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Information Technology Trends

1

ARRA

The American Recovery and Reinvestment Act is a strategic and significant investment in our country's future. The Act is expected to spur economic activity and lay the foundation for a robust and sustainable 21st century economy through efforts to save and create jobs, aid low-income and vulnerable households, modernize health care, improve schools, modernize our infrastructure, and invest in clean energy. The Act requires transparency, oversight, and accountability.

Arizona expects to receive an estimated \$6.3 billion in total Recovery Act funds. These funds will be used to help bridge the shortfall in State revenues, and initiate several recovery projects. State agencies are prioritizing applicable projects, submitting requests and plans for approval, and tracking all funds expended in coordination with the Governor's Office.

AHCCCS is developing project requests for the research and design of health care systems that support electronic health records, an health information exchange, and clinical data analytics for the State's Medicaid program.

2

Transparency

Now more than ever government organizations must be accountable for their actions. They must reveal what monies they receive, detail the expenditures that they make, and identify achievements such as jobs created or capabilities implemented. According to recent reports, industry suppliers are also scrambling to aid agencies in tracking stimulus funding via software and services to track and share information on economic stimulus programs. Microsoft, for example, rolled out software called Stimulus360, based on its SharePoint collaboration software, to track stimulus-funded projects. And other suppliers, including Acumen Solutions, CA, IBM, SAP, and MicroStrategy have debuted tools to manage ARRA projects as well.

The State of Arizona has recently chosen Stimulus360 for its ARRA reporting.



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3 HITECH

The Health Information Technology for Economic and Clinical Health (HITECH) Act provisions of the Recovery Act of 2009 create a historic opportunity to improve the health of Americans and the performance of the nation's health system through an unprecedented investment in health information technology (HIT). This initiative will be an important part of health reform as health professionals and health care institutions, both public and private, will be enabled to harness the full potential of digital technology to prevent and treat illnesses and to improve health.

This investment program is not just about technology implementation, it requires health care delivery innovation and payment reform. Today's system pays providers based on the volume of services they provide, not on the quality of health outcomes achieved. For HITECH to succeed - providers, payers, along with IT professionals need to be engaged and committed to improving the quality and efficiency of the health care delivery system.

The Healthcare Information Technology Standards Panel (HITSP), a public/private partnership standards body for health information technology, has developed technical standards for Electronic Health Records (EHRs) that are aligned with the economic stimulus law. The specific transactions support all seven of the required data exchanges - prescriptions, lab results, clinical data summaries, biosurveillance data, immunization registries, public health and quality measurement - the providers will need in 2011 and others for 2013 and beyond, according the recommended definition for the 'meaningful use' of health IT. HITSP's new technical specifications for EHRs support the workflow, information content, infrastructure, and security and privacy requirements laid out in the economic stimulus law.

AHCCCS has defined specific goals for an HIT infrastructure to support the Arizona Medicaid program of the future.

- Establish an Arizona statewide health information exchange infrastructure utilizing Arizona Medical Information Exchange (AMIE) and other HIEs to exchange health information and health records among Arizona hospitals and health care providers.
- Achieve 90% adoption of EHRs by Arizona hospitals, Medicaid health care providers, dentists, behavioral health providers, LTC facilities, and Home and Community Based providers.
- Design and implement an AHCCCS clinical data repository for the storage and exchange of AHCCCS health information for the purpose of quality and health care effectiveness analysis, continuity of care information, and evaluation of decision support.
- Develop the infrastructure and technologies for Medicaid clinical decision support tools for health care providers adopting EHRs.
- Develop the infrastructure and technologies to support patient decision support tools including health e-learning application, web based interactive health education, and self-management programs.



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4 HIE

According to the sixth annual survey (2009) by the eHealth Initiative, there are 193 active health information exchange initiatives in the country with 57 identified as operational. Operational HIEs reported cost savings such as reduced staff time spent on handling lab and radiology results, reduced staff time spent on clerical administration and filing, decreased dollars spent on redundant tests, decreased cost of care for chronic care patients, reduced medication errors. The services most offered are results delivery, connectivity with electronic health records, clinical documentation, and alerts for providers. The types of data exchanged include laboratory data, medication data (including outpatient prescriptions), outpatient laboratory, outpatient episodes, radiology results, emergency department episodes.

AHCCCS has developed the Arizona Medical Information Exchange (AMIE) for its Medicaid members. It is operating in Phoenix in pilot-mode with 9 data partners and 100 providers.

5 MITA

The Medicaid Information Technology Architecture (MITA) initiative seeks to re-orient Medicaid information systems toward a more beneficiary-centered approach that can help achieve the quality goals of the Department of Health and Human Services, the Centers for Medicare & Medicaid Services (CMS), and individual States. The focus of traditional Medicaid Management Information Systems (MMIS) has been on assuring accurate claim adjudication and standardized Federal reporting. The MITA framework seeks to move the MMIS toward a greater focus on the beneficiary, integration of clinical and administrative data, support of program analysis and decision making, and an enhanced capacity for Medicaid to communicate with other programs and payers.

The higher levels of maturity described within the MITA initiative describe scenarios that can support quality improvement by providing a more comprehensive base of information on individual beneficiaries and real-time data on changes in the delivery of services in real time. This can enhance the ability of providers to reduce unnecessary testing and procedures, avoid medical errors and adverse drug events, and assure that appropriate care is delivered. When the higher levels of maturity described in MITA have been achieved, Medicaid program managers will have the ability to identify and target at-risk populations, expedite prior authorization decisions, develop quality statistics for specific providers, and benchmark provider performance to measures calculated by other payers or States.

Several of the goals and objectives listed in this IT strategic plan are intended to enhance the MITA maturity levels of the AHCCCS business processes, improving the quality of health care outcomes of the Arizona Medicaid members.



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6 Consumer Portals

Consumers expect to find information and conduct business, including government services, conveniently and efficiently any time, any day, using any device. According to one researcher who surveys government websites, the Web is the most resource-efficient channel available to government, so it is important for agencies to optimize performance to encourage further adoption of the Web channel

AHCCCS has recently created several specialized portals for those who frequent the agency websites – members, providers, health plans, applicants, and community partners. These personalized portals are organized for one-click access to most of the applicable topics. For instance, members can update their address, submit a premium payment, access information about diseases and treatment plans; navigation is simple and straightforward.



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Gov 2.0

Greater transparency, accountability, and public participation are central to President's Obama's open Government agenda. These principles will allow the American people to have a stronger role in how their Government addresses the challenges we confront as a Nation. New technology has the potential to drive innovation in Government by making it possible to connect Government employees to one another and to the American people, thereby enabling the sharing of information and expertise, and the solving of problems in new and more effective ways. This has the potential to strengthen our democracy and promote efficiency and effectiveness in government.

Transparency is making more data available to the public in more useable forms. It gives citizens the ability to track spending and results, hold government accountable for performance, and use the results to create value for themselves and others.

Increased opportunities for participation and collaboration provide the government with the benefits of the public's collective expertise and information. New approaches for this increased involvement include the utilization of social networking tools, web feeds, video sharing, podcasts, widgets, micro-blogs, and so on.

There is a lesson to adopting these new approaches and tools such as Twitter – that administrators need to be aware of their implications. Banning their use probably is not necessary and might even be impossible, but policies to ensure responsible use and adequate security need to be in place as soon as new technology shows up in the workplace. Just because Twitter lets itself be hacked is no reason that users in your office should not be required to use strong passwords and common sense.

At a recent conference, Kundra, the federal CIO, told agencies that they need to prepare for an explosion of new data over the next five years that will be created partly because of emerging Web 2.0 technologies. "This notion of thinking about data in a structured, relational database is dead. Some of the most valuable information is going to live in video, blogs and audio, and it is going to be unstructured inherently." Consumers adopting this Web 2.0 technology will create great pressure on government agencies to provide services in terms the public is used to.

AHCCCS has initiated activities for the implementation of SharePoint for collaboration among various internal groups where participants can work on common documents, develop blogs and wikis. The agency is also drafting a social networking vision for the agency.



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Web 3.0

Almost every morsel of government data exists in electronic form somewhere, and with the exception of classified data, it is perfectly acceptable for public consumption. However, making it easy for people to find, analyze, share and ultimately understand the information is another story. Many tech experts say the solution lies in the Semantic Web, a slowly emerging set of technologies that aim to improve access to and the usability of information and software services on the Internet, ushering in a new era of Internet applications that some are already calling Web 3.0.

Whereas Web 2.0 is about connecting people through social-networking applications such as Facebook, wikis and Twitter, the next generation will be about connecting information in new ways that people will find more useful, relevant and enjoyable

The Semantic Web “is something that has a lot of potential and people are asking about it. But there’s a long way to go. Widespread usage is probably at least five years away.

The Web’s traditional function is to simply present content, such as a government report posted online. The Semantic Web goes a step further by seeking to illuminate the content’s meaning. It’s only a subtle shift, to be sure, but moving down that road creates powerful opportunities for associating content with other related resources on the Web. The focal point for Semantic Web developers is the World Wide Web Consortium – it describes the Semantic Web as a common framework for data sharing.



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9 Cloud Computing

Cloud computing refers to an arrangement in which an organization pays a service provider to deliver applications, computing power and storage via the Web. Although cost is a potential benefit for small companies, the biggest benefits are the built-in elasticity and scalability, which not only reduce barriers to entry, but also enable these companies to grow quickly. As certain IT functions are industrializing and becoming less customized, there are more possibilities for larger organizations to benefit from cloud computing.

As an example, healthcare providers are beginning to take a closer look at their medical image archiving costs and the significant benefits delivered by cloud-based storage solutions. They are challenged by the explosive growth in the size and volume of medical images, evolving regulations, lengthy retention requirements and the financial pressures from the economic crisis. Not only does cloud storage reduce archiving costs, it also improves disaster recovery, reduces information management complexity, and shifts storage costs to an operating expense. By protecting medical images off-site, the risks are reduced while the data is securely protected, yet readily accessible by staff.

Securing a cloud computing network where computer servers are often owned and operated by a third party is different than securing the traditional data center within the walls of an agency. A mitigation plan for these new risks would need to be developed

According to Red Hat, if an agency is running more than 1,000 servers, it could save money and become more flexible with its processor resources by building an internal cloud-computing infrastructure. This private cloud could offer almost all of the benefits of a public cloud but without the security and privacy headaches. The real benefit would be in getting high utilization of your existing infrastructure and flexibility around that.

Most likely, organizations will transform their IT infrastructure by virtualizing their data centers, then by consolidating data centers and operations, and ultimately adopting a cloud-computing model.

AHCCCS is currently beginning the transformation by virtualizing its servers, and some specialized PCs.



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Service Oriented Architecture

Service Oriented Architecture (SOA) describes a computer system architecture that creates pre-packaged software functions called services, that can be used by different organizations regardless of the technological differences between systems via standardized messaging techniques.

These common functions can then be bundled together in systems that present data from multiple sources. Service requests for information such as member eligibility, claims payment status, etc are currently being developed at AHCCCS.

External applications, such as the Health-eArizona are already using these services to collect member Application data for both DES and AHCCCS. More services and applications for cross agency needs are envisioned using this technology.



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Virtualization

To alleviate the budget and staffing burden of adding new servers, many organizations are using server virtualization technologies. By abstracting the physical boundaries of a server, virtualization helps IT organizations run multiple virtual machines (VMs) on the same physical server. In a virtual server environment, IT professionals can deploy a new server by quickly and easily copying or “provisioning” an existing VM. The administrator then places a new version of that machine on another physical server where space is available. Using virtualized server technology, an IT organization can reduce the deployment time for each new server from weeks or months to days or even hours. The streamlined deployment process slashes the associated IT labor hours, and the quick availability of the new server helps the business get the necessary technology resources without delay. In all, server virtualization significantly reduces not just deployment time, but also related IT labor costs. Many preliminary virtualization projects focus on reducing capital expenses by consolidating servers onto fewer physical machines. Well-planned and executed virtualization initiatives have been known to achieve consolidation ratios of 5:1 and even 10:1 (and in some cases, much higher).

Virtualization in storage and client devices is also moving rapidly. Virtualization to eliminate duplicate copies of data on the real storage devices while maintaining the illusion to the accessing systems that the files are as originally stored (data deduplication) can significantly decrease the cost of storage devices and media to hold information.

Hosted virtual images deliver a near-identical result to blade-based PCs. But, instead of the motherboard function being located in the data center as hardware, it is located there as a virtual machine bubble. However, despite ambitious deployment plans from many organizations, deployments of hosted virtual desktop capabilities will be adopted by fewer than 40 percent of target users by 2010.

AHCCCS is currently virtualizing its servers, and some specialized PCs. Virtualization is an alternative response to the continuous technology refresh required but rarely funded.



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Virtual Office

Virtual Office is a fully functional worksite that is not bound to a specific location but is portable and scalable, connecting employees to the work process in an advantageous setting rather than having to come to a central office to connect to the work process. It provides an environmentally friendly alternative to the daily office commute. Employees want to work from home because of high fuel costs and the distance from the office; agencies want to reduce real estate and operational costs. More and more organizations are offering virtual office as one of the choices for employment.

While implementing virtual office has had its challenges, and results in a cultural change for both employees and the organization, AHCCCS has found it to be beneficial to everyone. Agency results include increased employee retention, reduced absenteeism, expanded hours of availability, increased productivity, and reduced operational costs. Employee results include reduced stress, increased job satisfaction, improved quality of life, feel respected by leaders, and increased opportunities for homebound and those in rural areas. State results include reduced fuel consumption, reduced pollution, and reduced traffic. In addition, the agency has been able to close six facilities, reduce the number of copiers and printers, and eliminate supplies and cars. Aside from these obvious benefits, however, AHCCCS has found that virtual office employees are also more productive. To enhance the communication and collaboration of all employees, AHCCCS has implemented new tools for web conferencing and e-learning.

More than one third of the agency is currently working in virtual office, and a similar number work from home or telework one day or more a week. AHCCCS continues to support and expand these worksite alternatives.



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13 Open Source

Open source refers to software, tools and other applications that allow free and open access to the source code used to write the program. Open source development is usually supported through user communities that share advances and fix problems; other projects are supported by private companies that sell services to support open source code; and still other open source code is optimized, supported and distributed by vendors selling hardware that runs open source applications. Examples of open source code include Linux, Apache, MySQL and Firebird.

An open source license is a copyright license for computer software that makes the source code available under terms that allow for modification and redistribution without having to pay the original author. These licenses may have basic restrictions, such as a requirement to preserve the name of the authors and the copyright statement within the code.

Factors that attract users to open source include lower costs and reduced times of development, and reduced dependency on vendor-specific technologies. According to IDC, the market for open source software has accelerated over the past year due to the impact of the current financial crisis and increased acceptance from enterprise software buyers

Revenue from open source is an important but a small indicator of the commercial impact of open source. Large software vendors like IBM, Sun, Dell, HP, and Oracle are making significant amounts of indirect revenue from their activities with and support of open source. This has greatly aided mainstream adoption and acceptance.

AHCCCS will apply open source software that is well-supported for more efficient processing.

14 FISMA and HIPAA

FISMA is the primary regulatory tool for federal information security, requiring implementation of risk-based security programs and regular assessments of their effectiveness

HIPAA is the regulatory tool for Protected Health Information (PHI), requiring implementation of risk-based privacy and security programs and regular assessments of their effectiveness.

Because FISMA is a requirement for all Federal data, and significant amounts of PHI is processed in Federal systems with potential of even more available as EHRs are implemented, there are current discussions regarding the changing of the HIPAA compliance criteria to match that of FISMA. The bar must be set high enough to protect the personal information of all Americans.



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Encryption

Encryption technologies protect confidential information during transmission over networks and in storage by using algorithms and a key mechanism which renders information unreadable for unauthorized intruders. The information is mathematically protected against disclosure and cannot be read by someone who does not have a corresponding key to decrypt the information.

Encryption is a defense-in-depth strategy for the protection of informational assets.

Per Statewide standard P800-S850 Encryption Technologies, all confidential information residing on Direct Attached Storage (DAS) devices, Network Attached (NAS) devices, and Storage Area Network (SAN) devices, and all portable devices, shall be encrypted and compatible with statewide communications and security protocols and with State platform operating systems.

There is a security threat associated with all stored data that must be mitigated

AHCCCS currently encrypts confidential information which is transmitted externally; however, it does not encrypt data at rest or stored data. Per Executive Order 2008-10, the State (including AHCCCS) must endeavor to protect confidential information it acquires from its citizens and businesses through the deployment of encryption technologies. Budget requests to implement this technology remain unfunded.

Information Technology Issues



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1 IT Budget and Resources

Business needs, technological changes and refreshing of equipment continue to challenge agency IT budgets. With a new generation of IT arriving every 18 months (per Gartner Group), the continued lack of funding for technology refresh and infrastructure improvements impacts our ability to maintain quality service, increases our maintenance costs, and leads to increasing production problems impacting our critical business functions. During the past ten years, our technology refresh plan has only been funded for one year, leaving the agency with outdated poor performing equipment. Only with a well-funded technology plan will we be able to effectively support the dynamic nature of the agency.

As an alternative to the continuing purchase of PCs, we have replaced many PCs with thin client devices. Thin clients have less moving parts and last longer than the traditional PCs; they are also more secure. This change helps to reduce replacement costs per unit, and increase the longevity of the investment.

We have also begun to virtualize servers and PCs as another alternative in reducing replacement costs and increasing the longevity of our investment.

Another budget concern is the continual shortfall of agency funds for the increasing costs of operating our mainframe systems at the ADOA Data Center. Our projected expenditures are never fully funded. The agency has routinely had to search for other funding to accommodate these under funded expenses.

The cost projections for AZNET continue to be a concern.

2 Aging Systems

Our legacy system, the Prepaid Medical Management Information System (PMMIS), is eighteen years old and operates on an older technology. It is becoming increasingly more difficult to implement the necessary changes as required by our nationally recognized health care program. The database and programming languages are currently supported, but no major improvements are planned in the near future. There are limited trained resources, most being trained in-house. With two states to consider, it is necessary to develop an overall strategy for the future that addresses the expected life of the system (or individual components), the direction of the market as a whole, statewide enterprise architecture, service oriented architecture, e-Health, MITA, and federal and State regulations.

As stated elsewhere in this plan, AHCCCS has performed a MITA self assessment and prepared a roadmap of systems enhancements to reach an increased level of process maturity. We are also identifying new and innovative ways to address ineffective, inefficient, and wasteful processes, procedures and legislation that force us to operate in a suboptimal manner. It is important that we begin to put these plans into action before our existing aging system can no longer meet our needs.



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3 Retention and Recruitment of Staff

A continuing issue facing IT management today is the retention and recruitment of staff. Without technical resources, long range plans such as this IT Plan will not be accomplished. Enterprises worldwide are requiring additional resources to adopt new technologies and remain competitive in the marketplace. At the same time there is an overall shortage of IT skills, there are hiring freezes in government, and private enterprises are offering salary increases with which the government cannot compete. The need of government to change its personnel management to reflect private sector practices, e.g., frequent pay raises based on market rates, performance bonuses, simplified job/salary classifications, and streamlined hiring (and firing) procedures, has been recognized.

Retention and recruitment is not just an IT problem, but is common in many divisions across the agency. To help combat this issue, AHCCCS recognized the need to invest in advanced technology to support distributed work processes. Telecommuting has been made available as a work-site alternative, and many employees telecommute one or more days per week. In FY2006, a virtual office pilot was implemented where employees work in their homes on a permanent basis. To date about 35% of the agency employees work at home permanently, and several hundred telecommute one or more days per week.

Agency Business Goals

- 1 Health Care Costs: Maintain annual capitation rate (per member per month) increases below 6%.
 - 2 Health Care Quality: Improve quality and access to care.
 - 3 The Uninsured: Reduce the rate of uninsured Arizonans by providing reasonably-priced health care coverage.
 - 4 Organizational Capacity: Maximize agency capacity and resources, and address workforce issues, through the use of technology and planning.
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Information Technology Plan

IT Vision

Information... when, where, and how you need it!

IT Mission

To provide, operate, maintain and support high quality information systems to enable AHCCCS to continue to be a leader in providing comprehensive quality health care to those in need.

Goal # 1 Self-serve Customer Centric Government: Develop web portals and IVR tools for program members, providers, and business partners, for other governmental entities, for employees, and for the general public to provide each with a comprehensive portal for conducting business and locating information specific to their needs as well as providing them with all the latest relevant news and a source for obtaining general information.

Objective # 1

By June 2011, provide enhanced web-based application functionality for provider, member and prospective member, health plan and internal customer usability and office automation.

Current Situation

The agency websites continue to be enhanced to improve accessibility, expand the availability of on-line services, and update the amount of relevant information. Beginning in FY2011 for the next two years, we will focus on the implementation of the HIPAA 5010 transactions and the new ICD-10 disease coding structure.

Performance Measures

- 1 Number of transactions/projects implemented on the web per fiscal year. For FY2006, six major projects were implemented. For FY2007, eight projects were implemented for Arizona and six for Hawaii. For FY2008, nine projects were implemented. For FY2009, four AZ and two HI. The projections include the projects expected to be completed during the fiscal year.

Status : In Process

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
5	6	9	8	6



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Objective # 2

By June 2011, provide enhanced Integrated Voice Response (IVR) tools for members and prospective members, and providers.

Current Situation

The AHCCCS programs cover a significant portion (17% or more) of the state's population, many of whom are in sparsely populated areas with little or no access to the internet. We must remain cognizant of this group and continue to provide them with alternative ways for communicating with us about our programs and their coverage, along with ways to make changes.

Performance Measures

- 1 Number of IVR tools enhanced or implemented during the fiscal year.

Status : Un-Funded
 Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	1	0	1	1

Goal # 2

Standardize Electronic Transactions: Transform all business to government (B2G), government to government (G2G) and government to business (G2B) interfaces to the current standard, efficient, and comprehensive electronic transactions.

Objective # 1

By October 2009, implement the claims attachment transaction

Current Situation

The electronic claims attachment is an approved standard but is not mandated. The agency would like to allow the submission of electronic claims attachments from their trading partners. One of the large providers in Arizona was instrumental in the pilot on claims attachments and is in production with them. They have asked when AHCCCS will be ready to accept them because it streamlines their processes and turnaround time on claims payment. Other large trading partners have expressed interest, as Arizona rules mandate attachments on every claim for the FES population, so some hospitals deliver 7 – 10 boxes of paper attachments each week that they would prefer to send electronically.

Performance Measures

- 1 Percent of attachments submitted electronically to AHCCCS.

Status : In Process
 Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
0	0	40	60	80



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Objective # 2

By January 2012, implement the new 5010 versions of the HIPAA transactions.

Current Situation

ASC X12N has developed a modified version of their standards, Version 5010, to replace the current HIPAA standards, Version 4010 (as modified by Version 4010A1) for the following transactions:

- ASC X 12 834, health plan enrollment;
- ASC X12 820, premium payments;
- ASC X12 270/271, eligibility inquiry and response;
- ASC X12 278, health care services – request authorization;
- ASC X12 837, health care claims/encounters (institutional, professional and dental);
- ASC X12 276/277, health care claim status request and response; and
- ASC X12 835, health care claim payment/remittance advice.

In addition, the 999 transaction as well as the 824 and TA1 will be used to acknowledge receipt of inbound files where appropriate, replacing the 997 transaction.

Performance Measures

- 1 Number of 5010 transactions implemented by AHCCCS

Status :	Un-Funded	Target 09	Actual 09	FY 10	FY 11	FY 12
Category:	Output	0	0	0	0	9

- 2 Percent of business partners who have implemented the 5010 transactions

Status :	Un-Funded	Target 09	Actual 09	FY 10	FY 11	FY 12
Category:	Output	0	0	0	0	100

Objective # 3

By October 2013, implement the ICD-10 code set

Current Situation

The International Classification of Diseases (ICD) is a coding language of health care for both providers and payers. During the next few years the coding language will be transitioned from the current ICD-9 version to a new set of codes, ICD-10, for diagnoses and procedures. The new system provides a significant opportunity to improve the capture of information about the increasingly complex delivery of health care. The new codes will improve accuracy and flexibility in coding, and result in more detailed documentation needed to support accurate payments.

Performance Measures

- 1 Number of business partners who have implemented ICD-10

Status :	Un-Funded	Target 09	Actual 09	FY 10	FY 11	FY 12
Category:	Output	0	0	0	0	0



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Objective # 4

Actively participate in the development of new and revised standards as they relate to agency business.

Current Situation

IT staff are currently engaged in work groups for the adoption and maintenance of national health care standards. This work needs to continue

Performance Measures

0 NA

Status : In Process

Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Goal # 3 HITECH: Implement an HIT infrastructure to support the Arizona Medicaid program of the future.

Objective # 1

By January 2011, establish an Arizona statewide health information exchange infrastructure utilizing Arizona Medical Information Exchange (AMIE) and other HIEs to exchange health information and health records among Arizona hospitals and health care providers.

Current Situation

An HIE model has been developed and tested in Arizona for the Medicaid program; it is called AMIE. Other HIEs are being developed in Yuma and southern Arizona. This project adds more data interfaces to AMIE and establishes connectivity with the other HIEs in Arizona and the nation.

Performance Measures

1 This initiative is based on ARRA and subject to change; performance measurement has not been determined

Status : Un-Funded

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Objective # 2

By July 2011, achieve 90% adoption of EHRs by Arizona hospitals, Medicaid health care providers, dentists, behavioral health providers, LTC facilities, and Home and Community Based providers.

Current Situation

Many of the health care facilities nationwide rely on paper-based patient record systems. This project facilitates the adoption of electronic health records in medical practices throughout Arizona.

Performance Measures



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- 1 This initiative is based on ARRA and subject to change; performance measurement has not been determined

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Objective # 3

By December 2010, design and implement an AHCCCS clinical data repository for the storage and exchange of AHCCCS health information for the purpose of quality and health care effectiveness analysis, continuity of care information, and evaluation of decision support

Current Situation

As a payor, AHCCCS collects billing data from medical providers for adjudication and payment. It does not currently have the corresponding clinical data needed for care management and continuity of care when members change providers. This project focuses on building a clinical data repository for acute care, public health, dental, behavioral health, and long term care case management information.

Performance Measures

- 1 This initiative is based on ARRA and subject to change; performance measurement has not been determined

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Objective # 4

By December 2010, develop the infrastructure and technologies for Medicaid clinical decision support tools for health care providers adopting EHRs

Current Situation

This project adds the tools needed to support the meaningful use of the clinical data repository.

AHCCCS seeks to control on-going healthcare costs by promoting a healthier, better informed Medicaid population. These tools would provide a view into a member's history of care to ensure appropriate utilization of medical items and services, improve member compliance with established medical care regimens, and guide decision making through assessments and guidelines. CDS requires the automation and accumulation of member healthcare data.

Performance Measures

- 1 This initiative is based on ARRA and subject to change; performance measurement has not been determined

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0



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Objective # 5

By July 2011, develop the infrastructure and technologies to support patient decision support tools including health e-learning application, web based interactive health education, and self-management programs.

Current Situation

This project enables patients to review and manage their own health care using electronic tools.

Performance Measures

- 1 This initiative is based on ARRA and subject to change; performance measurement has not been determined

Status : Un-Funded
Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Goal # 4 Robust Architecture: Reengineer IT processes and systems adopting new (target) technologies to ensure a robust infrastructure for the future.

Objective # 1

By December 2014, replace aging systems and re-engineer the corresponding business processes to improve operational effectiveness.

Current Situation

The age and structure of the core applications dictate that AHCCCS should examine alternatives to enhance and upgrade IT capabilities. We will work within MITA's boundaries for these changes and support its goals for standardization, data sharing, quality of care, and modularization. We are also considering partnerships with other states in order to share the cost of this development.

Performance Measures

- 1 Number of system components enhanced and implemented

Status : Un-Funded
Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

- 2 Number of business processes with improved MITA maturity level

Status : Un-Funded
Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0



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Objective # 2

Continue to expand and enhance the use of imaged documents within the agency and begin the exchange of imaged documents with other agencies to provide faster turnaround and improved customer satisfaction.

Current Situation

Automatic inbound and outbound fax capability has been successfully expanded to all of the offices and departments throughout the agency. Further imaging enhancements are planned to improve efficiency and workflow.

Performance Measures

- Number of enhancements implemented during the fiscal year

Status : In Process

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	12	10	10	10

Objective # 3

Information Services Division (ISD) will maintain a continual level of maturity in its business processes following principles of CMMI.

Current Situation

CMM Level 2 was achieved in December 2005.

We are currently expanding our processes and procedures to include a broader scope as defined in the Capability Maturity Model Integration (CMMI).

Performance Measures

- CMMI maturity level. We expect to achieve the concept of CMMI level 2 in 2 years

Status : In Process

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	1	1	1	2

Objective # 4

By July 2013, build full redundancy support needed for the network systems at the primary and disaster recovery site.

Current Situation

This project replicates all agency data to a disaster recovery site, expands the usage of disk-to-disk backup to speed recovery times and upgrades tape backup equipment, implements a redundant server solution.

Performance Measures

- Number of critical functional areas supported by a redundant geographically separated alternate system in case of AHCCCS central system failure.

Status : Un-Funded

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	13	14	16	16



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Objective # 5

Support the adoption of common services across state and local agencies using SOA.

Current Situation

There are various types of data that are used by more than one entity such as vital records or Medicaid member eligibility. Today everyone is developing their own way to access the data. This access could be developed as a single service and made available for everyone to use.

Performance Measures

- 1 Number of common services implemented during the fiscal year. The Health-e-Arizona application is an example of one implemented; it is used to apply for social services or health care benefits. Both DES and AHCCCS use its transactions to determine eligibility for various benefits.

Status : Un-Funded

Category: Efficiency

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	1	1

Objective # 6

By June 2012, implement an EDI gateway for Arizona Medicaid.

Current Situation

AHCCCS would streamline processes and cut administrative overhead for the agency, its program contractors and their contracted providers by implementing the AHCCCS EDI Gateway as the single point of submission for all Medicaid Claims in the State of Arizona. Claims would come to the gateway directly from providers (or their billing services or clearinghouses) and member eligibility and plan enrollment on the date of service will be verified. Claims for members with coverage for the date of service will be validated against X12 standards and AHCCCS rules. Claims which do not pass this validation check will produce a notification to the submitter of the errors for correction and resubmission. Claims which are valid will be routed to the appropriate program contractor system for adjudication. Once the payer system adjudicates the transaction, an 835 electronic remit transaction describing the results of the adjudication will be returned to the gateway by the payer to inform the agency of the status of the payment for the service rendered. This project can reduce the data latency in the systems which provide clinical decision support by capturing and making the data available as soon as possible after the service is delivered.

Performance Measures

- 1 This initiative is a completely new way to process business; it must be thoroughly analyzed before determining the appropriate performance measurement

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Goal # 5 Efficiency and Cost Savings: Adopt and utilize standard common resources and practices, partnering with other states and agencies to improve the operational efficiency of State Government.



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Objective # 1

On an on-going basis, Information Services Division operates and maintains the Prepaid Medical Management Information System (PMMIS) for the State of Hawaii's Med-QUEST Medicaid program.

Current Situation

Hawaii's PMMIS (HPMMIS) is run on the mainframe in the Arizona Department of Administration Data Center with direct links to Med-QUEST and to AHCCCS. Hawaii shares in the cost to operate, maintain, and enhance the existing system shared by the two states. A Service Level Agreement (SLA) was implemented in FY2005.

Performance Measures

- 1 Percent of Service Level Agreement (SLA) goals achieved.

Status : In Process

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
90	88	90	90	90

Objective # 2

Continue to enhance network infrastructure, replacing out-dated hardware and software in conjunction with the statewide enterprise architecture, incorporating virtualization where possible, to support the agency's critical business functions

Current Situation

AHCCCS has implemented a number of initiatives that are cost effective and have created efficiencies for the agency, employees, and residents of Arizona. These initiatives - virtual office, telecommuting, thin client deployment, and imaging - depend on technology. The technical infrastructure must be updated and maintained in order to continue to support these initiatives for the agency's critical business functions. Failure to replace old equipment results in decline in employee productivity, increased repair and maintenance costs, and a lack of support for existing systems.

Performance Measures

- 1 Percent of network infrastructure hardware that is out of warranty/support and needs to be replaced.

Status : Un-Funded

Category: Quality

Target 09	Actual 09	FY 10	FY 11	FY 12
	20	25	60	75



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Objective # 3

By June 2013, develop and implement a purge process for PMMIS data according to the information retention requirements.

Current Situation

The amount of data stored in the PMMIS databases continues to grow as new members and their services are added to the AHCCCS program. All of this data is currently available on-line. By purging transaction data once its retention requirements have been satisfied, we should be able to reduce the rate of database growth and limit the corresponding growth of our data center utilization and costs.

The system has been developed and tested for Encounters and Claims, and more recently member data. Purge is requested on demand. There is a limit to how much we can purge due to the budget neutrality rules for Proposition 204 population.

Performance Measures

- Number of types of data purged on a regular basis. Currently, Oracle Financials and Capitation Payments are purged on a regular schedule

Status : In Process
 Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	2	2	3	3

Objective # 4

By June 2011, provide automated tools for project planning, scheduling and resource assignment, for documenting projects and their deliverables, for data modeling, for testing, for time reporting, for service request and incident reporting and tracking, for aggregate and granular project metrics (costs and timeframes), for social networking.

Current Situation

ISD has a very limited number of automation tools.

Performance Measures

- Number of tools implemented during the fiscal year. FY2009 added MS Project Server

Status : Un-Funded
 Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	1	1	1	1

Objective # 5

Participate and support the tri-agency disaster recovery plan.

Current Situation

The agencies with mainframe data centers are developing a self-sufficient plan to provide alternate site capabilities among themselves in case an incident occurs at one of the sites leaving the site inoperable. The AHCCCS mainframe system would be supported by this plan.

Performance Measures



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- 1 Number of planned tests conducted for AHCCCS systems. No tests were performed in FY2009 due to cancellation of alternate site contract by ADOA.

Status : Un-Funded

Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	1	2	4

- 2 Percent of tests conducted with successful results

Status : Un-Funded

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	100	100	100

Objective # 6

By June 2012, virtualize all servers.

Current Situation

Much of the server hardware is out of warranty, and it is costly to continue to replace them one to one. As an alternative, as funds become available, we have begun to purchase a few larger servers and have moved several virtualized servers on the new hardware.

Performance Measures

- 1 Percent of servers virtualized.

Status : Un-Funded

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	40	45	50	55

Objective # 7

Evaluate business needs and continue to implement thin clients across the agency in appropriate areas.

Current Situation

This clients cost less and have a longer life than personal computers. As PCs fail, they are replaced with thin clients according to the users business needs.

Performance Measures

- 1 Percent of additional thin clients implemented during the fiscal year. Currently there are about 800 thin clients in use or about 70% of the agency employees.

Status : Un-Funded

Category: Efficiency

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	10	5	5



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Objective # 8

Continue to support and increase participation of alternate worksites such as virtual office and telework.

Current Situation

About one third of the agency work from home on a permanent basis. The employees connect through SSL using a thin client device and router to access applications via terminal services. They have an IP telephone and participate in meetings with other employees using web-based conferencing; e-learning modules specifically developed for virtual office employees are available to all employees. Placing employees in virtual office and having others ready for telework enhances our ability to continue agency functions should certain service interruptions occur.

Performance Measures

- 1 Number of employees in virtual office (VO). As of June 2009 there were 394 employees in VO out of 1,132 total employees.

Status : In Process

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	394	425	435	450

Objective # 9

By June 2011, implement tools to detect the amount of potential fraud in the Medicaid program.

Current Situation

Prospective items like clinical edits could be added to the validation criteria of incoming transactions to detect and route possible discrepancies for further review. Retrospectively, processed transaction data could be queried using specific algorithms and tools to detect questionable items and determine repeatable patterns. AHCCCS could use these results to investigate, and correct if needed, the practices of their health plans and providers. As a result of these activities, the Surveillance and Utilization Review System (SURS) for the states would be strengthened

Performance Measures

- 1 The actual recoupment will be a combination of potential dollars recovered from a health plan or provider and capitation rate adjustments; no estimates are available.

Status : Un-Funded

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Objective # 10

Analyze and assess well-supported open source solutions for possible use at AHCCCS.

Current Situation

Factors that attract users to open source include lower costs and reduced times of development, and reduced dependency on vendor-specific technologies. According to IDC, the market for open source software has accelerated over the past year due to the impact of the current financial crisis and increased acceptance from enterprise software buyers.

Performance Measures



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- 1 Number of open source solutions implemented during the fiscal year. Linux is currently being used.

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	1	1

Objective # 11

By June 2011, incorporate new tools to improve the eligibility process.

Current Situation

Over the past several years workload demands on eligibility staff have been steadily increasing due to AHCCCS population growth and the increased complexity in the AHCCCS programs. To assist the agency in making the process more efficient, AHCCCS has begun to implement the following solutions: web-based public application, geospatial mapping, eligibility IVR, e-Find, and vital records. Implementation is a collaborative effort between AHCCCS and DES. Interfaces with MVD, DOR, DOC are also being pursued to help in the identification of members, along with the possibility of a statewide master person index.

Performance Measures

- 1 Number of tools implemented during the fiscal year. FY2009 - Health-e-Arizona Public Access and Vital Records

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	2	1	1	1

-
- Goal # 6** Staff Proficiency: Enhance staff knowledge and skills through training and education to maintain proficiency in current technologies and methodologies, health care industry standards and practices, and government regulation as they apply to the AHCCCS program.
-

Objective # 1

Managers and project leads of major projects will be certified in project management.

Current Situation

GITA issued a new statewide policy that requires PIJ-projects be lead by a State-certified project manager. This requirement is effective July 2008.

Performance Measures

- 1 Number of staff State-certified in project management

Status : In Process

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
23	21	21	21	21

Security Goals



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Goal # 1 Protect Assets: Implement optimum security measures to protect and safeguard agency information assets.

Objective # 1

By July 2012, enhance network security infrastructure through the implementation of additional threat protection, threat management and threat monitoring and mitigation tools.

Current Situation

AHCCCS relies on network connectivity to deliver and support mission critical services. To ensure the network is resilient and available to support agency-critical applications and a workforce that depends on availability of services and information, it is important to secure and protect the network against attack from inside and outside. Unauthorized access to the computer network or malicious activity by authorized users could disrupt the ability of the agency to function, and compromise member and agency data.

Performance Measures

- 1 Number of new tools implemented. Planned include hardware intrusion detection/prevention; monitoring, analysis, and response system (MARS) appliance; hardware network perimeter security ASA devices; hardware endpoint security (801.1x) LAN switches; Cisco security agent; McAfee total protection.

Status : Un-Funded
 Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
0	0	0	0	6

Objective # 2

By July 2012, protect confidential information through the deployment of encryption technologies.

Current Situation

Per Executive Order 2008-10, the State (including AHCCCS) must endeavor to protect confidential information it acquires from its citizens and businesses through the deployment of encryption technologies. Encryption technologies protect confidential information during transmission over State networks and in storage by using algorithms and a key mechanism which renders information unreadable for unauthorized intruders on State systems. The information is mathematically protected against disclosure and cannot be read by someone who does not have a corresponding key to decrypt the information. Encryption is a defense-in-depth strategy for the protection of informational assets of the State. AHCCCS currently encrypts confidential information which is transmitted externally, however, it does not encrypt data at rest or stored data. Per Statewide standard P800-S850 Encryption Technologies, all confidential information residing on Direct Attached Storage (DAS) devices, Network Attached (NAS) devices, and Storage Area Network (SAN) devices, and all portable devices, shall be encrypted and compatible with Statewide communications and security protocols and with State platform operating systems. Stored data poses a security threat which must be mitigated.

Performance Measures



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- 1 Percentage of backups which are encrypted. Once implemented, only newly created backups will be encrypted so the percentage of all backups will increase as the older unencrypted files roll off their retention schedule.

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
0	0	0	0	10

- 2 Percentage of data at rest which is encrypted.

Status : Un-Funded

Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
0	0	0	0	25

Objective # 3

Continually protect the privacy of personal information that is received and entrusted to the agency.

Current Situation

Performance Measures

- 1 Number of reported violations regarding PHI

Status : In Process

Category: Outcome

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	0

Objective # 4

Investigate the appropriate use of electronic signatures for the AHCCCS program.

Current Situation

Electronic signatures are not currently used

Performance Measures

- 1 Number of applications using electronic signatures

Status : Un-Funded

Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	0	0	1

Objective # 5

Continually provide staff training and awareness activities on privacy and security.

Current Situation

Performance Measures

- 1 Number of activities conducted during the fiscal year

Status : In Process

Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
	8	6	6	6



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Goal # 2 COOP: Have ready an executable plan that allows the agency to recover critical processes in order to function after a disaster.

Objective # 1

Continually update, test, and maintain a Continuity of Operations Plan (COOP) for the agency's essential processes.

Current Situation

AHCCCS participated in a statewide effort to implement a web version of the Living Disaster Recovery Plan System (LDRPS) for all state agencies. The agency's current plan is being updated in this new version of the software.

Performance Measures

- 1 Number of tests conducted during the fiscal year

Status : In Process
 Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	2	4	4

Objective # 2

By June 2011, implement a communication system that would notify employees in case of emergency due to a disaster or other service disruption.

Current Situation

AHCCCS has defined the incident management and notification teams in the Communicator system. This system automatically notifies the teams and gives them a message about the situation along with any actions to take. The system tries various numbers for a person until a contact is made and the message delivered. The system houses all of the contact information, has a secure interface, and resides off-premises.

Performance Measures

- 1 Number of tests conducted during the fiscal year.

Status : In Process
 Category: Output

Target 09	Actual 09	FY 10	FY 11	FY 12
0	3	4	4	4

Objective # 3

By June 2011, implement a campus paging system that could send audible messages to telephones throughout the buildings at central office.

Current Situation

Emergency situations sometimes require immediate, swift notification to all persons present in the buildings.

Performance Measures



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1 Number of tests conducted during the fiscal year.

Status : On Hold

Category: Input

Target 09	Actual 09	FY 10	FY 11	FY 12
	0	1	4	4

QA Measures

1 CMM

Achieved CMM Level 2 in December 2005

Type (Methodology): CMM

Status: Other
