

Pre-survey Instructions

IMPORTANT: Please carefully review the information below prior to beginning your survey.

This year, each organization will receive a unique link to access the survey without the need for a user ID and password. You will still receive an organization ID for record identification purposes, please include this number in your survey communications.

If your organization is part of a health system or IDN, you can complete one survey to include all hospitals if those facilities operate on the same EHR and have similar structure.

Instructions are as follows:

- Identify individuals from your organization to help you gather the data you will need to complete the various sections of the survey. CHIME recommends distributing a hardcopy of the survey to these individuals where they will mark their responses to be kept as a hardcopy.
- **Only one user should be in the survey at a given time.** Having multiple people in the survey simultaneously will result in lost data. Please designate one individual to enter data from the hardcopy into the survey tool. You can toggle between survey sections using the index.
- Prior to beginning the survey, please review the list of definitions [here](#). Reviewing this will help clarify the intent of questions and response options.
- Complete a hardcopy of the survey before entering data to the survey tool.
- If using your 2019 survey submission as a reference, please be mindful that some response options have changed and may not match against the 2020 version.
- The online survey tool will automatically save your responses as you move to the next page. Be sure to move to the next page before you close the survey.
- For questions that require screenshot validation, please include the question number as well as your organization ID in the submission email to mostwired@chimecentral.org
- All technologies need to have been in place by 3/31/2020 in order to include it in a survey response.
- Once all data has been entered into the survey tool, please go through each section and review all responses thoroughly.
- At the end of the survey, you will be required to verify that the CIO has reviewed and signed off on the submission. **Do not check this box or move forward until you are ready to submit. Once submitted, the survey cannot be reopened.**

- Upon submitting, you will be redirected to a survey summary where you can **print your submission for your records.**

Scoping

Where are facilities represented in this survey located? (select one)

- United States of America
- International

What type of facilities are represented in this survey? (select all that apply)

- International Acute Hospital (INTERNATIONAL ONLY)
- US Domestic Acute Hospital
- US Domestic Ambulatory Clinic
- US Domestic Long-Term-Care Facility

IMPORTANT NOTE

IF MULTIPLE FACILITY TYPES ARE REPRESENTED IN ONE SURVEY, RESPONSES MUST REPRESENT THE AVERAGE EXPERIENCE ACROSS ALL FACILITY TYPES. *There will still be unique and individual scoring returned for each facility type; scores will be similar but slightly different.*

IF THE EXPERIENCE IS DIFFERENT ACROSS FACILITY TYPES, ANOTHER SURVEY WILL NEED TO BE FILLED OUT FOR EACH UNIQUE FACILITY EXPERIENCE REPRESENTATION DESIRED. *There will be unique and individual scoring returned for each facility survey filled out; scores will be different according to unique facility survey responses.*

What type of facilities are represented in this survey? (Making multiple selections will allow you to complete all facility types within one survey)

- International Acute Hospital (INTERNATIONAL ONLY)
- US Domestic Acute Hospital
- US Domestic Ambulatory Clinic
- US Domestic Long-Term-Care Facility

General Information

Organization Information -

Organization Name:

Name of Parent Organization/IDN (if applicable):

Street Address:

City, State (Province), Postal Code:

Country:

CIO Information -

Name:

Phone Number:

Email:

If CIO DID NOT complete the Survey, survey respondent information -

Name:

Title:

Phone Number:

Email:

Results and benchmarking reports will be sent to both email addresses

Public Relations Information –

Name:

Title:

Phone Number:

Email:

Other Information -

Please identify which best describes the organization represented in this survey:

- Independently owned long-term care facility
- Long-term care facility owned by hospital or health network/system

Number of LTC facilities represented in this survey* _____

*If this survey is for more than one facility, your answers should reflect the **AVERAGE FOR ALL FACILITIES REPRESENTED**

Number of Beds/exam rooms regularly available (those set up and staffed for use) represented in this survey: _____

Number of physicians at your organization: _____

Total number of organization employees: _____

Primary EHR in use: _____

Finance Information -

What is your organization's total revenue (net patient revenue + other income)? _____

What is the estimated dollar amount associated with IT expenses? _____

Please report the number of FTEs on the IT staff as of December 31, 2019.

On the payroll: _____ Outsourced: _____

IT staff includes employees in other areas (e.g., decision support, clinical areas and strategic planning) whose primary role is creating or supporting systems or information technologies. It excludes PBX operators and other direct reports to the CIO that are not part of planning, supporting or provisioning IT services. Do not include vacant positions, include only staff on board.

If you are willing, please list all vendors that you use for the following:

Population health vendors:

Security vendors:

Telehealth vendors:

Business intelligence (BI):

AI vendors (AI):

Infrastructure

(2020-001) What methods does your organization(s) use to monitor your IT systems? (Check all that apply.)

- A. Use tools to monitor the end-user experience (network and system performance)
- B. Use automated tools to escalate problems to highly skilled technicians (Level 2 or 3) based on category and type
- C. Analyze issues to determine root cause analysis as a means to put fixes in place to avoid reoccurrences
- D. Use dashboard to manage infrastructure by exceptions/anomalies
- E. Log collection automation
- F. Utilize pattern detection against automated login attempts
- G. Gather and trend data to mitigate potential issues before they occur
- H. Perform and escalate on system log exceptions/errors
- I. Utilize tools such as user behavior analytics or user/entity behavior analytics (UBA/UEBA)
- J. None of these tools are used

(2020-002) How does your organization(s) support its **wireless** communications? (Select the one that best describes your situation.)

- A. Multiple discrete wireless networks for different purposes
(clinical/biomedical/physicians/public)
- B. A single, unified enterprise-wide wireless infrastructure enabling reliable access to all online applications
- C. No wireless infrastructure

(2020-003) Which of the following **wireless** applications and/or technologies does your organization(s) support? (Check all that apply.)

- A. Cellular connectivity throughout premises
- B. Nurse call/paging systems
- C. RFID/RTLS Locator System
- D. IP telemetry
- E. Two-way radio/security systems
- F. Video monitoring
- G. Wireless VoIP
- H. EHR/clinical information systems
- I. Wireless barcode medication administration
- J. Wireless infusion pumps
- K. Wireless barcode scanners for supplies
- L. Clinician alarm notification correlated for events
- M. Connected implants that deliver alerts regarding changes in medical conditions to smart device
- N. Wireless barcode for blood products administration
- O. Device alarm notification
- P. Patient facing wireless technologies (wayfinding, Geofence based push notification systems)
- Q. Remote monitoring and telehealth for on call physicians
- R. Wander Management/Patient Elopement
- S. None

(2020-004) Which of the following resource functions can physicians and other clinicians access remotely (from outside your organization(s) firewall)? (Check all that apply.)

- A. Full access to EHR (Complete/sign medical record, place orders, see other facilities' results, exchange patient data and orders with other facilities, etc.)
- B. Full access to diagnostic quality PACS/images
- C. Communicate with patients (email, alerts)
- D. Secure texting
- E. Support virtual patient visits
- F. Secure messaging via HISP (Health Information Service Provider)
- G. Secure messaging using other non-HISP vehicle
- H. Monitor chronic patients through alerts/notifications
- I. Data received on smart devices from connected implants, RFID/RTLS
- J. Clinician guidelines/pathways or evidence-based order sets with links to reference literature
- K. Full access to referential quality PACS/images
- L. Image sharing from other organizations
- M. None

(2020-005) Which of the following technologies does your organization(s) utilize to improve caregiver workflow? (Check all that apply.)

- A. HL7 CCOW standard for patient context management between applications
- B. Integrated clinical application suites
- C. Single sign-on—biometrics
- D. Single sign-on—proximity systems (tap-n-go)
- E. Roaming virtual desktop sessions (VDI)
- F. Traveling profiles
- G. Mobile voice recognition for clinician notes
- H. Remote published applications (terminal services)
- I. None

Security

(2020-006) Please indicate below which information security frameworks your organization(s) has adopted and follows as part of your information security program. (Check all that apply)

- A. NIST cybersecurity framework
- B. COBIT
- C. ISO 2700 series
- D. HITRUST
- E. SANS Top 20/CIS critical controls
- F. Self-developed
- G. No framework adopted

(2020-007) Who is responsible for leading information security in your organization(s)? (check one)

- A. Dedicated security leader in your executive suite (CISO, Director of security)
- B. CIO who doubles as a security leader
- C. An external security leader
- D. No dedicated security leader

(2020-008) Please indicate how often your board of directors/trustees or board committee receives a report on your information security program? (Check one.)

- A. Information security program update is provided monthly (or more often)
- B. Information security program update is provided quarterly
- C. Information security program update is provided semi-annually
- D. Information security program update is provided annually
- E. Not on a regular schedule but as requested by the board
- F. Never

(2020-009) How often does your organization(s) formally chartered cybersecurity governance, risk and compliance committee comprising executive team meet? (Check one.)

- A. Monthly (or more often)
- B. Quarterly
- C. Semi-annually
- D. Annually
- E. Never
- F. Unsure
- G. We do not have a formally chartered cybersecurity governance, risk and compliance committee comprising executive team

(2020-010) Which of the following security measures does your organization(s) currently use to authenticate/manage authorized **users**? (Check all that apply.)

- A. Smartcard access control (biometrics, key cards, proximity, magnetic)
- B. Identity management/governance (creation of unique identities which are tied to user accounts)
- C. Single sign-on
- D. Multi-factor authentication (soft tokens, hard tokens, SMS, biometrics, etc.)
- E. PKI/digital signature systems
- F. Adaptive/risk-based authentication for network access
- G. Federated access management (e.g., SAML)
- H. Privileged access management
- I. None

(2020-011) Which of the following security measures does your organization(s) currently use to authenticate/manage **devices**? (Check all that apply.)

- A. Inventory of authorized devices (tie to asset management systems, IoT/IoMT discover tools, network access control, or other factors)
- B. Inventory of authorized medical devices (tie to asset management systems, IoT/IoMT discover tools, network access control, or other factors)
- C. Network access control, monitoring of devices joining network
- D. Network access control, enforcement of devices joining network
- E. Bring-your-own-device (BYOD) management
- F. Mobile device management (MDM) for hospital owned devices
- G. None

(2020-012) Which of the following security technologies, services, tools or measures has your organization(s) implemented and used as part of security processes? (Check all that apply.)

- A. Database monitoring
- B. Data loss prevention (DLP)
- C. Intrusion detection systems (IDS)
- D. Intrusion prevention systems (IPS)
- E. Log management
- F. Privacy audit systems
- G. Automated user access provisioning systems
- H. Security incident event management (SIEM)
- I. Next generation endpoint protection systems (EDR, signatureless/machine learning agents, etc)
- J. Deception technology
- K. Endpoint encryption (laptops and desktops)
- L. Basic spam/phishing protection (signatures, digests, spam blacklists, etc)
- M. Anomalous network monitoring and analytics (full packet capture analytics tools to find threats)
- N. Medical device security tools
- O. Micro-segmentation /virtualization
- P. Governance, risk and compliance (GRC) systems
- Q. Cloud access security broker (CASB)
- R. Removable media encryption
- S. Email filtering and encryption
- T. None

(2020-013) Which of the following security processes does your organization(s) currently use to safeguard information? (Check all that apply.)

- A. Proper disposal of ePHI hardware or electronic media
- B. Remote mobile device data wiping capabilities
- C. Endpoint passcode/password
- D. Encryption of backups
- E. Encryption for wireless LANs
- F. Encryption for laptops and/or workstations (virtual desktop)
- G. Medical device password/access controls
- H. Formal incident response plan
- I. Consumption of threat intelligence information from other organizations (ISAC, DHS, etc)
- J. Procurement/contracting with security term including vendor risk assessment
- K. Segmentation of medical devices on specialized network segments
- L. 24/7/365 Security operations center (insourced, outsourced, hybrid)
- M. Training and education of workforce
- N. Data classification
- O. Secure system baseline images
- P. Encryption key management
- Q. None

(2020-014) How often does your organization(s) conduct each of the following activities? If unannounced, select unannounced as well (e.g. quarterly phishing exercises that are unannounced).

Activity		Unannounced	Quarterly	Annually	Every 2 years	Never
A	Risk assessment to identify compliance gaps and security vulnerabilities					
B	Penetration testing to identify security vulnerabilities					
C	Wireless penetration testing					
D	HIPAA compliance audits					
E	Testing recovery plan (all-tiers)					
F	Testing recovery plan (some-tiers/key systems only)					
G	Simulated phishing exercises					
H	Web application security assessments					
I	Social engineering risk assessment					
J	Application security assessment					
K	Third-party security audit					
L	Vulnerability scanning					
M	Medical device security audits					
N	Security awareness training					
O	Vendor security (or risk) assessments					
P	System/data access audits					

(2020-015) How often are the results of security assessments, audits, analysis, exercises or testing reported to leadership? (Check one per row.)

Activity		Monthly	Quarterly	Annually	Every 2 years	Never
A	Progress on security is tracked and reported to leadership					
B	Gaps or continuing deficiencies reported to leadership					
C	Business units are involved helping to prepare remediation plans after the work (above) is performed					

(2020-016) Does your organization(s) have any of the following insurance coverages related to cybersecurity? (Check all that apply.)

- A. Cyber liability
- B. Data breach
- C. Crime insurance coverage
- D. Business loss
- E. Network security and privacy
- F. Media liability
- G. None

(2020-017) Which of the following information sharing and analysis organizations is your organization(s) participating with to identify cybersecurity threats and vulnerabilities? (Check all that apply.)

- A. Commercial service providers (CSPs)
- B. Cyber Information Sharing and Collaboration Program (CISCP): DHS's program for public-private information sharing
- C. Health Information Trust Alliance (HITRUST)
- D. HIE partners
- E. Informal sharing in HIT user groups
- F. Informal sharing in professional society
- G. Health Information Sharing and Analysis Center (H-ISAC)
- H. State hospital associations
- I. Department of Homeland Security
- J. National Cybersecurity & Communication Integration Center (NCCIC)
- K. Health Cybersecurity & Communication Integration Center (HCCIC)
- L. None of the above

(2020-018) If you have a documented risk management program, what's the highest level the results are reported to? (check one)

- A. Board of trustees, or committee of the board
- B. Executive leadership / executive governance
- C. IT leadership
- D. Results are not reported in a formal way
- E. No documented risk management program

(2020-019) What components are included in your documented risk management program? (check all that apply)

- A. Risk responsibilities
- B. Mitigation steps for an event
- C. Contingency plan
- D. Risk Level Identification
- E. Risk tracking and reporting
- F. Risk assessment
- G. We do not have a documented risk management program

(2020-020) Do you have a comprehensive incident response plan with these components? (Check all that apply.)

- A. Documented tier 1 outage procedures
- B. Security/privacy breach notification procedures
- C. Planning and exercises including HR team
- D. Planning and exercises including legal team
- E. Planning and exercises including resource management (materials management/supply chain) team
- F. Planning and exercises including marketing & communications team
- G. Planning and exercises including other members of the organization
- H. Tabletop exercise at least annually
- I. Enterprise-wide exercise at least annually
- J. Disaster recovery plan tied to organizational business continuity plan
- K. Documented incident response team roster and responsibilities
- L. Post incident review, remediation and accountability process documented
- M. No comprehensive incident response plan

(2020-021) Please estimate how quickly your organization(s) can restore operations (applications that are considered “mission critical”) if a disaster causes the complete loss of your primary data center? (Check one per operation.)

a. Clinical information systems (EHR, lab, radiology)

<input type="checkbox"/> 0 – 4 hours	<input type="checkbox"/> 5 – 8 hours	<input type="checkbox"/> 9 – 24 hours	<input type="checkbox"/> 2 – 3 days
<input type="checkbox"/> 4 – 7 days	<input type="checkbox"/> 8 days – 1 month	<input type="checkbox"/> 1 month +	<input type="checkbox"/> Don't Know

b. Financial systems (payroll, patient accounting)

<input type="checkbox"/> 0 – 4 hours	<input type="checkbox"/> 5 – 8 hours	<input type="checkbox"/> 9 – 24 hours	<input type="checkbox"/> 2 – 3 days
<input type="checkbox"/> 4 – 7 days	<input type="checkbox"/> 8 days – 1 month	<input type="checkbox"/> 1 month +	<input type="checkbox"/> Don't Know

c. Human resources and staffing systems

<input type="checkbox"/> 0 – 4 hours	<input type="checkbox"/> 5 – 8 hours	<input type="checkbox"/> 9 – 24 hours	<input type="checkbox"/> 2 – 3 days
<input type="checkbox"/> 4 – 7 days	<input type="checkbox"/> 8 days – 1 month	<input type="checkbox"/> 1 month +	<input type="checkbox"/> Don't Know

d. Supply chain management systems

<input type="checkbox"/> 0 – 4 hours	<input type="checkbox"/> 5 – 8 hours	<input type="checkbox"/> 9 – 24 hours	<input type="checkbox"/> 2 – 3 days
<input type="checkbox"/> 4 – 7 days	<input type="checkbox"/> 8 days – 1 month	<input type="checkbox"/> 1 month +	<input type="checkbox"/> Don't Know

(2020-022) In the event of an emergency, what communication equipment and services does your staff use? (Check all that apply.)

- A. Fixed
- B. FirstNet
- C. Satellite phone, VSAT, MSAT and other satellite communications
- D. Government Emergency Telephone Service (GETS) cards
- E. Wireless Priority Service (WPS) service
- F. Telecommunication Service Priority (TSP)
- G. Crisis communications platform
- H. None

(2020-023) Which of the following activities are included in your business associate or third-party risk management program? (Check all that apply)

- A. An inventory of all business associates (updated at least annually)
- B. List of business associates that is prioritized based on the risk to your organization
- C. All business associate agreements have been updated since the 2013 Final Omnibus Rule
- D. We have a plan to evaluate high risk vendors
- E. Our business associates have completed their sub-contractor related assessments.
- F. We do not have a business associate or third-party risk management program

(2020-024) Rate the impact of the security technologies/strategies you report using in this section on the following outcomes? (1 low – 9 high scale) NOT SCORED

- Overall security outcomes: _____
- Protect against outside threats: _____
- Protect against internal threats: _____
- Protecting PHI: _____

(2020-025) From Last year to this year, has the overall number of security-related incidents at your organization? NOT SCORED

- Increased
- Stayed the same
- Decreased
- Not tracked
- Decline to answer

Administrative Supply Chain

(2020-026) Select the primary method your organization(s) uses to complete the majority of these **pharmacy supply activities**. (Select the one that best describes your situation.)

- **Automated: More than 50% of the activities are handled via electronic interfaces with appropriate internal controls (e.g., EDI, API integration, web)**
- **Semi-automated: More than 50% of activities are handled via electronic transaction (data keyed in), electronic tracking systems, and electronic usage reports**
- **Manual: More than 50% of activities are handled by telephone or fax**

Activities	Automated	Semi-Automated	Manual/Phone/Fax
A Check Product price/Contract Price			
B Check product availability			
C Process Purchase Requisition			
D Process Purchase order			
E Check order Status/routing			
F Received Order/Check-in			
G Receive Invoice			
H Pay Invoice			

(2020-027) For what percentage of **pharmaceutical supplies** is an electronic order generated when they reach a predetermined par level? (Check one.)

- 81-100%
- 61-80%
- 41-60%
- 21-40%
- 1-20%
- None

(2020-028) Select the primary method your organization(s) uses to complete the majority of these **medical/surgical supply activities**. (Select the one that best describes your situation.)

- **Automated: More than 50% of the activities are automated via electronic interfaces with appropriate internal controls (e.g., EDI, API integration, web)**
- **Semi-automated: More than 50% of activities are handled via electronic transaction (data keyed in), electronic tracking systems, and electronic usage reports**
- **Manual: More than 50% of activities are handled by telephone or fax**

Activities	Automated	Semi-Automated	Manual/Phone/Fax
A Check Product price/contract price			
B Check Product availability			
C Process Purchase Requisition			
D Process Purchase order			
E Check order status/routing			
F Receive Order/Check-in			
G Receive Invoice			
H Pay Invoice			

(2020-029) For what percentage of **medical/surgical supplies** is an electronic order generated when they reach a predetermined par level? (Check one.)

- A. 81-100%
- B. 61-80%
- C. 41-60%
- D. 21-40%
- E. 1-20%
- F. None

(2020-030) Please estimate the percentage of use of auto-ID technology (bar code, RFID) for **tracking/identifying** each item listed below. (Check one per row.)

Tracking/Identifying of:	RFID					Barcode				
	>95%	50-95%	<50%	0%	N/A	>95%	50-95%	<50%	0%	N/A
A Movable equipment**										
B Patient ID										
C Staff ID										
D Blood Supply										
E Surgical Supplies										
F Medical Supplies (nonsurgical)										
G Medication (bulk)										
H Medication (unit dose)										
I NA for LTC										
J Patient Tracking										
K Staff Tracking										
L Hand Hygiene										

** (IV Pumps, beds, IV poles, wheelchairs, portable x-ray units etc)

(2020-031) Does your organization(s) have a revenue-cycle and contracts-management application that: (Check all that apply.)

- A. Aggregates and measures cost of care across settings
- B. Aggregates charges to form bundles and episodes, with the aggregation logic enabling different groupings for different payers
- C. Manages the distribution of bundled payments to the physicians, hospitals and non-acute facilities that delivered the care
- D. Provides tools for retrospective analysis of clinical and administrative data to identify areas for improving the quality of care and reducing the cost of care delivered
- E. Reconciles charges and patient accounts to a monthly premium payment, billing co-payments and noncovered charges according to insurance agreements
- F. Supports real-time patient identification and tracking for value-based care conditions, e.g., COPD
- G. Provides patients with estimates on out of pocket expenses
- H. None

(2020-032) How do you monitor and collect information needed to manage supply/equipment recalls and expiration dates (i.e., product integrity) of the following products? (Check all that apply.)

- **Automated: More than 90% of activities are handled automated systems as appropriate to the item (e.g. electronic supply cabinet tracking, bar-coding, RFID, unique identifier tracked be database)**
- **Semi-automated: More than 50-89% of activities are handled automated systems as appropriate to the item (e.g. electronic supply cabinet tracking, bar-coding, RFID, unique identifier tracked be database)**
- **Manual: More than 50% of monitoring activities are handled via manual process logs (e.g. pen/paper, electronic document, spreadsheet, etc.)**

	Products	Automated	Semi-Annual	Manual	N/A
A	Drugs				
B	Blood				
C	Equipment				
D	NA for LTC organizations				

(2020-033) For each of the following **payer-related transactions**, estimate the percentage of activities conducted using HIPAA compliant transactions. (Check one per row.)

	Activities	>95%	50-95%	<50%	None
A	Claims Status Inquiry				
B	Claims Submission				
C	Electronic Funds Transfer				
D	Eligibility Inquiry				
E	Pre-certification				
F	Referral and authorization				
G	Remittance Advice				
H	Address Verification				

(2020-034) What percentage of the following validation activities is accomplished electronically using automated routines and/or software? (Check one per row.)

Definitions:

- A. **Charge and order matching:** Keeping charge master up-to-date as annual HCPCS codes are released and as prices of stocked items changes
- B. **Charge capture reconciliation:** Recording the service and charge to the patient at the point of care through automated systems entry that includes a system application that validates appropriate entry.
- C. **Contract management:** Refers to payer contracts and may include the following: (1) Automated system capable of validating whether contracted pricing is properly paid according to the negotiated rate (2) Payer-negotiated rates based on specific patient volumes; system adjusts payments when volume thresholds change.
- D. **Denial management:** Identify, quantify, correct and resubmit denied claims.
- E. **Medical necessity criteria checks:** Validating proposed services against local and national policies. Track the causes for medical necessity denials. Monitor/track performance of physicians, coders and others on compliance with documentation policies.
- F. **Physician performance comparisons:** Both quality and cost-efficiency measures that provide comparisons of individual physician performance against their peers with the goal of improving clinical outcome and appropriate utilization of services.

	Activities	>95%	51-95%	<50%	None
A	Charge and order matching				
B	Charge Capture Reconciliation				
C	Contract Management				
D	Denial management				
E	Medical necessity criteria checks				
F	Physician-performance comparisons				

(2020-035) Are you using bed/exam room tracking or patient-flow software as described below (bed tracking/patient-logistics management may be functionality included within your electronic health record)? (Check one per row.)

	System	Yes	No
A	NA for LTC organizations		
B	NA for LTC organizations		
C	NA for LTC organizations		
D	Exam room/bed tracking system		
E	Integrated patient logistics system that includes patient status, pending orders, critical lab results and room availability for the entire enterprise		
F	NA for LTC organizations		

(2020-036) Which of these employee management tools are available electronically/online throughout more than 50% of the organization(s)? (Check all that apply.)

- A. Self-scheduling of open shifts
- B. Enterprise HR management system or online HR manager portal
- C. Performance-improvement scorecards
- D. Real-time, web-based operational budget versus expense monitoring, financial modeling and budget forecasting
- E. Talent management tools (recruiting, hiring, on-boarding; compensation; performance; learning; succession; compliance and diversity)
- F. Learning management system
- G. Automated benefit selection
- H. Workforce management tool (productivity and cost trends)
- I. None

(2020-037) What types of computer-based education do you provide to clinicians? (Check all that apply.)

		Physicians	Nurses	Other licensed Providers
A	Privacy Training			
B	Information Security Training			
C	EHR Training			
D	CPOE Training			
E	Data Analytics Training			
F	Voice Recognition Software Training			
G	Sharing Best Practices for patient Safety			
H	Mobile Device Applications Training			
I	Biomed Bar Code Reader Training			

Analytics and Data Management

(2020 – 038) What is your status of embedding predictive analytics into the clinician’s workflow?

- A. Fully deployed and achieving outcomes
- B. Implementing or starting to use
- C. Looking to buy
- D. Not using

(2020-039) How is data delivered to **clinical and operational leaders**? (check all that apply)

- **Data visualization tools:** offer the ability to re-structure queries to “drill-down” into the data and filter information by a variety of parameters (date/time, patient, provider, disease, payer, etc.) on the fly.
- **Self-service data visualization tools** offer the same functionality as data visualization tools, but add the ability of end-users to reconfigure the data views to meet the needs of clinical and operational areas

		Web enabled real time analytics	Self-Service Data visualization tools	Data Visualization tools	Spreadsheets/ Graphs/Pivot Tables	Paper/PDF Reports	None
A	Clinical Quality Metrics						
B	Productivity metrics						
C	Patient volume metrics						
D	EHR utilization/ performance data						
E	Population health metrics						
F	Patient engagement/ satisfaction metrics						

(2020-040) How is data delivered to **individual clinicians** (nurses, doctors, pharmacists, etc.)? (check all that apply)

- **Data visualization tools** offer the ability to re-structure queries to “drill-down” into the data and filter information by a variety of parameters (date/time, patient, provider, disease, payer, etc.) on the fly.
- **Self-service data visualization tools** offer the same functionality as data visualization tools, but add the ability of end-users to reconfigure the data views to meet the needs of clinical and operational areas.

		Web enabled real time analytics	Self-Service Data visualization tools	Data Visualization tools	Spreadsheets/ Graphs/Pivot Tables	Paper/PDF Reports	None
A	Clinical Quality Metrics						
B	Productivity metrics						
C	Patient volume metrics						
D	EHR utilization/ performance data						
E	Population health metrics						
F	Patient engagement/ satisfaction metrics						

(2020-041) **NA for LTC organizations**

(2020-042) What backup systems and data repository models does your organization(s) use? (Check all that apply.)

- Cloud services for clinical systems
- Cloud services for non-clinical systems
- Data as a service (DaaS)
- Infrastructure as a service (IaaS)
- Storage virtualization
- Off-site redundant data center
- None

Interoperability and Population Health

(2020-043) Does your organization(s) incorporate a continuity of care document (CCD) or continuity of care record (CCR) prepared/received from a physician-office/ other external entity EHR? (Check one.)

- A. Yes; we pull data from the CCD into our EHR as discrete data elements.
- B. Yes, we incorporate the CCD into our EHR as a text-blob or PDF
- C. No; we cannot accept a CCD from a physician-office EHR

(2020-044) Which of the following entities can your organizations **send a CCD to**? (Check all that apply)

- A. External hospital / hospital system
- B. External physician practice
- C. Home health agency
- D. Skilled nursing facility, extended/chronic care facility
- E. Retail pharmacy
- F. Government data/records such as immunizations, death records, syndromic surveillance
- G. External laboratories
- H. Health information exchange (HIE)
- I. Insurance companies/payers
- J. Cannot contribute CCD to external entities

(2020-045) For what percentage of transitions of care or referrals does your organization(s) provide a summary care record: (Check one.) Moved from another section.

Functions	>95%	50-95%	<50%	None
Directly via EHR				
Via a HIE				

(2020-046) Which of the following external entities can your organization **consume discrete data** from?
(Check all that apply.)

- A. External hospital / hospital system
- B. External physician practice
- C. Home health agency
- D. Skilled nursing facility, extended/chronic care facility
- E. Retail pharmacy
- F. Government agency such as immunizations, death records, syndromic surveillance
- G. External laboratories
- H. Health information exchange (HIE)
- I. Insurance companies/payers
- J. Cannot consume any discrete data into the EHR

(2020-047) Does your organization(s) have an electronic disease registry to identify and manage gaps in care across a population?

- A. Yes
- B. No
- C. Unsure

(2020-047b) **NA for LTC organizations**

(2020 – 048) Do you have a system to track chronic-care management?

- a. Yes
- b. No
- c. Unsure

(2020 – 049) Which chronic disease management services do you provide to patients at home? Include only fully-implemented programs (not pilots) for relevant patient population. (Check all that apply.)

Condition	Self-test results entered manually online	Self-test results submitted using internet-enabled monitoring device	Medication management/compliance using secure e-mail	Real-time care management	Integrated with EHR
a. Asthma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Behavioral health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Chronic obstructive pulmonary disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Congestive heart failure					
f. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Heart disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Hypertension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Obesity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Sickle cell anemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. End stage renal disease (ESRD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. No services are offered to patients at home.					

(2020-050) What types of risk/value-based care contracts is your organization(s) participating in? Please, estimate the percentage of total revenue for each. (check all that apply)

- A. Fee-for-service: % revenue:
- B. Pay for performance: % revenue:
- C. Shared savings (upside risk only): % revenue:
- D. Shared saving (upside and downside risk): % revenue:
- E. Bundled payments: % revenue:
- F. Capitation: % revenue:

(2020-051) What technologies are you using to perform the following population health activities?
 (Check all that apply.)

51a. Data aggregation:

Activities	EMR	3 rd Party	Manual	NA
Data aggregation: Compilation of a longitudinal record that includes clinical, claims, and care-management interventions				
Reliable master patient index including duplicate record merging/deletion				
Aggregation of other data sources (social determinants of health, genomics, imaging data, etc.)				

51b. Data analysis:

Activities	EMR	3 rd Party	Manual	NA
Stratify patients according to risk				
Tailored advanced predictive/prescriptive analytics (i.e. AI, machine learning)				
Ability to identify and tag patient groups to develop internal registries				
Prioritized Worklist				

51c. Care management:

Activities	EMR	3 rd Party	Manual	NA
Identify gaps in care				
Empower care management workflow with data-driven intelligence				
Chronic disease management				
Use of social care networks for SDoH referrals to community organizations				

51d. Administrative and financial reporting:

Activities	EMR	3 rd Party	Manual	NA
Financial performance tracking under risk-based contracts				
Total cost of care analytics				
Network utilization tracking and network optimization analysis (i.e. leakage and steering)				
Tool to monitor care management performance				

51e. Patient engagement:

Activities	EMR	3 rd Party	Manual	NA
Target patients for outreach				
Secure messaging between patient, care-providers and care-managers				
Full CRM that includes integrated patient portal, outreach, education, and satisfaction				

51f. Clinician engagement:

Activities	EMR	3 rd Party	Manual	NA
Ability to track clinician usage of population health tools and activities				
Quality measures and analytics at the physician level (including MIPS, MACRA, etc.)				
Prioritized guidance on patient care-gaps and statuses				

(PDF #52a.) Of all the population health activities listed above, which three have been most influential on positively affecting **patient outcomes**? **(NOT SCORED)**

1st most influential: *(drop down of all activities listed above)*

2nd most influential: *(drop down of all activities listed above)*

3rd most influential: *(drop down of all activities listed above)*

(PDF #52b.) Of all the population health activities listed above, which three have been most influential on positively affecting **financial outcomes**? **(NOT SCORED)**

1st most influential: *(drop down of all activities listed above)*

2nd most influential: *(drop down of all activities listed above)*

3rd most influential: *(drop down of all activities listed above)*

(2020-053) Do you electronically coordinate care with clinical partners to perform the following activities? (Check all that apply.)

- A. Manage care transitions
- B. Build linkages to community-based resources
- C. Coordinate and monitor exchanges of information with specialists and other facilities
- D. Use call center to support care coordination
- E. Secure messaging with patients and health professionals
- F. Electronic medication and diagnostic ordering/management
- G. Consult/referral management and follow-up communications with electronic authorizations
- H. None

Patient Engagement

(2020-054) What percent of unique patients have accessed your patient portal within the last 12 months? **NOT SCORED**

- A. Unique Patients Accessed:
- B. Does not apply (we do not have a patient portal)

(2020-055) **NA for LTC organizations**

(2020-056) How is your organization(s) **engaging patients and their families online outside of the facility setting**? Please do not include pilots. All services/capabilities should be fully deployed HIT based products and services. (Check all that apply.)

- A. Introduce the patient and family to the care environment
- B. Introduce the patient and family to the services that will be delivered
- C. Review the education and other materials provided to the patient and family during a visit
- D. Where applicable, exchange secure e-mails with their care team members
- E. Continue the care pathway that was initiated prior to or during the clinical encounter
- F. Use videos to educate patient and family about procedures
- G. Use videos to educate patient and family about medications
- H. Use videos to educate patient and family about lab tests and results when available
- I. Participate in virtual patient visits (clinician and patient).
- J. Email appointment reminders
- K. Participate in virtual visits (patient and family)
- L. Remote patient monitoring
- M. Self-scheduling
- N. Automated check-in on arrival
- O. Wayfinding
- P. Schedule of individual activities, dining experiences, electronic maintenance requests
- Q. No online capabilities are available.

(2020-057) How is your organization(s) **engaging patients and their families through the intranet or internet inside of the facility setting?** Please do not include pilots. All services/capabilities should be fully deployed HIT based products and services. (Check all that apply.)

- A. Control the environment such as reporting problems that are not clinical in nature such as room temperature
- B. Order meals and snacks subject to dietary restrictions
- C. View all the functions on the traditional "white board" (staffing identification, schedule, patient goals, family goals, contact information)
- D. Participate in the discharge/checkout planning process
- E. Submit patient satisfaction responses
- F. Recognize staff who have performed above satisfaction
- G. Use e-mail, browsing, and entertainment
- H. None of these services/capabilities are available

(2020-058) How are your organization(s) **staff members helping to promote patient and family engagement in a facility setting through the intranet or internet?** Please do not include pilots. All services/capabilities should be fully deployed HIT based products and services.

- A. Initiate a patient pathway that uses HIT to follow a care plan specific set of processes
- B. Monitor patient and family engagement in real-time so that adjustments can be made during the clinical activities
- C. Perform data analysis that will assess efficacy and facilitate
- D. None of these services/capabilities are available

(2020-059) Does your organization(s) provide mobile apps for patients? (These should be apps created for a mobile handheld device and should NOT include responsive designed websites) (Check all that apply.)

- A. Alerts/notifications from mHealth devices
- B. Click-to-call contact directory
- C. Electronic insurance card
- D. ER wait times
- E. E-visit/virtual assistant
- F. Health library
- G. Patient portal
- H. Personal health record
- I. Personal health tracker
- J. Real-time news and blog feed
- K. Renew prescription
- L. Schedule visit
- M. Secure messaging (one way/two way)
- N. Wayfinding with floor plans and maps
- O. Price list for different services
- P. Text appointment reminders
- Q. No mobile app is available

(2020-060) Do you provide the ability for a patient to create a personal health record (electronic patient medical information stored for subsequent direct access by the patient; content may be entered by the patient or transferred from an existing electronic health record, or a combination of both) via a patient portal on your website and/or in partnership with a third-party PHR vendor? (Check one.)

- A. Yes, fully rolled out
 - What percentage of unique patients have used this tool? _____
- B. Yes, pilot program
- C. No

(2020-061) **NA for LTC organizations**

(2020-062) Which of the following telemedicine services does your organization(s) use to conduct diagnostic and therapeutic medical exchanges between patients and providers, and at which sites do you provide these services? (Check all that apply.)

	Telemedicine Service	Physician Office	Hospital	Post-Acute facilities (SNF, LTC, etc.)	Patient's Home
A	Consultations and office visits				
B	Pharmacologic management				
C	Psychiatric Exams/ Psychotherapy				

D	Rehabilitation				
E	Stroke care				
F	e-ICU				
G	Inpatient management				
H	Genetic counseling				
I	Addiction treatment and counseling				
J	Remote monitoring in the home				
K	No Telemedicine services available in this area				

(2020-063) What percent of unique patients treated by your organization(s) have used telemedicine technology? **NOT SCORED**

a. _____

(2020-064) Please describe how your organization(s) is using personal health tracking data from patient's wearable(s):

- A. Patient's wearable data is integrated with patient portal (Never, Sometimes, Always)
- B. Patient's wearable data is integrated with EHR (Never, Sometimes, Always)
- C. Patient's wearable data is used in a meaningful way by clinicians (Never, Sometimes, Always)

Clinical Quality and Safety

(2020-065) **NA for LTC organizations**

(2020-066) Do you use closed-loop bar code (or RFID) medication administration to match patients and **drugs** (formulation, dose, route, time) at least 95% of the time?

- A. Yes
- B. No

(2020-067) Do you use closed-loop bar code (or RFID) to match patients and **blood** at least 95% of the time?

- A. Yes
- B. No

(2020-068) **NA for LTC organizations**

(2020-069) **NA for LTC organizations**

(2020-070) **NA for LTC organizations**

(2020-071) Which of the following nurse activities are electronic for your organization? (Check all that apply.)

- A. Discharge/checkout checklist sends alerts for unmet criteria
- B. Discharge/checkout risk assessment
- C. Embedded links to relevant research and quality measures
- D. Evidence-based plan of care with links to reference literature
- E. Post-discharge/checkout follow-up
- F. Standardized care transition process
- G. Capture patient education assignments and status
- H. Provider hand-off tools
- I. None

(2020-072) Which of the following patient monitoring equipment in your organization(s) sends information directly to the EHR? (Check one per row.)

	Equipment	Fully Deployed	Partially Deployed	Not Deployed	N/A
A	Blood pressure				
B	Lab tests				
C	Pulse oximetry				
D	Temperature				
E	Blood glucose				
F	Cardiovascular catheter output				
G	EKG				
H	NA for LTC organizations				
I	Intracranial monitor				
J	IV pump				
K	Ventilator				
L	In-bed scale				

(2020-073) What percent of your clinicians are using the following real-time quality reporting resources? If none, put 0%. (Slide percent bar next to each option)

- A. Clinical decision support rule for high-priority hospital/health condition
- B. Critical values
- C. Dose checking (max/min)
- D. Dose suggesting (e.g., renal failure)
- E. Drug allergy alerts
- F. Drug formulary check
- G. Drug-diet checking
- H. Drug-to-drug interaction alerts
- I. Duplicate order alerts
- J. Predictive analytics
- K. Radiology decision support

(2020-074) In what units/reporting do you use an integrated surveillance system with the EHR to monitor patients?

- A. Critical care units
- B. Step-down units
- C. General medical-surgical units
- D. "Present on admission" reporting
- E. No surveillance system

(2020-075) What functionalities are fully deployed in your integrated surveillance system with the EHR?

(If you answer that you have an alert system, we will require a screenshot of this system. Screenshots should be e-mailed to mostwired@chimecentral.org) (Check all that apply.)

- a. Monitor patient vital signs
- b. Monitor lab test results
- c. Monitor medication administration
- d. Monitor other clinical information
- e. Send electronic alert notifying caregivers (e.g. deterioration in patient's condition; possible adverse event)
- f. No surveillance system

(2020-076) Please estimate the percentage of discharge/check-out medication orders (for new or changed prescriptions) transmitted as an electronic prescription. (Check one.)

- A. >95%
- B. 51-95%
- C. <50%
- D. None

(2020-077) By what method does your organization(s) track Hospital-Acquired/Onsite Infections? (Check all that apply.)

- A. Manual only
- B. Electronically stored (e.g., departmental system)
- C. Integrated with EHR
- D. No method to track Hospital-Acquired/Onsite Infections

(2020-078) **NA for LTC organizations**

(2020-079) **NA for LTC organizations**

(2020-080) Does your organization(s) engage in the following opioid use reduction programs and how impactful are those programs on reducing opioid use?

Opioid Use Reduction Programs	Organization Engagement (Yes/No/NA)	Program Impact on Reducing Opioid Use (1 low – 9 high; NA) NOT SCORED
Limiting doses/pills per prescription		
Use of non-narcotics in order-sets		
Electronic physician education programs		
Electronic patient education programs		
Electronic prescribing of controlled substances (EPCS)		
E-Prescribing module connected to state/regional PDMP (prescription drug monitoring program) data base		

(2020-081) Are you using AI enabled detection to identify any of the following possible prescribing anomalies? (check all that apply)

- a. Unusual/unsafe drug interactions
- b. Prescriptions outside dosing guidelines
- c. Unusual/unsafe drug use
- d. Abnormal prescribing practices
- e. Not using AI enabled detection to identify possible prescribing anomalies

(2020-082) Which of the following e-prescribing functions do you provide, and which physician practices do you provide them for? (Check all that apply.)

Functions		Employed Physicians	Independent Practicing Physicians	Do Not Provide	N/A
A	Capture pharmacy dispense history				
B	Check payer-based formulary				
C	Check allergies, drug-drug interactions				
D	Prescription automatically faxed to retail pharmacy				
E	Prescription sent electronically to retail pharmacy (do not include fax)				
F	Prescription discontinued transmitted electronically to retail pharmacy (do not include fax)				
G	Renewal request received by fax from retail pharmacy				
H	Renewal request received electronically from retail pharmacy (do not include fax)				
I	Electronic prescribing of controlled substances				
J	Connection to prescription drug monitoring program integrated within EHR				

Innovation and Emerging Technologies

(2020-083) How far along is your organization(s) in adopting the following AI solutions? **(NOT SCORED)**

		Not using	Looking to Buy	Implementing or starting to use	Fully deployed and achieving the desired outcome
A	Purpose built AI vendors				
B	Analytics platform vendors with AI capabilities				
C	EMR vendors embedded AI capabilities				
D	HIT application vendors with embedded AI capabilities				
E	Home Grown				

Purpose built AI vendors: Vendors primarily focused on analytics and AI, offering and commercially supporting a dedicated and standalone product (or products) designed specifically for AI. Purpose built / focused AI vendors often will include some level of prebuilt models, content, and uses cases that are specific to healthcare.

Analytics platform vendors: Analytics vendors with AI infrastructure and/or platforms, typically used as a foundation for enabling customers to do AI with a “do-it-yourself” approach, i.e. ability to build your own models or use cases. The technology that infrastructure/platform AI vendors have is often used as the AI foundation for other vendor products (i.e. embedded) that are industry specific - healthcare and other industries.

HIT application vendors: Vendors with healthcare information technology (HIT) applications that are primarily purposed to fulfill a role for one or more HIT areas, but which are not seen as a as a purpose built /standalone AI product. HIT application vendors that have some level of AI, whether in one or more products, typically have it embedded within a specific application, such as a radiology system (PACS) that is supported/enhanced by AI but is not commercially sold as a AI product.

(2020-084) What is your organization(s) strategic timeline for deploying the below emerging technologies? **(NOT SCORED)**

	Technology	Already Using	1-2 year strategy	3-5 year strategy	5+ year strategy	Not currently part of our future strategy
A	5G					
B	NLP (Natural Language Processing)					
C	Predictive analytics					
D	Drones					
E	Virtual reality					
F	Internet of Medical Things (IOMT)					
G	Blockchain					
H	3D printing					
I	Cognitive computing, machine learning					
J	Neural networking					
K	Genomics					
L	Other- please specify: _____					