

HEALTH INFORMATION INFRASTRUCTURE PLAN

FINAL REPORT

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A. EXECUTIVE SUMMARY

Beginning in early 2017, efforts began to review and analyze the “As-Is” state of many health information technology related topics throughout the State of Alaska. This effort was largely driven and informed by Section 56 of the Medicaid Redesign Senate Bill 74 (2016) which requires the Department of Health and Social Services (DHSS) to develop a plan to strengthen the health information infrastructure, including health data analytics capability. DHSS contracted with HealthTech Solutions, LLC via an open procurement process to provide technical assistance in the creation of the Alaska Health Information Infrastructure Plan as defined in SB 74. The purpose of the Health Information Infrastructure Plan is to support the movement of the health information infrastructure within the State of Alaska from the current “As-Is” state to the desired “To-Be” state by providing a thorough understanding of the current state, needs, and gaps, resulting in the creation of a roadmap to serve as a guide to move forward.

To ensure the Health Information Infrastructure Plan was truly reflective of the needs of the stakeholders, a series of six workgroup sessions were held to allow stakeholders the opportunity to provide background, input, and suggestions. Information shared during these sessions was an integral part of the development of this plan. The workgroup sessions were held between the Spring of 2017 and Summer of 2018 and included a broad range of stakeholders from the Alaskan healthcare landscape including representatives from healthcare facilities, provider practices, medical associations, tribal entities, mental health practices, the statewide Health Information Exchange (HIE), and DHSS. The workgroups were open forum discussions guided by defined topics and facilitated by the HealthTech Solutions’ project team. They resulted in an enhanced understanding of the current state of the infrastructure and future needs as expressed by the stakeholders.

Throughout the course of the workgroup discussions, several common themes arose and were used to inform the creation of this Health Information Infrastructure Plan. These common themes included:

- Inconsistent rate of adoption and lack of interoperability of Electronic Health Record systems;
- Limitations in functionality and capabilities of Healthconnect, the statewide HIE;
- Limited use of telehealth throughout the state and ways to increase telehealth use;
- Lack of data governance policies and standards;
- A high degree of redundancy in reporting requirements within the State;
- Limitation of data analytics capabilities;
- Lack of a comprehensive statewide provider directory/registry; and
- Limitations of public health systems

A gap analysis of the “As-Is” and “To-Be” state was completed following the workgroup sessions. The gap analysis formed the basis for recommendations that will support the movement from the current “As-Is” state to the desired “To-Be” state. The following table provides a high-level overview of the proposed recommendations.

Recommendation Summary	
Topic	High-Level Recommendations
Health Information Exchange Platform Modernization	Focus on improvement of core services, including connection to the broad range of electronic health records in use across Alaska. Institute data validation to ensure accuracy of available data. Continue onboarding efforts across all provider types and consider including additional data sources such as social determinates of health. Add support for high value use cases.
Medicaid Information Technology Architecture Related Projects	Complete a full Medicaid Information Technology Architecture 3.0 State Self-Assessment
Master Client Index	Establish a single enterprise wide master index for use across the organization to ensure consistent and accurate data. Establish data governance processes.
Fraud, Waste, and Abuse	Obtain a high functioning fraud waste and abuse detection solution to improve discovery of fraud waste and abuse. Obtain a case tracking solution with automated workflows in order to increase the efficiency of DHSS work force,
Secure Identity and Access Management	Conduct a gap analysis of the myAlaska solution to identify gaps in the system's functionality and explore the feasibility to utilize the system across the Medicaid Enterprise. Consider including a complete security and risk assessment of the myAlaska portal.
Eligibility and Enrollment Related Projects	Include eligibility and enrollment components in the Medicaid Information Technology Architecture 3.0 State Self-Assessment to ensure identification of all needs and inclusion in roadmap and planning documents. Prioritize solutions to allow providers to utilize Presumptive Eligibility opportunities and automate eligibility for deemed newborns. Develop a State data hub to make state owned data readily available as needed across the enterprise. Obtain an Asset Verification System.
Referral Management Module	Obtain a referral management module to close referral loops and greater transparency of referral patterns.
Care Management	Obtain a Care Management Module to improve and support care coordinate efforts
Provider Directory	Obtain a robust Provider Directory Module to support care management and telehealth

Document Management System	Obtain an electronic Document Management System and workflow management system to improve efficiencies across DHSS
Telehealth	Establish and communicate clear Telehealth policies and enterprise wide tools. Provide technical support and assistance to increase adoption of Telehealth. Develop a Provider Directory that highlights practices utilizing Telehealth. Increase funding available for providers to offset the cost of technologies to support telehealth
Provider Enrollment and Management	Evaluate the feasibility of implementing a statewide common credentialing program. Complete a comprehensive review of all provider enrollment and management business process in conjunction with the Medicaid Information Technology Architecture 3.0 State Self-Assessment.
Electronic Health Records Adoption	Continue outreach and education to support and encourage electronic health records adoption
Public Health Modernization	Modernize Public Health registries
DHSS Recommendations for Successful Transition to Modularity	
Data Governance	Implement data governance activities across DHSS to promote interoperability and data sharing capabilities across the Department
Enterprise Architecture	Convene an Enterprise Architecture group to steer the technical architecture of the DHSS Enterprise
Enterprise Project Management Office	Establish an Enterprise Project Management Office
Independent Verification and Validation	Procure an Independent Verification and Validation vendor for utilization across all Medicaid Enterprise implementations
Testing and Quality Assurance Services	Identify dedicated State testing staff to lead all testing efforts as modules are obtained, contract with a dedicated testing vendor, and utilize automated testing tools.
Systems Integrator	Obtain a System Integrator and work closely with that entity

In addition to recommendations established within this Health Information Infrastructure Plan, a business value analysis of the recommendations was completed. Projects related to the following areas were found to provide a high degree of business value to the enterprise and identified a need for greater urgency:

- Medicaid Information Technology Architecture

- HIE Platform Modernization
- Data Governance
- Enterprise Architecture
- Enterprise Project Management Office
- Independent Verification and Validation
- System Integration
- Telehealth
- EHR adoption
- Public Health Reporting

Additional details related to the business value analysis is in **Section F. Business Case Value**.

Budget estimates for the recommendations have been derived based upon industry trends and procurements of similar solutions in other states and are detailed in **Section G. Budget**. The estimated price ranges are reflective of Design, Development, and Implementation (DDI) efforts for the recommendations. While some of the recommended solutions such as the Eligibility and Enrollment Presumptive Eligibility functionality is estimated to cost less than one million dollars, a few of the recommendations are more costly items such as Health Information Exchange Platform and are estimated to cost in the six to ten-million-dollar range. However, most of the estimated price ranges are somewhere between one to six million dollars each.

Contingency plans have been addressed for each of the major recommendations within the plan to provide an alternative consideration in the event it is needed. Some items, such as the Medicaid Information Technology Architecture Assessment and the Independent Verification and Validation Vendor do not have a contingency as they are required by federal guidance. Other items such as the Care Management solution, Fraud Waste and Abuse System, and the Eligibility and Enrollment Asset Verification System could be obtained from other states while the contingency plan for other recommendations would be to continue business as usual.

As Alaska evolves from their existing legacy Medicaid solution to a modular approach including reuse, shared services, and Software-as-a-Service, the State must consider strategies for security controls. In **Section I. Determining Security Controls**, an overview of a security program framework has been provided. DHSS will be able to reference this section to develop their Security Plan in alignment with the industry standards.

Ultimately, these efforts have culminated in the Health Information Infrastructure Roadmap which is detailed in **Section J. Health Information Infrastructure Plan**. The roadmap identifies the impact and timing dependency of the recommendations. Some projects have been identified as projects that can begin immediately, while others have a dependency on another initiative. In general, most projects are contingent upon the completion of the Medicaid Information Technology Architecture State Self-Assessment by DHSS.

B. BACKGROUND

As directed by Alaska's Medicaid Redesign Senate Bill 74, the Alaska Department of Health and Social Services in conjunction with HealthTech Solutions created this Health Information Infrastructure Plan. As documented above in **Section A. Executive Summary**, the purpose of this Plan is to meet the requirements of the Medicaid Redesign Senate Bill 74 to develop an infrastructure plan to help support the health transformation activities in Alaska.

DHSS defines health information infrastructure at a high level as the array of interoperable health information technology products and services that support continuous learning and improved health. The creation of the Health Information Infrastructure Plan required reviewing the health information infrastructure within the State and the interaction with, and impact upon, various stakeholder groups in addition to ensuring alignment with other State and national initiatives. The high-level considerations in creation of the Plan included:

- Use of existing statewide and DHSS technology to include, but not limited to, the statewide Health Information Exchange
- Identification of opportunities for integrating and streamlining health data systems administered by State government
- Creation of a document that provides:
 - "As-Is" view of the existing systems
 - Gap analysis of what is missing
 - "To-Be" or desired view of the future state
 - Roadmap of recommendations
- Implementation Plan to achieve "To-Be" state
- Alignment with other Medicaid Redesign Senate Bill 74 initiatives
- Alignment with, and the ability to contribute to, the DHSS Enterprise Information Technology Strategic Framework and Information Technology Roadmap

With the above listed considerations in mind, HealthTech Solutions has created the Health Information Infrastructure Plan to be inclusive of the following:

- Identification of critical areas where standards are needed
- Measurable health infrastructure outcomes based on Medicaid Redesign Senate Bill 74
- Opportunities to leverage existing and emerging technology
- Opportunity for resource allocation improvement
- Alignment to State government technology standards, where applicable
- Assurance of a phased and scalable approach for implementation
- Streamlined approach to a complex technology environment
- Methods to ensure compliance to the plan
- Framework that is Health Insurance Portability and Accountability Act compliant

To ensure the development of a relevant Health Information Infrastructure Plan that provides optimal opportunities for improvement, six stakeholder workgroup sessions were held. These workgroup sessions were used to determine areas of necessary infrastructure improvement and to capture use cases for infrastructure implementation. The workgroup sessions included

stakeholders selected by DHSS and were held on March 6, 2017; May 12, 2017; September 19, 2017; November 14, 2017; February 13, 2018; and May 10, 2018. In these meetings, stakeholders took an active role in the identification of recommendations and how to achieve the “To-Be” environment.

Stakeholder workgroup meetings, in addition to sub-group meetings, provided the basis for a Gap Analysis of the “As-Is” and “To-Be” assessments of both internal and external DHSS environments. The Gap Analysis includes details provided by the stakeholders about the infrastructure, interoperability, and resource support. The analysis also includes details about the alignment of the DHSS information infrastructure with Medicaid Information Technology Architecture 3.0 and the National Human Services Interoperability Architecture business processes. The Gap Analysis identifies areas of improvement and resources for leveraging across the Enterprise. For more information, see **Section D. Gap Analysis**.

A Business Case Value assessment was developed using the Gap Analysis and Stakeholder Engagement Report. **Section F. Business Case Value** includes information about the assessment as well as the prioritization for recommended infrastructure implementation.

HealthTech Solutions also identified and developed a Contingency Plan for the recommended infrastructure as well as associated risks for each recommended product and/or service. For more information, see **Section H. Contingency Plan**.

A high-level plan was identified and developed for the Health Insurance Portability and Accountability Act and Health Information Technology for Economic and Clinical Health security controls for utilization. The Implementation Plan includes recommended security controls and other procedure and policy levers for the recommended infrastructure. Each recommendation aligns with Minimum Acceptable Risk Standards for Exchanges requirements. The Implementation Plan can be found in **Section I. Determining Security Controls**.

A Health Information Infrastructure Roadmap has been developed based upon recommendations identified from workgroup discoveries and the Gap Analysis. The Roadmap contains the strategic framework for recommended infrastructure products and/or services and includes business process transformation, policy changes, and other procedure changes that will be required of DHSS and external stakeholders. The Roadmap can be found in **Section J. Health Information Infrastructure Roadmap**.

Lastly, this Plan includes a high-level budget estimate for recommended infrastructure products and/or services including costs for implementation. The budget can be found in **Section G. Budget**.

DHSS’ vision for the future of health information technology is a multi-year vision that consists of existing and planned projects and initiatives that will significantly contribute to Alaska’s healthcare transformation. HealthTech Solutions is aware that Medicaid Redesign Senate Bill 74 required a demonstration project for Medicaid reform as well as a coordinated care demonstration project. As both efforts were in the planning stage during our time of information gathering, recommendations specific to these initiatives have not been included in this Health Information Infrastructure Plan; however, many of the recommendations included would ultimately support these projects.

By leveraging the information in this Plan, Alaska will be in a more favorable position to transform healthcare by providing data required by healthcare providers for care coordination and quality improvement and information support required by DHSS and healthcare providers to enable development and implementation of Medicaid Redesign Senate Bill 74 initiatives.

C. STAKEHOLDER ENGAGEMENT

Stakeholder engagement was necessary to create a fully informed plan that would add value to all Alaskan stakeholders. As such, a series of six workgroup sessions and several sub-group meetings were held to allow stakeholders to provide background, input, and suggestions that would shape the creation of the Plan.

There were many common themes identified throughout the stakeholder engagement sessions which helped derive the recommendations in the Health Information Infrastructure Plan. These common themes are included in the table below:

Workgroup Discussion Common Themes	
Theme	Details
Electronic Health Record Adoption	<ul style="list-style-type: none"> Adoption rate is inconsistent across provider types and is especially low with certain provider types There is a high degree of variation in the electronic health record systems throughout the State with an estimate of 52 vendors in use When electronic health record systems are adopted they are not always connected or interoperable with other systems
Health Information Exchange	<ul style="list-style-type: none"> Current functionality is limited, and some offerings are under-utilized Current Orion technology platform requires upgrades to meet stakeholder needs Struggles to interface with the large number of electronic health record vendors currently in use within the State Lack of bi-directional capabilities with the Immunization Registry and other registries Could potentially support additional use cases within the State, but current capabilities will need to be enhanced for this to occur Lack of single sign-on capability
Telehealth/Telemonitoring	<ul style="list-style-type: none"> Not widely used throughout the State Need for policies, best practices, and identified procedures appropriate to telehealth The provider community has a desire to be able to select the information that becomes included in the Personal Health Record Need for full Health Insurance Portability and Accountability Act compliant telehealth infrastructure Need for outreach, education, and technical support to increase usage

Workgroup Discussion Common Themes	
Theme	Details
Data Governance	<ul style="list-style-type: none"> • Consistent lack of data governance policies and data standards in all areas throughout DHSS • Desire for centralized data repository/warehouse for use in data analytics, reporting, care and referral management, and patient care • Stakeholder engagement in data governance activities has declined over the course of time as representatives have moved on or out of State
Reporting Redundancy	<ul style="list-style-type: none"> • There is currently a high degree of redundancy in the reporting requirements for providers within the State and there is a desire to streamline this process by leveraging the Health Information Exchange for reporting purposes. This would allow providers to report data once to Health Information Exchange and the Exchange would then disseminate as appropriate.
Enhancing Data Analytics Capability	<ul style="list-style-type: none"> • Analytics capabilities within DHSS are limited and often manual • There is a desire for greater access to data analytic tools in the provider community
Statewide Provider Directory/Registry	<ul style="list-style-type: none"> • Current lack of a comprehensive provider directory/registry to include both clinical medical providers in addition to community and support service providers is limiting the ability to effectively exchange data and provide patient care
Public Health Systems	<ul style="list-style-type: none"> • Public health systems are outdated and will not support bi-directional exchange with the Health Information Exchange • Updating of these systems would be key to support the goal of utilizing the Health Information Exchange to support streamlining of reporting

The sub-group meetings, which were held in addition to the six main workgroup sessions, are listed below:

1. Eligibility and Enrollment, which included staff from both Medicaid Management Information System and Alaska’s Resource for Integrated Eligibility Service
2. Department of Corrections
3. Children Services
4. Program Integrity
5. Behavioral Health
6. Health Information Exchange users, Providence Hospital, and the Alaska Native Tribal Health Consortium
7. DHSS staff regarding Data Governance
8. Telehealth Workgroup
9. Department of Administration
10. Southcentral Foundation Representative

The goal of these workgroup sessions and sub-group meetings was to develop an understanding of the “As-Is” and desired “To-Be” environment as identified by the stakeholders, thus allowing for the creation of a Health Information Infrastructure Plan that was well-informed and driven by the needs of the stakeholders.

C.1 ARTIFACT REVIEW

In addition to the stakeholder engagement sessions, HealthTech Solutions also reviewed multiple DHSS artifacts, publicly available documents, and the written reports from other Medicaid Redesign Senate Bill 74 workgroups. Information Technology infrastructure needs identified by the various workgroups and within the artifacts were considered in the Gap Analysis. Although not an all-inclusive list, the following notable artifacts were reviewed and analyzed as part of the Gap Analysis process:

- State Medicaid Health Information Technology Plan
- Health Information Technology for Economic and Clinical Health Implementation Advance Planning Document
- 2016 Annual Medicaid Reform Report
- 2017 Annual Medicaid Reform Report
- Alaska Medicaid Redesign Telehealth Stakeholder Workgroup Report
- Alaska Medicaid Redesign Quality and Cost Effectiveness Targets Report
- Medicaid Technical Assistance Healthcare Authority Feasibility Study Final Report
- Medicaid Redesign Senate Bill 74

D. GAP ANALYSIS

The Gap Analysis is based on the output from the various stakeholder engagement and sub-group sessions and outlines the “As-Is” and “To-Be” state along with recommendations on how to achieve the “To-Be.” For better document flow and readability, this section is divided into topics. Some topics may have multiple identified gaps and/or recommendations. Section topics are as follows:

- Health Information Exchange Platform Modernization and Related Projects
- Medicaid Information Technology Architecture Related Projects
- Master Client Index
- Fraud, Waste, and Abuse
- Secure Identity and Access Management
- Eligibility and Enrollment
- Referral Management
- Care Management
- Provider Directory
- Document Management System
- Telehealth
- Provider Enrollment and Management
- Electronic Health Record Adoption

- Public Health Modernization
- Project Delivery
 - Data Governance
 - Enterprise Architecture
 - Enterprise Project Management Office
 - Independent Verification and Validation
 - Testing and Quality Assurance Services
 - Systems Integrator

D.1 HEALTH INFORMATION EXCHANGE PLATFORM MODERNIZATION AND RELATED PROJECTS

Health Information Exchange Core Services

Goal: A highly functioning health information exchange to facilitate widespread clinical data sharing amongst providers. The Health Information Exchange must also support and facilitate the endeavors of the State of Alaska and the Medicaid Enterprise to improve the quality and safety of care for all Alaskans.

Health Information Exchange “As-Is”

Background

In 2009, Alaska DHSS contracted with HealtheConnect Alaska (previously known as AeHN) to assist the State in establishing a Health Information Exchange capability among healthcare providers and hospitals in Alaska. HealtheConnect Alaska coordinated an effort to develop Health Information Exchange product requirements and select a Health Information Exchange technology vendor. Orion Health was selected as that vendor. Orion Health currently provides Health Information Exchange functionality including a clinical portal and patient portal services. HealtheConnect Alaska uses the NextGate solution for the Master Patient Index.

HealtheConnect Alaska deployed the health information exchange and direct secure messaging technologies using a hosted, Software-as-a-Service model and launched a pilot program in February 2011 with one hospital and two clinics participating in the exchange of authorized medical information. The pilot project and associated user acceptance testing was completed in early September 2011 and HealtheConnect Alaska began connecting additional Alaska providers in December 2011. Today, HealtheConnect Alaska provides clinical communication pathways for 470 provider organizations and approximately 3,000 healthcare providers throughout the State, with over 40 Electronic Health Records providing patient data into the Health Information Exchange.

In addition, HealtheConnect Alaska acts as the conduit for public health reporting, sending immunization, syndromic surveillance, and reportable laboratory data to DHSS from connected organizations. Ten participating provider organizations are submitting immunization data via the Health Information Exchange to Alaska’s Immunization Registry, VacTrAK. Sixteen organizations are submitting syndromic surveillance data via the Health Information Exchange to BioSense, and nine hospitals are submitting lab data via the Health Information Exchange to Alaska’s Electronic Laboratory Reportable database, AKSTARS. Despite this success, there are many provider types

that are not connected or have not adopted Certified Electronic Health Record Technology that would allow for successful implementation of the full vision of the Health Information Exchange.

Providers are required to report to many State government systems. Some systems are electronic and automated, and some are fed by paper reports manually entered into spreadsheets or Access databases where they are inaccessible to all but State government users. Much of this data is duplicative and could be greatly simplified from the provider's point of view. The diagram below illustrates a high-level depiction of the current state of provider reporting.

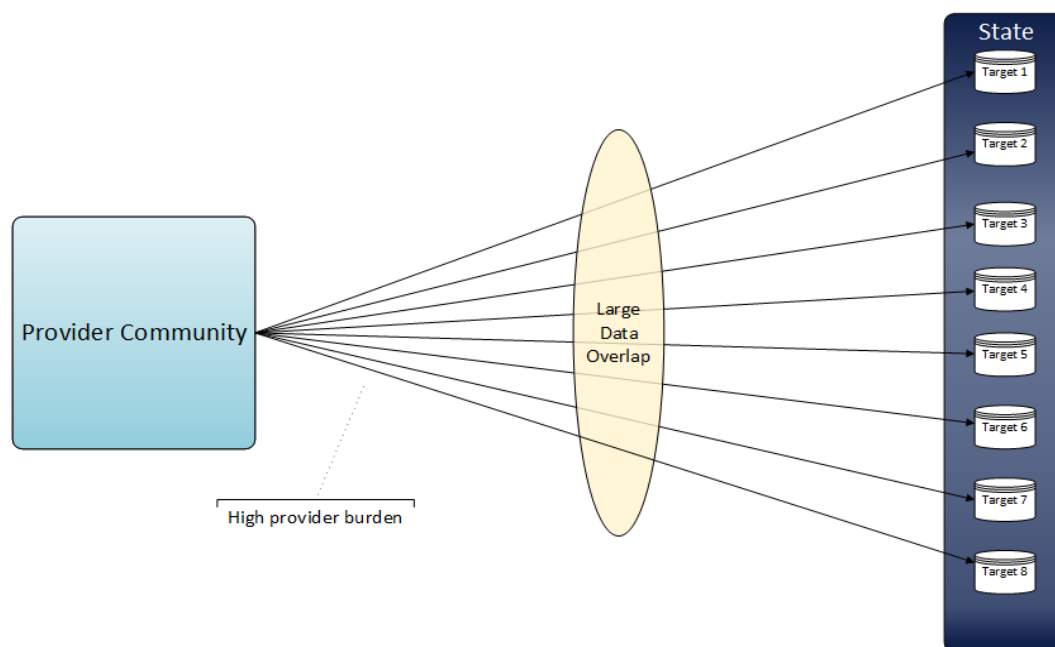


Figure 1: Reporting – Current State

Provider Participation and Utility of the Health Information Exchange

An Environmental Scan was completed in January 2018 indicating that participation in the Health Information Exchange was limited, and those who reported participation indicated use was rare to never. Many providers indicated they had selected alternative options to meet their needs. The November 13, 2017 workgroup meeting revealed that stakeholders had a lack of confidence in the Health Information Exchange and felt the cost was not worth the value. The workgroup sessions also revealed that providers felt the Health Information Exchange was cumbersome for use.

An additional complicating factor based upon feedback obtained during the stakeholder workgroups is that, at times, it is viewed as a competitive advantage by large provider organizations to have data siloed within the systems of their own organizations. Consequently, providers indicated that some State providers' networks are reluctant to exchange patient data with their competitors. HealthConnect Alaska shared plans to provide new services, yet, based on stakeholder feedback, HealthConnect Alaska has not met their foundational core service obligation.

The Health Information Exchange was unable to provide usable admit, discharge, and transfer alerts, and therefore the hospital association brought the Collective Medical Technologies

Emergency Department Information Exchange into the State to provide that functionality. That implementation has gone very well, and providers speak highly of their participation in the Emergency Department Information Exchange.

Direct Secure Messaging capability is available but is not well integrated into business workflows. As reported by the workgroup, the barrier to adoption seems to be that Direct Secure Messaging is a separate email system for them. If they could use this from their own email system or from within the electronic health record, it would see much greater adoption. The possibility of integrating with TigerConnect, a secure messaging tool, was also mentioned in the workgroup session.

HealthConnect Alaska is committed to modernizing and maintaining the Health Information Exchange's relevance as the secure messaging provider for Alaska. They have selected two new vendor partners to support secure communications and improve usability and widespread adoption. TigerConnect, for Direct-certified text messaging, and Inpriva, for Direct Secure Messaging, are leaders in their respective areas and significantly expand the Health information Exchange's offerings as one of the largest Direct Secure Messaging providers in the country.

Implementation of new or enhanced Health Information Exchange functionality is often slow moving. Progress and timelines are not well known by stakeholders, and the provider community is not well-versed on the capabilities and value proposition of the Health Information Exchange. For example, within the workgroup meeting, the provider community expressed concerns regarding privacy and security. This could relate to a concern among the provider community presenting a barrier to consistent adoption and usage of the Health Information Exchange.

The Health Information Exchange is currently in transition. HealthConnect Alaska is about to implement changes that may be a turning point in the capabilities offered, thus increasing the value of the Health Information Exchange. The planned changes are listed below as a summary of the "To-Be" and recommendations to achieve the "To-Be."

Health Information Exchange "To-Be"

The Health Information Exchange should focus on use cases that bring value proposition to the providers. The Health Information Exchange's primary value proposition is to provide clinical information on the right person at the right time to improve care coordination. The Exchange should demonstrate interoperability to integrate with provider electronic health records and have the ability for single sign-on with electronic health records incapable of integration.

The Health Information Exchange must demonstrate interoperability with the Medicaid Management Information System and other key systems within DHSS for the sharing of clinical data to support care coordination, data analytics, population health, and determination of costs of care.

The Health Information Exchange must support providers in meeting meaningful use requirements and exchanging clinical data such as lab results and immunizations. The Health Information Exchange should utilize a robust Master Patient Index with a low percentage of mismatches and ensure the interfaces are receiving "clean" data from providers.

HealthConnect Alaska is implementing two applications to modernize their secure messaging platform by supporting mobile devices, digital verification, and overhauling the process for

onboarding new secure messaging participants. HealtheConnect Alaska has indicated they will be able to issue new accounts within 72 hours of receiving the notarized identification form which is a significant decrease from the current two to four weeks with Orion Health. Additionally, Inpriva, the improved Direct Secure Messaging platform, regularly uploads accounts to the national direct registry to facilitate secure directory access for all participants.

TigerConnect, the Health Information Exchange's new secure texting, will seamlessly integrate into the unified landing page and will be integral in the Health Information Exchange 2.0 initiative. TigerConnect will provide admit, discharge, and transfer triggered text messaging to participating providers of record for their patients and will support new Direct Secure Messaging alert notifications. As discovered during the stakeholder interviews, TigerConnect is already being used in Alaska with the Alaska Native Tribal Health Consortium, Imaging Associates, and many other provider organizations. By HealtheConnect Alaska's new partnership, they will be able to expand the secure texting directory for all participants.

Recommendations to Achieve “To-Be”

It is recommended that efforts be centralized around improving the core services provided by the Health Information Exchange to present a value proposition to the provider. When the core services are enhanced, the utility of use cases at the provider and State level will be increased. Several of the “To-Be” capabilities are already being planned or being implemented. The recommendations for reaching the goal of modernizing the Health Information Exchange platform include:

Expand Health Information Exchange Core Services

- Onboarding additional provider locations to add data and critical mass to the Health Information Exchange
 - Integrate Alaska Psychiatric Institute's data into the Health Information Exchange (an on-boarding activity):
 - Using a DHSS Information Technology Framework approved methodology, the Health Information Exchange will access the State's only inpatient psychiatric hospital's data on a nightly basis and store the raw Continuity of Care Document in a repository. When subscribing organizations make queries for their patients, those queries will be matched against the Continuity of Care Document repository and, in compliance with the implemented consent policy, information will be shared using the Health Information Exchange's Unified Landing Page or through Application Programming Interface connections to electronic health records
 - Implement Ambra Image Exchange:
 - Connect the Health Information Exchange with Ambra Image Gateway to allow for subscribing organizations to see images completed at other facilities
 - Health Information Exchange Onboarding Support will continue for behavioral health providers, tribal providers, and partner tribal providers
- Continue efforts to engage third-party payers
- Onboard additional provider locations for public health reporting

- Increase utilization of the query-based portal until such time that electronic health records integration is widespread
- Enhance and streamline capability to connect to the broad range of electronic health records systems currently in use within Alaska
- Add capability to parse and store consolidated clinical document architecture data
- Institute ongoing data validation to ensure completeness and accuracy

Add Support for High Value Use Cases

- Add capabilities to support high value use cases such as integration with the prescription drug monitoring program, data analytics, simplified reporting, referrals, and incorporation of behavioral health and correctional patient data

Enhance Alert/Notification Capabilities

- Improve and increase capabilities for alerts and notifications, including admit, discharge, and transfers, allowing for near real-time notification via electronic health records systems

Enhance Registry Capabilities

- Implement bi-directional data flow with the public health registries. The statewide immunization registry, VacTrAK, is available for submission of update transactions only and data is not shared with the Health Information Exchange. Having this data available for direct query and inclusion in clinical documents would enhance the value of both registries.
- It is also recommended that this strategy be expanded, over time, to all other registries that can be legally shared with the provider community.

Improve Accessibility of the Health Information Exchange Data

- The Health Information Exchange must develop the capability for integration with capable electronic health records so that access to the Health Information Exchange data is incorporated into the provider's workflow. This functionality has already been proven to greatly increase utilization of the health information exchange.
- Single sign-on should be an option for electronic health records that are not capable of integration with the Health Information Exchange. This functionality also supports an easier workflow for the provider.

Improve Utilization of Direct Secure Messaging

- Leverage the upgraded platform, including TigerConnect for secure texting

Improve Communication, Outreach, and Education

- Develop a communication plan to address the following aspects:
 - Increase efficiency and transparency when implementing new functionality to the Health Information Exchange
 - Clearly define and educate providers of current Health Information Exchange capabilities

- Ensure that privacy and security concerns are addressed, and the provider community is educated and develops the level of comfort necessary to increase adoption
- Develop a comprehensive communication plan and execute with appropriate resources and oversight

Explore Options for Interoperability with the Emergency Department Information Exchange

- The Emergency Department Information Exchange provides information about patients across points of care for Alaska's Emergency Departments. Since it provides visit and care history and has been well received by the community, the Health Information Exchange should explore options for connecting with the Emergency Department Information Exchange.

Improve State to Provider Information Sharing

- Incorporate Medicaid claims data into the Health Information Exchange
 - Sharing this information would provide data to populate the Health Information Exchange's shared medical record

Expand the Data Set

- Information available and housed within the Health Information Exchange is limited specifically to clinical information. Explore the possibility of including additional data such as social determinants of health data.

Quality Reporting

Goal: Improve the efficiency of quality reporting and reduce provider burden

Quality Reporting "As-Is"

Providers are inundated with, and over-burdened by, the multiple reporting requirements from State and Federal programs as well as various commercial payers. Subsequently, one of the high priorities for many States is the strategy to improve quality reporting but also reduce provider burden. The initiative should provide tools that streamline the processes used to report on quality measures. Common initiatives provide technology support to ease the capture, aggregation, and reporting of agreed upon quality reporting measures. The desired outcome is reduced reporting workload for providers and simplified processes for reporting required measures. Affordable tools should be readily available to assist providers with the capture and reporting of their quality data.

There are multiple States that have a variation of healthcare consortiums that include providers, healthcare associations, or hospitals that focus on the population of health via clinical quality measures/improvement. In some cases, the States are linked to the State Health Information Exchange or various Health Information Exchanges to share and compare data. In Alaska, the Health Information Exchange communicates with and engages the primary care community which includes the Alaska Primary Care Association, Federally Qualified Health Centers, and Patient Centered Medical Homes. The potential data captured could support Accountable Care Organizations and other alternative payment models.

Currently, the eligible hospitals and eligible professionals attesting to the Alaska Medicaid EHR Incentive Payment Program have the capability to upload an XML file of aggregate Clinical Quality Measure data with their attestation. This does not meet the Centers for Medicare and Medicaid Services guidelines for electronic submission of Clinical Quality Measure data.

Quality Reporting “To-Be”

In the future, providers will have the capability to electronically report Clinical Quality Measures from their electronic health records, as Stage 3 of the Promoting Interoperability Program is implemented. Clinical Quality Measure reporting via the Health Information Exchange will allow providers to submit data to Alaska in one location and will also support DHSS efforts for quality data analytics and population health.

Recommendations to Achieve the “To-Be”

DHSS should continue the design and development of a Clinical Quality Measure reporting feature that supports their long-term vision for improved care for all Alaskans. Quality data reporting via the Health Information Exchange is efficient for providers and Medicaid and facilitates strategy for a data-driven organization. This workflow also enables the process for providers and hospitals to directly report and submit Clinical Quality Measures as data is received by the Health Information Exchange. During the process, the data should be passed through the DHSS Enterprise Service Bus and consumed by other Medicaid Enterprise systems to improve the overall quality reporting.

It is also recommended that a clinical advisory board be established to help guide the selection and governance of the Clinical Quality Measure reporting. A clinical advisory board can be advantageous in a Clinical Quality Measure project to provide subject matter expertise on clinical documentation and how workflow can impact the success of the Clinical Quality Measure reporting project. Suggested responsibilities of the clinical advisory board include:

- Advise the State on strategies for implementing quality activities to allow for the collection and sharing of quality management data and monitoring of outcomes of chronic diseases affecting Alaska Medicaid recipients such as diabetes, hypertension, and obesity
- Provide input on the clinical quality measures to be tracked by the State
- Assess and identify opportunities for improvement of quality management and performance improvement activities
- Identify opportunities to improve patient and clinical safety across the delivery of care and within the network
- Identify quality indicators and thresholds for evaluation; reviewing potential quality of care cases and recommending actions as indicated
- Make recommendations, as needed, on: reports pertinent to the States’ quality program

D.2 MEDICAID INFORMATION TECHNOLOGY ARCHITECTURE RELATED PROJECTS

Medicaid Information Technology Architecture Alignment

Goal: Align the Medicaid Enterprise to Medicaid Information Technology Architecture business processes and improve the maturity of the technology infrastructure

Medicaid Information Technology Architecture Alignment “As-Is”

Stakeholders have indicated the Medicaid Enterprise infrastructure is not in alignment with Medicaid Information Technology Architecture business processes. Systems within the Department are often siloed and structured in a way that limits interoperability and the effective use of shared information and resources. This is due to the historical “program oriented” approach to systems development. Under this approach, a funded program needs a system and a system is obtained. After the initial “go-live” of these systems, the requirements change, especially with workflow, making the system no longer appropriate or requiring users to use multiple systems for many tasks.

The Department also has an Enterprise Service Bus in the form of a BizTalk implementation that is capable of securely integrating internal applications with each other and providing a controlled, secure broker for external integration. This system is currently used to integrate the Eligibility and Enrollment, Medicaid, and Public Health systems. It provides a secure integration point with HealthConnect Alaska. State-to-State data flows are brokered through BizTalk for newer systems or simply involve the transference of files between systems. For the most part, the systems are siloed or not accessible at all other than by the State government staff who maintain them.

Medicaid Information Technology Architecture Alignment “To-Be”

In the “To-Be” state, the Medicaid Enterprise would be fully aligned with Medicaid Information Technology Architecture business processes. These standards would also be applied across all systems and functions within DHSS including Health Information Technology for Economic and Clinical Health funded Health Information Technology projects. In this “To-Be” vision, a service-oriented architecture is established, and the BizTalk application is leveraged to integrate Information Technology solutions across the Medicaid Enterprise. Lastly, shared services and a shared data approach in all planned Information Technology projects have been considered and is a component of the Information Technology maturity roadmap.

Recommendations to Achieve the “To-Be”

Based on the guidance from the Centers of Medicare and Medicaid Services and the feedback of the stakeholders, it is recommended that the DHSS complete a full Medicaid Information Technology Architecture 3.0 State Self-Assessment to assess all elements of the Medicaid Enterprise including eligibility and enrollment systems. This would include a full current state/future state assessment of all business processes, information architecture, and technical system implementations comprising the Medicaid Enterprise in Alaska. The results would be used to make executable decisions on current systems, contracts, and other potential barriers to the modernization of the Medicaid systems landscape. The recommended Medicaid Information

Technology Architecture concept of operations, an output of the Medicaid Information Technology Architecture 3.0 State Self-Assessment is illustrated below.

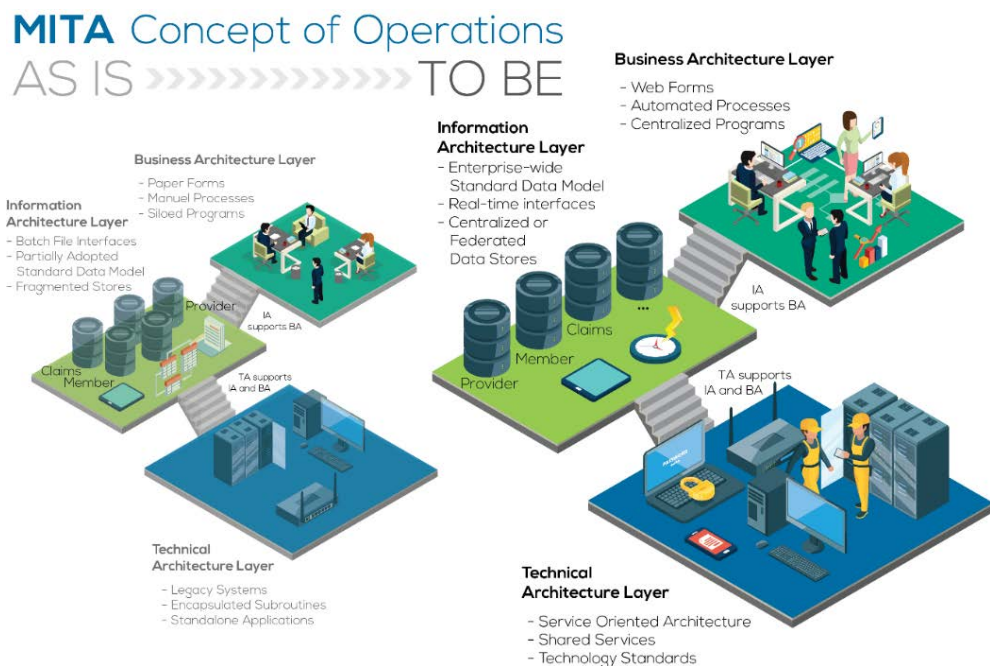


Figure 2: Example Medicaid Information Technology Architecture Concept of Operations

As indicated previously, the DHSS utilizes a BizTalk environment for integrating internal systems. This environment could be used to provide integration with the Health Information Exchange for the publishing of State data to providers including integration of the Health Information Exchange with State sources using Alaska’s BizTalk platform.

Medicaid Management Information System Modernization

Goal: Use the completed Medicaid Information Technology Architecture 3.0 State Self-Assessment to identify a procurement roadmap for modernization

Medicaid Management Information System Modernization “As-Is”

The current Medicaid Management Information System was released to production and went live in October 2013. As of the date of the Health Information Infrastructure Plan report, the Medicaid Management Information System has not been certified by the Centers of Medicare and Medicaid Services. Stakeholders expressed concerns with the quality of the Medicaid Management Information System data. Due to these concerns, Medicaid claims data has not been included in the Health Information Exchange. This has greatly reduced the utility of the Health Information Exchange, given that Medicaid claims data could provide both clinical and prescription information on a large percentage of Alaskans, many of who are the most vulnerable patient population and require the most resources to manage.

The current Medicaid Management Information System was obtained using a big bang approach with a single vendor, Conduent, as the primary source of system functionality. This has proven to hinder system improvements due to the cost of modifications and the limited changes that can occur because of the solution architecture. The functional state of the Medicaid Management

Information System has also contributed to inefficient claims billing and reconciliation, department operations, and limited analytics capabilities and decision support.

Medicaid Management Information System Modernization “To-Be”

Consistent with current trends of the Medicaid industry, the “To-Be” vision would be a Medicaid Management Information System that has been designed based on a modular approach and in alignment with Medicaid Information Technology Architecture 3.0 business processes and standards. One potential outcome of the Medicaid Information Technology Architecture 3.0 State Self-Assessment could be a claims system capable of supporting future State initiatives.

Recommendations to Achieve the “To-Be”

As mentioned above, it is recommended to rely on the outcome of the Medicaid Information Technology Architecture 3.0 State Self-Assessment to determine the approach that is practical, feasible, and appropriate. It is also recommended for DHSS to modernize the Medicaid Enterprise by procuring multiple modules that will be dictated through the procurement roadmap to be developed during the Medicaid Information Technology Architecture 3.0 State Self-Assessment project. Examples of modules include but are not limited to:

- Systems Integrator
- Independent Verification and Validation
- Enterprise Data Warehouse
- Provider Management
- Pharmacy Benefit Management
- Fraud, Waste, and Abuse
- Fiscal Agent
- Third Party Liability
- Customer Relationship Management
- Care Management
- Eligibility and Enrollment

D.3 MASTER CLIENT INDEX

Goal: Enhance the DHSS Master Client Index

Master Client Index “As-Is”

DHSS has implemented a statewide Master Client Index to reduce or alleviate duplication of client demographic data. The Master Client Index is not currently synchronized with the Health Information Exchange Master Patient Index, and it is unclear the extent of use of the Master Client Index in DHSS.

Master Client Index “To-Be”

To improve the data quality, demographic information available, and to increase the utility of the Master Client Index across the Enterprise, the Master Client Index will be synchronized with the Health Information Exchange Master Patient Index. This will not only enhance the Master Client Index but will also support the creation of a unique client identifier. The Master Client Index’s unique identifier will provide the base architecture needed to create a single client view across

the Enterprise including all services and programs. While using two eligibility systems to determine Medicaid Eligibility, this unique identifier should be leveraged to avoid duplicate applications across the two systems. The Master Client Index data will include recipient demographic data and information from all programs including Medicaid waivers, care management programs, Community First Choices, public assistance programs, and public health programs. The data set can also contain current and previous enrollment history, current diagnosis, and hospital admission and discharge data.

Matching will be done to determine if applicants are already receiving benefits in another program. A data governance process will guide the matching process which can be done using demographic data, giving weights and thresholds to different attributes to determine if it is the same person. The consolidation of this data enables better care delivery in critical programs such as care coordination. Further, the enhanced Master Client Index will enable more advanced analytics and better program evaluation due to the richer and more stable data environment. These advantages will play a key role in advancing healthcare delivery in Alaska.

Recommendations to Achieve the “To-Be”

Establish a data governance process for client indexing, developing patient matching rules, and data stewardship. To enhance the eligibility process, it is recommended to incorporate the Master Client Index into the application process to flag duplicate applications and/or individual family members who are already recipients in existing or pending applications. It is also recommended that the DHSS Master Client Index be integrated with the Health Information Exchange Master Patient Index to improve coordination of care. This integration would be created through a bi-directional connection to support updates to data whether they occur within the Master Client Index or within the Health Information Exchange Master Patient Index.

D.4 FRAUD, WASTE, AND ABUSE

Goal: Improve the ability for the DHSS to detect and track potential cases of fraud, waste, and abuse

Fraud, Waste, and Abuse “As-Is”

Medicaid Redesign Senate Bill 74 identified the reduction of fraud, waste, and abuse as a core goal. Based on an interview with the Medicaid Program Integrity staff, it was noted DHSS has implemented a Surveillance and Utilization Review Subsystem, J-SURS, a Truven Health Analytics product, to produce the required Surveillance and Utilization Reports. However, at the time of this report, it was unclear if, and how, the Program Integrity Unit would utilize the J-SURS tool. The Program Integrity Unit is currently using a manual process to identify potential cases of fraud, waste, and abuse and to open cases. All case tracking and resolution is completed by staff.

Fraud, Waste, and Abuse “To-Be”

With a Medicaid Redesign Senate Bill 74 directive to focus on the reduction of fraud, waste, and abuse, the Program Integrity Unit should have Information Technology solutions to streamline and focus their effort in high probability cases and track workflows and case action to ensure the maximum impact can be achieved with limited staffing. Information Technology solutions that support workflows in this area will drive efficiencies.

Recommendations to Achieve the “To-Be”

In support of the Medicaid Redesign Senate Bill 74, it is recommended for the Program Integrity Unit to complete a gap analysis of the J-SURS product to determine if this product meets all required needs of the unit. It is further recommended that to support this initiative, DHSS should consider implementing an advanced fraud and abuse detection solution that is scalable and offers a solution for advanced analytics and fraud detection. The Program Integrity Unit also expressed a desire for a case tracking solution. It is recommended that the DHSS obtain a case tracking solution that easily integrates with multiple data sources, offers automated workflows, and allows for the workflows and case attributes to be easily configured.

D.5 SECURE IDENTITY AND ACCESS MANAGEMENT

Goal: Leverage myAlaska for Single Sign-On

Secure Identity and Access Management “As-Is”

Currently, there is not an enterprise-wide identity and access management system leveraged by the State across the Health and Human Services program. However, the myAlaska platform is used as a solution to provide a multifunctional universe for statewide activities including, but not limited to, issuance of benefits, retirement, and identity verification of State employees. myAlaska Authentication aligns with the State of Alaska’s Health Information Exchange approach and Medicaid reform initiatives by leveraging myAlaska as the user authentication and identity management tool for the Health Information Exchange. Alaska has identified the need for a shared or enterprise solution for identity verification/validation. The 2017 Medicaid Redesign Report noted the myAlaska portal did not meet the requirements of the Health Insurance Portability and Accountability Act. SafeNet, an identity and data protection application, has been identified by DHSS as a potential solution to improve the compliancy of myAlaska.

Secure Identity and Access Management “To-Be”

Implementation of a tool such as SafeNet would allow myAlaska to be leveraged across DHSS as a single sign-on solution to support the Enterprise. To provide a cost savings, DHSS intends to leverage myAlaska as the primary means for user authentication and electronic submission of Meaningful Use data by providers. Another use case for the myAlaska portal would be to integrate with the DHSS Master Client Index and support authentication of users within the Health Information Exchange. This could simplify user authentication for all of DHSS using a single authoritative source of information and reduce overhead costs.

Recommendations to Achieve the “To-Be”

To document the feasibility of using myAlaska across the Medicaid Enterprise, a gap analysis of the solution should be completed to identify gaps in the system’s functionality. As a component of the gap analysis, it is recommended that a complete security and risk assessment of the myAlaska portal is considered.

D.6 ELIGIBILITY AND ENROLLMENT RELATED PROJECTS

Eligibility and Enrollment

Goal: To implement an efficient and accurate single eligibility determination system

Eligibility and Enrollment “As-Is”

With the implementation of the Affordable Care Act, Alaska followed the national trend to replace their current legacy Eligibility Information System (which followed historic eligibility processes regarding income, income disregards, and household composition; and generally included many manual processes for the more complex determinations), with a new system intended to be more automated, flexible, and maintainable over time. The plan was to initially process eligibility groups subject to the Modified Adjusted Gross Income methodology introduced by the Affordable Care Act and, in time, migrate the processing of those eligibility groups exempt from Modified Adjusted Gross Income as well as other benefit determinations such as Supplemental Nutrition Assistance Program.

Medicaid eligibility groups who fell under the Modified Adjusted Gross Income methodology were to convert from the historic method January 1, 2014.

The new eligibility system, Alaska’s Resource for Integrated Eligibility Service, launched in 2013 with numerous issues. The Alaska’s Resource for Integrated Eligibility Service sub-group meeting revealed that backlog of pending applications grew to an unmanageable number, and they were unable to identify duplicate applications in the pending backlog. The DHSS website posted information for pending applicants regarding efforts to address applicants’ needs which included community resources, division new overtime policy, and help numbers for questions.

According to available records, in late 2015, Alaska changed from an “assessment” State to a “determination” State allowing the Federal Marketplace to determine eligibility rather than assessing the possibility of eligibility. DHSS has partnered with 18F to assist with the planning and execution of the Eligibility Modernization project. 18F is an office within the General Services Administration of the Federal government that collaborates with other agencies to assist with technical issues and develop products to improve how government serves the public through technology solutions. According to documentation obtained on the 18F GitHub, work on Alaska’s Resource for Integrated Eligibility Service stopped in the summer of 2016 leaving Alaska with a partially implemented eligibility system and a backlog of approximately 14,000 applications. Staff are currently working in two different eligibility systems resulting in duplicate efforts, decreased worker productivity, and frustrated beneficiaries. This frustration carried over to the provider community as was evident in the May 12, 2017 stakeholder workgroup meeting.

Members of the provider community presented lists of concerns and specific examples which contained individuals with continued care needs without a billing source due in part to the backlog in eligibility determinations and re-determination. Records indicate that Alaska partnered with 18F to resolve the issues in the eligibility system and continue the migration plan. The current roadmap available on GitHub indicates work started in early 2017 with the identification of product owners and teams, a vision was produced in May 2017, and the first Request for Proposal was released in November 2017 and awarded in December 2017. The first Statement of Work was to develop a search functionality. 18F’s approach is to use Agile product development to take a transparent

and modular approach. This approach will use multiple vendors (moving away from a single eligibility vendor) incrementally improving the system and empowering the system operation workers to feel confident about maintaining the system. 18F stated success will be achieved when worker productivity and morale is tangible, and benefits are being provided in a timely manner.

In addition, providers voiced concerns that presumptive eligibility capabilities were reduced rather than expanded after the Affordable Care Act go-live. Hospital representatives expressed concerns regarding the ability to submit claims in a timely fashion for newborns deemed eligible based on the mother's eligibility status at the time of birth. This delay may be caused by inefficient processing of the eligibility status.

Eligibility and Enrollment “To-Be”

Alaska needs an efficient and accurate single eligibility determination system. The legacy Eligibility Information System needs to be retired as it is old technology (common business-oriented language (COBOL) on a mainframe, which is batch and transaction driven), is difficult to implement changes within, expensive to host, and operating two systems creates rework for staff. The eligibility determination system will play a key role in the initiatives planned in Alaska. As Alaska transitions into a fully modular Medicaid Management Information System environment, it is essential the eligibility and enrollment components are making near real-time determinations and real-time interface/integration capabilities. This integration capability should include any vendors who are providing coordinated care to Medicaid recipients. The eligibility module of the Medicaid Management Information System Enterprise is often used to enroll and/or flag individuals enrolled in special programs, adding in the elimination of duplicative or overlapping services. In a truly modular enterprise, the eligibility system assumes the role of the member subsystem in the previous single monolithic Medicaid Management Information System. In that capacity, it will hold information vital to accurate claims processing. The timeline for movement to the Enterprise Medicaid Management Information System environment should include a single eligibility and enrollment system.

Taking full advantage of Affordable Care Act guidelines regarding presumptive eligibility, implementing the eligibility and enrollment module will allow all qualified entities to make presumptive determinations for both children and pregnant women. Eligibility for deemed eligible newborns can be automated, ensuring a timely billing source for providers.

In addition, Section 1940 of the Social Security Act created by the Supplemental Appropriation Act, 2008, Pub. L. No. 110-252, requires States to have a mechanism in place to verify assets for determining or re-determining Medicaid eligibility for aged, blind, and disabled Medicaid applicants or recipients. The Affordable Care Act required these systems to be electronic. The future state of the Alaska single eligibility system needs to seamlessly trigger an electronic Asset Verification System to explore and verify the assets at each application and re-determination of eligibility under the aged, blind, and disabled categories of Medicaid.

Recommendations to Achieve the “To-Be”

It is recommended to include the eligibility components in the Medicaid Information Technology Architecture 3.0 State Self-Assessment. This will highlight any weakness, beyond those already identified, which could impact the Enterprise and ensure this component is included in the outputs

of the Medicaid Information Technology Architecture assessment, including roadmaps and strategies. It is also recommended to evaluate the Medicaid Information Technology Architecture timeline and State government initiatives timelines to ensure the eligibility and enrollment system implementation is on track to support the Enterprise and the initiatives of Medicaid reform. In the event of a misalignment in timelines, DHSS should evaluate the options and ensure the current approach is on track to meet the enterprise needs. There are several single vendor Eligibility and Enrollment systems in use across States. Procurement or a technology transfer from another State may be an option as well as adding resources to the current approach to accelerate its outcome.

It is recommended to prioritize Presumptive Eligibility in the Eligibility Modernization Project and/or explore alternate methods to support Presumptive Eligibility, as well as explore options for automating the eligibility segment for deemed eligible newborns.

It is recommended to obtain an Asset Verification System to electronically verify the assets of applicants and recipients receiving Medicaid under the aged, blind, and disabled categories. Based on the language in the 2016 Annual Medicaid Reform Report, this electronic system may also be utilized for income and identity verification.

State Data Hub

Goal: To streamline access to available eligibility-related State data, improving quality of outcomes, and reducing worker and applicant burden across the Enterprise

State Data Hub “As-Is”

In meeting with the sub-groups, it was learned that program integrity staff must manually search wage records and other State data sources, and eligibility staff must complete various online searches to make an eligibility determination.

Many States are moving towards a more inclusive State data hub or State integration hub for ensuring accurate eligibility, viewing it as a better method for gathering data to verify the eligibility of their clients across multiple programs. States can create a data hub to gather information across multiple State data sources and make that information available at time of application.

State Data Hub “To-Be”

A State-level data hub or State integration hub acts as a centralized State data repository, containing data from sources such as vital statistic birth and death records, unemployment insurance payments, and State wage records. The data hub is utilized at application and re-applications for all applicants and a dashboard or inquiry tool would be available for authorized personnel. The State data hub would include sources such as child support, unemployment insurance, and vital records. Depending on State policies for the issuance of driver’s licenses, including that information in the data hub may also provide proof of identity.

Recommendations to Achieve the “To-Be”

To enable better sharing of information, the development of a State data hub (or State integration hub) is suggested. The hub will act as a centralized integrated hub for sharing data across various entities and systems in the Enterprise, including identified related systems. This data hub will be part of the larger Medicaid Enterprise data hub. It is anticipated that the Medicaid Enterprise data

hub will expand to include storage of nontraditional data as new areas of business and information is identified as relevant to improving coordination of care and the overall health and well-being of the Medicaid population.

One data source that other States have used that Alaska may consider including would be “The Work Number,” a user-paid verification database created by TALX Corporation, which is one of the largest repositories of employer-reported employment and income data. If the State elects to use their own State data hub to meet the requirements of the federally mandated asset verification system, inclusion of the Automated Clearing House Bank Routing file system will be needed in addition to property records.

It is recommended for DHSS to obtain a vendor or include the scope of work in a Systems Integrator procurement to work with DHSS to develop a State data hub. As part of the data governance, Alaska will be providing the framework criteria for individual matching that feeds into the State’s Master Client Index to ensure consistency across the Enterprise. The State data hub can be leveraged by other benefit programs to retrieve and store information such as the Electronic Benefits Transfer card usage, foster care cases (as identified by Title IV-E of the Social Security Act) can use the data hub to automatically trigger a Medicaid case file and initiate a Primary Care Physician appointment via interaction with the referral or care management module. This data hub can be used to transmit newborn records from vital and public health records to expedite newborn eligibility as well as date of death to terminate various assistance programs. The data hub can pull data from Public Assistance Reporting Information System, lifeline, and Low-Income Subsidy referrals and trigger appropriate action. The hub can support referrals to the Women, Infants, and Children program as appropriate, and data from local jails and prisons to trigger appropriate actions on Medicaid eligibility files.

The data hub would interface with the State’s eligibility system, providing electronic triggers, verification, and uploaded data for many components of the public assistance applications. In addition, the hub will support the ability to query historic data for identified areas of DHSS that have a business need to access historical data, such as program integrity.

D.7 REFERRAL MANAGEMENT MODULE

Goal: To improve the referral process to include non-medical community organizations and ensure the referring entity is alerted of the outcomes and receives relevant information for ongoing care

Referral Management Module “As-Is”

Providers voiced concerns in the workgroup meetings that when referring patients to other providers they generally do not receive appropriate patient data back to ensure their member records are complete, also known as “closing the referral loop.” As the conversation evolved, it was expanded to include the inability of providers to refer to community resources that may be equipped to meet their patient’s social needs. Based on conversations across all stakeholder meetings, the need for a global enterprise referral system was noted.

Referral Management Module “To-Be”

A robust referral system is needed that has many capabilities including the inclusion of community resources as well as clinical providers. The system would distribute referrals evenly among comparable resources in each geographic area through load-balancing algorithms. This is particularly helpful with community resources to ensure no one single organization is being overloaded. Referral systems can be leveraged to make referrals within DHSS and to outside agencies.

The system would have a dashboard view and receiving providers can receive an alert to both the provider and office schedulers. The information transmits in real-time and includes the desired appointment date and time, patient demographic information for contact, and any additional records that need to be shared. The referral system enables end-to-end patient referral tracking by encouraging specialist staff to report appointment attendance or noncompliance (information beneficial to waiver case management for care plan adherence and needed intervention) as well as return clinical notes to primary care offices for better patient care and outcomes.

In addition, because referrals typically occur when there is a change of diagnosis or an escalation in care needs, the system can send real-time alerts to appropriate individuals when the diagnosis indicates a need for care management or other supportive services offered by specific Medicaid programs. Promoting swift introduction of care management or other needed supports ensures the patient is guided to an appropriate high-quality, low-cost setting and needed supports are in place to avoid further deterioration of the patient's health. The system can pull patient demographics and provider information from multiple sources identified by the agency.

The system can include an end user administration tool that allows each connected entity to update and manage their office as appropriate. Other features of the system may include the ability to see, via a heat map referral, patterns, and distance tracking from the referring provider or patient address to the specialist to ensure referrals are in alignment with policy rules regarding distance traveled.

Recommendations to Achieve the “To-Be”

It is recommended to obtain a referral system or module that is based on Service Oriented Architecture with open Application Programming Interface allowing for easy connection via the secure framework to both the Health Information Exchange and the DHSS Enterprise Service Bus. This system would be contingent on the establishment of a comprehensive provider directory that includes both medical and non-medical entities. The system can obtain provider data from the provider directory and member data from the Master Client Index, as should all other modules across the Medicaid Enterprise, including the Health Information Exchange.

The system must provide a user interface that allows community resources to connect as well as providers not utilizing the Health Information Exchange. The system can be leveraged to support waiver programs and Community First Choice as well as any care management services that may be in place within the enterprise.

D.8 CARE MANAGEMENT

Goal: Improve care management across the State

Care Management “As-Is”

Providers discussed that the lack of data standardization and interoperability are creating barriers to care management. Providers do not have access to needed data or methods to support their patients’ clinical or social determinants of health. Currently, Alaska Medicaid has limited care management programs; Care Management Services and Alaska Medicaid Coordinated Care Initiative. Care Management Services is a voluntary program and is operated by a contractor, Qualis Health that has nurse case managers to assist recipients and their families to obtain needed health and community services. Alaska Medicaid Coordinated Care Initiative, also a voluntary program, provides one-on-one case management services including scheduling appointments, addressing barriers, and referrals to specialist and social supports.

Alaska has four 1915 (c) waivers: Intellectual & Developmental Disabilities, Adults Living Independently, Adults with Physical and Developmental Disabilities, and Children with Complex Medical Conditions, and a State plan program providing Personal Care Services for approximately 4,000 individuals who do not meet institutional level of care.

Alaska recently received approval of two State Plan Amendments:

- 1) Providers targeted case management services for individuals transitioning to a community setting and is available for up to 60 consecutive days of a covered stay in a medical institution. Services include a comprehensive assessment to determine the need for medical, educational, social, or other services.
- 2) Community First Choice 1915(k) State plan option provides choices for recipients, and, if elected, recipients can receive Personal Care Services and care coordination

Medicaid Redesign Senate Bill 74 has several provisions to enhance care management including a directive for DHSS to evaluate and/or deploy an expanded care case management system or managed care and a demonstration project for behavioral health. In addition, the State has a Chronic and Acute Medical Assistance program for those not eligible for Medicaid.

Care Management “To-Be”

Providers must have the tools necessary to provide patient-centered care. Patient information is readily available including any past screenings, assessment, and care plans. DHSS has a clear view into the activities of case management across all areas of Medicaid. This view will provide many advantages from oversight to avoiding duplication of services. Consolidated data will allow DHSS to evaluate success rates of various approaches to care management across the Enterprise. This will support efforts to improve outcomes, reduce cost, and ensure recipients are receiving the right care, in the right setting, for the right cost. Waiver case managers can determine if care plans are being followed and utilize work flow components. Waiver management can track enrollments and budget neutrality of each waiver at any given point in time.

Recommendations to Achieve the “To-Be”

It is recommended that DHSS obtain a Care Management Module that will be loosely coupled for easy integration with both the Health Information Exchange and the Enterprise Service Bus to support interoperability. The Care Management Module will support all areas of care management across DHSS using role-based access to ensure only appropriate information is presented. The module should include a case management tool to support various activities across the Enterprise in need of a consolidated case file with workflow prompts and alerts. The care management system will support any future managed care programs, home and community-based services programs, and the Community First Choice State plan, as well as provide a shared platform for any future Administrative Service Organizations.

In addition, the module should be able to support (i.e. process, store, and display) data from an Electronic Visit Verification System ¹. Use of an Electronic Visit Verification system was mandated by law (21st Century Cures Act, Section 12006) for all personal care services (in place by 2019) and home health services (in place by 2023) under Medicaid.

The Care Management Module will support grievance and appeals relating to care management and will link to the Referral Management module identified above and the provider directory identified below as they are developed.

As the Medicaid Enterprise matures, the module will couple with the data warehouse and decision support to allow for the development of dashboards, data analytics, and predictive modeling for potentially at-risk recipients.

The Care Management Module would primarily support the Medicaid Enterprise but could be leveraged in the future to meet other needs across the State, such as coordination of care with private entities including Corrections and private carriers. The procurement should include the flexibility for additional functionality and use cases to be included in the solution.

D.9 PROVIDER DIRECTORY

Goal: A provider directory capable of meeting the care coordination needs of Alaska

Provider Directory “As-Is”

There is not a statewide authoritative source of provider information in Alaska. There is the Medicaid Management Information System provider file that is used for payment purposes, but this information falls short of meeting the needs of the community. Care coordination and referral systems are dependent on a Provider Directory.

Provider Directory “To-Be”

The DHSS needs to obtain a Provider Directory that can be leveraged by individuals, plans (including Medicaid), Health Information Exchanges, and any other qualified users. The Provider Directory features an extended data set that includes community supports, other governmental programs, and non-governmental organizations, in addition to traditional medical providers. This Directory is used by all State programs including any future MCOs or Administrative Service

¹ <https://www.congress.gov/bill/115th-congress/house-bill/6042>

Organizations and identifies your Telehealth providers. It currently supports the Referral Management module and Direct Secure Messaging. This provider directory will be a valuable tool in helping to position the Medicaid Enterprise as it moves toward value-based payment models by making a comprehensive set of information about providers accessible to stakeholders.

Recommendations to Achieve the “To-Be”

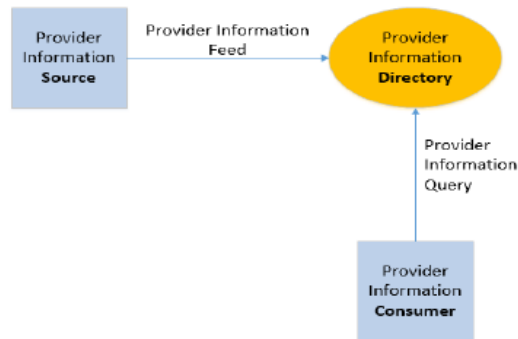
It is recommended the DHSS obtain a robust Provider Directory module that can receive data feeds from multiple sources and harmonize the information into an authoritative statewide Directory. The specifics regarding this statewide Provider Directory will largely depend upon the use cases that exist as well as the available resources that can be leveraged. However, there is a growing recognition throughout the industry that to utilize Provider Directories to support the transition to value-based care models, Provider Directories will need to include:

- Additional types of providers, including non-clinical types (i.e. nutrition, transportation, housing)
- Affiliations between providers and affiliations with care teams, including individuals with organizations
- Ability to link to additional data sources
- Support for patient-to-provider attribution models

In its State Health IT Modular Functions for Value Based Payment Strategic Implementation Guide, the Office of the National Coordinator for Health IT describes three Provider Directory models: (1) basic centralized, (2) simple federated, and (3) complex federated. Medicaid HITECH consolidated the information in their report, “eCQM and Provider Directory Toolkit: An Introductory Conceptual Guide for State Medicaid Agencies”². These models are presented to illustrate the general flow of information and can be used to evaluate the models’ relevance to DHSS needs and environment.

² <https://qppsurs.files.wordpress.com/2018/07/ecqm-prov-dir-toolkit-508.pdf>

Centralized Model—may be more representative of the current state of provider directories



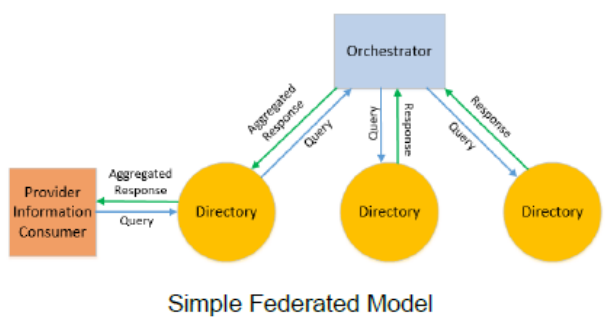
Provider information sources feed new and updated provider information into a Provider Directory, and consumers of information can query the directory.

- Authorized Information Sources include:
- National Plan and Provider Enumeration System (NPPES)
 - State licensing bureaus
 - National associations
 - Commercial registries
 - Delivery networks
 - Health Information Exchanges

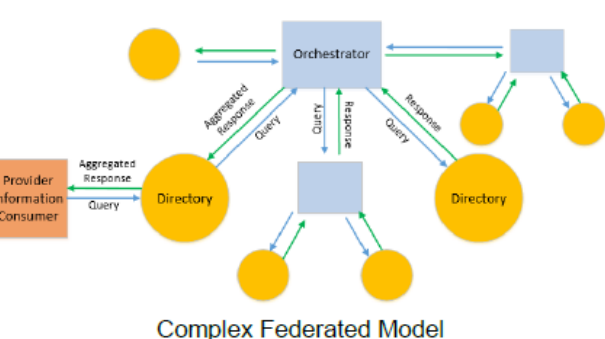
Source: Recreated from [State Health IT Modular Functions for VBP: Strategic Implementation Guide](#)

Figure 3: Centralized Provider Directory Model

Federated Models—Could be basis for the future state of Provider Directories



Simple Federated Model



Complex Federated Model

Structure: Multiple directories that communicate with a higher-level orchestrator

- Information flow:
- A query can be made with any one of the provider directories;
 - Query is relayed from the directory to the higher-level orchestrator node;
 - Orchestrator then relays the query to the other subordinated directories;
 - The directories send their responses to the orchestrator, which aggregates the information;
 - Orchestrator then sends a response to the initial directory that the consumer queried;
 - Aggregated response is then provided to the consumer.

Source: Recreated from [State Health IT Modular Functions for VBP: Strategic Implementation Guide](#)

Figure 4: Federated Provider Directory Model

There is not a single model of Provider Directory that works best for all States, however, the trend is toward a single authoritative source of data to obtain efficiencies and eliminate redundant effort. Many States are in the process of researching and planning efforts to implement a statewide provider directory and are at various phases of that process. As provider directories is a topic in which there has historically been limited standardization and many are still working through the process of planning efforts, there are few States who have seen a provider directory solution through to completion. However, of those who have successfully implemented a provider directory solution or are actively working on implementing a solution there are some commonalities. All have enlisted the services of a vendor to assist in the provider directory efforts. Some are using non-profit entities that are also operating the Health Information Exchange for the state, some are using off the shelf products and are working with the vendor to implement, and others have opted to procure from a vendor that is performing the work for another state. In all cases, state government entities work closely with the vendors and maintain an active role in establishment of requirements and governance activities associated with the directories. Some are have opted to leverage state government IT resources for hosting while others are hosted by the vendor.

To create a provider directory that will meet the needs of the stakeholders of the Alaskan healthcare ecosystem, it will be necessary to identify the needs and use cases to be met, any emerging care coordination models to be supported, and if any relevant state or federal regulations exist. This will likely involve a high level of stakeholder engagement and extensive strategic planning efforts including researching publicly available information regarding the considerations of implementing a provider directory solution and any lessons learned information that may be available through other States efforts. This information will drive the development of a provider directory that will best support the needs of DHSS and all relevant stakeholders.

D.10 DOCUMENT MANAGEMENT SYSTEM

Goal: Implement a Document Management System

Document Management System “As-Is”

The workgroup discussed that as the agency moves toward alternate payment systems and new delivery methods, the need for oversight and coordination will increase the workload of DHSS staff. This would come in the form of increased document traffic.

Document Management System “To-Be”

Efficiencies gained through automation will help reduce this burden on staff. Much could be accomplished with the addition of a Document Management System with an automated workflow.

Recommendations to Achieve the “To-Be”

Implementation of an enterprise electronic Document Management System and workflow management system can support DHSS staff as the agency moves toward alternate payment systems and delivery methods. It is recommended that Alaska obtain such a system as part of its strategy of modularizing the Medicaid enterprise.

D.11 TELEHEALTH

Goal: Reduce barriers for telehealth services

Telehealth “As-Is”

Funding from the USAC Rural Health Care Fund has increased the accessibility to broadband in rural parts of Alaska. Although access has improved, workgroup discussions indicated that Telehealth is not widely or consistently used throughout the State.

The Medicaid Redesign Telehealth Workgroup Report described multiple barriers to the adoption of Telehealth across the State including the lack of ability to reimburse for various Telehealth services and the expense of technology required for Telehealth services. The report also noted that access to adequate broadband services can be costly, and without continued funding and support, this cost could become a barrier. These findings were consistent with the discussion by provider participants of the Health Information Infrastructure Plan workgroup.

Telehealth “To-Be”

The “To-Be” vision for telehealth improves the ability for healthcare providers to provide care to patients from a remote location by reducing barriers and increasing adoption and support of Telehealth services. The main goal of the “To-Be” would be to increase the reimbursement available for a larger set of telehealth services, have streamlined coordination of care through technology including a Provider Directory as mentioned earlier.

Recommendations to Achieve the “To-Be”

Recommendations can be implemented by DHSS alone for Medicaid-enrolled providers or can include a partnership with private carriers across the State. Recommendations include:

- Establish and communicate with the provider community clear Telehealth policies, acceptable procedures, best practices, and enterprise wide tools
- Provide technical support and assistance to increase adoption of Telehealth
- Develop a Provider Directory that highlights practices utilizing Telehealth
- Use lessons learned from Indian Health Services including the practice of placing individuals at specific geographic locations to assist people with Telehealth
- Advocate for continued funding support for rural broadband connections
- Increase funding available for providers to offset the cost of technologies to support telehealth

D.12 PROVIDER ENROLLMENT AND MANAGEMENT

Goal: To streamline and improve provider enrollment across all payers

Provider Enrollment and Management “As-Is”

The most prevalent complaints among workgroup participants regarding provider enrollment and management were:

- Significant lag-time required to credential with private payers within the State
- Need for increased automation and streamlining of the enrollment process across all payers

Workgroup participants pointed out that current opportunities to decrease the administrative burden of enrollment on the provider are not consistently utilized by all carriers. For example, it was noted that Medicaid does not utilize Council for Affordable Quality Healthcare for the application process. More than 1.4 million physicians and other providers enter and maintain a wide range of information within the Council for Affordable Quality Healthcare ProView, each creating a comprehensive provider profile to share with the healthcare organizations they choose. Nearly 900 health plans, hospitals, and provider groups utilize the Council for Affordable Quality Healthcare ProView³. Utilization of the Council for Affordable Quality Healthcare would potentially offer an opportunity for Medicaid to streamline and reduce duplication of paperwork for providers who wish to apply for participation.

Provider Enrollment and Management “To-Be”

Provider enrollment and management that is streamlined and automated wherever possible, and the opportunity for payers to leverage a shared common credentialing function, creates efficiencies and cost savings within the provider enrollment process across payers.

Recommendations to Achieve the “To-Be”

It is recommended DHSS evaluate the feasibility of implementing a statewide common credentialing program. Such a program would support streamlining of the credentialing process which is a necessary precursor step to the provider enrollment process for all payers. The ability for all payers to leverage a shared resource could reduce duplication of work across payers and in turn increase cost efficiencies and support the goal of providing provider information that has been fully and consistently vetted allowing for quicker enrollment at the payer level. The State of Oregon could potentially serve as a resource to obtain lessons learned and information regarding the potential pitfalls of implementing such a program as they are currently implementing a statewide common credentialing program.

In addition, in conjunction with the Medicaid Information Technology Architecture 3.0 State Self-Assessment, it is recommended that all provider enrollment and management business processes be fully reviewed and evaluated to determine areas in which the process can be streamlined and automated within the Medicaid Enterprise. Such options as the adoption of the Council for Affordable Quality Healthcare as an application mechanism could be considered in this review and evaluation.

³ https://www.caqh.org/sites/default/files/solutions/proview/CAQH_ProView_FINAL_4.7.15_final.pdf?token=4-8cNh4E

D.13 ELECTRONIC HEALTH RECORDS ADOPTION

Goal: Increase EHR Adoption

Electronic Health Records Adoption “As-Is”

The following list reflects the current electronic health records adoption as reflected in the environmental scan:

- Hospitals, Federally Qualified Health Centers affiliated providers, and Tribal affiliated providers have adoption rates of nearly 90 percent or better
- Electronic health records adoption rates are significantly lower among certain provider types such as dental and behavioral health providers
- Usage of electronic health records systems is often siloed within the walls of the practice/location with limited sharing of data with other healthcare entities
- Health Information Exchange adoption is low throughout the State with an overall adoption rate of 28 percent
- Telehealth adoption is limited with an adoption rate of only 29 percent. Tribal affiliated provider groups are the exception with an adoption rate of nearly 100 percent.
- Electronic exchange of data, including referral data, is limited across provider groups

Electronic Health Records Adoption “To-Be”

Electronic Health Records and other digital technologies are the future of healthcare. The Electronic Health Record industry predicts more competition and emerging cloud technology will make Electronic Health Records more affordable for smaller practices in the coming years⁴. MACRA will significantly impact how practices think and use electronic health records in the future. The ideal “To-Be” landscape would reflect increased adoption of electronic health records technology that meets emerging needs of practices, and technology that supports bi-directional communication between both providers and patients.

Recommendations to Achieve the “To-Be”

It is recommended DHSS continues to support and encourage Electronic Health Records adoption across the State through outreach and education, which may include, but not be limited to, webinars and educational materials, to ensure the provider community is informed and understand emerging trends and technologies.

⁴ Electronic Health Records (EHR) Market Analysis By Product (Client Server-based, Web-based), By Type (Acute, Ambulatory, Post-Acute) By End-use (Hospitals, Ambulatory Care), And Segment Forecasts, 2018 – 2025; 125 pages; April 2017; PDF

D.14 PUBLIC HEALTH MODERNIZATION

Goal: Improve the efficiency of public health reporting

Public Health Modernization “As-Is”

There are numerous healthcare-related registries used by the State. Public Health registries include, but are not limited to, the following:

- AK Facility Data Reporting – hospital inpatient and outpatient discharges (hospitals only)
- Lead Electronic Lab Reporting – currently reported by hospitals; this will be expanded for Eligible Hospital and Eligible Professional electronic submission
- OZ System – newborn screening and hearing detection
- AK Birth Defects Registry – infants and young children with birth defects
- Death and Injury Reporting – including multiple registries:
 - AK Firearm Injury Reporting Surveillance System – firearm related injuries
 - AK Fatality Assessment and Control Evaluation Registry – occupational injury data collection
 - AK Violent Death Reporting – injuries resulting in death
 - AK Drowning Surveillance System – drowning related fatalities
- Lead ELR
- Cancer Registry
- AKSTARS – reportable disease registry
- BioSense – syndromic surveillance reporting
- Electronic Lab Results reporting
- Trauma Registry
- VacTrAK-Immunization Registry

In March 2016, an analysis of the Public Health registries was completed by HealthTech Solutions. The report identified significant gaps in the utility of registry reporting and provided a recommended solution for integration. Most registries are Microsoft Access databases and do not have the capability to integrate with other systems. This has caused a barrier to have a streamlined method for data collection and limited utility for the registry data. Stakeholders did discuss that the VacTrAK immunization registry meets the needs of the provider community. Stakeholders also explained the frustrations and inefficiencies of the variations of the data sets and reporting methods required by the registry owner.

Public Health Modernization “To-Be”

Electronic public health reporting for all providers to all Alaska public health registries implemented as a ‘Report Once’ structure/process would accomplish a number of goals for the State. Electronic reporting will produce data for multi-purpose use in the State – Public Health, data analytics, and population health. A ‘Report Once’ structure will be much more efficient for providers and promote increased participation, as well as promote the utilization and value proposition of the Health Information Exchange.

In the “To-Be” state, the registries recognized as specialized registries by the State should be expanded. This will provide increased federal funding opportunities and can support the ability for

providers to attest to Meaningful Use. The system that collects required STD/HIV data, called PRISM, should be recognized as a specialized registry. As part of the PRISM project, results data from the State lab can be integrated in the Health Information Exchange by connecting the Laboratory Management Information System to the Health Information Exchange for query by subscribing organizations.

Recommendations to Achieve the “To-Be”

The first recommendation is for DHSS to revisit the 2016 assessment of the Public Health registries and determine the applicability of the data and recommendations. In the instance that the report is still relevant to the environment, it is recommended for DHSS, in collaboration with Public Health, to strategize on the execution of the modernization plan. Electronic public health reporting should be implemented for as many Alaska public health registries as is technically possible. Electronic reporting should be done via Health Level-7 standards reporting that meets the Center for Disease Control specifications as well as Meaningful Use/Promoting Interoperability as appropriate. Additionally, it is recommended that the State expand the registries that are recognized as specialized registries. The Alaska Department for Public Health should work with HealthConnect Alaska Health Information Exchange to develop interfaces and Health Level-7 reporting functionality. In this model, reporting would be centralized through the Health Information Exchange as illustrated below.

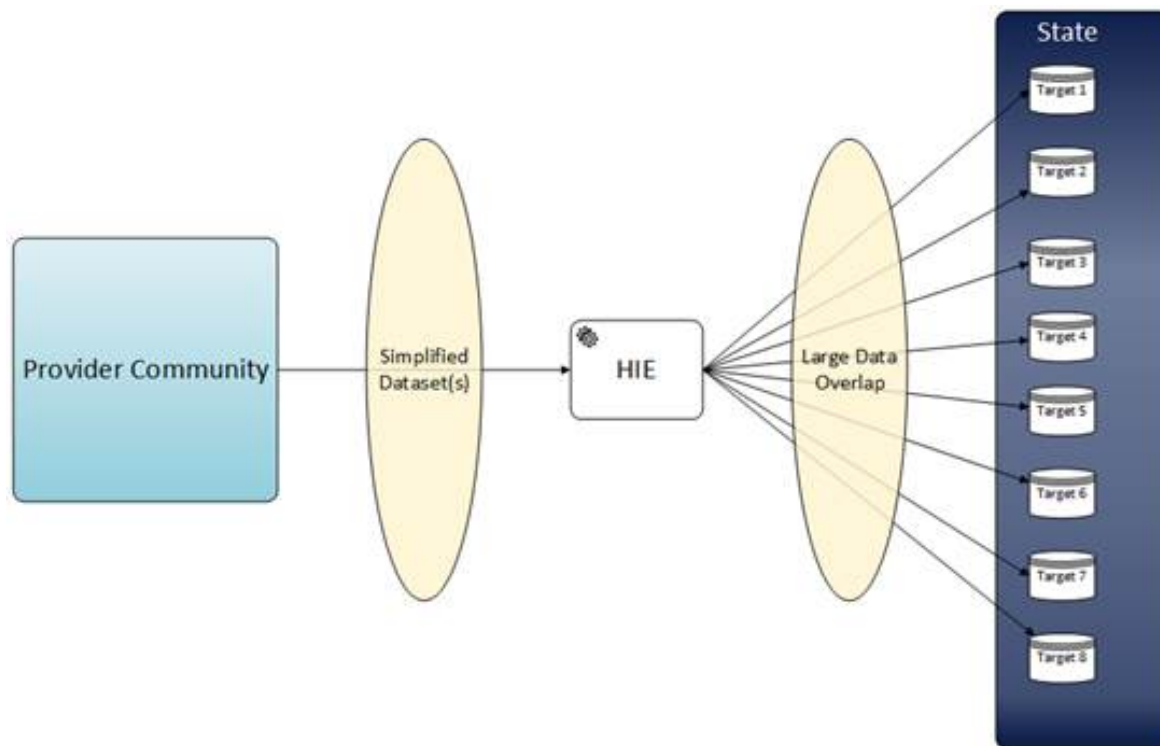


Figure 5: Provider Reporting, Desired State

E. PROJECT DELIVERY

This section contains areas that can have a positive impact on the success of future Information Technology solutions within DHSS. It was observed that the Department is in varying levels of maturity in these areas. This section has omitted the “As-Is” and moved to a format of describing the topic, and then summarizing the recommendations that DHSS should consider as they move forward. This section includes information on the following:

- Data Governance
- Enterprise Architecture
- Enterprise Project Management Office
- Independent Verification and Validation
- Testing and Quality Assurance Services
- Systems Integration

E.1 DATA GOVERNANCE

Lack of data governance policies and standards is creating a barrier to interoperability. Establishing a data governance committee helps to build the framework for establishing statewide data governance policies and standards and promote interoperability. Unfortunately, stakeholder engagement in data governance activities wanes over time. The workgroup recommended better recruitment, management, and coordination of data governance activities to ensure representation from key stakeholder groups.

Data governance is the discussion of how data is collected, processed, and disseminated across the Enterprise. What is collected, who can access, what are the usage limitations, and what are the retention requirements are all pertinent questions to be addressed by data governance. The function is multi-disciplinary and requires skillsets including technical, business, and legal experience. Much was discussed in the Health Information Infrastructure Plan workgroup sessions about the need for data governance with considerable focus on harmonization of data being received from various sources.

Recommendations

It is recommended that the DHSS create a data governance board and additional governance workgroups to develop data governance processes and address quality and consistency of all data within its purview or influence, including Health Information Exchange and internal state systems. The illustration below is a sample data governance organization based on a top down approach and hierarchy that can be considered by the DHSS.

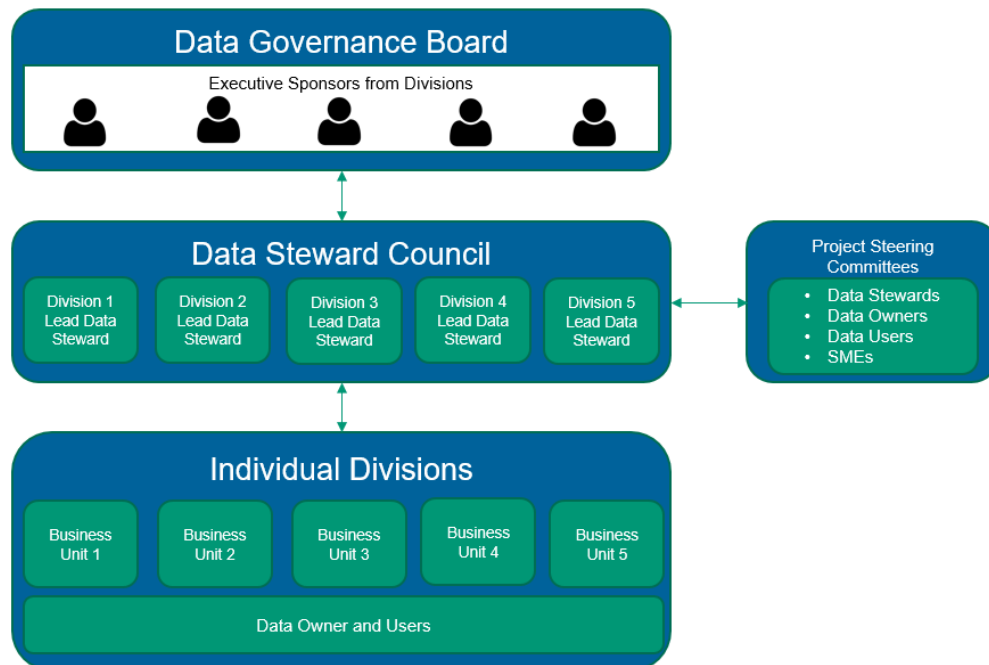


Figure 6: Data Governance Organization

E.2 ENTERPRISE ARCHITECTURE

Enterprise Architecture is primarily about setting standards, selecting specific technologies, and making sure all selected technologies are interoperable, support the business, and are cost effective. It is important to have an Enterprise Architecture group in place to connect the business, technical, informational, and cost topics to ensure a consistently appropriate environment even as that environment undergoes steady evolution. Enterprise Architecture consists of models, diagrams, tables, and narratives, which together translate the complexities of the agency into simplified yet meaningful representations of how the agency operates and intends to operate. This includes business processes, rules, information needs and flows, users, and location as well as hardware, software, data, communication, and security standards. Enterprise Architecture analysis provides Agency leadership with clear views into the operational reality. The Enterprise Architecture development, implementation, and maintenance is a basic principle of effective Information Technology management. The Enterprise Architecture group will provide consistent architectural guidance and will establish enterprise architecture and standards for future Information Technology solutions.

For Medicaid modernization, States are now utilizing the services of a Systems Integrator to manage the integration of separately procured modules. The Enterprise Architecture group works alongside the Systems Integrator in these cases and helps codify standards, support the inclusion of standards in the Request for Proposals, and help with the vendor selection process as experts.

Recommendations

It is recommended that DHSS convene a permanent Enterprise Architecture group and empower them to make meaningful decisions regarding the information and technical architecture of the Alaska DHSS Enterprise. One of the first orders of business for the Enterprise Architecture group will be to establish a charter for the group's authority, objectives, roles and responsibilities, membership, decision making (voting authority), escalation, and alignment with State policy. The group can be staffed with State government staff or staff augmentation contractors and membership should include:

- Senior Technical Architect with focus on Alaska DHSS Enterprise projects supporting Medicaid
- Senior Technical Architect with focus on Enterprise Architecture Standards
- Data Architect with knowledge of Medicaid and national frameworks such as Medicaid Information Technology Architecture and National Human Services Interoperability Architecture
- Interface and Interoperability Subject Matter Expert
- Security Analyst to develop security compliance plans in accordance with applicable laws and regulations
- Privacy Subject Matter Expert

Staffing options should be full-time during the Medicaid Enterprise modernization project. This will provide more responsiveness to the project and help reduce schedule, cost, and functionality gap risks. Funding can be obtained through an Advance Planning Document with the Centers for Medicare and Medicaid Services to offset the cost of additional staffing. It is expected that Enterprise Architecture staffing will evolve beyond the Medicaid Enterprise modernization and be key as the Department expands and evolves.

The Enterprise Architecture group will host regular meetings to discuss topics of interest, set policy, and approve technical plans and designs. These meetings will include other personnel from DHSS, the Systems Integrator, modular vendors, and the Independent Verification and Validation as needed. The Enterprise Architecture group will guide development plans, assist with procurement requirements and specifications, and ensure the agreed upon architectural direction is followed.

E.3 ENTERPRISE PROJECT MANAGEMENT OFFICE

Discussion within the workgroup sessions reflected the past difficulties within the DHSS when launching large Information Technology solutions. Major system development and enhancements are difficult to manage, in part due to the large number of stakeholders and the time-consuming process of vendor management. Each vendor is unique with varying approaches and timelines.

An established Enterprise Project Management Office staffed with skilled project managers who dedicate the time and attention to vendor management while working together with DHSS's own project managers and policy staff is needed when launching large Information Technology solutions. The Enterprise Project Management Office absorbs the daily oversight of new system development and facilitates coordination between various stakeholders. In addition, an Enterprise

Project Management Office could support DHSS in coordinating documentation between future vendors, including Independent Verification and Validation vendors.

Recommendations

An organization can benefit from the vision of efficient, timely, and functional Information Technology projects by utilizing an Enterprise Project Management Office. An Enterprise Project Management Office assists the organization's executive by bringing a project management and software expertise framework to tracking and evaluating project progress. This is especially critical in organizations where there are dependencies on, or implications for, other organizations and sub-units. Most ideally, an Enterprise Project Management Office allows for a team of experts to execute Information Technology projects that fulfill an executive's mission, vision, and goals. This team of experts should represent the organization's policy disciplines (e.g., healthcare, transportation, child support), project management, and technologists. This multi-disciplinary approach allows the team, on the executive's behalf, to properly govern projects without falling into silos.

When properly executed, an Enterprise Project Management Office will reduce project inefficiencies, schedule delays, and increase end user satisfaction. Every organization has opportunities to benefit by ensuring that Information Technology developers and stakeholders are cooperative, informed, and transparent. Since Information Technology projects usually involve numerous teams, products, and integrations, coordinating these teams can be a heavy lift. In large private or government bureaucracies, competing priorities may develop, making it difficult to meet schedule and budget obligations. Furthermore, Enterprise Project Management Office vendors allow the client to contract for specific subject matter expertise; particularly project management, technical architecture, software development, program and policy, and operations management which may alleviate resource strain experienced by DHSS.

Moving to a modular enterprise often means working with multiple vendors simultaneously and without a dedicated Enterprise Project Management Office, State government resources are stretched. It is recommended that DHSS obtain the services of an Enterprise Project Management Office to assist through this transitional process.

E.4 INDEPENDENT VERIFICATION AND VALIDATION

State Medicaid Director Letter 16-010⁵ was released August 16, 2016. This letter provided guidance to State health and human services departments with strategies for modularity of Medicaid Enterprise systems. As part of the guidance, Independent Verification and Validation was discussed. Under Code of Federal Regulations, title 45 section 95.626, an Independent Verification and Validation vendor may be required for large Medicaid Information Technology projects. Based on the regulation and guidance of the State Medicaid Director letter, it is a requirement for State agencies to obtain an Independent Verification and Validation vendor for Medicaid Enterprise modernization and modular projects, including eligibility and enrollment procurements.

⁵ <https://www.medicaid.gov/federal-policy-guidance/downloads/smd16010.pdf>

The scope of the Independent Verification and Validation is detailed in the Medicaid Enterprise Certification Toolkit and includes the evaluation of project management, evaluation of project performance, evaluation and management of testing processes, and technical reviews of all modules. The main role of the Independent Verification and Validation is to provide an impartial assessment of the progress of large scale projects.

Recommendations

Alaska shall comply with the regulations related to all Independent Verification and Validation requirements. As such, it is recommended for DHSS to include an Independent Verification and Validation vendor as a component of any major solution redesign or procurement effort. Additionally, to control efficiencies and cost, it is recommended the same Independent Verification and Validation vendor be leveraged across all Medicaid Enterprise implementations. To ensure true independent status, the Independent Verification and Validation vendor should not be allowed to bid on any functional modules or serve as the Systems Integrator for the Enterprise.

E.5 TESTING AND QUALITY ASSURANCE SERVICES

In a modular world, it can become complicated to test a process that involves solutions from multiple vendors. All vendors test their own technologies, but a complicated environment could lead to questions when testing the overall processes when workflow or orchestration is hiding underlying details. Also, in a complicated environment, someone will need to manage all the test cases, their status, defect resolution processes, and other testing related topics.

Quality Assurance services go beyond testing and provide statistical analysis of the state of the testing effort, defect analysis, and other quality topics. This activity can be provided by the testing vendor or can be outsourced separately. Alaska may wish to separate these activities to improve the chance of an Alaska vendor winning the bid as the Quality Assurance services require a higher level of skill that some small companies may lack.

Automated testing tools are important to achieve deep testing because they can run many tests without human interaction leaving human testing staff available for more challenging tasks.

Recommendations

It is recommended that DHSS hire a dedicated testing vendor to manage all aspects of the testing process and perform testing services that are not performed by the module or Systems Integrator vendors. The timing of this should correspond with the deliverable schedule of the module or Systems Integrator vendors, whichever comes first. Also, review and evaluate a standard suite of automated test tools to be established with the assistance of the Enterprise Architecture group. An additional recommendation is to assign dedicated test coordination staff to lead the testing effort from the DHSS side.

E.6 SYSTEMS INTEGRATOR

The Centers of Medicare and Medicaid Services has provided guidance to States regarding the modular approach to the Medicaid Enterprise through both the State Medicaid Director⁶ letter #16-010 and the Medicaid Enterprise Certification Toolkit volume 2⁷, which superseded the prior Medicaid Management Information System Certification Toolkit. Both toolkits promote the utilization of Systems Integrator for supporting the design, development, implementation, and operation of Medicaid Enterprise systems. The Centers of Medicare and Medicaid Services has defined the role of the Systems Integrator as having a specific focus on ensuring the integrity and interoperability of the Medicaid Information Technology Architecture and cohesiveness Medicaid Enterprise modules and systems. The Centers of Medicare and Medicaid Services envisions a modular Service Oriented Architecture for Medicaid Enterprise with the Systems Integrator responsible for successful integration of the infrastructure.

The Centers of Medicare and Medicaid Services defines the role of the Systems Integrator as follows:

- At a detailed technical level, helps establish standards and ensures that all modules work together seamlessly and securely with external systems
- Ensures that overall security and privacy remain intact when various modules and components are integrated
- Manages, coordinates, and supports the work of multiple Medicaid Enterprise module vendors and negotiates solutions to disagreements that may arise between different development contractors
- Ensures modules are being built using appropriate interoperability standards
- Manages risks that may arise when scheduled or technical slippage in one module affects other modules
- Cooperates with a State's Project Management Office and the Independent Verification and Validation contractor to give an accurate, honest reporting of project status

States are encouraged to use an acquisition approach that limits the potential conflict of interest a Systems Integrator may have in choosing the modular solutions to be incorporated into the Medicaid Enterprise. The Systems Integrator may be precluded from bidding on procurements of the Medicaid Enterprise module application software, though the Systems Integrator may provide elements of the technical infrastructure such as the DHSS Enterprise Service Bus, master data management tools, and identity and access management tools. The goal of the Centers of Medicare and Medicaid Services is to avoid being locked in to a single vendor or an otherwise closed set of solutions. Instead, the Centers of Medicare and Medicaid Services is encouraging States to obtain modules from multiple vendors.

Recommendations

It is recommended to obtain a Systems Integrator and work closely with this vendor as they will be tasked with working in conjunction with each module vendor, connecting disparate technology,

⁶ <https://www.medicare.gov/federal-policy-guidance/downloads/smd16010.pdf>

⁷ <https://www.medicare.gov/medicaid/data-and-systems/mect/index.html>

and ultimately keeping the project on track. The Systems Integrator is to create an environment in which different vendors can work collaboratively. The Systems Integrator contract should clearly outline the Systems Integrator's responsibilities and authority. For example, DHSS may choose to empower the Systems Integrator to make or impact change to the original plan as issues arise. These responsibilities would be outlined in the contract. States can retain this authority and include language in the contract that clearly outlines the expectations for resolution of issues and decision making.

In researching other States' approach to systems integration, five options were found to be most commonly utilized by States. Below is an outline of those options. Based solely on the recommendations within this this roadmap, Option 5 would be the desired approach for DHSS. All options have been provided for reference should DHSS choose to incorporate any of these recommendations with the Medicaid Enterprise modernization following the Medicaid Information Technology Architecture State Self-Assessment.

Systems Integrator Options

Option 1: Full Fledged Systems Integrator

The Systems Integrator provides the integration layer as well as the hosting of all modules. The Systems Integrator provides:

- Servers, hardware, and System software (not the modules)
- Hosts modules from other vendors
- Disaster recovery
- The Integration functionality for the modules to talk to each other
- Key governance stakeholder

This option offers true modularity but has the disadvantage that some vendors are not open to hosting their solution on other vendors' hardware. Also, economies of scale that a module vendor might have in their own data center are not realized. In this option, the Systems Integrator is generally prohibited from bidding on other modules.

Option 2: Architectural Systems Integrator

The Systems Integrator does not provide any hardware or software but serves in an advisory capacity. The Systems Integrator is responsible for ensuring that the other vendor hosted modules integrate and deliver an integrated solution. The Systems Integrator is held accountable for all integration work and provides:

- Architectural design
- Interface data definitions
- Integration governance
- Modular vendors host their own solution

This option offers modularity as well as third-party oversight on two modules connecting with each other. The accountability component of such an Systems Integrator scope of work needs to be well defined within the contract.

Option 3: Systems Integrator with “Pass-Thru”

This option is very similar to Option 1, except the Systems Integrator also issues Request for Proposals, contracts with the module vendors, and is responsible for integration. They however do not host the solution. The State participates in all these activities and the module costs are passed through from the State to the Systems Integrator and on to the module vendor. This option allows for a faster procurement timeline for modules but may not be allowed in some States due to procurement regulations.

Option 4: Advisory Systems Integrator

This option is similar to Option 2, except the Systems Integrator is not directly accountable. The Systems Integrator provides subject matter expertise, as well as project management resources, who advise the State staff and module vendors on integration. In such a scenario, it is important that the State implements oversight on the quality of work the Systems Integrator does as the Systems Integrator is not directly responsible nor accountable for the delivery of an integrated product.

Option 5: Combo Systems Integrator

This option is a combination of Option 2 and Option 4 with an add-on for Quality Assurance /testing efforts. The Systems Integrator does not provide any hardware/software but is responsible and accountable for:

- Architectural design
- Interface data definitions
- Integration governance
- Quality Assurance and Integration testing

The Systems Integrator plays an advisory role in:

- Project Management
- Module Functionality
- Project Governance

Systems Integrator Functionality	Option 1: Full Fledged Systems Integrator	Option 2: Architectural Systems Integrator	Option 3: Systems Integrator with “Pass-Thru”	Option 4: Advisory Systems Integrator	Option 5: Combo Systems Integrator
Provides hardware and systems necessary for integration	✓		✓		
Hosts all solution	✓		✓		
Accountable/Responsible for system integration	✓	✓	✓		✓
Manages module vendors, including their procurements			✓		
Provides Systems Integrator related subject matter expertise	✓	✓	✓	✓	✓
Quality Assurance & Integration Testing	✓		✓		✓
Total Cost	Very High	Medium	Highest	Low	Medium

F. BUSINESS CASE VALUE

Recommendations developed from the Gap Analysis process have been prioritized based on the perceived value to the Enterprise. Recommended projects have been listed in the grid below based on a combination of the perceived business value for the Enterprise and the urgency of the project or recommendation. In general, items that are considered high business value and urgent are projects that have a critical impact on the operations of State government. Those items considered less urgent are projects and recommendations that may be dependent on the completion of other projects or are items that, if not completed, would not interrupt the functions of State government. Many of these recommendations are to enhance functionality or obtain new technologies to improve services provided to clients, streamline processes, and increase interoperability amongst enterprise systems.

	Urgent	Less Urgent
High Business Value	<ul style="list-style-type: none"> • Medicaid Information Technology Architecture Related Projects • Health Information Exchange Platform Modernization and Related Projects • Data Governance • Enterprise Architecture • Enterprise Project Management Office • Independent Verification and Validation • Systems Integration • Telehealth • Electronic Health Records Adoption • Public Health Reporting 	<ul style="list-style-type: none"> • Fraud, Waste, and Abuse • Referral System • Provider Enrollment and Management • Secure Identity and Access Management • Eligibility and Enrollment • Care Management <ul style="list-style-type: none"> • Testing and Quality Assurance Services • Provider Directory
Minimal Business Value	<ul style="list-style-type: none"> • Document Management Systems 	

The feasibility of recommendations is dependent on a variety of external factors including resource availability, funding availability, and policy changes and levers. The future direction including the outcome of the coordinated care demonstration project and behavioral health accountable service organization should be considered when prioritizing recommendations.

G. BUDGET

The table below presents the estimated price range for each major recommendation of the Health Information Infrastructure Plan. The budget figures are presented as a range of price estimates that have been derived based on industry trends and procurements of similar solutions in other States. The price estimate is greatly dependent on the following items:

- Procurement methodology
 - To execute the project:
 - Will a competitive procurement be required?
 - Will this be sole sourced?
 - Will it be obtained from a State to State transfer?
 - Might it be done in house?
- Desired functionality
 - Will customization be requested?
 - Expanded scope?
- Implementation timeline
- Number of users
 - If the project requires a solution to implemented, how many users will the system be supporting?
 - Is it cost prohibitive based on the number of users that will be using the tool?
 - Are there multiple user roles?
- Availability of funds

The below price estimates are reflective of the Design, Development and Implementation phase and do not include ongoing maintenance and operations.

Estimated Price Range for Health Information Infrastructure Plan Recommendations	
Health Information Infrastructure Plan Recommendation	Estimated Price Range
Health Information Exchange Platform	\$6-\$10 million
Medicaid Information Technology Architecture Assessment (Vendor supported)	\$1-\$3 million
Master Client Index	\$3-\$6 million
Fraud, Waste, and Abuse System	\$1-\$3 million
Secure Identity and Access Management	\$3-\$6 million
Eligibility and Enrollment/Asset Verification System	\$1-\$3 million
Eligibility and Enrollment Presumptive Eligibility functionality	less than \$1 million
Eligibility and Enrollment Automation of Deemed Eligibility	less than \$1 million
Eligibility and Enrollment State Data Hub	\$3-\$6 million
Referral Management Module	\$1-\$3 million

Estimated Price Range for Health Information Infrastructure Plan Recommendations	
Care Management	\$6-\$10 million
Provider Directory	\$3-\$6 million
Document Management System	\$1-\$3 million
Telehealth	less than \$1 million
Common Credentialing to support Provider Enrollment	\$6-\$10 million
Electronic Health Records Adoption	\$1-\$3 million
Public Health Modernization	\$6-\$10 million
Data Governance	\$1-\$3 million
EPMO	\$3-\$6 million
Enterprise Architecture	\$1-\$3 million
Independent Verification and Validation Vendor	\$1-\$3 million
Systems Integrator	\$6-\$10 million
Testing and Quality Assurance	\$1-\$3 million

A price estimate was established for the project delivery recommendations, however, as a general rule of thumb, the price range for those projects will typically be based on a percentage of the overall project cost as detailed in the chart below.

Recommendation to Support Project Delivery	Pricing Estimate Industry Trends
Data Governance	Generally estimated to be approximately 5% of the overall project cost
Enterprise Project Management Office	Generally estimated to be approximately 10% of the overall project cost
Enterprise Architecture	Generally estimated to be approximately 5% of the overall project cost
Independent Verification and Validation Vendor	Generally estimated to be approximately 5% of the overall project cost
Systems Integrator	Generally estimated to be approximately 15% of the overall project cost

Recommendation to Support Project Delivery	Pricing Estimate Industry Trends
Testing and Quality Assurance	This price estimate will be dependent on the Systems Integrator model selected. Some Systems Integrator models will include testing and Quality Assurance services and others will not. In the instance the Systems Integrator is not responsible for testing and Quality Assurance, the cost is generally estimated to be approximately 5% of the overall project cost

H. CONTINGENCY PLAN

The Health Information Infrastructure Plan Contingency Plan establishes alternative plans DHSS could consider for the projects. A recommended contingency has been established for each major project identified in the Gap Analysis section of this report. The recommended contingency is intended to serve as an alternative consideration in the event a recommendation was cost-prohibitive, or funding was unable to be secured, deemed to not be in alignment with the Department goals and vision, or unattainable for any other reason. These recommendations are intended to support the decision-making process and clearly identify the risk of the project not being attainable or feasible. The contingency plan should be revisited as each project progresses to allow for new contingencies to be identified or risks to be adjusted. The chart below outlines the recommended contingency for each major project established by the Health Information Infrastructure Plan.

Alaska Health Information Infrastructure Plan Recommended Contingencies		
Health Information Infrastructure Plan Recommendation	Risk	Recommended Contingency
Health Information Exchange Platform	Medium	Business as usual
Medicaid Information Technology Architecture Assessment (Vendor supported)	Low	No contingency, required by federal guidance
Master Client Index	Medium	Business as usual
Fraud, Waste, and Abuse System	Medium	Obtain from another State
Secure Identity and Access Management	Medium	Business as usual
Eligibility and Enrollment/Asset Verification System	Medium	Obtain from another State
Eligibility and Enrollment Presumptive Eligibility Functionality	Low	Business as usual
Eligibility and Enrollment Automation of Deemed Eligibility	Low	Business as usual
Eligibility and Enrollment State Data Hub	High	Business as usual
Referral Management Module	High	Business as usual

Alaska Health Information Infrastructure Plan Recommended Contingencies		
Care Management	Medium	Obtain from another State
Provider Directory	Medium	Business as usual
Document Management System	Low	Business as usual
Telehealth	Medium	Business as usual
Common Credentialing to support Provider Enrollment	Medium	Business as usual
Electronic Health Records Adoption	Low	Business as usual
Public Health Modernization	Medium	Business as usual
Data Governance	Low	Business as usual
Enterprise Project Management Office	Low	Business as usual
Enterprise Architecture	Low	Business as usual
Independent Verification and Validation Vendor	Low	No contingency, required by federal guidance
Systems Integrator	Low	Business as usual
Testing and Quality Assurance	Low	Business as usual

I. DETERMINING SECURITY CONTROLS

This Volume IV of the Minimum Acceptable Risk Standards for Exchanges (MARS-E) document suite, Version 2.0 provides the System Security Plan for each Administering Entity responsible for implementing comprehensive security and privacy controls specified in the Patient Protection and Affordable Care Act of 2010 (hereafter simply the Act or ACA). Administering Entities are required to complete the System Security Plan and document their compliance with mandates of the Act and Department of Health and Human Services Regulations. The System Security Plan is the key tool for describing an Administering Entities information technology security and privacy environment for information technology systems and for documenting the implementation of security and privacy controls for the protection of all data received, stored, processed, and transmitted by the technology systems and supporting applications. The System Security Plan must be initiated during the initial stages of the life cycle process for information technology systems.

The baseline security and privacy requirements for the health insurance exchanges are documented in Volume III: Catalog of Minimum Acceptable Risk Security and Privacy Controls of the MARS-E document suite. Volume II of the document suite fully describes the goals and content of the catalog.

The System Security Plan should be reviewed and updated on an “as needed” basis, including annually, and when there are major system modifications that could potentially impact the security

and privacy of the administering entities information system. The Volume IV includes detailed instructions for supplying the contents of a System Security Plan, which includes:

- Part A, Executive Summary and System Identification
- Part B, the System Security Controls Implementation Plan
- Part C, the system Privacy Controls Implementation Plan
- Part D, System Security Plan Attachments
- Appendix A – IRS Requirements for Safeguarding Federal Tax Information (FTI)
- Appendix B – Security and Privacy Agreements and Compliance Artifacts

The complete Volume IV: ACA Administering Entity System Security Plan can be accessed on the CMS website:

<https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/4-MARS-E-v2-0-AE-ACA-SSP-11102015.pdf>

SECURITY CONTROL CLASS AREAS

The security program framework, derived from the National Institute of Standards and Technology Special Publication 800-53, Revision 4 and Appendix J document, is divided into four program class areas: Management, Operational, Technical, and Privacy. Each program class area is further divided into a set of security families. There is a total of 26 control families, each producing a high-level security policy. Each family has a two-letter identifier that is the prefix of the Control ID.

Management Control Class Area

This program area focuses on policies that relate to the management of risk and the management of the security program. This class consists of five security policies: Security Assessment and Authorization, Planning, Program Management, Risk Assessment, and System Services and Acquisition.

Operational Control Class Area

This program area focuses on policies that are primarily implemented and executed by people, rather than the information system. This class consists of nine security policies: Awareness and Training, Configuration Management, Contingency Planning, Incident Response, Maintenance, Media Protection, Physical and Environmental Protection, Personnel Security, and System and Information Integrity.

Technical Control Class Area

The focuses of this program area are on policies that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system. This class consists of four security policies: Access Control, Audit and Accountability, Identification and Authentication, and System and Communications Protection.

Privacy Control Class Area

The program area focuses on policies that define the administrative, technical, and physical safeguards employed to protect Restricted and Confidential Information.

ORGANIZATION OF POLICIES AND CONTROLS

Each one of the security policies has a number of supporting security controls that, when implemented and enforced, will satisfy the requirements of the security policy. There is a total of 197 Controls including the Security and Privacy Controls.

Sample Table: Organization of Policies and Controls

Control Class Area	Item Number	Family ID	Policy Family Name	Number of Security Controls
Management	1.	CA	Security Assessment and Authorization (formerly Certification, Accreditation, and Security Assessment)	6
	2.	PL	Planning	5
	3.	PM	Program Management	11
	4.	RA	Risk Assessment	4
	5.	SA	System Services and Acquisitions	11
Operational	6.	AT	Awareness and Training	4
	7.	CM	Configuration Management	9
	8.	CP	Contingency Planning	9
	9.	IR	Incident Response	8
	10.	MA	Maintenance	6
	11.	MP	Media Protection	6
	12.	PE	Physical and Environmental Protection	18
	13.	PS	Personnel Security	8
	14.	SI	System and information Integrity	11
Technical	15.	AC	Access Control	16
	16.	AU	Audit and Accountability	13
	17.	IA	Identification and Authentication	8
	18.	SC	System and Communications Protection	21
Privacy	19.	AP	Authority and Purpose	2
	20.	AR	Accountability, Audit, and Risk Management	6
	21.	DI	Data Quality and Integrity	2
	22.	DM	Data Minimization and Retention	2
	23.	IP	Individual Participation and Redress	4
	24.	SE	Security	2
	25.	TR	Transparency	2
	26.	UL	Use Limitation	3
TOTAL				197

As part of the System Security Plan, each control is reviewed and applied according to the National Institute of Standards and Technology special publication 800-53, Revision 4. The ACA Administering Entity System Security Plan provides a worksheet listing all controls that must be completed. The table below presents a sample control derived from the Access Control family. It demonstrates the process for properly completing and submitting a compliant System Security Plan.

AC-1: Access Control Policy and Procedures	
Control	
<p>The organization develops, documents, disseminates to applicable personnel, and reviews and updates (as necessary) within every three hundred sixty-five (365) days:</p> <ol style="list-style-type: none"> a. An access control policy that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and b. Procedures to facilitate the implementation of the access control policy and associated access controls. 	
Guidance	
<p>This control addresses the establishment of policy and procedures for the effective implementation of selected security controls and control enhancements in the AC family. Policy and procedures reflect applicable federal laws, Executive Orders, directives, regulations, policies, standards, and guidance. Security program policies and procedures at the organization level may make the need for system-specific policies and procedures unnecessary. The policy can be included as part of the general information security policy for the organization or, conversely, can be established for the security program in general and for particular information systems, if needed. The organizational risk management strategy is a key factor in establishing policy and procedures. This control supports and aligns with the provisions of the ACA and the requirements of 45 CFR §155.260, Privacy and security of personally identifiable information.</p>	
Related Control Requirement(s):	PM-9
Control Implementation Description:	
«Click here and type text.»	
Assessment Procedure:	
Assessment Objective	
Determine if the organization has implemented all elements of the AC-1 control as described in the control requirements.	
Assessment Methods and Objects	
<p>Examine: Access control policy and procedures, other relevant documents or records.</p> <p>Interview: Organizational personnel with access control responsibilities; organizational personnel with information security responsibilities.</p>	

Figure 7: Sample Access Control Policy and Procedure Table

SYSTEM INFORMATION/COMPONENTS

As part of the System Security Plan, a high-level asset inventory for each component of the system is conducted. The sample table below is an example of the information that must be completed

Sample Table: System Information/Components

Server Name	Application Description	OS	DB	Function

USER COMMUNITY ORGANIZATIONS AND ACCESS

System users must be identified and their access to data cataloged. The table below is an example of identifying the level of access for the System users.

Sample Table: User Community Level of Access

User Group	Organization	Component	Data Access	IT Resource Access

SYSTEM INTERCONNECTION / INFORMATION SHARING

Included in this section is the following information concerning the authorization for the connection to other systems or the sharing of information:

- List/Name of interconnected system
- Type of interconnection (TCP/IP)
- Discussion of how the systems will interact, and security concerns and Rules of Behavior of the other systems that need to be considered in the protection of this system

Sample Table: System Interconnection /Information Sharing

Name/Unique Identifier	Type of Interconnection (e.g., SFTP, HTTPS, Web Services)	Interaction Details and Security Considerations

SAMPLE APPLICABLE LAWS OR REGULATIONS CHECKLIST

A list of federal and State laws should be identified and documented in the System Security Plan. This will enable the system owner to implement security controls the applicable laws and regulations.

LAW/REGULATION/POLICY	APPLICABLE
MINIMUM SECURITY REQUIREMENTS FOR FEDERAL INFORMATION AND INFORMATION SYSTEMS (FIPS)	<input type="checkbox"/>
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)	<input type="checkbox"/>
INTERNAL REVENUE SERVICE (IRS) PUBLICATION 1075 GUIDELINES	<input type="checkbox"/>
SOCIAL SECURITY ADMINISTRATION (SSA) GUIDELINES	<input type="checkbox"/>
CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)	<input type="checkbox"/>
IDENTITY THEFT ENFORCEMENT AND PROTECTION ACT	<input type="checkbox"/>
FEDERAL INFORMATION SECURITY MANAGEMENT ACT (FISMA)	<input type="checkbox"/>
OTHER (SPECIFY BELOW):	<input type="checkbox"/>

DATA CLASSIFICATION

The Data Classification Standard applies equally to all individuals who use or handle Information resources. Users of the system share in the responsibility to secure and protect the data they access. Users can view/use their own data and not be allowed to view any other data unless the data has been sufficiently de-identified or aggregated in such a way as to prevent identification of other providers' data.

Data created, sent, printed, received, or stored on systems owned, leased, administered, or authorized by the agency are the property of the agency and its protection is the responsibility of the owners, designated custodians, and users.

Data shall be classified as follows from highest level sensitivity to the lowest:

- Restricted – data that is subject to specific federal or State regulatory requirements and must a.) remain encrypted at all times while at rest, in use, or during transmission; b.) be comprehensively monitored for access/distribution; and c.) provide for comprehensive access, distribution and audit controls
- Confidential – which includes Personally Identifiable Information and Protected Health Information – data that is subject to specific federal or State regulatory requirements and must a.) be encrypted during transmission to an outside agent or when stored on a mobile device, b.) be monitored, and c.) provide strong access, distribution, and audit controls
- Agency Internal – data that is not subject to specific regulatory or other external requirements but is considered sensitive
- Public – information intended or required for public release as described in applicable Alaska State Law

Specify the classification of data relative to this security plan.

Data Classification Standard Sample

Restricted Data/Information	<input type="checkbox"/>
Confidential Data/Information	<input type="checkbox"/>
Agency Internal	<input type="checkbox"/>
Public Information	<input type="checkbox"/>

SYSTEM CATEGORIZATION (POTENTIAL IMPACT OF SECURITY BREACH) SAMPLE

To successfully implement the proper security controls, determine the impact of a breach of that data. The impact assessment will determine the level of controls.

Description of Information/System Component	Security Categorization of Information									Overall Impact
	Confidentiality Impact			Integrity Impact			Availability Impact			
	Potential Impact of Security Breach									
	L	M	H	L	M	H	L	M	H	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

J. HEALTH INFORMATION INFRASTRUCTURE ROADMAP

The Roadmap serves as a basic guide to move DHSS from the current “As-Is” toward the desired “To-Be” state as informed by the workgroup sessions, stakeholder feedback, and documentation reviews. The following depicts and summarizes the trajectory of the Alaska Medicaid Enterprise over the last several years. The Health Information Infrastructure Plan recommendations will support increased interoperability, the advancement of Medicaid Information Technology Architecture maturity, and a modular enterprise design which will be critical in the success of the Medicaid transformation initiatives.

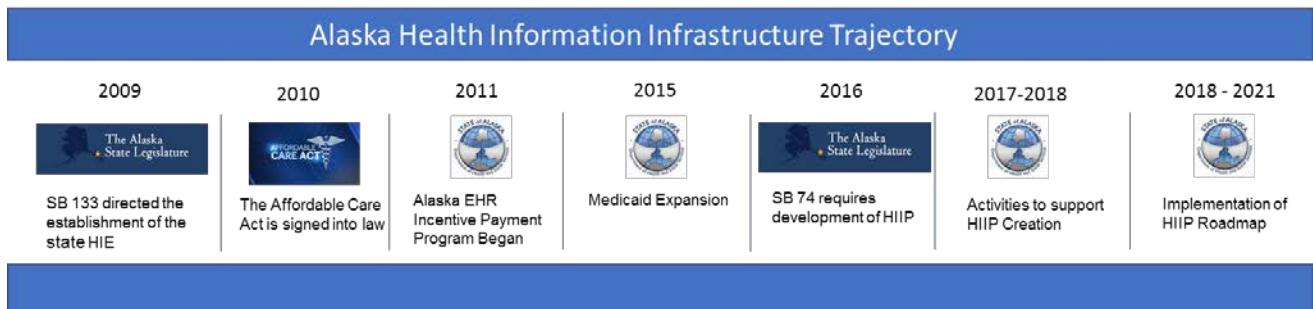


Figure 8: Alaska Health Information Infrastructure Trajectory

The Roadmap has been developed with the assumption that all recommendations will be implemented and that funding requests will be submitted and approved without delay. The Roadmap identifies the impact of the recommended project on the Enterprise and any timing dependency to the project. It is suggested that recommendations identified without any timing dependency and high impact should move forward immediately as they are critical to the progression of the Enterprise.

As noted, it is recommended that some projects move forward following the conclusion of the Medicaid Information Technology Architecture 3.0 State Self-Assessment. The Medicaid Information Technology Architecture 3.0 State Self-Assessment will provide the State with the level of detail sufficient to fully assess current system capabilities and needs and develop a more

comprehensive Roadmap. It is envisioned this Roadmap will be augmented based upon the findings of the Medicaid Information Technology Architecture 3.0 State Self-Assessment.

Health Information Infrastructure Plan Roadmap		
Health Information Infrastructure Plan Recommendations	Impact	Timing Dependency
Health Information Exchange Platform	High	Can initiate immediately
Medicaid Information Technology Architecture Assessment (Vendor supported)	High	Can initiate immediately
Master Client Index	High	Post Medicaid Information Technology Architecture Assessment
Fraud, Waste, and Abuse System	Medium	Post Medicaid Information Technology Architecture Assessment
Secure Identity and Access Management	Medium	Post Medicaid Information Technology Architecture Assessment
Eligibility and Enrollment/Asset Verification System	Medium	Can initiate immediately
Eligibility and Enrollment Presumptive Eligibility functionality	Medium	Can initiate immediately
Eligibility and Enrollment Automation of Deemed Eligibility	Medium	Can initiate immediately
Eligibility and Enrollment State Data Hub	Medium	Post Medicaid Information Technology Architecture Assessment
Referral Management Module	Medium	Can initiate immediately
Care Management	Medium	Post Medicaid Information Technology Architecture Assessment
Provider Directory	Medium	Post Medicaid Information Technology Architecture Assessment
Document Management System	Low	Can initiate immediately
Telehealth	High	Can initiate immediately
Common Credentialing to support Provider Enrollment	Medium	Can initiate immediately
Electronic Health Records Adoption	High	Can initiate immediately
Public Health Modernization	High	Can initiate immediately
Data Governance	Medium	Post Medicaid Information Technology Architecture Assessment
Enterprise Project Management Office	Medium	Post Medicaid Information Technology Architecture Assessment

Health Information Infrastructure Plan Roadmap		
Enterprise Architecture	Medium	Post Medicaid Information Technology Architecture Assessment
Independent Verification and Validation Vendor	Medium	Post Medicaid Information Technology Architecture Assessment
Systems Integrator	Medium	Post Medicaid Information Technology Architecture Assessment
Testing and Quality Assurance	Medium	Post Medicaid Information Technology Architecture Assessment