![ASET - Arizona Strategic Enterprise Technology]

Arizona Health Information Exchange (HIE) Unconnected Providers Program

ARIZONA HIE ENVIRONMENTAL SCAN
and
COMMUNITY INTERVIEWS

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During the fall of 2012, the Arizona Strategic Enterprise Technology (ASET) Office commissioned a series of interviews and an HIE environmental scan to better understand the adoption and use of health information technology, and health information exchange, in Arizona.

The interviews were conducted during August and September of 2012 with 32 individuals representing 19 organizations. These organizations were chosen to provide representative views of Behavioral, Long Term Care, and Rural providers and to elicit information concerning their adoption and use of health information technology and exchange in Arizona. An Arizona HIE environmental scan is included to provide perspective.

The HIE environmental scans of the three specific healthcare segments covered activities associated with the federal government, at the national level, within Arizona, and within other states. The scans reviewed publicly available resources.

When available, these reports can be downloaded from the ASET website at http://hie.az.gov/it.htm

Arizona HIE Environmental Scan and Community Interviews
HIE Environmental Scan – Behavioral Health Care
HIE Environmental Scan – Long Term Care
HIE Environmental Scan – Rural Health Care

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  Dr. Tony Dunnigan, CMIO

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  William Olivares, IT Technician
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  Luce Westphal, LPN

Arizona Chapter of American Academy of Pediatrics
  Rebecca Nevedale, Associate Director
  Son Yong Pak, Improvement Coach

Arizona Medical Association
  David Landrith, Vice President

Carondelet Health Network
  Tony Fonze, CIO

Cobre Valley Regional Medical Center
  Neal Jensen, CEO
  Sandra Montgomery, Director of Informatics
  Frank Stapleton, Clinics Director

Copper Queen Community Hospital
  Jim Dickson, CEO
  David Chimura, CIO

Desert Terrace Healthcare Center – Ensign Group
  Patrick Hobbs, Executive Director
  Tyler Douglas, Information Systems

Jewish Family & Children's Service
  Dr. Michael Zent, President & CEO

MIHS (Maricopa Integrated Health System)
  Dave Kempson, CIO

Mountain Park Health Center
  Dr. John Swagert, CEO

Mt. Graham Regional Medical Center
  Julie Johnson, Director Patient Access/HIM
  Philis Finch, RN

Northern Arizona Healthcare
  Steve Lewis, Sr. HIE Architect

Phoenix Pediatrics
  Kevin Berger, MD, Director

Ponderosa Pines Care and Rehab
  Richard Anderson, Administrator
  Leslie Kuhn, Director of Nursing

Summit Healthcare
  Ron McArthur, CEO
  Kent McQuillan, CIO

Verde Valley Guidance Clinic
  Robert Cartia, CEO

Villa Maria Care Center
  Damacio Marquez, Executive Director
  Dorothy Dean, Director of Nurses

Yuma Regional Medical Center
  Claudia Ulloa, Telemedicine Program Coordinator

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Background

Arizona has a rich history of promoting health information technology (HIT) and health information exchange (HIE). In 2006, community leaders came together and developed the Arizona Health-e Connection Roadmap. The Roadmap identified the priorities for healthcare network services and created a business plan that focused on meeting the needs of health care providers, payers, patients, consumers, and employers.

In 2009, Congress passed the American Recovery and Reinvestment Act (ARRA). A key piece of this legislation was the Health Information Technology for Economic and Clinical Health (HITECH) Act. This Act established Meaningful Use (MU) of interoperable EHRs in the health care system as a critical national goal and it incentivized EHR adoption by providers.[1] Health information exchange (HIE) has emerged as a core capability required for both hospitals and providers to achieve MU, qualify for the incentive programs, and provide better care for patients.

Another key element of the HITECH Act was the State Health Information Exchange Cooperative Agreement Program (SHIECAP). This program assists states and territories to advance regional and state level HIE; while moving toward national interoperability of patient health information.[2]

In March 2010, the State of Arizona was awarded a $9.3M SHIECAP grant. The Grant is provided as a catalyst to develop the necessary infrastructure for Arizona's health information exchange capability. The Arizona Strategic Enterprise Technology (ASET) office is responsible for the programmatic implementation of this grant for the State of Arizona.[3]

In responding to the grant award, ASET formed an HIE Steering Committee to continue the momentum of the work done in 2006 which created Arizona's Health-e Connection Roadmap. The Committee continued to leverage community resources and relationships, establish priorities for the grant funds, and provide on-going review and feedback of the grant program.

In the fall of 2012, ASET launched the ***Unconnected Providers' Grant Program***[4] to support HIE planning and implementation for health care organizations. This grant program is aimed at stimulating the adoption of HIE by healthcare providers who currently have not planned or implemented an information exchange solution. It has a special focus on rural hospitals and providers, behavioral health providers, and long term care providers. To help prepare for this grant program, ASET commissioned an environmental scan of current health information exchange initiatives in Arizona and around the country and interviews with Arizona healthcare providers.

Arizona Strategic Enterprise Technology
Health Information Exchange Priorities

Develop Sustainable Exchange Marketplace	"Core Services" RFP (Provider Directory)
Unconnected Providers HIE (Sub-Grant Program)	Support Policy Development
Coordinate State and Federal Partners	Provider and Consumer Outreach and Education
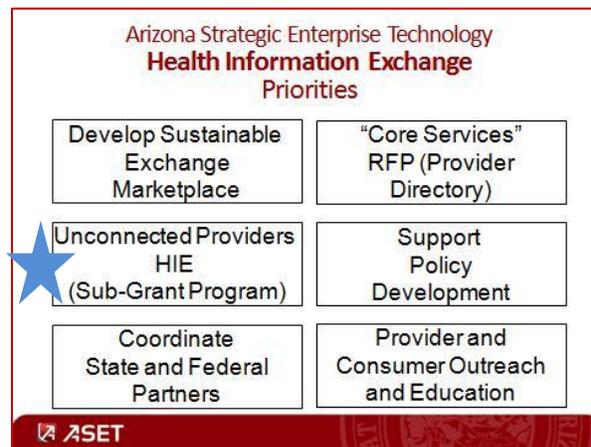
Executive Summary

During August and September 2012, interviews were conducted to inform the State of Arizona and the Arizona Strategic Enterprise Technology (ASET) office about the issues and opportunities facing health care providers regarding health information exchange (HIE). The purpose of the interviews was to inform ASET on the types of assistance a grant program (under ARRA funding) could provide to healthcare organizations to help them participate in HIE.

The focus of the interviews was on four specific healthcare segments: behavioral health, rural providers, rural hospitals, and long term care (LTC) providers. Nineteen separate telephone interviews were arranged with a total of 32 people participating. Organizations in nine counties, plus two state-level associations, were included. Interviewees represented a wide variety of positions within their organizations. Examples of the position titles of interviewees include: CEO, President, CIO, Administrator, Director of Nursing, Executive Director, CMIO, and Director of Informatics.

The interviews were structured to elicit information in three broad subject areas: Barriers to HIE; Drivers of HIE – those things that motivate participation; and Assistance needed to move forward with HIE. The interviews revealed a wide variety of comments in each subject area, which were then grouped into categories. Those categories that were mentioned most often are listed below.

Barriers to HIE
❖ Cost
❖ Insufficient resources
❖ Lack of EMRs

Drivers of HIE Participation
❖ Better patient care
❖ Better relationships and hand-offs with other healthcare providers
❖ Required reporting

Assistance Needed for HIT / HIE
❖ Education / Outreach
❖ Expertise / Resources
❖ EMR upgrades
❖ Interface development

Each subject area and its associated categories are described in more detail in the report.

Key to successful implementation of health information exchange is the ability of providers to obtain the information they need. This requires that the providers with whom they share patients also participate in the exchange of information. Interviewees were asked to identify key partners with whom they would like to exchange healthcare information. A table of their responses is included in this report.

The result of a scan of HIE-related activity within the State of Arizona is provided in the report as background to statewide HIE activities. This information was obtained separately from the interviews through publically available sources.

The following recommendations were developed by Mosaica Partners through an analysis of the interview findings combined with our knowledge of "best practices" found in Arizona and other states. They are presented in a suggested order of implementation.

- Launch the grants program
- Focus on HINAz becoming operational
- Collaborate with other HIE/Telemedicine initiatives within the State
- Update and enhance the State HIT/HIE strategy
- Enhance HIT/ HIE education
- Convene stakeholders for dialogue
- Continue / Enhance outreach efforts
- Encourage providers to identify their trading partners
- Improve access to broadband

Overall, the research uncovered strong support, and a continued need, for state leadership for HIT/HIE planning and implementation in Arizona.

The appendix contains a summary of each interview. Identifiable comments, when present, are included with the express permission of the interviewees.

Introduction

During August and September 2012, interviews were conducted to inform the State of Arizona and the Arizona Strategic Enterprise Technology (ASET) office about issues and opportunities facing health care providers regarding connection to HIE. The purpose of the interviews was to inform ASET on the types of assistance a state administered grant program (under ARRA funding) could provide to healthcare organizations. This program is known as "The Unconnected Healthcare Providers Health Information Exchange (HIE) Grant Program."

The focus of the interviews was on four specific healthcare segments: behavioral health, rural providers, rural hospitals, and long term care (LTC) providers.

ASET sought input from a variety of HIE stakeholders and state healthcare provider associations to help identify specific organizations to include in this process. There was a broad range of HIT/HIE experience ranging from organizations that were mature in their use of HIT, and even sharing healthcare information, to others who were in the early stages of HIT use. Some of the organizations were eligible for Meaningful Use incentive payments while others were not. Some of the providers were in urban settings while others were in rural settings. The variety of organizations represented affords an interesting perspective on HIT/HIE in Arizona.

The objectives of the interviews were to:
1. Obtain information and perspectives from representatives of key stakeholder segments concerning the reasons why health care providers remain unconnected.
2. Obtain input on interviewee perspective(s) of what would help them adopt HIE.
3. Identify actions ASET could take to enable HIE adoption.

Information obtained during the interviews was summarized and used to help shape the "Unconnected Healthcare Providers Health information Exchange (HIE) Grant Program." After an analysis of the interview findings was completed, a series of recommendations was prepared for consideration by ASET.

The recommendations are located at the end of this report.

Interview Process

The first steps in the process were to determine the objectives of the interviews and to identify interview candidates. Once the objectives were agreed upon, ASET worked with key stakeholders and associations to identify health care providers that represented a wide variety of knowledge and experience levels in the implementation and deployment of Health Information Exchange / Health Information Technology, (HIT/HIE).

The Arizona HIT Coordinator then contacted each of the potential interviewees, explained the purpose of the interviews, and requested their participation. Once individuals agreed to participate in an interview, they were contacted by Mosaica Partners and the interview was scheduled.

Nineteen separate telephone interviews were arranged with a total of 32 people. Interviewees represented a wide variety of positions within their organizations. Examples of the position titles of interviewees include: CEO, President, CIO, Administrator, Director of Nursing, Executive Director, CMIO, and Director of Informatics.

Laura Kolkman, President of Mosaica Partners, conducted each of the interviews. Each interview consisted of a set of structured questions with time allotted at the end for general comments from the interviewees. Interviewees were made aware that their comments would be shared with ASET. The interviews lasted between 30 and 45 minutes each. Interviewees were requested to review the notes from their session and make any necessary corrections. Permission was obtained from each organization to share the identifiable comments that are found in the appendix of this report.

Interviewee Organizational Experience with HIT/HIE

The 19 organizations interviewed represented a wide variety of healthcare organizations, capabilities, patient populations, and geographic distribution within Arizona. Organizations participating in the interviews included: rural hospitals and providers, Federally Qualified Health Centers (FQHCs), behavioral health providers, long term care providers, non-rural hospitals and medical associations.

There was wide variation among the organizations in their level of HIT adoption. Of the 19 organizations interviewed, nine could be described as being sophisticated users of HIT; seven could be described as maturing in their use; and one as low in its use of HIT. Two of the interviews were with representatives of statewide organizations that were not direct providers of care.

Distribution of Interviewees by County and Organization Type

Organizations in nine counties, plus two state-level associations, were included. The table below shows, by county, the number of organizations interviewed.

County Name	County TOTAL	Behavior Health Facilities	Long Term Care Facilities	Rural Hospitals	Non-Rural Hospitals, Providers, & FQHCs	Associations
Apache						
Cochise	1			1		
Coconino	2		1	1		
Gila	1			1		
Graham	1			1		
Greenlee						
La Paz						
Maricopa	6	1	1		4	
Mohave						
Navajo	1			1		
Pima	3		2		1	
Pinal						
Santa Cruz						
Yavapai	1	1				
Yuma	1			1		
Statewide	2					2
TOTAL	19	2	4	6	5	2

Summary of Interviewee Findings by Subject Area and Category

The interviews were structured to elicit information in three broad subject areas: Barriers to HIE; Drivers of HIE; and Assistance needed to move forward with HIE. ASET used the findings from these interviews to structure its Unconnected Healthcare Providers Health Information Exchange (HIE) Grant Program.

The interviews revealed a wide variety of comments in each subject area, which were then grouped into categories. The list below shows these categories within the subject areas. Within each subject area, some categories of comments were heard more often than others. The categories of comments most frequently heard are marked with a red asterisk (❖) and are at the top of each subject area's list. Other comment categories follow in alphabetical order. Later in this document, each subject area and its associated categories are described in more detail.

Barriers to HIE

- ❖ Cost
- ❖ Insufficient Resources
- ❖ Lack of EMRs
- Difficult interoperability/interfaces
- Government standards
- Lack of broadband
- Lack of data in the HIE
- Privacy concerns
- Provider priorities
- Provider workflow changes
- Other

Drivers of HIE Participation

- ❖ Better patient care
- ❖ Better relationships and hand-offs with other healthcare providers
- ❖ Required reporting
- Control and risk management
- Costs
- Improved image of rural healthcare
- Transfer of data – bi-directional communications with key healthcare partners

Assistance Needed for HIT / HIE

- ❖ Education / Outreach
- ❖ Expertise / Resources
- ❖ EMR upgrades
- ❖ Interface development
- Community collaboration
- Critical mass of data into State HIE – HINAz
- DIRECT
- E-Prescribing
- Clarify the State direction for HIE
- HIE functions
- Publicity / Promotion
- Proofs of concept

Barriers to HIE Participation

When developing a grant program for providers to connect to HIE, it is important to understand the reasons that are preventing them from moving forward. The first subject area covered in the interview – after gaining a basic understanding of the technology adoption level in the organization – focused on what the interviewees viewed as barriers to their adoption of HIE.

The section below contains summaries of the comments in the Barriers subject area. The comments most frequently heard are marked with a red asterisk (❖) and are at the top of the list. Other comment categories follow in alphabetical order.

Barriers to HIE

- ❖ Cost
- ❖ Insufficient resources
- ❖ Lack of EMRs

- • Difficult interoperability/interfaces
- • Government standards
- • Lack of broadband
- • Lack of data in the HIE
- • Privacy concerns
- • Provider priorities
- • Provider workflow changes
- • Other

Cost ❖

Interviewees expressed a great deal of concern about the costs associated with participating in health information exchange. Nearly every interviewee mentioned cost concerns during their interview. Their concerns ranged from the costs that EMR vendors charge to develop the technical interfaces between an EMR and the HIE – and that the costs to develop interfaces for a small facility are the same as that of a large facility – to the need to upgrade their EMR systems to be able to handle the data; to the on-going connection charges that the organizations will incur once they are connected to an HIE.

There were also cost concerns related to unknowns such as: if providers will need to connect to multiple HIEs or ACOs, and if the practices that providers want to exchange data with be willing to incur the costs of exchange. In other words, "Is connecting to the HIE economically viable?"

Insufficient Resources ❖

Lack of resources is a major barrier to many of the rural and long term care (LTC) organizations moving forward with HIE. The lack of adequate financial resources is pervasive. Especially in the rural areas, the lack of HIT resources is due not only to financial constraints, but also the result of difficulty in attracting and retaining knowledgeable HIT talent. Interviewees communicated an increased need for IT resources as the support requirement for HIT and HIE become more complex. Where independent EMR implementations used to be able to be supported with minimal resources, the added complexity of interfaces, new standards, and technology has made providing this support more challenging.

Lack of EMRs ❖

Although each of the provider organizations interviewed is currently using an EMR, there is a concern that there are still many providers who have not yet adopted EMRs and would not be ready to exchange information. The interviewees also mentioned that many of the EMRs now in use are not fully meeting the needs of their organizations and required high levels of customization – adding costs and some frustration with associated workflow disruption.

Difficult Interoperability/Interfaces

Difficulty with interoperability was cited as a major barrier to HIE by many of the interviewees. Each new interface that needs to be written for an EMR typically comes with a high price tag from the vendor. Interviewees expressed dismay and frustration with prices for ambulatory EMR interfaces that range from $5,000 to $12,000 per interface. This is compounded by the fact that many interfaces are often required. There is a strong desire to be able to write a single interface and have that interface accommodate all required connections. Some organizations are opting to use DIRECT until the interoperability issue is better addressed.

Government Standards

Interviewees view lack of consistent HIT/HIE technical standards as a major contributor to the interoperability problem. There was also frustration expressed that current standards aren't robust enough – and keep changing. Some interviewees were also unhappy with what appears to be a lack of coordination between ONC and CMS in this area.

Lack of Broadband

Particularly in the rural areas, the lack of access to high-speed internet by all providers is a barrier to HIE. Even in areas where broadband or DSL access was available, the costs associated with the upload and download speeds required were seen as too high.

Lack of Data in the HIE

Interviewees cautioned against launching an HIE that does not contain a base set of usable data. Some mentioned a desire to know that key providers were participating. Several interviewees mentioned the value of AMIE and the Medicaid data it provided. They are expecting that same data will be available from the statewide HIE, but don't know the plan or timing of that access. There was also concern about whether or not HINAz/Axolotl would be able to "digest" a CCD as discrete data elements. This was viewed as an important capability.

Privacy Concerns

There were multiple concerns expressed relating to privacy. There is a definite need, on the part of providers, for a clearer understanding of Arizona consent laws and how they will be implemented to support HIE. Interviewees expressed general concern about exactly what type of consent is required by the state for different types of information and data use. Contributing to their confusion was the fact that HINAz changed its interpretation of what kinds of data use (from query to storage) requires consent. Organizations are looking for legislative guidance.

There is a need for better understanding about what and how behavioral health information can be shared. One individual also asked for clarification around prisoners' health information privacy.

In general, there were concerns around the risks and liability for data once it is out of the (source) provider's control. Many questioned how to know if they can trust others to protect the data.

Provider Priority

Many interviewees expressed the concerns that providers have regarding keeping their businesses viable. Their perspective is that unless HIE can show it provides them high value, it will be difficult to convince these providers to add HIE to their operating costs.

Provider Workflow Changes

According to the interviewees, incorporating and integrating HIE into the provider workflow is paramount to its success. To many, this means the information must be available without having to leave the EMR application. They indicated they are unwilling to go to multiple external sites to access the information.

Drivers of HIE Participation

Just as important as understanding the barriers to HIE participation, is understanding the factors that will motivate providers to move towards HIE participation. What will it take to overcome the barriers? Once barriers to HIE were discussed, the interviews explored the reasons why an organization would be interested in HIE. Interviewees were asked to identify some of the drivers that would motivate them to participate in HIE. There were a wide variety of responses.

The section below contains summaries of the comments in the Drivers of Participation subject area. The comments most frequently heard are marked with a red asterisk (❖) and are at the top of the list. Other comment categories follow in alphabetical order.

Drivers of HIE Participation

- ❖ Better patient care
- ❖ Better relationships and hand-offs with other healthcare providers
- ❖ Required reporting

- Control and risk management
- Costs
- Improved image of rural healthcare
- Transfer of data – bi-directional communications with key healthcare partners

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Better Patient Care - Linking All of the Patient Data across Providers ❖

Virtually all of the interviewees cited better patient care as the overall driver for HIE participation. They recognize the value a trusted source of complete patient information could have on their ability to provide high quality care. Areas where more complete information are needed include: medication information, referrals and other continuity of care situations, frequent visitors to EDs, rural and urgent care referrals, and access to data from other locales. Many long term care facilities commented that obtaining orders and medications for patients being transferred from acute care hospitals is one of their most time consuming activities – that this lack of information could delay providing the patient with the best care possible.

Better Relationships and Hand-Offs with Other Healthcare Providers ❖

Going hand in hand with providing better patient care through access to more complete information, many interviewees mentioned that they felt relationships with other providers could be improved with the capability to exchange health information electronically. In particular LTCs were interested in working with acute care hospitals to smooth the care transition between facilities. They believe that this could provide them an advantage over other LTC providers who do not have this capability.

There was concern expressed with the effectiveness of the paper-based transfer of information – especially from an LTC to an acute care setting. Interviewees commented frequently that the paper files are not received by the hospital during the transfer process. A related concern voiced by multiple interviewees is how to maintain the "patient story" when using EMRs and HIE.

Required Reporting ❖

Many interviewees mentioned that improving the efficiency of required reporting – whether it is to the State immunization data base or quality metrics – would provide an incentive for HIE participation. For example, today there is no consistent connection between ASIIS and a provider EMR. The data has to be entered twice and reconciled. Integrating these activities would provide valued efficiency. Similarly, other benefits mentioned included assistance with general reporting measures and supporting providers in demonstrating that their actions are positively impacting quality.

Control and Risk Management

Several interviewees mentioned using HIE to improve their internal processes and streamline administrative controls. One example cited was that the VA cannot transfer a patient until the receiving facility provides a verbal approval. Having a fully documented record of the patient would enable the receiving facility to make a decision more efficiently. Another driver for HIE was the hope that its use would provide improved access to Medicaid eligibility information.

Costs

Reducing overall costs was mentioned by virtually all of the interviewees as a driver of HIE. The cost savings identified were in various areas. One interviewee mentioned that by not having to "chase" medical records, transfer information, and eligibility, they might save the costs associated with one full-time employee. Another mentioned cost savings in the number of discrete systems with which they would need to connect. One noteworthy perspective is that access to HIE will significantly reduce the uncertainty of making treatment decisions with incomplete patient information. For example, today for many patients – in the paper-based world – there is a "known unknown." Providers tend to be conservative and choose the "safest" level of care – which may include admitting patients that otherwise, could be treated on an ambulatory basis.

Improved Image of Rural Healthcare

Some interviewees mentioned that participating in HIE could improve the perception of their organizations by patients and physicians alike. Especially in the rural areas, it was thought that HIE participation could also help them improve their marketing opportunities for recruiting physicians and other resources by making their organization a more attractive place to work.

In addition, there were comments that patients – especially those who are more tech-savvy – could view participation in HIE as one of the efforts the provider is making to improve both healthcare delivery and patient satisfaction.

Transfer of Data and Bi-Directional Communication with Key Healthcare Partners

Key to successful implementation of health information exchange is the ability of providers to obtain the information they need to provide better care. This requires that the providers with whom they share patients also participate in the exchange of information. Interviewees were asked to identify providers with whom they would like to exchange healthcare information. The table below shows the priority trading partners identified by each interviewee organization.

Summary of Key HIE Trading Partners Identified by Interviewees

Organization Key Trading Partners	Organization Type
Adelante Healthcare ▪ Providers within their network ▪ Hospitals where they share patients	Non-Rural / FQHC
Archie Hendricks, Sr. Skilled Nursing Facility ▪ Sells Indian hospital ▪ AHCCCS for eligibility and enrollment ▪ Tucson Medical Center ▪ University Medical Center ▪ St. Mary's Hospital ▪ Casa Grande Regional Medical Center ▪ Sonora Quest Labs	Long Term Care
Arizona Medical Association ▪ Labs ▪ Immunizations	Association
AZ Chapter of American Academy of Pediatrics ▪ Public Health for immunizations ▪ Pharmacy Benefit Management	Association
Carondelet Health Network ▪ Tucson Medical Center ▪ HIE to HIE connections	Metropolitan Hospital
Cobre Valley Regional Medical Center	Rural Hospital

Organization	Organization Type
Key Trading Partners • Cobre Valley's clinics • St. Luke's Medical Center • Mountain Vista Medical Center • Banner Health • Scottsdale Healthcare	
Copper Queen Community Hospital • Labs • Copper Queen clinics • Tucson Medical Center • Mayo • Carondelet	Rural Hospital
Desert Terrace Healthcare Center - Ensign Group • Banner Health • Major hospitals • Sonora Quest Labs	Long Term Care
Jewish Family & Children's Service • Health Plans – Mercy, United, and others • ER Information	Behavioral Health
Maricopa Integrated Health System – MIHS • Pharmacy Data	FQHC look-alike[5, 6] Hospital Behavioral Health
Mt. Graham Regional Medical Center • Tucson Medical Center	Rural Hospital
Mountain Park Health Center • Immunization data	FQHC
Northern Arizona Healthcare • Physicians that refer to us that are not employed by us	Rural Hospital
Phoenix Pediatrics • Phoenix Children's Hospital • DME ordering • Hospital ERs • Newborn State screening lab results • Insurance companies • Referrals, specialists	Provider
Ponderosa Pines Care and Rehab • Flagstaff Medical Center • Firestone Pharmacy from Utah • Ability to electronically bill Medicaid	Long Term Care
Summit Healthcare • Initial focus will be connect to the State's immunization database • Connect private HIE to the statewide HIE	Rural Hospital
Verde Valley Guidance Clinic • Hospital • Other primary care organizations	Behavioral Health

Organization	Organization Type
Key Trading Partners	
▪ The Health department ▪ All those that were involved in AMIE	
Villa Maria Care Center	Long Term Care
▪ Tucson Medical Center ▪ Spectrum Pharmacy ▪ Sonora Quest Labs ▪ VA ▪ University Medical Center ▪ St. Mary's ▪ St. Joseph's	
Yuma Regional Medical Center	Rural Hospital
▪ Our physicians ▪ Sunset Community Health Center ▪ Women's health providers ▪ Referring physician practices	

Assistance Needed for HIT/HIE

A key reason for conducting these interviews was to determine the ways in which the State of Arizona could provide grant assistance to assist providers with HIE participation. After obtaining information on the interviewees' perspectives on the barriers and drivers for HIE participation, the discussion then turned to understanding where specific assistance was needed.

The section below contains summaries of the comments in the Assistance Needed subject area. The comments most frequently heard are marked with a red asterisk (❖) and are at the top of the list. Other comment categories follow in alphabetical order.

<table>
<tr><td colspan="2">Assistance Needed for HIT/HIE</td></tr>
<tr><td>❖</td><td>Education / Outreach</td></tr>
<tr><td>❖</td><td>Expertise / Resources</td></tr>
<tr><td>❖</td><td>EMR upgrades</td></tr>
<tr><td>❖</td><td>Interface development</td></tr>
<tr><td>•</td><td>Community collaboration</td></tr>
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</table>

Education / Outreach   ❖

Risk / Compliance / Privacy / Security

There was a varying knowledge of, and comfort level with understanding, the issues relating to patient privacy and the exchange of healthcare information. Some of the interviewees were well-versed in all aspects of HIE. However, others – especially those in the more rural areas with less access to privacy specific resources – expressed a strong desire to receive education in this area. Some of their concerns included: a lack of knowledge on "how things work" with HIPAA, security, state law, and HIE; the need for a better understanding of an organization's accountability – under HIPAA – when patient information is exchanged; how to be sure the recipient of information is protecting patient information appropriately; and the need for a better understanding of the legal ramifications of consent.

HIE Benefits

While all agreed that better access to patient information would improve patient care, many interviewees were not clear on the exact benefits they could expect and how to describe those benefits to their administration or physicians. Many were unsure about the various choices available to them for HIE and would welcome an opportunity to learn more about topics such as "robust exchange," DIRECT, and EMR-to-EMR connection.

HIE Choices and Implementation

There was a general interest in obtaining assistance in understanding the basics of HIE as well as understanding how to share healthcare information and remain HIPAA compliant. Some interviewees suggested that a workshop about interoperability, HIPAA and Meaningful Use would be helpful.

HINAz and DIRECT

Many of the interviewees were not aware of the services to be offered by HINAZ, or of the capabilities offered by the DIRECT option, and are interested in obtaining more information.

Expertise / Resources ❖

As mentioned in the Barriers section of this report, many of the interviewees view a lack of resources as a barrier to moving forward with HIE. Some of the areas in which assistance would be valued include providing external resources such as consultants who can help organizations determine the best approach to use in selecting an EMR; understanding what HIE participation will entail; and helping them understand, from a legal and technical perspective, the steps they need to take as they move forward with HIE. Assistance with HIE planning, support for required provider workflow changes, and on-site resources to bring a provider on-line were other areas mentioned where help could be provided.

Interviewees also mentioned that assistance in the form of HIE tools would be valuable. These tools could include examples of legal agreements, step-by-step guides, lists of certified EMRs that interoperate with the exchange, and a list of contacts for more information.

EMR Upgrades ❖

As noted earlier, many interviewees need to upgrade their current EMR systems before they can participate in HIE and would appreciate financial assistance in this area.

Interface Development ❖

Along with the need (and costs) to upgrade their EMR systems, most, if not all of the interviewees said that assistance in helping to defray the high costs of writing the interfaces from their EMR systems to the HIE would be a high priority area. Many are looking for ways to economize on these costs by working with vendors to decrease the "one off" pricing of the interfaces.

Community Collaboration

Assistance in helping with community collaboration was suggested by a few of the interviewees. Their ideas revolved around creating and funding a venue where leaders of HIE from the various hospital systems can get together with rural, behavior health, and LTC providers – "people like us" – to discuss the obstacles they face in moving toward HIE. The goal is to generate ideas and work together collaboratively to solve the problems.

Critical Mass of Data into the State HIE – HINAz

Having a critical mass of data in the HIE is important to its success. Interviewees suggested that there be funding available to help HINAz populate the database so that there is sufficient data to be considered valuable.

DIRECT

There were several suggestions that funding access to DIRECT would help providers take the first step towards HIE.

ePrescribing

Some interviewees related that assistance with identifying high volume patients and providers and providing assistance for moving forward with ePrescribing would be valuable.

Clarify the State Direction for HIE

There is a perception that state agencies are not well aligned in their goals, planning, or timing for HIT/HIE. Several interviewees expressed a desire for the State to provide leadership in creating a unified strategy for the agencies, followed by a coordinated plan, and then actions that aligned with the plan. There is a level of frustration among some interviewees as they wait for this plan to materialize. Some organizations have decided to move forward in implementing connections on their own.

Interviewees cited AzHeC as a strong bridge-building organization. At the same time, there was frustration expressed with HINAz and its lack of progress in providing the Provider Directory and other services.

HIE Functions

Interviewees stressed the importance of the HIE providing the capabilities that it "advertised." They mentioned the significant investment required for the providers to participate and that it is important for the services offered to be valuable. One interviewee said, "Make the HIE so good that if you aren't using it, you're crazy and the patients won't stay with you."

Publicity / Promotion

Publicizing the success of the HIE was mentioned as a good use of funding. It is important that providers see and understand how other providers are successfully using HIE. One suggestion was to create publicity to demonstrate real-life examples of how using HIE is making a positive difference for patients and providers.

Proofs of Concept

One interviewee suggested funding a proof of concept where providers and payers work together to identify patients they have in common, decide what information they would share, and then determine how to design a care coordination program that would benefit the patient, the provider, and the payer.

Other

Other requests included a program to reach out to networks of providers rather than one organization at a time; providing no cost loans – since many of the interviewees were not able to make a prospective investment in HIE; and assistance in obtaining and supporting broadband connections – especially in the rural areas where communication costs are very high.

Additional Comments

There were additional comments that were valuable, but did not readily fall into the broad categories described above. They include:

Advisory Groups

Some interviewees expressed a desire for a forum in which they could discuss HIE issues with others – both within the state and from other states – who have similar issues.

AHCCCS

There was concern expressed that AHCCCS is too rigid in the format of the forms it will accept. One interviewee commented, "We have to do things twice. We customized every form in our EMR to document the wellness of each patient. They (AHCCCS) still require their paper form. Our printout has all of the same content, but our form doesn't look exactly like their form. They won't accept our electronic version of the form."

ASET

The interviewees had many positive comments about ASET, its staff, and the direction being taken. They feel listened to, and believe there is good communication.

Consumers and the Public

There were suggestions on how the State could better provide information to the public on EMRs and HIE. One suggestion was to "provide grants to AARP and others that have some ability to 'fire up' their constituencies." Gaining the support of the public to encourage the legislature to continue to support HIE was seen as very beneficial. Finding ways to build support for HIE in the business community was also mentioned as a way to increase consumer support.

Meaningful Use (MU) Status Comments

Some of the interviewees' organizations have not yet registered for MU Stage 1, while others have already received a payment. One interviewee expressed disappointment at not being able to use the Regional Extension Center (REC) services because of not being part of their target groups. They suggested REC expand their services beyond the ONC mandate. [Note: This has since been addressed.]

NwHIN Connect

For those interviewees providing care to patients covered by the Indian Health Service (IHS), there was a strong desire to build NwHIN connected services. Electronic health data for IHS patients is only available through a NwHIN connection.

State of Arizona HIE Activity Scan[*]

Arizona Accountable Care Organizations (ACOs), Health Information Exchanges (HIEs), and Telemedicine Initiatives

Arizona has a rich history of promoting HIT and HIE. As a result of prior state and community efforts, there are many initiatives – taking various forms – currently underway to share health information electronically.

Accountable Care Organization (ACO) Initiatives

There are multiple ACO-related initiatives underway in Arizona. These activities are relevant because health information exchange is regarded as a core capability for the success of an ACO.

Medicare ACOs:[7, 8, 9]

Arizona Connected Care

> A collaboration of independent health care providers in Tucson and Southern Arizona, that includes more than 150 physicians, three Federally Qualified Health Centers (FQHC) and Tucson Medical Center (TMC). The ACO is expected to serve nearly 7,500 beneficiaries.

Arizona Primacy Care Providers (AzPCP) ACO

> A Medical Corporation, a member of the Heritage family of medical groups, located in Chandler, Arizona and comprised of networks of individual practices with 73 physicians. It will serve Medicare beneficiaries in Arizona.

Banner Health[10]

> Medicare Pioneer ACO. To date, the Banner Physician Hospital Organization is responsible for more than 20,000 Medicare Advantage members in three different Medicare Advantage Plans.

John C. Lincoln Accountable Care Organization, LLC[11]

> Located in Phoenix, the ACO is comprised of both John C. Lincoln (JCL) hospitals and JCL ACO participating primary care physician offices. The JCL ACO will also partner with community primary care and subspecialist physicians, and other institutions to incorporate health care components that the health network does not currently provide.

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[*] Information in this section was obtained through an environmental scan and was conducted independently of the interviews of the nineteen organizations.

Payer sponsored initiatives and ACOs

Aetna Whole Health Plans and Banner Health[12,13]

Banner Health Network has entered into an Accountable Care Collaboration with Aetna. It will serve as a tailored network for Aetna's Whole Health product. Banner Health operates 23 acute-care hospitals, as well as long-term care centers, outpatient surgery centers, and an array of other services including family clinics, home care and hospice services and a nursing registry. This new product will be available to Maricopa County, and to some Pinal County employers with 2-100 eligible employees.

Cigna and Banner Health[14]

Banner Health Network and Cigna are launching a collaborative accountable care initiative. Collaborative accountable care is Cigna's approach to accomplishing the same population health goals as accountable care organizations (ACOs). This collaboration will benefit over 20,000 individuals.

Cigna and Cigna Medical Group[15]

Cigna Medical Group (one of the Valley's largest multi-specialty group practices with 23 health care centers and two convenience care clinics located throughout metropolitan Phoenix) is part of an initiative launched to test and refine the ACO model of care. It was the first patient-centered medical program in the Phoenix area involving a large medical group practice and a single private payer.

Health Net of Arizona and Banner Health[16]

Banner Health Network has partnered with Health Net of Arizona to serve as the tailored network for their ExcelCare product offered in Maricopa County and parts of Pinal County. This represents a subset of the full Health Net HMO network.

United Healthcare and Tucson Medical Center[17]

Tucson Medical Center and independent physicians in the community are creating an accountable care organization named the Southern Arizona Accountable Care Organization (SAACO). OptumHealthTM, OptumInsightTM, and OptumRxTM will provide the analytics to help SAACO support physicians.

Vanguard Health Systems and Dignity Health[18]

Dignity Health is partnering with the Arizona State Physicians Association (ASPA) to provide independent physicians access to a health information exchange through an accountable care organization. Dignity Health is jointly applying to create an affordable care organization with Vanguard Health Systems. The ACO is named the Arizona Care Network.

HIE Initiatives

In addition to the ACO-related initiatives, there are several other HIE activities currently taking place, or under development, within the state.

Health Systems

Bayless Behavioral Health Solutions[19]

In 2011, Bayless Behavioral Health Solutions launched a statewide HIE that focuses on the exchange of behavioral healthcare data. They were one of the first mental health providers to launch an HIE to share patient records with partners. Through a two-way, secure data exchange; information is accessible to anyone involved in mental health services, including healthcare providers, insurance companies, case managers, educators, probation officers, and skilled nursing facilities. In compliance with state and federal security laws, sensitive data exchange within Bayless is not integrated with medical health records.

Community Access Partnership of Arizona and Mexico (CAPAZ-MEX); Cross-Border Continuity of Care Record project[20]

CAPAZ-MEX is a joint program between Mexico and Arizona whose primary goal is to improve the health status of the medically-underserved populations by building and strengthening the infrastructure for a continuum of care (medical, dental, and mental health). It is a private medical providers' discount network established by the Regional Center for Border Health, Inc.[21] and the Yuma County Medical Collaborative to increase the availability, accessibility, and affordability of healthcare services for the uninsured and underinsured residents of Yuma County. The medical provider network extends to the US-Mexico border communities of San Luis R.C., Sonora, Los Algodones, and Mexicali, Baja California. Members can receive up to 65% discount on healthcare services. Members are enrolled into a Continuity of Care Record-Health Information Exchange (CCR-HIE) that allows their medical information to be accessed on both sides of the border by the CAPAZ-MEX medical providers through a secure web-portal.[22]

Carondelet Health Network[23]

Carondelet will lead the efforts with Pima Council on the Aging Transitional Care Navigation Program. The health information exchange will be employed to improve coordination of care through a Transition of Care (ToC) web-based platform. Carondelet is part of the Ascension Health network which is a multi-state system.

Dignity Health (formerly Catholic Healthcare West)[24]

The health information exchange is called the Phoenix Connected Community and will connect users with the MobileMD protected information transfer mechanism. The Dignity Health hospitals in Arizona include: Chandler Regional Medical Center, Mercy Gilbert Medical Center, Barrow Neurological Institute, and St. Joseph's Hospital and Medical Center.

Jewish Family & Children's Services (JFCS)[25]

JFCS was awarded a $750,000 grant in 2012 by Magellan Health services of Arizona for a new integrated health care initiative. JFCS will use the grant to implement integrated information exchange of electronic health records between primary care providers and mental health providers. The grant will also allow JFCS to train a team of peer navigators who will serve patients by helping them to coordinate care between providers.

Scottsdale Health Partners[26]

Scottsdale Health Partners (SHP), a joint venture between Scottsdale Healthcare and Scottsdale Physician Organization, awarded Harris Corporation a three year, $7.9 million contract to implement its Clinical Integration solution. SHP will deploy the Harris Provider Portal which will aggregate patient information from disparate clinical data sources. In addition, the Smart Messaging service will enable secure electronic communications between providers and the Referral Management product will manage the referral life cycle.

Tucson Medical Center (TMC)[27, 28]

TMC is developing information exchange capabilities on two fronts – as part of a public system being developed at a statewide level (HINAz), and building its own information exchange as a building block to participate in the Arizona Connected Care Network ACO.

Yuma Regional Medical Center (RMC)[29]

Yuma RMC selected Epic Systems Corp for a $73.3 million, five-year initiative to implement inpatient and ambulatory electronic health records. The hospital's 2010-2014 initiative is linking interested community physicians to the hospital EHR. The consumer web portal was implemented in 2012.

Telemedicine Initiatives

There are many active telemedicine initiatives within the State. While telemedicine may not be specifically thought of as "health information exchange," there are numerous opportunities for working together with these programs to improve access to patient information.

The University of Arizona[30]

Arizona Telemedicine Program. Arizona has been a pioneer in telemedicine since 1995. The program has created partnerships among a wide variety of for-profit and not-for-profit healthcare organizations and has helped create new interagency relationships within the state government. The program demonstrates a strong commitment to research and currently provides medical services in 20 communities. Continuing medical education is delivered to 34 communities using bi-directional video conferencing. The reach of this telemedicine program is depicted in the graphic.[31]
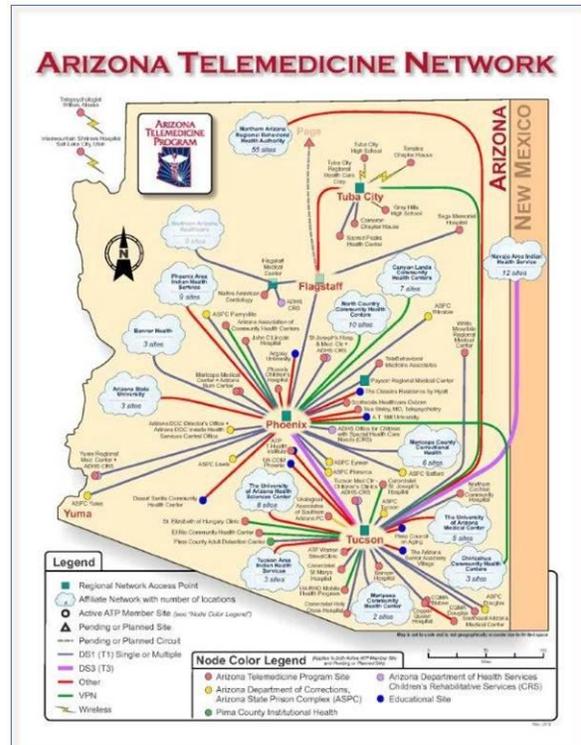
In 2004, through a grant from Blue Cross Blue Shield of Arizona, the University of Arizona was able to establish the Southern Arizona Telemedicine and Telepresence (SATT) Program. The program facilitates the virtual presence of an experienced trauma surgeon from the University of Arizona Medical Center, through a dedicated telemedicine network with five rural hospitals: Benson Hospital - Benson; Copper Queen Hospital - Bisbee; Southeast Medical Center - Douglas; Sierra Vista Regional Health Center - Sierra Vista; and Holy Cross Hospital - Nogales.

For more than ten years, the Arizona Telemedicine Program has operated pilot projects to test new tele-home health concepts. These projects utilize inexpensive videophone equipment connecting to the patient's home through ordinary telephone lines. The current use cases include: ostomy care, cardiac transplant care, and compassionate oncology care.

Mayo Clinic[32]

Mayo offers stroke telemedicine also called tele-stroke. Mayo doctors with advanced training in the nervous system remotely evaluate patients who have had acute strokes and make diagnoses and treatment recommendations to emergency medicine doctors at other sites. Mayo Clinic's hub in Phoenix serves patients in Bisbee, Casa Grande, Cottonwood, Flagstaff, Globe, Kingman, Parker, Show Low, and Yuma.

One recent study, in which Mayo Clinic - Phoenix participated, involved using telemedicine to diagnose concussions among rural-area high school students. The study involved doctors using telemedicine tools to evaluate and determine the concussion symptoms of a 15-year-old boy in Arizona.[33]
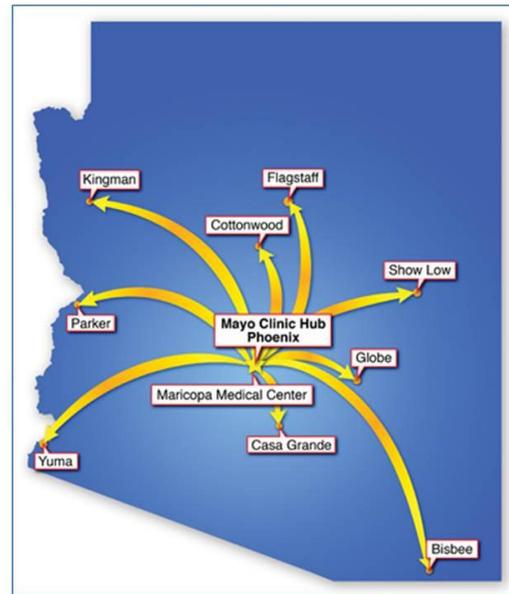
Banner Health Network[34]

Remote Monitoring. Banner Home Care offers telehealth monitoring to patients with chronic diseases like congestive heart failure and diabetes. This program is offered in conjunction with skilled nursing. The patient is assessed, and if approved for the program receives training, home telehealth system equipment (blood pressure monitor, digital scale, oxygen sensor), and a minimum number of weekly calls.

East Valley Banner Hospitals[35]

Banner Health began testing a new program that allows patients with behavioral health issues in hospital Emergency departments to "see" a psychiatrist via a secured video link in late 2011. Using "Telepsych," an emergency physician can request a consult from a psychiatrist or psychiatric nurse practitioner at the Banner Psychiatric Center, a 24/7 behavioral health center in Scottsdale, Arizona. When the secure video link is established, the psychiatrist works with the physician to assess the patient and can create a course of action for proper patient care.

Carondelet Health Network[36]

Carondelet has a tele-cardiology program that expands the reach of rural hospitals. The rural hospital's emergency department physician can examine the patient and then initiate a tele-cardiology visit with a cardiologist at the urban hospital. The cardiologist helps the local physician decide whether to admit the patient or transfer to the urban center. The hospital's telemedicine program also includes tele-neurology, tele-stroke, and tele-education.

The Center for Telehealth and eLaw[37]

Arizona has specific telemedicine statutes that require telemedicine practitioners to obtain consent from the patient or the patient's health care decision maker before providing health care services. Those wishing to practice medicine in the state of Arizona need to obtain a limited pro bono registration, locum tenens registration, or a full medical license.

Copper Queen[38]

In 2007, Copper Queen Community Hospital (CQCH) in Bisbee installed Trauma Telemedicine technology. This provides emergency room doctors at the hospital a real-time video and audio connection with trauma doctors at University Medical Center in Tucson, who are then able to guide emergency room staff and facilitate patient stabilization prior to transfer.

In 2008, CQCH instituted tele-dermatology services and Coumadin clinics in the Rural Health Centers. Also in 2008, the hospital signed on with the Mayo Clinic in Phoenix to provide Stroke Telemedicine for Rural Residents (STARR). The STARR system provides physicians at the hospital with two-way, audiovisual communication with top neurologists throughout the state to treat acute stroke victims. The system allows patients to be examined and stabilized prior to transport, if necessary; or to be treated locally without transport. CQCH has also implemented Electronic Medical Records, and uses telemonitors in patients' homes as part of their Copper Valley Home Health program.

CQCH received a grant to purchase and install digitized x-ray systems in the hospital and its clinics. This will provide them the capability of sending images that may be read instantly in physician's homes or offices so that diagnoses may be made rapidly.

Northern Arizona Regional Behavioral Health Authority (NARBHA)

NARBHA provides telemedicine for a network of small behavioral health clinics throughout the region (Mohave, Coconino, Apache, Navajo, and Yavapai).[39] This new form of mental health delivery receives financial support from the federal government, particularly from Medicare.

Scottsdale Healthcare[40]

Remote Monitoring. Scottsdale offers the McKesson TeleHealth Advisor to remotely monitor patients. This program includes a Health Buddy appliance and more than thirty disease management programs.

Southern Arizona VA Health Care System

The Southern Arizona VA Health Care System (SAVAHCS)[41] opened three Rural Health Coordination Care Centers (RHCCC). This expanded rural health care services to eligible Veterans in southern Arizona. The Casa Grande and Sierra Vista Centers are in separate facilities near the Community Based Outpatient Clinics (CBOC) and opened in the spring of 2012. The Yuma RHCCC was imbedded in the new, expanded Yuma CBOC that opened October 1st, 2012.

Each RHCCC and all CBOCs now have expanded Veterans' access to specialists, health education, and disease management support without leaving their 'home' clinic by using telemedicine capabilities which allows the Veteran to 'see' care providers or educators via live video teleconferencing from the SAVAHCS main campus or another CBOC.

Broadband Initiatives

According to the 2012 report, "Arizona's Strategic Plan for Digital Capacity,[42]" advancing Arizona's digital infrastructure is fundamental to progress in every area of society including: education, healthcare, research, business, public safety, government and the environment.

U.S. Census data reveals Arizona ranks 18th in broadband coverage among the states and District of Columbia with 79.1% of Arizonans living in households with Internet access. At 64.6%, Arizona ranks 31st in individuals accessing the Internet at home and 34th among the 50 states in average digital connection speeds.

There are major barriers to overcome for rural Arizona's digital build-out. These include the costs and delays in permitting processes, lack of consistent rules among jurisdictions, inadequate long-distance connections infrastructure (middle mile), and lack of network resiliency.

The figure below depicts Arizona's wide gaps in high speed internet availability.[43]

Internet Download Speeds Available Across Arizona
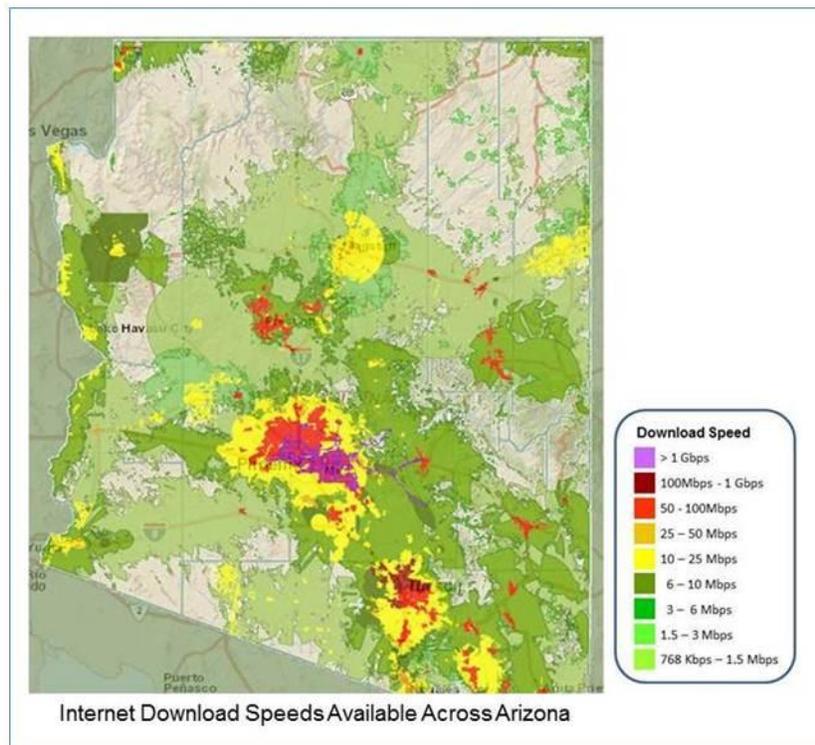
Digital Arizona Program[44]

ASET is leading the program to identify needs for, and encourage collaboration on, the expansion of Broadband. The goal is to promote job growth and economic development in Arizona, while lowering overall communication costs. The Digital Arizona Program will create economic models to quantify the long-term benefits and costs for sample rural communities in the near future. Described below are two of the initiatives included in the Digital Arizona Program.

- **Broadband Mapping and Planning Federal Grant**[45]
  Arizona received a $2.3 million grant from the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) for this project. The Broadband mapping project will collect and verify the current availability, speed, and location of Broadband across Arizona.

- The State of Arizona was also awarded an additional $4.064 million by the National Telecommunications and Information Administration (NTIA) to map and plan expansion of Broadband access.

Arizona Broadband Grants to Enhance Capabilities[46]
Arizona has been the recipient of tens of millions of dollars in federal assistance for programs to enhance rural broadband capabilities. Examples of initiatives funded with these grants include:

- The Tohono O'odham Utility Authority (TOUA) received a $3.6 million loan and a $3.6 million grant to design, engineer and construct a digital network to replace dial-up service. They also were awarded a second round USDA Broadband grant for $10,307,000 that serves as a last mile infrastructure project
- The Navajo Tribal Utility Authority (NTUA) was awarded a $32.1 million federal grant to provide middle mile and last mile Broadband infrastructure access to the Navajo Nation.
- The San Carlos Apache Telecommunications Utility, Inc. (SCATUI) was awarded a $10.5 million grant/loan that will provide fiber-to-the-premise (FTTP) service to the San Carlos Apache Reservation in Arizona.
- Hopi Telecommunications Inc. (HTI) was awarded a $3.6 million grant/loan that will connect Jeddito, Arizona with existing Broadband infrastructure more than 60 miles away.
- The Arizona Telephone Company was awarded a $4 million USDA grant to fund Broadband expansion projects in three rural areas of Arizona.
- GovNET, Inc. was awarded a $39.3 million grant to offer affordable middle-mile Broadband service in Arizona.
- The Havasupai Reservation and two scientific research facilities will benefit from a $2.2 million USDA Rural Utility Services (RUS) grant to implement the Northern Arizona Data Internet Network Extension (NADINE) to provide 300 Mbps of capacity to rural areas on the reservation.
- Midvale Telephone Exchange received a $1.115 million USDA Rural Utility Services (RUS) grant to provide Broadband service at speeds of at least 20 Mbps in the Prescott Prairie, Mingus Meadows, and Mingus Mountains areas of Henderson Valley. They also received a $2.147 USDA Rural Utility Services (RUS) grant to provide Broadband services.

Governor Jan Brewer recently signed into law the landmark Digital Arizona Highways Act of 2012[47], allowing conduit for fiber optic cables to be built along Arizona's highways using the State's rights-of-way. This will continue to enhance Arizona's ability to bring high-speed internet to its rural areas.

State Supported Public-Private Collaborative Initiatives

Arizona Health-e Connection Roadmap

In 2006 Arizona developed the Arizona Health-e Connection Roadmap[48]. This roadmap has provided the foundation for many of the HIE initiatives within the state. The roadmap described an overall approach for connecting Arizona healthcare providers and in many cases, focused specifically on the health information exchange that would be required among providers within a medical trading area (MTA) as well as across the state.

Example initiatives from the Roadmap, listed below, continue to be important today:

- Governance. Convening and supporting a broad range of interests and geographies to come together around the possibilities of moving e-health forward for Arizona.
- Privacy, Security, and Legal. Identifying and addressing issues that are needed to ensure e-health information exchange is confidential and secure, including legislative actions.
- Marketing and education. Developing a statewide portal to provide a one-stop access point to statewide resources, tools, and education.
- Technology. Recognizing the need for secure messaging between providers in addition to a fully robust HIE.
- Rural challenges. Understanding and beginning to address the unique challenges present in rural communities. For example: broadband availability and cost, the need to receive medical care within the borders of other states, the different levels of technology implementation, and skilled resources.

Arizona Health eConnection (AzHeC)[49] – Regional Extension Center

In April 2010, AzHeC was awarded a grant by the Office of the National Coordinator for Health Information Technology (ONC) to develop a regional extension center (REC) to assist Arizona health care providers with EHRs and Meaningful Use. The Arizona Regional Extension Center (REC) is one of 62 federally funded and designated RECs nationwide that serves as an unbiased, trusted resource with national perspective and local expertise. The REC offers membership and "hands-on" technical assistance services to qualified health care providers.

Arizona Health-e Connection (AzHeC) administers the Arizona HIE Marketplace[50] program under the direction of the State of Arizona and the Arizona Strategic Enterprise Technology (ASET) office. This program provides viable HIE options to any willing Arizona health care provider and assists providers participating in secure exchange of health information.

AzHeC developed a marketplace for the DIRECT approach through services offered by health information service providers (HISPs). DIRECT is also known as a "push" technology as it will push data electronically – directly from one provider to another.

As of 11/29/2012, over 670 providers had established DIRECT Exchange secure messaging accounts. There are over 800 additional providers who have expressed interest and are going through the education and on-boarding process to establish accounts.
Example use cases for DIRECT include:[51]

- Community health centers sending referrals to specialists and hospitals
- A county correctional facility sending inmate care summaries to state prisons when inmates are transferred between facilities
- An accountable care organization employing DIRECT exchange to coordinate care among providers in their network
- A behavioral health facility connecting with other providers, pharmacies, labs and acute care facilities
- Rural providers sending patient referrals to specialists and hospitals in urban areas
- Public health reporting, such as immunization reporting

The HIE Marketplace identifies and publishes information about health information exchange options, through an ongoing review and approval process, to ensure that Arizona health care providers are able to choose the best HIE option for their facility or practice. In 2013, AzHeC will be expanding the HIE Marketplace to review applications from organizations interested in being listed in the Provider Directory as "query based - robust HIE" in addition to the organizations already listed for "push - DIRECT HIE" capabilities.

Health Information Network of Arizona (HINAZ)[52]

The Health Information Network of Arizona (HINAz) represents a collaborative effort of major health care entities in Arizona including hospitals, large group practices, laboratories, health plans, as well as business and consumer representatives. HINAz has a rich history, as it is the collaboration of two important HIE initiatives. Beginning in 2004, the Southern Arizona Health Information Exchange (SAHIE) formed when the health care community in Southern Arizona began to explore the possibility of a regional Health Information Organization (HIO). In 2007, the Arizona Health Care Cost Containment System (AHCCCS) received $16 million in federal funding through a Medicaid Transformation grant to form the Health Information Exchange and Electronic Health Record utility program, which eventually would become the Arizona Medical Information Exchange (AMIE), an HIE effort in Maricopa County. In 2010, SAHIE and AMIE merged to create a single state-wide HIO called HINAz.

HINAz and their technology partner Axolotl/Optum were awarded a core services[53] contract by Arizona Strategic Enterprise Technology (ASET) to establish a provider directory for the statewide HIE. The HIE, when fully operational will include the capability for providers to push information to the HIE, as well as the capability to query the information. The first phase will establish a Provider Directory. The second phase will include a Master Patient Index and Record Locator Service. This effort is known as "robust HIE" because it includes the ability to both push data and also to query for data.

Summary of Recommendations for ASET Consideration

The following recommendations were developed by Mosaica Partners through an analysis of the interview findings combined with knowledge of "best practices" found in Arizona and other states. They are presented in a suggested order of implementation and are provided for consideration. Overall, the research uncovered strong support and a continued need for state leadership for HIT/HIE planning and implementation in Arizona.

Launch the grants program
- Launch the Grants program and ensure that grant recipients have the resources available to help them be successful.
- Consider providing grantees additional support through education and access to resources to supplement the activities they undertake to progress towards HIE connection.
- Publish the objectives of the approved grantees and highlight their successes.

Focus on HINAz becoming operational
- Continue to work with HINAz in making effective HIE services available as soon as possible.
- Continue to encourage HINAz to create a well-populated data base and to work with providers to contribute data.
- Encourage HINAz to become a HISP in conjunction with providing the statewide Provider Directory services.

Collaborate with other HIE/Telemedicine initiatives within the State
- Convene a meeting with the key stakeholders of the various HIE efforts around the state to discuss potential synergies and opportunities for collaboration. Discuss ways to prevent "HIE silos" from forming.
- Develop a process to stay informed of community HIE efforts and create opportunities for collaboration with the statewide HIE effort.
- Explore areas of potential synergy with the various telemedicine programs within the state.

Update and enhance the State HIT/HIE strategy
Statewide HIT/HIE Strategy and Action Plan
- Continue to update the existing statewide HIT/HIE plan, communicate it broadly, and ensure that progress is made.
- Develop/enhance the State of Arizona HIT/HIE roadmap.
- Develop a strategy and action plan to connect the State of Arizona, through the NwHIN, to the IHS, VA, SSA, and other federal agencies that house healthcare information.
- Develop a consistent approach for enforcing HIPAA and state privacy regulations.

State Agencies
- Develop a coordinated approach and action plan – for the state agencies that hold healthcare related information – to share information among state agencies, with providers in Arizona, and with agencies outside the state.
  - Focus on bi-directional exchange of immunization information (ASIIS), state labs, corrections facilities, behavioral health, and access to Medicaid eligibility information.
  - Establish and implement a standard method for appropriate electronic access to healthcare information.
  - Eliminate re-keying of data that already resides in a provider's EMR.

Enhance HIT/ HIE education
General Education
- Improve awareness and use of existing state and federal HIT/HIE tool kits and other resources to help providers understand and implement HIT/HIE.
  - These tools could include examples of legal agreements, step-by-step guides for participation, lists of certified EMRs that interoperate with the exchange, and contact information.
- Ensure rural providers can take advantage of the various rural healthcare targeted resources that are available to them from the federal and state government.
- Continue to provide access to education on the various choices available for HIE such as "robust exchange," DIRECT, and EMR-to-EMR.
- Solicit input from providers and provider organizations for on-going HIT/HIE educational needs.
Privacy and Security
- Hold a series of education sessions for providers focusing on Privacy and the sharing of healthcare information.
- Describe what a participation agreement consists of, and the penalties for violation. Include how participants can be sure the recipient of information is protecting patient information appropriately.
- Provide education about the Arizona consent laws and regulations and discussion of the legal ramifications of consent.
- Provide a primer on "how things work" with HIPAA, security, state law, and HIE.

Convene stakeholders for dialogue
- Continue the ASET public meetings.
- Continue to work with AzHeC as a convener of healthcare stakeholders.
- Convene sessions where providers and healthcare administrators with similar issues/experiences/solutions can come together to discuss issues, generate ideas, and work collaboratively to address problems. Provide a mix of in-person and webinar/conference call venues to maximize participation in the sessions.
- Create opportunities to share best practices among the providers in the state.
- Provide a forum for discussion around costs of EMR-to-HIE interface development and seek ways to reduce those costs.

Continue / Enhance outreach efforts
- Continue the outreach efforts to assist providers to achieve their MU targets.
- Consider expanding the assistance beyond those providers initially targeted for REC assistance to a broader audience including specialists, providers in larger practices, LTC, and non-physician behavioral health providers. [NOTE: Already underway.]
- Continue to work with state professional organizations to facilitate regular dialog with stakeholders.
- Consider providing grants to AARP or other consumer focused organizations to educate and stimulate demand for provider participation in HIE.
- Work with major employers and other consumer organizations to establish the value of, and the need for, HIE.

Encourage providers to identify their trading partners
- Encourage providers to work with their identified trading partners to collaborate and develop action plans for sharing healthcare information. Assist with meeting planning and facilitation where needed.
- Convene community discussions to identify local stakeholders who need to collaborate because they share a patient population.

Improve access to broadband
- Collaborate with other state and federal programs to continue to build access to high speed broadband.

Appendix

Individual Interview Summary

Each organization interviewed provided its own unique perspective on the challenges and opportunities afforded by HIE. To retain the perspective and the "stories" of each of the interviewees we have summarized the interviews of each organization.

Adelante Healthcare
Maricopa County - Rural – FQHC
Interviewees: Dr. Tony Dunnigan, CMIO; Perry Horner, CIO

Adelante Healthcare, located in Phoenix, has been a member of the El Rio network (network) of FQHCs for one year. All the network participants are using NextGen as their EMR and they are in the process of testing NextGen HIE to share information within their network. They are interested in sharing information outside of their network, but face the challenges of money and time for interface mapping and development between their EMR and an outside HIE.

Key Barriers to HIE Participation Identified
- Money and time for
  - Interface development
  - CCR/CCD export import
- Need to identify and agree what parts of the record you'd want to export.
- Concerned about how the recipient of the data will protect the patient's information.

Opportunities for HIE
- Outside of their own network, they referred to exchange as a "poor man's information exchange" requiring separate portals and passwords for each different organization.
  - Banner allows access into their portal.
  - Working with Dignity Health as well
- Would prefer one single entity gathering the information for common access.
- There is a major advantage to having the info at point of service.
- Would like bi-directional access for immunization from ASIIS - both to check status and import it into their system.

Assistance

State could develop an "HIE Implementation kit" which provides guidance. Included in the "kit" could be: examples of legal protocols, list of all members in the exchange and contact information, a step by step guide of what to do first (partnerships, technology teams), a list of which EMRs will work with the HIE, a description of how to do a test with the HIE and what results you should expect, and information on how to connect to the HIE.

Trading Partners

- First priority is the providers within their network.
- Next priority is to exchange with the hospitals where they share patients.

Other Comments

- They were not interested in using DIRECT as they believe it would cause an extra step to get the information into the EMR. They want exchange that can automatically insert data into the EMR.
- HIE should keep the high impact common scenarios (use cases) in mind to create a high impact tool. Examples mentioned include:
  - ER to clinic
  - Hospital - clinic
- Patient consent needs to be automated and in the EMR
- HIE/ASET should reach out to the "networks" – not just the individual organizations – for promoting HIE.
- Need a tool (HIE) so good that if you aren't using it you're crazy and patients won't stay with you.

Archie Hendricks Sr. Skilled Nursing Facility
Pima County – SNF
Interviewees: William Olivares, IT Technician;
Ken Rodriguez, Assistant Director of Nursing,
Margie Rodriguez, Luce Westphal LPN, MDS

Archie Hendricks is a Medicare Certified 60-bed SNF located in Skills, AZ, directed by the Tohono O'odham Nursing Care Authority.

Permission to publish the detailed information from the interview was not obtained by the time of publication.

Arizona Medical Association
Arizona – Association
Interviewee: David Landrith, VP of Policy & Political Affairs

Mr. Landrith described the adoption of EMRs in Arizona as "not monolithic," but dependent upon geography and practice venue with many smaller practices questioning the expense of moving to EMRs. However, he also said that most providers are leaning towards embracing EMRs because of their recognized clinical value. From an HIE perspective, he pointed out that, in general, physicians are not patient with technology. He stressed that it is critical to get a critical mass of data before engaging with the physicians. "Wait until it's ready."

Key Barriers to HIE Participation Identified
- Concern about privacy and the penalties for breach.
- Not sure they want to put the notes in the system that they used to write in the corners of the documents.
- Greater pall over private practice now - related to the sea change that is going on in healthcare. Falling reimbursement, failure of congress to do anything with Sustainable Growth Rate (SGR).

Opportunities for HIE
- Offers them a way to do things real time. Important for the ER.
- Labs/immunizations are the lowest hanging fruit; then a good patient summary.
- Believes EMR and HIE offer a more efficient and effective way to care for patients.
- Business community involvement has dropped off through benign neglect. Not creating demands by saying "we need this." Need to strategically create the demand.
- There is an opportunity for partnering with IHS in that in Arizona there are many health issues with the Indian population. Many are treated outside of the IHS. Important to make sure that the systems work together.

Assistance
- Thinks a SWAT team would be a good approach – go into a Group – with 3-4 people, for 30-90 days and do whatever it takes to get the practice exchanging – like new physicians out of college that pay someone $25K to do whatever it takes to set up a new practice with EMR and HIE.
- Need to educate the Consumer. Give grants to AARP to do the education – and fire up their constituency to generate demand

Trading Partners
- Labs
- Immunizations

Other Comments
- Find a way to bring specialists into the exchange – beyond just general practice. For example – could Arizona create a state program to supplement the federal MU incentives?
- Choose practices that can be teachers in their own communities.
- Believe ASET is going in the right direction, would not have said that 2 years ago.
- Need to make sure the HIE interoperates with Indian Health Service – at the technology and people levels.

AZ Chapter of American Academy of Pediatrics
Arizona – Association
Interviewees: Rebecca Nevedale, Associate Director;
Son Yong Pak, Quality Improvement Coach

Overall, they believe that their members are familiar with HIE because there has been a lot of communication. However, most of their membership consists of small practices and the pediatric community in general has been a late adopter of EMRs. The slow rate of EMR adoption among pediatricians and the belief that robust exchange may not be financially feasible, has lead them to believe that it will be some time before this provider community fully adopts HIE. They are looking to DIRECT as a more near term method for exchange.

Key Barriers to HIE Participation Identified
- Difficulty in implementing EMRs due to lack of pediatric specific products and costs.
- Push (DIRECT), the challenge is you don't know exactly which entity the child will end up with given that some children are served in different systems; i.e., AzEIP, DDD, CRS, or Behavioral Health. Need process flow before HIE.
- Well care visits are a big portion of the business, however, the data requirements for programs are inconsistent:
  - The Medicaid EPSDT tracking form and guidelines on national level (Bright Futures) are not congruent, so the provider has to choose which one to use or created a customized form.
- Unknown which standards will be adopted – relative to forms.
- Docs don't like the double entry for immunizations – EMR and the State immunization registry. HIE could address this problem.

Opportunities for HIE
- Meds review, frequent flyer kids, continuity of care – communications back and forth with the hospital and the PCP
- Meds reconciliation - meds change so often because kid's chemistry changes so quickly
- Behavioral health – carve out program – as a provider don't know what other providers are prescribing.
- If HIIE can "push" eligibility information directly to EHRs so providers will have access to system enrollment information, it would be very helpful for providers.

Assistance
- Challenging to make the investment and then wait for reimbursement. No cost loan would help.

Trading Partners
- Immunizations
- Pharmacy Benefit Management for Rx data, including Regional Behavioral Health Authorities, labs, hospitals, urgent care centers, and specialists

Other Comments
- Conduct focus group of physicians and ask them directly what they need. They are responsive to that sort of thing
- Could do a survey.
- Lot of value to having an open discussion.

Carondelet Health Network
Pima County – HINAz Board Member
Interviewee: Tony Fonze, CIO

Carondelet is on the HINAz board and as such were one of the first organizations to send data to HINAz. Due to a change in the interpretation of the need for consent to send data, the data was withdrawn until patient consent was obtained. Having resolved the consent policy issue, Carondelet will begin sending data again in the near future. The data they send to HINAz will include Admission / Discharge / Transfer (ADT) information, labs, transcribed radiology reports, discharge information, and emergency department visit notes.

Key Barriers to HIE Participation Identified
- Having to move between EMR and HIE would interrupt workflow.
- TMC has formed a local ACO and would like everyone to connect to that (vs. HINAz), but they are willing to allow connection to HINAz.
- Vendor is charging $4-$20K to hook up to HINAz.
- Doctors are worried about survival as volumes are declining.
- Doctors are concentrating on meaningful use.
- HIE connectivity is a distant third priority.

Opportunities for HIE
- Use the HIE to connect in-patient and out-patient systems.
- Tucson has large winter population. Nice to see data from other states.
- HIE will be valuable for rural referrals if bi-directional exchange can occur.
- Hospital is committed to putting out a "zero footprint" image viewer for rural. HIE would be very valuable for rural referrals. If we could get images from them, we'd be ahead of the game.
- Telemedicine with rural areas. Having the ability of the doctor while doing remote exam to see the data on the patient would be very powerful.

Assistance
- HINAz could use the money to set a target for increasing the number of viewing or contributing providers.
- Employ individuals on full time basis in community education and connecting.
- Supplement ability to have rural providers and hospitals connect to their destinations for imaging. Train people and change the workflow. Create a workflow that involves imaging and HINAz - for complete package of data sharing.
- Higher level of connectivity for telemedicine. Could the funds be used for rural providers to connect to HINAz? Supplement or pay for starting off with larger practices.

Trading Partners
- HIE to HIE connections
- Tucson Medical Center

Other Comments
- Very pleased with the work that ASET is doing and the value they are bringing.
- Happy with work that Lorie is doing.

Cobre Valley Regional Medical Center
Gila County – Rural Regional Medical Center
Interviewees: Neal Jensen, CEO; Frank Stapleton, Clinics Director;
Sandra Montgomery, Director of Clinical Informatics

Cobre Valley Regional Medical Center has been on the "EMR journey" for about five years. They are currently in the process of moving from Meditech 5.0 to 6.0 to support meeting Meaningful Use Stage 1. They are familiar with the state program to implement HIE. They described their knowledge of the HIE programs at the "50,000 foot level." They know hospitals are beginning to participate and expressed their desire to be a part of it.

Key Barriers to HIE Participation Identified
- Cost and resources.
- Interface costs for EMR to HIE are high
- Technology resources are hard to come by – can't afford contractors.
- Lack broadband connection – using microwave for connection. Have unreliable cable modems at providers.
- The robust bi-directional interface to HINAz is $150K which is too high.

Opportunities for HIE
- Physicians would like all information – especially labs – to come in electronically
- Improve the quality of information that they receive from other providers
- Reduce redundant tests. However, some providers do redundant testing, such as imaging - even if the facility sends the films with the patient.

Assistance
- Need money and resources to move from Meditech 5.0-6.0 to establish a data repository.

Trading Partners
- Cobre Valley's clinics
- Phoenix
- St. Luke's Medical Center
- Mountain Vista Medical Center
- Banner Health
- Scottsdale Healthcare

Other Comments
- Very pleased that ASET is asking the questions and looking at a way to help. Want to recognize them for at least reaching out to ask and provide some assistance. That's a real positive.

Copper Queen Community Hospital
Cochise County – Rural Health Clinic
Interviewees: Jim Dickson, CEO; David Chimura, CIO

Copper Queen operates three of the largest clinics in the state in addition to providing inpatient acute care. They have used an EMR for 4 years and are now in the process of replacing it. They are a strong supporter of HIE, but expressed questions around whether the current statewide HIE could deliver.

Key Barriers to HIE Participation Identified
- Current EMR systems will need to be replaced
- Lack of broadband to the clinics
- Considering joining an ACO with TMC, but not clear how that will impact joining HINAZ or if the costs will be double.
- Costs of interfaces to EMR are high

Opportunities for HIE
- The State HIE would give us a known quantity of interfaces to develop and maintain.
- Link inpatient and labs. Each clinic has its own lab and has high volumes.
- We also transfer patients to Tucson; work with Phoenix.
- We are preeminent in telemedicine.

Assistance
- Consulting help to evaluate all of the systems involved (have sent out an RFP to get 3rd party opinion) to help choose EMR system.

Trading Partners
- Copper Queen Clinics
- Labs
- Tucson Medical Center
- Mayo
- Carondelet
- Phoenix

Other Comments
- Would like to be involved in an advisory group at a national level – talk to other people that have the same issues as we do.
- Use VICS mail. It's low cost and secure on both ends. Carondelet uses it too.

Desert Terrace Healthcare Center - Ensign Group
Maricopa County – Long Term Care
Interviewees: Patrick Hobbs, ED-Desert Terrace Healthcare, Tyler Douglas, Information Systems

Desert Terrace Healthcare is affiliated with Ensign Services, a national organization that provides services to long term care providers. They just finished their initial roll out of Point Click Care – both the clinical and billing portions. They are interested in ways to integrate and improve processes with pharmacies, labs, supply companies and other ancillary providers.

Key Barriers to HIE Participation Identified
- Don't feel the standards are robust enough for the information that we need to exchange.
- HIE, if not executed effectively, can result in a distraction that takes time away from the care givers in the facility.
- We were cut out of the government funding programs. Funding is important.
- Cost – who is going to pay for the HIE?
- Multiple hospitals as trading partners presents an interoperability challenge
- Lack of funding for Skilled Nursing Facilities (SNFs) and LTC

Opportunities for HIE
- Better, more efficient way to receive information from hospital when admitting a patient
- Want to integrate with the hospital and have admission orders. Would like the EMR info to come from the hospital and also be able to send information out.
- Sharing data will give us a competitive advantage. Hospitals want to partner with facilities that are providing the best clinical care to save money.
- There is a big opportunity to improve accuracy and timeliness of information
- Gives them a competitive advantage to show the care that is provided – with the data that supports the outcomes.

Assistance
- Use money for all 11 Arizona facilities to connect to HINAz
- Fund/facilitate sessions to bring IT leaders from the various hospitals and systems to meet and have real discussions about what the obstacles are.
- Education about confidentiality and legal aspects of HIE.

Trading Partners
- Banner Health
- The major hospitals
- Sonora Quest Labs

Other Comments
- Provide a venue where leaders of HIT from various hospital systems, ancillary providers and LTC leaders could meet in a conference session and have real discussion and obstacles with everyone present
- Would like information on confidentiality and legal matters - what information are organizations accountable for? What steps do we need to take to avoid pitfalls?

Jewish Family & Children's Service
Maricopa County – Behavioral Health
Interviewee: Dr. Michael Zent, President & CEO

"We are ready to be the first BH to participate in the HIE. We will help them think through the BH privacy issues." The Jewish Family & Children's Service is entirely electronic. This comes as no surprise since they are in the IT business as well as being a behavior health provider. They are responsible for the behavioral health customization within the NextGen product. They are also already registered for DIRECT.

Key Barriers to HIE Participation Identified
- Federal requirement for 42 CFR part 2. This requires that the CCD be able to be parsed to identify this specific information and check as to whether the patient has opted in to this specific information being shared. Technology is not generally able to do this now.
- Not sure what's allowed at the state level – from a behavioral health data sharing perspective
- Cross agency exchange is hard – horizontally with PCPs and vertically with case and care management. Ability to share data is hampered by the lack of electronic software.

Opportunities for HIE
- Provider level:
  - To improve care by making more information available – Behavioral health and primary care.
  - Improve care through relationships with PCP and also with welfare and criminal justice.
- At managed care level:
  - Improve information to manage utilization and risk.
- Would like access to the following data:
  - For major diagnoses - for example depression - need to know PCP meds and labs
  - Also want to know if person was hospitalized and what kind of facility– acute or BH
  - Presentation at EDs

- If have co-morbidities - need the clinical information to the prescriber on the BH side as well as the clinician.
- Address the issue of the PCP knowing what BH meds a patient is currently on. These can and do change frequently.
- Meds reconciliation for physical and behavioral health

Assistance
- Resources to help us drill down into what it takes legally and technologically to be compliant.
- Help with uni-directional information flow (PCP to BH) would be great. Real opportunity to improve care and patient information
- Map our high volume patients to providers and see if they have e-Prescribing. Where they don't, we could get Surescripts involved, and then update our system to receive the current meds from Surescripts.
- PCP info is with United Healthcare/Mercy/others. Real work is the systems mapping to each other. Could do a pilot/proof of concept demonstration. We have a software company and could reach out to the health plans. Our biggest contract is with Medicaid for BH. I would map out our biggest overlap with the health plan – Mercy or United, look to the shared patients, and then decide what kind of information could be shared clinically. Tie in at the health plan level.

Trading Partners
- Health Plans – Mercy, United, and others
- ER Information

Other Comments
- "Really glad for any attention on this issue. Appreciate the state leadership on this."
- "Keep up the momentum."

MIHS (Maricopa Integrated Health System)
Maricopa County – FQHC Look-alike
Interviewee: David Kempson, CIO

Maricopa Integrated Health System, the largest BH in-patient provider in the county, achieved HIT Adoption Stage 6 with their recently completed Epic implementation. As one of the partners with AHCCS in the demonstration grant for AMIE, they were an early adopter of HIE. They were also an early data provider to HINAZ. As with Carondelet, they withdrew their data when the consent law was reinterpreted. They are now in the process of revising their consents so that they can resubmit their data.

Key Barriers to HIE Participation Identified

- Not ready to adopt HIE for physicians, they will get frustrated with a system that doesn't have a critical mass of data
- Epic does not support DIRECT
- NextGen and Epic won't connect with each other. We may have to use Connect to connect our systems.
- Need a critical mass of data into our system.
- Without AMIE, we aren't getting the pharmacy data. Pima County Correction can't move forward without that.

Opportunities for HIE

- Address the BH issue with DIRECT or some other method. Work with JFCS to figure out what we can do and replicate it across the state.
- Strategy to use to get providers on board: Look to the future. Focus them on the fact that the whole model is changing. To meet that model - more accountable for the care of the patient - HIE is how we're doing that

Assistance

- Further efforts to put critical mass of data into HINAZ.
- Accelerate achieving critical mass of data by adding additional feeds such as ADT, labs, add DC, patient summary
- Address the Behavior health issue - through Direct or some other method
- Would like to see that the state has a unified strategy where everyone is aligned and sharing the same goals.

Trading Partners

- Pharmacy data

Other Comments

- HINAz needs to go ahead and get the Phase I partners up. Have missed a lot of deadlines.
- If we are going to have a statewide provider directory, from a technical standpoint, that could be a primary source for HISPs. HINAz isn't an approved HISP; that should be a priority.
- We are hitting risk and compliance issues and wanting to hold information close. Need education for the HIM risk and compliance groups. They need to understand that the new reimbursement model is driving everyone to a community health record and we must interoperate to achieve that. Not risk free, but we have to do it.
- The state agencies don't seem to be on the same page. We need a strategy for the Provider Directory and the information. We need the private HIEs connected to the state HIE. Need to connect OptumInsight to RelayHealth.
- Need to have the leadership of these organizations inputting into a plan and align actions against that plan

- Have a plan - what is our strategy for ensuring provider directory and DIRECT integration
- Have we gone so far with private HIEs that they won't agree to share with everybody
- Where do the parties really stand?
- Starting a BH HIE – hope we go with the state HIE. Don't want providers to have to go to three different places for data.
- HINAZ - absolutely needs to be successful in getting all phase one partners up and the sooner the better

Mt. Graham Regional Medical Center
Graham – Rural Regional Medical Center
Interviewees: Julie Johnson, Director, Patient Access/HIM;
Philis Finch, RN

Mt. Graham Regional Medical Center is located in Safford, AZ, and is the primary source of healthcare for both Graham and Greenlee Counties. HIE is not well understood by the medical community and as a result there is resistance by many physicians. However, there is also a desire on the part of newer physicians to the area as well as surgeons and others to access more complete patient information electronically. As of the date of the interview, they have not yet registered for MU Stage 1 because they are in the midst of an EMR conversion from CPSI to Meditech. They plan to apply in the fall of 2013.

Key Barriers to HIE Participation Identified
- Lack of funding
- Privacy concerns – there seems to be an attitude of "we don't want to open up our records, but we'd like yours."
- Lack of understanding on how HIE would work
- Small size of IT department
- Would need to get organizational buy-in before beginning to plan

Opportunities for HIE
- Best HIE option would be to start with DIRECT and then move into robust HIE. We use some encrypted email today.
- Benefit of HIE would be the ability to get information back from Tucson Medical Center and exchange information with other metropolitan hospitals.
- Improved access to records across transition of care could improve the patient's perception of the medical center – as well as improve patient care.

Assistance
- Education is important. We have a competitive culture. The resistance might be addressed through education.
- Assistance – need education on privacy and security – one of our top priorities. The state could offer free webinars or information on their website.

Trading Partners
- Tucson Medical Center/ other metropolitan hospitals and clinics.

Other Comments
- We would like information on who is participating now.

Mountain Park Health Center
Maricopa County – FQHC
Interviewee: John Swagert, MD, CEO

Mountain Park Health Center is an urban FQHC with 500 employees and five clinics across metropolitan Phoenix. They have been running eClinicalWorks now for one year with four out of the five clinics up and running.

Key Barriers to HIE Participation Identified
- Resources currently dedicated to other priorities
- Want to ensure they fully understand the impact and requirements from cost and workflow perspective before adding HIE
- Connecting to HINAZ would rise on the priority list if it [HINAz] was working and could solve problems

Opportunities for HIE
- If the HIE could streamline and populate our EMR, the clinical teams would move HIE up on the list. Examples:
- Projects like colon cancer screening - if get report back through HIE rather than through Fax
- If it could address care opportunity list - list of things that show up on the dashboard and need to be done; e.g., PQRI measurements
- We have a lot of OB/GYNs – just getting the chart to the hospital and matched is a big issue. The two EMRs don't talk to each other.
- We are uploading the immunizations with no feedback – if that were addressed, it would save us hundreds of hours.
- Medicaid offloaded the eligibility checking to us, so if that process were easier, it would be very attractive.

Assistance
- Cost to cover the mapping of the EMR interfaces and the vendor workflow experts.

Trading Partners
- Immunization data

Other Comments
- Feel like we get listened to fairly well and have a good pipeline to communicate issues.

Northern Arizona Healthcare
Coconino County – Rural
Interviewee: Steve Lewis, CMO

Northern Arizona Healthcare is located in Flagstaff and said that as of the day of the interview they had "joined HINAz." HIE is a part of their strategic plan and they are interested in public and private HIEs. They use the Cerner EHR system, have their own hospital secure email, and have decided not to sign up for DIRECT at this time. Most of their physicians have EMRs, but still many do not.

Key Barriers to HIE Participation Identified
- Funding and resources (lack of HL7 expertise)
- Would like certain practices to join HINAz and supply data; however, they are worried about how much it will cost. (e.g., after hearing what Greenway would charge for the interface, a practice wasn't interested any more).
- Internally, going through a major transition by bringing IT support back in house.
- Many of their potential trading partners at Indian Health Services locations are running on generators and batteries for their servers. If they run out of fuel, their entire record system would be inaccessible.
- Education – a lot of providers are concerned about sharing data –
  - They are concerned about HIPAA
  - They are worried about having their data discovered in another database,
  - Will other practices "go fishing" for patients in the database.

Opportunities for HIE
- Improve referrals to the SNF or the PCP. When you give them all of the information they need, they will want to send their patients back to Northern Arizona health care rather than to a competing system.
- Indian Health Services will connect to NwHIN. HINAz needs to connect there too so we can access the IHS data.

Assistance

- Interface programming assistance to get the information out of the EMR
- Brining in a lab expert to help associate local codes to LOINC
- Align all nomenclature within the system so don't need translation tables.
- Provider education - workshops

Trading Partners

- Physicians that refer patients to us that are not employed by us

Other Comments

- IHS - cannot join HINAZ directly.
  - The IHS Data warehouse is in Albuquerque and that's where they connect to NwHIN.
  - Cannot connect directly to their DB
  - The "638" hospitals can connect to HINAZ.
  - 40% of the ER patient base for health system is from IHS.
- If AzHeC/REC could offer a service – pay for their advice on MU, to make sure we are following all of the guidelines to qualify for MU.
- Need to be able to use discreet data elements from the CCD.

Phoenix Pediatrics
Maricopa County - Specialists
Interviewee: Kevin Berger, MD, Director

Phoenix Pediatrics has 10 providers across two locations. They have been using a version of Allscripts EMR adapted for pediatrics since January 2011. They are very familiar with HIE and currently have electronic interfaces with Quest Labs (bi-directional) and Value radiology (for reports).

Key Barriers to HIE Participation Identified

- Cost and time for EMR interfaces.
- Management time to be involved in every phase of creating interfaces to ensure interests of the practice and the patient are protected.
- Lack of ability to bill Vaccines for Children Program (VFC) vaccines out of EMR. (problem specific to Allscripts EMR)

Opportunities for HIE

- The ability to interface to Phoenix Children's Hospital/ major pediatric hospitals.
- Can't bill VFC vaccines out of the EMR today. Adjustments are made on PM side before sending out bills.
- Largest private practice for special needs - lot of care coordination, letters of medical necessity, durable medical equipment (DME), LTC, etc. Interface would be amazing. Have high volume - 2500 kids - on LTC.

- Save us time and money. Medication management and scanning is overwhelming.
- Would like to get some real information about our patients from the specialists.
- Claims data, provided by insurance companies, is more accurate than the ER discharge summaries that may or may not be sent to provider.
- Since removed from hospital scene – communication with specialists is fragmented. HIE could improve that.
- Improve communication and care coordination if have real time information.

Assistance
- If ASET could facilitate setting up something with Phoenix Children's to exchange data - that would be helpful.
- Education on available HIE options.
- Need contact people available who can and will follow through.
- Support to go forward with programs like Vaccinations for Children (VFC).
- AHCCCS take our electronic form for documenting wellness instead of having us do things twice. Would like to send it electronically. See Early Periodic Screening, Diagnosis, and Treatment Program (EPSDT) below.*

Trading Partners
- Phoenix Children's Hospital
- Specialists
- Emergency Rooms
- DME ordering – there are 2,500 kids on LTC insurance – severely disabled
- Insurance companies to supply data notification of encounters outside of the Medical Home
- Newborn State screening lab results and hearing screen results could be sent via an interface or accessed online and saved to chart in a similar way to the vaccine registry (ASIIS in Arizona)

Other Comments
- Phoenix Children's trying to set up ACO.
- Banner system is pursuing other practices to join them as well.
- In Arizona EPSDT* federal - goes onto EMR but AHCCCS still requires paper EPSDT form to document well exam by age. Forms are different by age. They set up the forms in the EMR to be exact copies. But even though he can print out the completed form, it's appearance is not an exact duplicate so AHCCCS will not accept the electronic version of the form.

Best Practice:

Insurance company sends them hospital discharge and ED information. From that data, they follow up with the patients. They also educate the patient that if they need to be seen on an urgent basis that they should call the office and they will be seen.

Ponderosa Pines Care and Rehab

Coconino County – Long Term Care
Interviewees: Richard Anderson, Administrator;
Leslie Kuhn, Director of Nurses

Ponderosa Pines is an 80-bed Long Term Care and Rehabilitation Center. Approximately 80% of its patients/residents are Native American. They have had separate nursing and business office systems for some time and in December 2011, they went live with the integrated system, "PointClickCare." However, their physical therapy and dietary systems are not yet integrated. In addition, they only have access to hospital data (for potential admissions) through the hospital portal. When they transfer a patient to an acute care hospital, they must send paper records with the patient.

Key Barriers to HIE Participation Identified

- Health information technology is a new concept for many LTC facilities.
- Haven't had conversation with Flagstaff hospital; don't know if they are interested in exchanging data or what would be required to make it happen.
- Every facility has different programs that don't link.
- IT resources are expensive.
- Not sure who needs to be involved or how to start the conversation around HIE
- EMR's are not interoperable

Opportunities for HIE

- Having a more complete history of the resident before their admission would enable them to provide better, more complete care.
- Many times the family is burdened by having to locate a resident's multiple medical records and may even be unable to obtain them. Having the records available through HIE would ease that burden significantly.

Assistance

- Need help to know where to start and what to do to move to HIE
- Help with understanding how to set up an interface with other providers.
- Need to understand talking points and how to have the HIE conversation with potential trading partners.

Trading Partners
- Flagstaff Medical Center
- Firestone Pharmacy, located in Utah
- Medicaid – would like the ability to electronically bill Medicaid

Other Comments
- Willing to participate, but need education and assistance to get started

Summit Healthcare
Navajo County – Rural Regional Medical Center
interviewees: Ron McArthur, CEO; Kent McQuillan, CIO

Summit Healthcare Regional Medical Center is a general medical and surgical hospital in Show Low, AZ. Their board has been very active in wanting to exchange data between the hospital and providers. The hospital went live with its EMR system, Paragon, in January 2012 and plans to go live with its exchange software, Axesson, in January 2013.

Key Barriers to HIE Participation Identified
- Providers are using a variety of EMRs.
- Difficult to find trained IT resource
- Costs are prohibitive for some organizations.
- Privacy & Security – "always something you just worry about."

Opportunities for HIE
- Sharing information between the physicians and the hospital.
- Better patient care, save time, save test duplication.

Assistance
- Support staff to support the docs.
- Additional infrastructure support to accommodate additional providers who want to participate

Trading Partners
- State immunization database – their initial focus would be to connect to the immunization database
- Private HIE to the statewide HIE

Other Comments
- Decided not to wait for the statewide HIE and just implement a connection independently.

Verde Valley Guidance Clinic
Yavapai County – Behavioral Health
Interviewee: Robert Cartia, CEO

The Verde Valley Guidance Clinic, located in Cottonwood has been all electronic for some time through the NetSmart Avatar plexus product for behavioral health and the Cerner product for primary care.

Key Barriers to HIE Participation Identified
- Data in behavioral health is not necessarily recorded as discrete data. Many times the information is more in comments/notes which is difficult to exchange discretely. Progress notes and assessments are not data elements.
- Customizability of behavioral health from state to state and county to county. There are different instruments used and this is constantly changing.
- Slow adoption of EMRs in behavioral health.
- Difficult to give patients access to their own records.

Opportunities for HIE
- Prevention
- Avoid duplication of tests
- Better medication management
- Assist in managing to keep costs down so that decisions are made on facts, rather than going the most conservative route because information may be missing.
- PCPs need access to psyche meds, allergies, historical hospitalizations from BH side, and knowledge of high risk patients (e.g. suicide).

Assistance
- Prod EMR vendors to make their systems interoperable.
- Help folks connect to HINAz

Trading Partners
- Hospital
- Other primary care organizations
- The Health Department
- All those that were involved in AMIE

Other Comments
Exchange of PHI is occurring regularly (electronically) now between EMRs. There may not be interoperability but there is data exchange and patients are not consulted, nor do I think they have to be if it is for their care and treatment. Examples are referrals to specialists, med lists, imaging, and labs.

Villa Maria Care Center
Pima County – Long Term Care
Interviewees: Damacio Marquez, Executive Director;
Dorothy Dean, Director of   Nurses

Villa Maria Care Center is a combination of long term care, rehabilitation, and assisted living facilities. They have an EMR, PointClickCare, and Tucson Medical Center has access to their patient records.

Key Barriers to HIE Participation Identified
- Systems are not connected:
  - Pharmacy – very expensive to add drug reorder capability to their system.
  - Labs – Currently scan all the labs. Can access Sonora Quest system, but does not send lab results directly to their system.

Opportunities for HIE
- Better, more complete information about patients transferring from hospitals. Today the information is often incomplete.
- Online access to patient information from the hospital would assist the facility in making more timely decisions about whether or not to accept a patient.
- Improve information sharing with the VA. The biggest area of gap today.
- Better information sent to hospitals when patients are transferred to acute care.

Assistance
- Computer interfaces
- Computer training for our nurses and staff
- General education on HIE
- Help with developing a plan to share information

Trading Partners
- Tucson Medical Center
- Spectrum Pharmacy
- Sonora Quest Labs
- VA
- University Medical Center
- St. Mary's & St. Joseph's (Carondelet)

Other Comments
- "We really are interested in participating and it could benefit us, and the resident."

Yuma Regional Medical Center

YUMA REGIONAL MEDICAL CENTER
Caring for the growing needs of our communities

Yuma County – Rural Regional Medical Center
Interviewee: Claudia Ulloa, Telemedicine/Training Supervisor

Yuma Regional Medical Center has just completed an Epic implementation. They have been involved with statewide efforts to plan for HIE and were invited to participate with HINAZ. At the time, their understanding was that HINAZ would only provide exchange with others such as Tucson, but would not facilitate exchange within the Yuma medical community. Since the local community is a priority for them, they decided not to participate at that time. However, in December 2011, they signed an agreement to participate in the exchange with HINAZ.

Key Barriers to HIE Participation Identified
- Need to have a critical mass of participants in the county to make it worthwhile. Just participating for transfer patients is not viable.
- Providers within the community are on different EMRs and interface costs are enormous
- Lack of resources (cost and expertise) to write the interfaces

Opportunities for HIE
- Continuity of care
- Better connection and communications with affiliated physicians
- Medication reconciliation
- Access to the medication records, labs, discharge summary, immunization, surgery history, and previous diagnosis will improve care

Assistance
- Would like guidance and legal expertise on a number of topics related to consent and the sharing of information in the medical record, including:
  - Developing policies
  - How HINAZ manages consent
  - Who owns the record – the lab, the HIE, the Doc, the Hospital – who is responsible?
  - How to manage behavioral health information in the exchange
- Need funding to develop and support connecting interfaces

Trading Partners
- Our physicians
- Sunset Community Health Center
- Women's health providers
- Regional Center for Border Health
- Referring physician practices

Other Comments
- There's a Yuma IPA group investigating forming an ACO. What does ASET recommend? Connect to the ACO in town or connect to HINAz?

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