Guide for Advanced Practice of the HIE

Data-driven Care Using the Arizona Health Information Exchange (HIE)
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Introduction

To assist our participants with optimal use of the Arizona health information exchange (HIE), we've developed this guide on advanced practice use of HIE services and products to help you better serve your patients and achieve improved outcomes.

The HIE is much more than a second medical record. Not only does it contain clinical information not found in your medical record or delivered by your clinical staff, but it can also be the gateway to improved care coordination, better outcomes, enhanced measurement performance and increased patient safety, as well as heightened patient and provider satisfaction. Workflows for accessing the portal, the use of alerts and reports are the means to these improvements. This guide and participant-specific guides are your road map to better clinical and financial success.

In this guide, "patient" will represent client, resident, medical patient, consumer or member.

This introductory guide lays the foundation for our participant-specific guides. Additional guides in the “Advanced Practice of the HIE” series include:

- Skilled Nursing Facilities
- Primary Care & Specialty Ambulatory Care
- Behavioral Health Outpatient & Residential
- Pediatric Practice

About Us

Health Current

Health Current, a Contexture organization, is the health information exchange (HIE) that helps partners transform care by bringing together communities and information across Arizona. More complete information leads to better care and better outcomes. It makes healthcare transformation possible. Since 2007, Health Current has worked to become Arizona’s primary resource for information technology and data exchange, integrating information with the delivery of care to improve the health and well-being of individuals and communities. Health Current: a partner that gives providers the information they need to make better clinical decisions and keep people healthy. Learn more at healthcurrent.org.

Contexture

Contexture is a nonprofit, regional organization that provides strategic, technical and administrative support to communities committed to advancing health through information sharing. As the umbrella organization of CORHIO, a health information exchange in Colorado and Health Current, the Arizona health information exchange, Contexture is the largest health information organization in the Western region. Contexture means the manner of being woven or linked together to form a connected whole. Established in 2021, its mission is to advance individual and community health and wellness through the delivery of actionable information and analysis. Learn more at contexture.org.
Benefits & Impact of the HIE

Multiple studies on the use of a health information exchange have shown increased clinical quality and improved health outcomes, including improved medication reconciliation, immunization and health record completeness, population-level immunization rates, fewer duplicated procedures, reduced imaging, lower costs and enhanced patient safety.

Care Delivery

The HIE can be utilized during care delivery in numerous ways. A pre-visit search of the HIE portal can garner a more complete clinical history, completed labs and radiology reports, hospitalization records and all prescribed medications.

<table>
<thead>
<tr>
<th>Care Delivery Impact</th>
<th>HIE Service Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make transition of care simpler/safer</td>
<td>Get more complete information exchanges between facilities</td>
</tr>
<tr>
<td>Close gaps in care</td>
<td>Search the portal to see where care falls short or was completed</td>
</tr>
<tr>
<td>Avoid readmissions</td>
<td>Reduce readmissions by using alerts</td>
</tr>
<tr>
<td>Pre-encounter workflows save time during encounters</td>
<td>Gather all clinical information prior to the patient arriving</td>
</tr>
</tbody>
</table>

Use Cases

There are several use cases for the HIE beyond only as an expanded medical record.

<table>
<thead>
<tr>
<th>Use Case</th>
<th>HIE Service Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical performance measures data support</td>
<td>Providers improve clinical performance with alerts and reports</td>
</tr>
<tr>
<td>Care management</td>
<td>Care managers turn alert and report data into clinical action</td>
</tr>
<tr>
<td>Public health monitoring support</td>
<td>Providers receive patient clinical information in times of medical crisis</td>
</tr>
<tr>
<td>Emergency department access to patient records</td>
<td>ED providers see a complete patient history on the spot</td>
</tr>
<tr>
<td>Specialists access to outpatient and inpatient records for transition and coordination of care</td>
<td>Specialists gain access to complete record set for a more complete diagnosis</td>
</tr>
</tbody>
</table>
**Effectiveness & Efficiency**

Operational efficiencies and reduced costs can be gained using the HIE. This means less time spent per visit but with improved outcomes. This can also result in cost savings per patient that can equate to improved reimbursement through value-based contracts.

A 2016 study showed access to clinical data in the HIE resulted in shorter emergency department (ED) visits, fewer hospitalizations and less utilization of imaging services. (Jordan Everson, 2016)

<table>
<thead>
<tr>
<th>Impact</th>
<th>HIE Service Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saves time before and during patient visit</td>
<td>Robust patient information available when needed</td>
</tr>
<tr>
<td>Reduces redundancy of testing</td>
<td>Search for results as opposed to re-ordering</td>
</tr>
<tr>
<td>Reduces costs</td>
<td>Through improved workflows, alert and report services assist with better clinical interventions</td>
</tr>
<tr>
<td>Path to improved STAR rating</td>
<td>Improves quality and patient experience by not having to duplicate tests or repeat stories</td>
</tr>
<tr>
<td>Path to improved reimbursements</td>
<td>Through better performance on quality measures</td>
</tr>
<tr>
<td>Path to improved quality</td>
<td>By using alert services that turn into clinical action</td>
</tr>
</tbody>
</table>

**Provider Impact**

Provider satisfaction can increase due to more available clinical data. This saves time during visits and can contribute to a more complete diagnosis. It can also help improve outcomes, which can mean higher reimbursements.

Speaking on the importance of information sharing in the clinical practice, a physician said: “If the patient had a CT last week at a hospital across town, it has to be just as easy for me to get that result as it is to order a new one.”

— Matt Lambert, 2021
**Office Workflows**

Front and back office workflows can be optimized using the HIE. The team can collect clinical information prior to visits. Insurance and demographic information can be augmented through a portal search.

<table>
<thead>
<tr>
<th>Workflow Step</th>
<th>HIE Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-visit planning</td>
<td>Saves time during the visit, improves provider satisfaction</td>
</tr>
<tr>
<td>Eligibility verification backup</td>
<td>Check portal demographics to confirm coverage</td>
</tr>
<tr>
<td>Medical record coordination</td>
<td>Limit wait time for records to be faxed/mailed</td>
</tr>
<tr>
<td>High-complexity coding (HCC) - Risk Adjustment Scoring</td>
<td>Use the portal during yearly Medicare visits to include all diagnoses</td>
</tr>
<tr>
<td>Authorization (DME, home health, inpatient, BH residential)</td>
<td>Collect more information from the portal to support authorizations and use Direct Secure Messaging to send the authorization request</td>
</tr>
<tr>
<td>Referral management</td>
<td>Easily and securely send patient records and referral paperwork</td>
</tr>
</tbody>
</table>

**Healthcare System/Network/Payer**

Healthcare systems and payers can utilize the HIE to enhance their efforts to improve clinical outcomes and reduce costs.

<table>
<thead>
<tr>
<th>Focus Area/KPI</th>
<th>HIE Service Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care management</td>
<td>Alerts for high-risk or diagnosis-driven patients sent directly to the care manager</td>
</tr>
<tr>
<td>High cost/high needs protocol management</td>
<td>Request reports on high-risk patients</td>
</tr>
<tr>
<td>Provides backbone of technical infrastructure for leveraging by state national initiatives</td>
<td>Participation fulfills ONC interoperability requirements</td>
</tr>
<tr>
<td>Creates potential feedback loop between health-related research &amp; actual practice</td>
<td>Use reports as a look back on outcomes and immunizations flow from public health to the HIE for use by providers</td>
</tr>
</tbody>
</table>
A Value-based, Data-driven Culture

Do you consider your organization to be value-based/data-driven? Healthcare providers are being moved toward data-driven care more than ever. To improve outcomes and increase reimbursement, using data effectively and efficiently is very important.

Value-based, data-driven healthcare practices have the following attributes:

- Proactive, not reactive. They focus on prevention instead of solely sick care.
- Uses workflows to ensure that no steps are missed.
- Uses team-based care with everyone working at the top of their license.
- Focuses on improving results through real-time data gathering and applying clinical workflows.
- Invests in and use the latest technology, leveraging alert and report services to improve outcomes.
- Focuses on data gathering and measurement and evaluate that data to ensure improvements are achieved and sustained.

If you can check the boxes above, congratulations! Review this next section as a refresher.

If your organization isn't quite there, this section is an overview supporting your move to a value-based, data-driven culture.
Change Management

Whether you're moving toward a big culture change, such as implementing a continuous quality improvement model or just adapting to data-driven/measurement-based care, a change management strategy is in order. There are a variety of change management models developed by experts specifically for healthcare organizations. These models drive change deep into the workforce and involve all staff in all steps of the process. According to Airiodion.com, here are a few of the more popular change management models in healthcare:

- Prosci ADKAR Model
- McKinsey 7S Framework
- Bridge’s Transition Model
- The Kurt Lewin Change Model
- The John Kotter 8-Step Change Model
The AIMS Center at the University of Washington published its plan for implementing the integrated collaborative care model (CoCM). This is a good example of a change strategy for a healthcare organization.

No matter which change management method you use, keep in mind that healthcare is a complex system of health professionals, staff, patients and payers. What seems like a small change can have a great impact on any one of these groups. New processes must be thought through from beginning to end to understand the effects they may have along the entire care spectrum and to business/payment processes.

For more information, see “Change Management” in the Additional Resources section.
Data Strategy & Management With HIE

The HIE contains the clinical information and tools to assist with data management. However, healthcare organizations must first determine what their clinical and business goals are and what they are attempting to improve to decide what to track, act on and measure.

Data Strategy

Choose data wisely. Too much data can lead to data fatigue and will ultimately be ignored. Choose data that aligns with what’s important to you and your patients. And only choose data that can be measured, is actionable and will make an impact.

Choosing Data

Organizations can select data and measures based on their mission and goals, payer priorities, internal quality programs or other factors of importance.

Data can also be aligned with the following:

1. Value-based Measures
   - CMS Prospective Payment System measures
   - Managed Care Contract measures (Medicare, Medicaid, commercial)
   - Bundled payment arrangements
   - Merit-based Incentive Payment System (MIPS)

2. Quality Initiatives
   - The Joint Commission or other certifying body quality measures
   - Internal quality program goals

3. Reimbursement
   - MDS considerations for skilled nursing facilities (SNFs), adjustment of level of care
   - Risk Adjustment Factor (RAF) scoring by adding diagnosis
Data Management — Workflows

Once you determine what data you need to focus on, you develop data management workflows. Workflows are essential to turn data into clinical action. They are a set series of steps that accomplish a task or the movement of work within a task. Workflows enable your team to work more efficiently and with less frustration, reducing the time between receiving data and putting that data into action.

Workflow design needs to be detailed. With every step you need to take a deep dive into what needs to be accomplished in that stage and what’s the most efficient way to accomplish it. Include input from everyone involved in the workflow.

When your facility/practice has corporate ownership with multiple locations — lead workflows from there:

- Identify champions at each facility
- When possible, use the same workflows everywhere
- Track staff use of HIE portal and services at corporate level
- Provide backup training for each step in case of turnover
- Apply continuous quality improvement by monitoring workflows through reports on HIE utilization, comparison of outcomes across teams and settings or on-site monitoring

Some HIE workflow suggestions:

- Prior to admission at SNF for correct placement
- At admission/prior to visit to obtain deeper information on recent encounters
- Clinical results alerts for care interventions
- SNFs and primary care providers/physicians (PCPs) to obtain specialist visit records
- Facilities/practices to obtain hospital notes and discharge summary
- After discharge to track readmissions
- After discharge to schedule follow-up appointments
- HIE alerts for ADT and clinical results and transcriptions
- HIE alerts for COVID-19 test results
- Establishing and updating patient panels and deleting patient from panels
- Prior to or during telehealth visits for a more expansive patient view
Healthcare Data Management Workflow Design Steps Overview

Workflow that leads to clinical interventions:
(micro - patient by patient)

- Start with the goal
  - Identify gap or outlier to manage and monitor
  - HIE portal review
  - HIE alerts
  - HIE reports
- Choose the correct data and how it will be received
  - HIE portal review
  - HIE alerts
  - HIE reports
- Assign an initial point of contact for the data
  - If alerts, build your patient panel
  - If reports, build your patient list
- Design dissemination of data to care team (if not directly received by the care team)
- Apply clinical interventions using evidence-based practices
- Continually track the use of workflows and outcomes and adjust when necessary

Workflow that leads to population health and quality improvement:
(macro - by population)

- Monitor each initiative separately
- Use reports from
  - The Arizona HIE
  - Electronic medical record
  - Accountable care organization (ACO)/ Clinically integrated networks (CINs
  - Health plan(s)
- If needed, translate reports to make them easy to read/understand
- Disseminate to the correct team or team member
  - Care management
  - Quality
  - Data team
  - Others
- Review data and update clinical workflows if needed
- Dashboard measures for an overview of results/actions
Workflow Example 1

HIE Alerts for COVID-19 Test Results

**Old workflow**

1. COVID test sent to lab
2. MA receives numerous phone calls from patient of care giver asking if results are available
3. Results delivered with the daily lab run
4. Patient notified of result (with instructions for care and quarantine if positive)

**New workflow**

1. COVID test sent to lab
2. Patient informed they will be notified as soon as result alert available*
3. Results alert sent immediately upon completion
4. Patient notified of result (with instructions for care and quarantine if positive)

*Patient added to COVID Alerts Panel (set up in advance).
Workflow Example 2

Facilities/Practices to Obtain Hospital Notes & Discharge Summary

Old workflow

- Patient arrives for visit; states they were in the hospital
- MA calls hospital, asks for discharge summary and patient instruction be faxed
- Patient seen by provider
- Hospital has most likely not sent over any documentation yet

New workflow

- Provider is set up for ADT alerts, receives notification on patient hospital visit*
- Provider obtains more information from hospital (if necessary)
- Provider calls patient to schedule a hospital follow up appointment
- Patient arrives for appt; all necessary clinical info. is already in the chart

*Alert is delivered either real-time or botched (cumulative data sent at predetermined time).

In addition to achieving workflow efficiency, the patient receives appropriate care and an unnecessary readmission may have been avoided.
**HIE Value-based Contract Management**

**Where is care/payment now and where is it going?**

### Past/Future
- **Episodic treatment** of the sick
- **Rising costs** and transactional care
- **Independent** providers struggling to coordinate care
- **Outdated** technology and communication methods
- **Frustrating** and time-consuming patient and provider experiences
- **Fee-for-service payments**

### Current/Future
- **Holistic care** for the entire population
- **Shared accountability** to improve outcomes and lower costs
- **Team-based coordinated care**
- **New tools, apps and technology** to make it easier
- **More productive and satisfied** patients and healthcare providers
- **Value-based payments**

**Value-based Care/Contracting**

Value-based care/contracting is the connection of cost and quality. It shifts the care delivery focus from volume to value, and redefines financial incentives toward reduced costs instead of fee-for-service by focusing on quality, not quantity of visits. The HIE can assist providers with this shift:

- By using alert services so clinical interventions can be applied quickly after an abnormal result.
- By searching the portal for results instead of re-ordering tests or procedures.
- By using report services to track if clinical interventions are working to improve outcomes to a population.
- By searching the portal for clinical information to coordinate care with the patient’s entire care team (specialists, PCPs, behavioral health providers, etc.).
In value-based payment models, providers generally must think about the entire patient experience across all care settings and between visits to achieve the desired clinical results. The HIE can improve the entire patient experience through:

- Reducing the number of times the patient must “tell their story,” as consultation encounters can be viewed in the portal before or during their visit.
- Reducing duplicate testing or preventative procedures, as results may be found in the portal.
- Not having to reschedule the patient visit due to not having results or consult notes in hand.

Movement along the value-based payment continuum shifts accountability and control over care to the healthcare provider. Ideally, payers and regulatory agencies should grant greater provider flexibility and innovation to allow providers to improve outcomes through the latest practices. The corollary is that provider risk also increases over time and with movement to more sophisticated value-based payment models.

These contract models directly link risk and outcomes on both an upside and downside basis. This means providers can share in a larger pool of savings — or suffer reimbursement losses.

If your organization doesn’t yet have any value-based contracts, it will. The Health Care Payment Learning & Action Network (HCPLAN or LAN) is an active group of public and private healthcare leaders dedicated to providing thought leadership, strategic direction and ongoing support to accelerate our care system’s adoption of alternative payment models (APMs). The LAN Group published the following goals for service spend in value-based contracts at the national level in 2021.

### Our Goal Statement

Accelerate the percentage of U.S. healthcare payments tied to quality and value in each market segment through the adoption of two-sided, risk alternative payment models.

<table>
<thead>
<tr>
<th>Year</th>
<th>Medicaid</th>
<th>Commercial</th>
<th>Medicare Advantage</th>
<th>Traditional Medicare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>15%</td>
<td>15%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>2022</td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>2025</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


The LAN’s Alternative Payment Model (APM) Framework was developed to standardize conversations regarding the category levels. The payment categories begin at 1, with the lowest amount of value-based contract elements, to the most at level 4.)
LAN: “This Framework represents payments from public and private payers to provider organizations (including payments between the payment and delivery arms of highly integrated health systems). It is designed to accommodate payments in multiple categories that are made by a single payer, as well as single provider organizations that receive payments in different categories — potentially from the same payer. Although payments will be classified in discrete categories, the Framework captures a continuum of clinical and financial risk for provider organizations.”

— APM Framework, 2021

Examples of HIE Uses in Value-based Contracting Types Coordinated With Their LAN Category

LAN Category 1
Type of Contract
Fee-for-Service (FFS) Contracts Strategies:
- Increase efficiencies: Use workflows to guide portal searches and alert services to ensure clinical data is collected prior to patient encounters.

LAN Category 2
Type of Contract
Base FFS With Pay for Performance Contracts Strategies:
- Utilization management: Use ADT Alerts for hospital and urgent care use to reduce inappropriate hospitalization and ED use. Use reports for trends in hospitalization and ED use. Search portal for completed labs, radiology and preventative procedures to reduce redundant testing.
- Gaps in care management: Use portal search for referral encounters. Run reports for overdue testing.
- Care coordination: Use alert services to coordinate care upon admission, discharge and transfer.
- Record exchange: Use Direct Secure Email to send records to other care team providers.

LAN Category 3
Type of Contract
Bundled/Episodic Payment Contracts Strategies:
- Disease education/management: Use alert services to receive alerts on clinical results for immediate clinical interventions or patient education.
- High-risk registries: Use alerts and run reports on high-risk patients for immediate clinical interventions, quality improvement, inappropriate inpatient admissions and ED use reduction.
- Track admissions, discharges and transfers.
- Use ADT Alerts for hospital use reduction, care coordination, follow up after discharge.
- Use reports for trends in hospitalization and ED use.
- Provider-based or shared-care management: Coordinate care and see encounter data through use of the portal.
LAN Category 4

Type of Contract

Total Cost of Care Strategies:

- Use reports for trends in hospitalization and ED use.
- Use HIE alert services to coordinate care for patients in urgent care or the emergency department to reduce unnecessary inpatient admissions.
- Cost reducers (redundant labs, Rx, SDOH, patient health literacy). Search the portal for completed labs, radiology and preventive procedures to reduce redundant testing.
- Use alert services when a patient goes to the ED to educate them about urgent care for non-emergent care, when appropriate.

Throughout this guide, we offer opportunities and suggestions to use data from the HIE to not only survive under value-based payments but thrive. Use of the portal, alerts and reports will augment any current electronic health record (EHR) system your organization is using.
Optimal Use of the HIE Portal

The HIE portal is full of information about your patients. Because it aggregates data across the spectrum of providers and services treating a single patient, it includes information not found in your own patient record. The portal view is individualized, so clinicians and care managers review one patient at a time.

The portal provides secure online access to a consolidated patient record, including specialized view of seriously mentally ill (SMI) patient crisis data. It includes all treating physical care providers who share information with the HIE. It contains behavioral health services with patient consent. It can be utilized by care managers and clinicians to identify the complete patient history for care coordination, transitions of care, changes, etc.

You can use a 36-month period for population health activities (risk stratification, outreach campaigns, etc.). Encounters can be downloaded, shared by providers to other providers through Direct Secure Email or sent securely to yourself.

<table>
<thead>
<tr>
<th>HIE Portal Data</th>
<th>Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergies/Adverse Reactions</td>
<td>View allergies as well as adverse reactions noted by other providers</td>
</tr>
<tr>
<td>Medications</td>
<td>Complete medications list from all providers on the care team</td>
</tr>
<tr>
<td>Diagnosis/Problem List</td>
<td>Expand your diagnosis list. Especially useful during yearly Medicare exam for RAF scoring.</td>
</tr>
<tr>
<td>Procedures/Treatments</td>
<td>Update your record with procedures and treatments you did not order</td>
</tr>
<tr>
<td>Diagnostic Test Results</td>
<td>Reduces redundancy and assists with efficiency during patient visits</td>
</tr>
<tr>
<td>Immunizations</td>
<td>Complete immunizations list</td>
</tr>
<tr>
<td>Vital Signs</td>
<td>See vitals from other providers. Useful during telehealth visits to see most recent in-person vitals taken by a health professional</td>
</tr>
<tr>
<td>Advance Directives</td>
<td>Important feature, especially during end-of-life treatment</td>
</tr>
<tr>
<td>Payers</td>
<td>Augment your current payer information by checking demographics in the portal</td>
</tr>
<tr>
<td>Family History</td>
<td>Get a complete family history when a patient isn’t a good historian</td>
</tr>
</tbody>
</table>

(Continued on next page.)
## Optimal Use of the HIE Portal (continued)

<table>
<thead>
<tr>
<th>HIE Portal Data</th>
<th>Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social History</td>
<td>Get a complete social history when patient isn’t a good historian</td>
</tr>
<tr>
<td>Clinical Documents</td>
<td>View and download clinical documents from other providers and care settings</td>
</tr>
<tr>
<td>Discharge Summary</td>
<td>Especially important after hospital discharge for complete clinical picture</td>
</tr>
<tr>
<td>Emergency Department Report</td>
<td>View ED report for follow up care or ED/inpatient diversion</td>
</tr>
<tr>
<td>Encounter Summary</td>
<td>View and download other provider encounters</td>
</tr>
<tr>
<td>History &amp; Physicals</td>
<td>View and download other provider H&amp;Ps</td>
</tr>
<tr>
<td>Operative Notes</td>
<td>View and download operative reports for care and follow up</td>
</tr>
<tr>
<td>Consultation Notes</td>
<td>View and download consults from specialists</td>
</tr>
<tr>
<td>Demographics</td>
<td>See demographics when patient can’t be reached. View latest phone number listed, next of kin, emergency contact, address, etc.</td>
</tr>
</tbody>
</table>
Portal Summary Tab

Summary tab includes all the patient’s clinical information. The main page features the Dashboard, which can be configured to your specifications.

HIE 3.0 Dashboard View

Summary tab/dashboard uses:

To search for and download any external clinical information from the patient’s entire longitudinal record.

A quick view of:

- Last vitals
- Last visit note with an outside provider
- Active medications
- Current allergies
Continuity of Care Document (CCD)/Consolidated Clinical Document Architecture (CCDA)

CCD is a generic term for an electronically generated, patient-specific clinical summary document. CCDs are sometimes called different names — Continuity of Care Document, Summary of Care Document, Summarization of Episode Note — just to name a few. In this guide, we use Continuity of Care Document. The purpose of a CCD is to improve communication between healthcare providers during a transition of care. CCDs are generated outside a provider’s EHR system and include care summary information.

Shared through:

- An XML format file sent to and read by your EHR
- Downloaded summary PDF
- Secure email with another provider or to yourself

Data typically shared in a CCD include:

- Patient demographics
- Patient history
- Medications
- Allergies
- Procedures
- Encounters
- Problem lists
- Diagnoses
- Lab results
- Immunizations
- Health risk factors

CCDs can also include advance directives, family history, social history and insurance information.

When used optimally, CCD exchange can reduce staff time spent gathering patient clinical information during transitions of care. And CCDs generally expand the clinical information available to providers and give them more details on the care patients received at outside facilities. Combined with existing medication, imaging and lab data in the HIE that is shared from hospitals and labs, CCDs may give providers the additional clinical data needed at the point of care.

Health plans use CCD elements in a variety of reports and measures.
Other Portal Tabs & Uses

- Demographic info: Check to update outdated information in your system
- Billing info: Check to update outdated information in your system or prior to a new patient’s arrival to confirm coverage
- Advanced directives
- Consent (opt in or opt out)
- Facilities: Identify which facilities the patient has visited
- Next of kin: In the event you need and don’t have this information
- Aliases: Confirm patient information
- Associated providers: See full care team
- Support persons: See if the patient has a transportation company

Portal Search

“Ctrl F” can be used as a quick way to find what you’re looking for on portal page. Matches will be highlighted. This is a fast way to locate clinical data, such as a lab result, discharge summary, radiology report or anything else contained in the patient’s record.

Portal Workflows

As with other data collection methods, build and follow workflows for the use of the HIE portal. Possible portal workflows can include, but are not limited to:

- Access by the medical assistant/case manager/admissions team prior to a visit or admission to obtain information on care from outside facilities
- Lab and radiology results
- Specialist or PCP visit summaries
- Hospital records
- Post-acute care facilities records
- Access by the medical assistant prior to a new patient ambulatory visit for a comprehensive history of care
- Access by the billing department when insurance coverage is unknown
- Access by providers to obtain additional chronic diagnosis for risk adjustment factor yearly reporting
- Access by admission staff for post-acute care level of care placement
- Access by care management team for care coordination activities
- Access by telemedicine providers before patient visit to get a comprehensive background
Portal Workflow Efficiencies

Updating Your Workflows can Drive Efficiencies in Your Practice

Old workflow

*Test Results Day of Visit*

- Patient checks in for their appointment
- MA rooms patient and looks at record to see if any tests were ordered
- Test(s) completed and in chart
- Complete vitals/rooming of patient OR Test not completed and in chart
- Ask patient where they had it done and call for the result

Throws off the schedule and is stressful for the patient, provider and staff.

New workflow

*Search HIE Prior to Patient Arriving*

- Staff member pulls visit list in early AM
- Checks HIE for each patient record for tests ordered
- Downloads results to record
- Complete record set ready for the visit
- No added work or waiting after patient arrives for visit

Saves staff time.
Improves patient experience.
HIE 3.0 Behavioral Health View

Prior to 2021, the Arizona HIE offered two different portal experiences: one portal for physical health data and another portal for behavioral health. With the transition to HIE 3.0, physical health and behavioral health are now viewed through the same portal experience and access is controlled by user roles. If the user isn't assigned a user role with access to protected data, the user will not see the protected data, but physical health will display.

Patient consent, as well as the necessary level of user permission, are required to be able to view the behavioral health portal.

HIE 3.0 Behavioral Health Sample View

---

**Usage Terms and Conditions**

Protected Data Pre-disclosure

This record which has been disclosed to you is protected by federal confidentiality rules (42 CFR part 2). The federal rules prohibit you from making any further disclosure of this record unless further disclosure is expressly permitted by the written consent of the individual whose information is being disclosed in this record or is otherwise permitted by 42 CFR part 2. A general authorization for the release of medical or other information is NOT sufficient for this purpose (see §2.33). The federal rules restrict any use of the information to investigate or prosecute with regard to a crime any patient with a substance use disorder, except as provided at §§2.12(c)(8) and 2.55.

I accept these terms and conditions.

---

**Consent In Effect: Opt In With Consent: Break The Glass**

You have consent to only view some of this patient’s data. To access the rest, you must unlock consent data (only allowed under certain circumstances).

**Patient Consent Information**

<table>
<thead>
<tr>
<th>Standard System</th>
<th>Consent Value</th>
<th>Effective Date</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard System</td>
<td>Opt In</td>
<td>07/13/2021</td>
<td></td>
</tr>
</tbody>
</table>

**Protected Data System - Default**

<table>
<thead>
<tr>
<th>Name</th>
<th>Consent Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Data System</td>
<td>Consent: Break The Glass</td>
</tr>
</tbody>
</table>

Access will be audited

Your access will be audited in the system.

Unlock Patient Data
Crisis Summary Tab

The Crisis Summary tab contains a real-time snapshot of the most important information for patients designated as having a serious mental illness (SMI). Providers with the necessary level of user permission may access this tab. This tab is especially useful during crisis or emergency situations in which providers or emergency personnel need access to the patient’s behavioral health provider or PCP, as well as other care team members, along with vital clinical information, such as blood type, suicide history or recent court-ordered (involuntary) care.

Crisis Summary Tab Snapshot

<table>
<thead>
<tr>
<th>Crisis Summary</th>
<th>BM Provider/Refill Provider</th>
<th>COT</th>
<th>Clinical Site Assignment</th>
<th>COT Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acutely Disabled</td>
<td></td>
<td>No</td>
<td>27th Ave. PQ</td>
<td>2023/05/31</td>
</tr>
<tr>
<td>COT Evaluation Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Danger to Self</td>
<td>Emergency Contact</td>
<td>Yes</td>
<td>Emergency Contact Phone</td>
<td></td>
</tr>
<tr>
<td>Disposition</td>
<td>My mother</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNH Advocate Phone</td>
<td>Guardians Place</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SM Level of Care</td>
<td>Suicide History</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Optimal Use of Alert Services

HIE alerts are events-driven notifications triggered by admissions, discharges, registrations and clinical/laboratory results.

- Notification that an identified event has happened to a member of a pre-defined population (patient panel uploaded to the HIE); e.g., by provider, care manager, high-needs patients, chronic care panels, SMI, condition-specific panels
- Use determined by organizational need
- Provides a venue for a single point of contact for abnormal results, COVID test results, immunization information and admissions, discharges and transfers

Alert Delivery

Alerts can be received in three (3) ways:

<table>
<thead>
<tr>
<th>Alert Types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time</td>
<td>An individually identified event based on patient panel</td>
</tr>
<tr>
<td>Batch</td>
<td>Aggregate reports for all patients on a panel experiencing the event or condition being monitored</td>
</tr>
<tr>
<td>Dynamic</td>
<td>Alerts based on individual registration (COVID-19 results, Right Care Alerts)</td>
</tr>
</tbody>
</table>

Choosing the delivery method of your alerts will depend on the workflows for each alert you choose to receive, who is receiving it and how the alert can impact care. HIE alerts allow for a single point of contact who can disseminate the information so clinical workflows and patient notification can be applied.

Also consider that data fatigue is real and when staff are bombarded with alerts all day, some may fall between the cracks. Plan wisely who alerts are delivered to and make it part of their job scope and workflow.

How alerts are delivered, who receives them and what they do with them should all be part of your alert workflow.
Alert Delivery Methods — Use Cases

Alert workflows should have a standard in place for the amount of time from the alert to the clinical action.

- For readmission reduction, daily batch alerts should enable your team to contact the patient to schedule the follow-up appointment within the 7-day window.
- For COVID-19 test results, real-time alerts should be considered since patients are anxious to hear their results.
- Care management teams or providers monitoring patients with diabetes receiving real-time A1c results can react with immediate clinical intervention to high results (also pertinent for hyperlipidemia and other chronic illnesses).
- Real-time alerts of any type for patients on high-risk panels allow for faster clinical intervention.
- Real-time alerts should be used to capture admissions, discharges and transfers to keep patients from a higher level of service:
  - A real-time alert that a patient is at an urgent care or ED can elicit a phone call to that facility to coordinate care and prevent a hospital admission.
  - A real-time alert that a patient has been transferred can elicit a phone call to coordinate care with the new facility.
- Batch alerts are particularly useful for:
  - Data aggregation and population health.
  - Situations where the patient is lower risk and there is no expectation of an immediate need after hours or on weekends.

Alert Delivery Destination

Alerts can be delivered three (3) ways:

1. Secure email
2. Secure file transfer protocol (SFTP)
3. Directly into your EHR (only specific systems accommodate this)

Delivery destination options are up to your workflow(s). Consider who on your team will receive the delivery and what works best for them.
Clinical Results Alerts

Clinical result alerts are notifications when a specified type of result, such as a radiology report, lab report or a certain document type like a discharge summary, is received by the HIE for an individual on a patient panel.

The result or document is attached to the alert or it may simply be an alert notifying you to check the portal.

Use Cases for Clinical Result Alerts

- Any lab results related to chronic conditions can be quickly moved into clinical action; e.g., A1-C, fasting or random glucose to control diabetes, lipids levels to control hyperlipidemia, etc.
- COVID results can be received in real time and the patient notified immediately of the results.
- Preventative screenings for patient notification and immediate follow up on abnormal results.

Admission, Discharge, Transfer Alerts

Notification of ED and inpatient facility admissions, discharges or transfers (ADTs). Delivered real-time or batch.

Use Cases for ADT Alerts

- Admission and subsequent discharge alerts allow providers to schedule follow-up appointments for patients within value-based parameters (7 and 30 days from discharge).
- Urgent care visit alerts (real time) can prevent unnecessary inpatient hospital admissions when providers intervene with care coordination efforts.
- Admission and discharge for recent SNF patient can assist with continuity of care with the patient returning to the same SNF, if needed.
- Discharge alerts notify providers that their patient has gone home and may need in-home services, as well as a follow-up appointment.

Mental Illness Hospitalization Alerts

ADT event notification from an approved (mixed-use only) inpatient behavioral health hospital, based on patient panels uploaded to the HIE.

Use Case for Mental Illness Hospitalization Alerts

- Mental Illness Hospitalization Alert informs behavioral health practices when their patient has been discharged and to schedule the required value-based measures, 7- and 30-day post discharge follow-up visits.
- Immediately initiate discharge planning with inpatient facility staff, family and caregivers.
Patient-centered Data Home Alerts

Patient-centered Data Home (PCDH) alerts use ZIP code matching to route notifications that a specific patient has been admitted to or discharged from an ED/inpatient facility outside the patient’s home state, and allows the home or away facility to query for additional patient records.

Data sharing through PCDH is made possible through the Civitas Networks for Health (civitasforhealth.org), a national collaborative comprised of member organizations working to use HIE, health data and multi-stakeholder, cross-sector approaches to improve health.

Civitas HIEs Cover >90% of U.S. Population

Connecting Whole Communities — HIEs provide critical information in real time. By facilitating the real-time electronic transfer of clinical information, including test results and hospital admissions to providers and public health authorities, HIEs provide critical infrastructure for those working on the front lines against COVID-19.

Use Cases for PCDH Alerts

- PCDH alerts can let providers know when a patient has been admitted to an out-of-state facility, allowing for care coordination and transfer information if needed.
COVID-19 Results Alerts

Participants can choose to receive one of two types of COVID-19 alerts:

- For both positive and negative lab results
- For positive lab results only

Can be sent in real-time or as batch according to a predetermined schedule (daily, weekly, etc.) and can be delivered two (2) ways:

- Secure email
- Secure file transfer protocol (SFTP)

Use Cases for COVID-19 alerts:

- COVID-19 alerts notify providers immediately (real time) of COVID-19 results so the patient can be informed right away and subsequent clinical interventions started, if needed.

Dynamic COVID-19 Alerts

Real-time updates on a patient’s COVID-19 status during the registration or intake process at a hospital or health system. The COVID-19 alerts delivery option takes real-time registration received by the HIE, typically based on an emergency or inpatient registration, and queries the database to extract any COVID-19 results from the originating EHR system. These “dynamic” alerts are ideal for ensuring ED and inpatient staff have the most up-to-date COVID-19 lab results at first patient contact.

Use Cases for Dynamic COVID-19 Alerts

- Dynamic COVID-19 alerts notify providers during registration or intake if the patient has had a recent COVID-19 test.

Emergency Medical Service Alerts

The Arizona HIE receives patient demographics and the electronic Patient Care Report from Image Trend (a health information hub) on behalf of several emergency medical services (EMS) agencies participating with the HIE. When an EMS patient is later discharged from the hospital, Health Current/Contexture sends a discharge alert back to close the loop.

Use Cases for EMS Alerts

- Discharge ADT specialized for EMS for continuity of care allow EMS professionals to close the loop after their patient is discharged from the hospital.
Right Care Alerts — ED High Utilizers

These alerts use a real-time registration received by the HIE, typically based on an emergency or inpatient registration, queries the database, and sends an ED Utilization Risk Report back into the originating EHR system based on the following three threshold parameters:

- 6 or more ED visits in 180 days
- 3 or more ED visits in 30 day
- 3 or more acute facilities in 90 days

Use Cases for Right Care Alerts — ED High Utilizers

- Alerts ED clinicians and accountable care organizations to monitor ED overuse by reaching out to the patient to apply clinical or social interventions to improve their health and lower their ED usage.

Patient Panels

- Patient panels are the patient lists that prompt alerts. Except for Dynamic Alerts, you must identify and maintain lists of patients to be monitored and for whom alerts are sent. The panel provides the controls for delivery of all alerts.

- Update panels often. You’ll need a workflow to ensure this gets done and back up staff members are trained in case of illness, time off or turnover.

- You’ll also need a workflow to delete patients from panels. Only currently active patients can be on panels. There are a few exceptions to this rule, such as a period after a patient gets discharged from a skilled nursing facility (SNF) or acute inpatient setting. For continuity of care and readmission reduction, inpatient facilities may follow patients for a period after discharge.

- Patient panels are custom. You choose which patients are on your panels. Panels should be driven by population health frame, of patients with similar clinical needs. Start small and work to larger patient panels, if possible.

Some considerations for types of patient panels:

- High-risk patients: Monitor for ADT and clinical results for immediate clinical interventions.
- Special healthcare needs (pregnant patients, etc.).
- By care manager: All alerts go to the care manager assigned to that patient. All the care manager’s patients are included on the panel.
- By diagnosis for care interventions: Patients with diabetes, hyperlipidemia, etc.
- All patients:
  - To monitor ADTs for inpatient diversion, follow-up visits after discharge and care coordination.
  - COVID test results.
  - PCDH alerts to know if a patient is receiving care in another state.
- All Medicare patients: Ensure optimal Medicare reimbursements by utilizing Transitional Care Management (TMC) codes for timely patient follow up.
- ACO or managed care patient groups: Monitor and act on contract measures.
Optimal Use of Reporting Services

Data without context and analysis are meaningless. To make the most positive and sustainable impact on patient care, you must perform data analysis through reporting.

HIE reports can augment your population health efforts by including clinical data from all care providers for a specified set of patients during a set period.

- HIE reports can assist you with tracking your performance over time or comparing periods of time to each other to see if changes in workflow or an updated clinical intervention improved outcomes.
- Through reports the HIE can provide your information to a third party.
- Patients can be risk stratified using your own criteria.
- Hospital and ED overuse can be tracked.

The Arizona HIE offers a variety of report templates, as well as custom reports.

- See pages 35-37 for reports available along with their description, fields, format and applications.
- See page 38 for data fields available for custom reports.
## Available Reports

### Alert Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Summary data of alerts for a specific date range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Fields</td>
<td>CID, Patient name, DOB, Admission type, admitting provider, diagnosis, event type ADT^0_, treatment location, insurance, date sent</td>
</tr>
<tr>
<td>Format</td>
<td>Excel spreadsheet</td>
</tr>
<tr>
<td>Permitted Use</td>
<td>Care coordination</td>
</tr>
<tr>
<td>Notes</td>
<td>No analysis, just an Excel XLS unsorted sheet</td>
</tr>
<tr>
<td>Applications</td>
<td>Track the number of hospitalizations, UC visits, ED visits, abnormal results for a patient over time</td>
</tr>
</tbody>
</table>

### Inpatient Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Summary data of alerts for a specific date range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Fields</td>
<td>CID, Patient name, DOB, Admission type, admitting provider, diagnosis, event type ADT^0_, treatment location, insurance, date sent</td>
</tr>
<tr>
<td>Format</td>
<td>Excel spreadsheet</td>
</tr>
<tr>
<td>Permitted Use</td>
<td>Care coordination</td>
</tr>
<tr>
<td>Notes</td>
<td>No analysis, just Excel XLS unsorted sheet</td>
</tr>
<tr>
<td>Applications</td>
<td>Track the number of hospitalizations, UC visits, ED visits, abnormal results for a patient over time</td>
</tr>
</tbody>
</table>

### Alert Summary Report

<table>
<thead>
<tr>
<th>Description</th>
<th>Summary data of alerts for a specific date range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Fields</td>
<td>CID, patient name, DOB, admission type, admitting provider, diagnosis, event type ADT^0_, treatment location, insurance, date sent</td>
</tr>
<tr>
<td>Format</td>
<td>Excel spreadsheet</td>
</tr>
<tr>
<td>Permitted Use</td>
<td>Care coordination</td>
</tr>
<tr>
<td>Notes</td>
<td>No analysis, just Excel XLS unsorted sheet</td>
</tr>
<tr>
<td>Applications</td>
<td>Track the number of hospitalizations, UC visits, ED visits, abnormal results for a patient over time</td>
</tr>
</tbody>
</table>

(Continued on next page.)
### Available Reports

#### Clinical Items Report

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th>Summary of clinical values/results for a panel of patients over a period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Fields</strong></td>
<td>CID, patient name, DOB, order number, label, value, report date, source</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Excel spreadsheet</td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
<td>Population health</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Primarily single clinical item listing; e.g., HbA1c, blood pressure, HDL, LDL</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Compare periods of time of clinical results for patients to track improvement or worsening of conditions over time</td>
</tr>
</tbody>
</table>

#### Data Source Data Sharing Request

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th>Identified by source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Fields</strong></td>
<td>Identified and de-identified data</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Source defined within AZ HIE capabilities</td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
<td>Participant request to share data</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Participant can request the HIE to extract their own data to be submitted to a third party for research or population health efforts</td>
</tr>
</tbody>
</table>

#### Readmission IP & Revisit ED Within the Same Provider Group

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th>Listing of patients admitted to ED/inpatient who revisited within 30 days to a second facility within the provider’s group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Fields</strong></td>
<td>CID, patient name, DOB, admission type, admitting provider, diagnosis, event type ADT^0_, treatment location, insurance, date sent</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Variable</td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
<td>Care coordination/case management</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Patient risk level assignment for multiple hospitalization use</td>
</tr>
</tbody>
</table>

(Continued on next page.)
## Available Reports

<table>
<thead>
<tr>
<th><strong>Data Source &amp; MR Source Code Crosswalk</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Typical Fields</strong></td>
</tr>
<tr>
<td><strong>Format</strong></td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
</tr>
<tr>
<td><strong>Applications</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Risk Model</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Typical Fields</strong></td>
</tr>
<tr>
<td><strong>Format</strong></td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
</tr>
<tr>
<td><strong>Applications</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Custom Report</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Typical Fields</strong></td>
</tr>
<tr>
<td><strong>Format</strong></td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
</tr>
<tr>
<td><strong>Applications</strong></td>
</tr>
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</table>
# Data Available

<table>
<thead>
<tr>
<th>Notification Summary Report</th>
<th>IP/ED Report</th>
<th>Clinical Items Report</th>
<th>Readmission IP and Revisit ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>subject_key</td>
<td>subject_key</td>
<td>clinical_item_key</td>
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</tr>
<tr>
<td>subject_alias_key</td>
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<tr>
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<td>start_time</td>
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<tr>
<td>first</td>
<td>encounter_id</td>
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<td></td>
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<tr>
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<td>encounter_id</td>
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<tr>
<td>insurance_information</td>
<td>encounter_id</td>
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<table>
<thead>
<tr>
<th>Basic Risk Model</th>
<th>COVID Lab Result History</th>
<th>Encounters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name, First name DOB</td>
<td>Organization</td>
<td>Source ID</td>
</tr>
<tr>
<td>Health Current Patient Identifier (CID)</td>
<td>Patient Name</td>
<td>System</td>
</tr>
<tr>
<td>ER Visit Count</td>
<td>Gender</td>
<td>Patient ID</td>
</tr>
<tr>
<td>Inpatient Visit Count</td>
<td>Date of Birth</td>
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**Contact your account manager to set up reports.**
HIE Use for Care Management/Population Health

Care Management/Managing Population Health

A simple definition of population health:
Proactive management of health in a population.

In the U.S., 5% of the population accounts for half of the $3.5 trillion in annual healthcare spending. These “super-utilizers” are often ideal candidates for risk-stratified care management, which assigns a health risk status to a patient, then uses that status to direct and improve care. The ability to identify, stratify and manage high-risk patients is critical for organizations working to change cost structure and outcomes. (Health Catalyst, 2019)

Looking at this statistic highlights the Pareto principal (80% of the cost is from 20% of the patients) and the need for focusing on high-risk patients.

Key components of Population Health

Data Strategy
You have a lot of data at your disposal from your electronic health record, the HIE, claims data, health plans and any Accountable Care Organizations or Clinically Integrated Networks in which you participate. You can use this data to inform population health management.

Your data strategy should be centered around actionable data, not interesting data. That actionable data should be based on your health plan contracts and program (MIPS, TIP, DAP) measures.

Patient Engagement Strategy
Data without action will not lead to improved outcomes. That action is your patient engagement strategy, which is essential to an effective population health program. The first step is turning clinical data into clinical action. This could be in the form of contacting the patient to discuss better care alternatives to the ED, notifying patients that it’s time for preventative screenings, or changing an insulin dose or improving diet in your patients with diabetes. The key to improving population health is engaging one patient at a time, because it’s the patient that must take that action to improve their outcomes.
Outcomes Tracking

That which is measured, improves. Only by examining the data at regular intervals are you able to tell if your population health efforts are succeeding. Use standardized reporting processes and formats. This will support transparency across your organization, increase confidence in the data, make the focus on action and support clinical strategic thinking.

The purpose of a population health program is to keep people healthy, prevent illness and screen for disease before it causes problems.

Managing populations, especially those utilizing a higher level or more services can improve outcomes for that population and save the system money. These “shared savings” are often returned to healthcare organizations via value-based contract measures.

Populations that are frequently managed include:

**Diagnosis Driven**
- Diabetes
- Hyperlipidemia
- Asthma
- Serious mental illness
- Nicotine dependency
- Obesity
- Pregnancy

**Contract Driven**
- Health plan member
- ACO/CIN member
- Medicare
- Value-based measure

**Patient Driven**
- High risk
Diagnosis-driven Population Health Management

Patients with mismanaged chronic illness are sicker. Managing these populations will improve health and save the system money.

**Goal:** Improving glucose levels in patients with diabetes.

**Data:** A1-C and random glucose results.

**Data collection method:** A1-C and random glucose results

**Receiver:** MA via batch at 8 a.m. daily. Log results on tracking spreadsheet.

**Action:** Apply standing order or forward to provider for order. Receive order and apply clinical intervention. Schedule follow-up testing.

**Follow up (track and measure):** Track overtime and document results.

Contract-driven Population Health Management

Managing a population for a value-based measure leads to success for that measure. Align your population, data and follow up with your contract measures.

**Goal:** Improving on HEDIS measure. Follow up after hospitalization for mental illness: 18 and older, 7 days and 30 days.

**Data:** Psychiatric inpatient discharges.

**Data collection method:** HIE alerts psychiatric inpatient discharges.

**Receiver:** MA via batch at 8 a.m. daily. Log discharges on tracking spreadsheet.

**Action:** Contact patient for follow-up visit. Schedule 7-day and 30-day follow-ups.

**Follow up (track and measure):** Track overtime and document results. That which is measured improves.
Risk-driven Population Health Management

Managing through risk stratification follows the Pareto principal (80% of the cost is from 20% of the patients) and the need for focusing on high-risk patients to improve outcomes, lower utilization and save the system money.

- If this is your first pass at risk stratification, start small with an Excel spreadsheet and use CMS Hierarchical Condition Category Coding (HCC) as a risk guide. You may purchase software that can assist with identifying your high-risk patients.
- The managed care organizations or accountable care organizations you contract with most likely will provide a high-risk patient list.
- Set your own parameters for your high-risk patient list. Some criteria could include:
  - Multiple hospitalizations
  - Multiple ED visits
  - Behavioral health conditions
  - Multiple co-morbidities
  - Polypharmacy (many prescription medicines)

“\What gets measured can improve. If results are not measured, successes cannot be distinguished from failures. If successes cannot be distinguished, they cannot be replicated. If failures cannot be identified, they cannot be corrected. If results cannot be demonstrated, support cannot be secured.\”

— Attributed to Osborne & Gaebler

High-risk patient panels can be used to track ED usage and hospital admissions and discharges. Clinical and social determinants interventions after hospitalization or ED visits can lower future admissions/readmissions in this population.

Whether or not you have a care management team, you can manage your patients on a smaller scale. Start by choosing just one value-based measure and use the HIE alert services to track and then apply clinical intervention(s) to manage and improve.

CommunityCares: Arizona’s SDOH Referral System

Heath Current teamed with the Arizona Health Care Cost Containment System (AHCCCS), Arizona’s state Medicaid agency, and, in collaboration with 2-1-1 Arizona (Solari), implemented a single, statewide closed loop referral system to address social determinants of health (SDOH) needs in Arizona, CommunityCares. This new technology platform is designed to connect healthcare and community service providers to streamline the referral process, foster easier access to vital services and provide confirmation when social services are delivered.

AHCCCS launched its Whole Person Care Initiative (WPCI) to focus on the social factors that have an impact on individual health and well-being, such as housing, employment, criminal justice, non-emergency transportation, and home and community-based services interventions. As part of the WPCI strategy, AHCCCS partnered with Health Current to develop a technology solution that can support providers, health plans, community-based organizations (CBOs) and community stakeholders in meeting the healthcare and social-economic needs of Arizonans.

By combining the forces of Health Current, AHCCCS and 2-1-1 Arizona (Solari), and leveraging the combined power of technology and trust of NowPow/Unite Us, the new platform promises to be a game changer in helping the community better serve the social service needs of all Arizonans. To learn more about CommunityCares, visit healthcurrent.org/SDOH.

The Arizona Healthcare Directives Registry

Health Current/Contexture is the new home for the Arizona Healthcare Directives Registry (AzHDR) after 2019 legislation granted the transition of the registry from the Secretary of State’s office to the Arizona HIE to improve healthcare provider access to advance directives.

The Arizona Healthcare Directives Registry (AzHDR) is designed to help honor patients’ end-of-life healthcare wishes by providing seamless access to advance directives across the continuum of care. Launched in late 2021, the new AzHDR provides a reliable and safe place to store and make accessible Arizonans’ advance directive documents so end-of-life care is guided by one’s wishes. The secure and confidential system provides peace of mind to registrants and offers easy access to participating healthcare providers. Registering advance directives with the AzHDR will ensure wishes documented are wishes honored.

Working together as a community, we can ensure that no matter where or when someone faces the moment they can’t communicate, their advance directives are registered, accessible and honored. To learn more about the AzHDR, visit AzHDR.org.
HIE Use for Direct Secure Messaging

Direct Secure Messaging (DSM) is a secure communication for sensitive information through the internet. It's the cornerstone of facilitating interoperability between disparate health technologies and organizations.

The Arizona HIE offers DSM services to its participants. Alerts and reports can be delivered to participants through DSM or participants can send messages using it, even if the provider doesn't have an electronic medical record.

DSM is a streamlined way to send information from the HIE or from your EHR to other providers. DSM can be used instead of faxing for sending referral or authorization paperwork, encounter notes before or after a specialist visit or for placing orders. Read receipts can be received to ensure the receiver read the email.

Receiving providers must have the capacity to receive DSM. DSM services are available to providers not participating in the HIE. Non-participating providers can contact Health Current/Contexture recruiting for more information at recruitment@healthcurrent.org.
Common HIE Definitions

- **ADT** — Admission, Discharge and Transfer notifications through alert services.

- **Batch Alerts** — Aggregate reports for all patients on a panel experiencing the event or condition being monitored. Schedule is set by participant.

- **Bi-directional** — Having access to the HIE and also regularly sharing patient data with the HIE.

- **Data Exchange** — Capture and share patient health information with HIE participants utilizing push/pull and query/response functionality.

- **Direct Secure Email** — Secure email for clinical information exchange; DirectTrust certified and HIPAA compliant.

- **HIE Portal** — Secure online access to patient data; includes specialized view of seriously mentally ill (SMI) patient crisis data.

- **Patient Alerts** — Event-driven notifications triggered by admissions, discharges, registrations, and clinical/laboratory results and documents, including COVID test results.

- **Patient Panel** — A list of patients to be monitored and for whom alerts are sent. The panel provides the controls for delivery of all alerts.

- **Query/Response** — Delivery of continuity of care documents (CCD) with 3-month look back or complete history based on an electronic request.

- **Real-time Alerts** — An individual-identified event based on a patient panel delivered in real time. Dynamic alerts are those pulled in real time based on a patient registering at a participant’s facility.

- **Reports** — Standardized Clinical Summary Reports and files of the most recent patient clinical/encounter information. Multiple formats. Custom reports also available.
Additional Resources

Workflows
AHRZ: How to Map Workflows in Health Care Settings
   How to Map Workflows in Health Care Settings | Agency for Healthcare Research and Quality (ahrq.gov)

Lippincott Research Journals: Advances in Skin and Wound Care Workflow Analysis: The Importance of Clinical Order Sets
   Workflow Analysis: The Importance of Clinical Order Sets : Advances in Skin & Wound Care (lww.com)

Vanguard Systems, Inc.: How to Improve Workflow Efficiency
   How to Improve Workflow Efficiency | Vanguard Systems (vansystems.com)

AMA STEPSforward: Team-Based Care and Workflow
   Tools and Courses to Enhance Team-Based Care and Workflow | AMA Steps Forward | AMA Ed Hub | AMA STEPS Forward | Ed Hub (ama-assn.org)

Continuous Quality Improvement
HealthCatalyst: The Top Five Essentials for Outcomes Improvement
   The Top Five Essentials for Outcomes Improvement (healthcatalyst.com)

AHRQ: Using Health Information Technology to Support Quality Improvement in Primary Care
   Using Health Information Technology to Support Quality Improvement in Primary Care | PCMH Resource Center (ahrq.gov)

AMA STEPS Forward: Organizational Culture
   Organizational Culture Tools and Courses | AMA Steps Forward | AMA Ed Hub | AMA STEPS Forward | Ed Hub (ama-assn.org)

AMA STEPS Forward: Team-Based Care Improve Patient Care and Team Engagement Through Collaboration and Streamlined Processes
   Team-Based Care | Clinical Pharmacy and Pharmacology | AMA STEPS Forward | AMA Ed Hub (ama-assn.org)

Health Catalyst: Value-Based Care: Six Steps Towards Meaningful, Ongoing Healthcare Performance Improvement
   Implementing Healthcare Performance Improvement Initiatives (healthcatalyst.com)
Risk Stratification/Care Registries
Managing High Risk Patients
Managing High Risk Patients | HybridChart

Health Catalyst: Deliver Better Population Health
Deliver Better Population Health by Avoiding 3 Mistakes (healthcatalyst.com)

AMA STEPSforward: Patient Care Registries
Patient Care Registries | AMA STEPS Forward | AMA Ed Hub (ama-assn.org)

California HealthCare Foundation: Using Computerized Registries in Chronic Disease Care
Using Computerized Registries in Chronic Disease Care (chcf.org)

Value-based Care
AMA STEPSforward: Value-Based Care Promote the Triple Aim
Value-Based Care | AMA STEPS Forward | AMA Ed Hub (ama-assn.org)

Health Catalyst: Shifting to Value-Based Care: Four Strategies Emphasize Agility
Shifting to Value-Based Care: Four Strategies Emphasize Agility (healthcatalyst.com)

Health Catalyst: Value-Based Care: Four Key Competencies for Success
Value-Based Care: Four Key Competencies for Success (healthcatalyst.com)

Healthcare IT Today: The Most Influential Person in Healthcare Might Soon Be the Care Manager, Not the Doctor
The Most Influential Person in Healthcare Might Soon Be the Care Manager, Not the Doctor | Healthcare IT Today

Change Management
Tallyfy: 9 Steps to a Successful Change Management Process
9 Steps to a Successful Change Management Process - Tallyfy

Airiodion: The Best Strategies for Managing Change in Healthcare | Change Management Guide for 2020-2021
Applying Best Change Management in Healthcare | All You Need to Know – Airiodion (AGS)
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Connecting Health and Care for the Nation A Shared Nationwide Interoperability Roadmap. (n.d.).  


What are the Value-based Programs? (2020, January 6). Retrieved from CMS: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/Value-Based-Programs

Your Advanced Practice of the Arizona HIE Begins Today.

Congratulations! You’ve completed your review of the Guide for Advanced Practice of the HIE. We hope this guide will help you and your organization improve patient care and clinical outcomes and enhance your value-based reimbursements.

We will update this guide periodically as needed. If you download it, check back often for the most recent version. If you find outdated information or a broken link in your downloaded version, be sure to download the most recent version. If you still find issues, please contact us at guides@healthcurrent.org to let us know.

Also, share this guide with your colleagues. Providers not participating with the Arizona HIE can contact recruitment@healthcurrent.org to learn more.

If you have any questions about this guide, use of the HIE, adding services, such as alerts and reports, etc., contact your designated Arizona HIE account manager or email HIESupport@healthcurrent.org.

Learn how to get more out of your HIE. Visit: healthcurrent.org/YourHIE