#### **General Information**

#### **Organizational Information**

Please provide the following information.

#### **Organization Name**

If your organization is submitting multiple surveys, please name the group of facilities represented in this survey (example: ABC Inc. Region One; Flagship Hospitals of ABC Inc.)

Note: this name will be used for the associated report and industry recognition

#### **Organization ID**

(Provided by CHIME)

Name of parent organization/IDN (if applicable)

**Street address**(Organization headquarters)

City

State

Zip/Postal code

Please provide the following information regarding the CIO (system CIO if applicable):

First Name Last Name Phone Number Email

# If the CIO DID NOT complete the survey, please enter survey respondent information -

First Name Last Name Title Phone Number Email

The following questions must be completed for your hospital/system to be considered for qualification as a Most Wired organization. This information is used for benchmarking and research purposes only.

#### Please provide the following for your LTPAC facilities...

Number of facilities represented in this survey

Number of beds rooms regularly available (those set up and staffed for use) represented in this survey Number of physicians at your organization

Number of other clinicians at your organization (NP, PA)

#### Please report the number of FTEs on the IT staff as of March 31, 2022.

Applications Staff:
Technology Staff:
Informatics/ Analytics Staff:
Innovation/ Digital/ AI Staff:
HIM:
BioMed:
Administrative:

Other:

Outsourced:

Total number of organization employees:

#### **Finance Information**

(Please use whole numbers and local currency)

What is your organization's total gross revenue (net patient revenue + other income)? What is your organization's total IT expenses? What is your organization's total operating expense? What is your organization's total capital expense?

Enter your primary EHR in use at your long term care facilities.

### Infrastructure

## (PDF-001) Which of the following methods does your organization 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

# (PDF-002) Which of the following best describe how your organization supports <u>wireless</u> communications within your facility? (Check one)

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

## (PDF-003) Which of the following <u>wireless</u> 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 VolP
- 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 for clinicians
- R. Telehealth for clinicians
- S. Wander Management/Patient Elopement
- T. None

# (PDF-004) Which of the following resource functions can providers associated with your organization access 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/RLTS
- J. Clinician guidelines/pathways or evidence-based order sets (to include links to reference literature)
- K. Full access to referential quality PACS/images from outside organizations
- L. None

## (PDF-005) Which of the following technologies does your organization 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 POC devices
- H. Mobile voice recognition for clinician notes
- I. Remote published applications
- J. None

## (PDF-006) Which of the following mobile devices used at the point of care, do you provide your care team?

#### (Check all that apply)

- A. Laptops/Tablets
- B. IP Based Telephone
- C. Mobile carts or Workstations on Wheels
- D. Care team is not issued dedicated devices

# (PDF-007) Which of the following types of employee-owned devices used in the care of your patients, does your organization support?

#### (Check all that apply)

- A. Laptops/Tablets
- B. Smartphones
- C. Wearables
- D. Voice activated devices
- E. None

# (PDF-008) Which of the following capabilities are delivered via a wireless network to care team members using handheld devices at the point of care?

- A. Secured messaging
- B. Discrete patient data
- C. Waveforms
- D. Alerts
- E. None

### Security

(PDF-009) Which of the following information security frameworks does your organization use to guide your information security program?

#### (Check all that apply)

- A. NIST CSF
- B. COBIT
- C. ISO 27000 series
- D. HITRUST
- E. SANS Top 20/CIS critical controls
- F. Other/Self-developed
- G. No framework adopted

## (PDF-010) Whom on your executive team is primarily responsible for leading information security in your organization?

#### (Check one)

- A. CISO (or other similar security related title in your executive suite)
- B. CIO
- C. An executive other than a CISO or CIO (CFO; COO)
- D. We outsource this function (external security leader/vendor)
- E. A non-executive team member (Director of Security)
- F. No security leader

# (PDF-011) Please indicate how often your board of directors/trustees or board committee, receive a report on your organization's information security efforts? (Check one)

- A. Monthly (or more often)
- B. Quarterly
- C. Semi-annually
- D. Annually
- E. As requested (no regular cadence)
- F. Never

# (PDF-012) How often does your organization's formally chartered cybersecurity governance, risk and/or compliance committee meet? (Check one)

- A. Monthly (or more often)
- B. Quarterly
- C. Semi-annually
- D. Annually
- E. As requested (no regular cadence)
- F. We do not have a formally chartered cybersecurity governance, risk and compliance committee

# (PDF-013) Which of the following types of security authentication measures does your organization currently use to authenticate/manage authorized users? (Check all that apply)

- A. Knowledge-based authentication measures (passwords)
- B. Possession-based authentication measures (something the user has like a one-time password sent to the user's cell phone; USB keys)
- C. Inherence-based authentication measures (biometrics)
- D. Location-based authentication measures (geolocation security checks)
- E. Behavior-based authentication measures (picture selection)
- F. Multi-factor authentication
- G. None

# (PDF-014) Which of the following security controls does your organization currently use to authenticate/manage devices accessing your network? (Check all that apply)

- A. Control inventory of **non-medical devices** authorized to access our network
- B. Control inventory of **medical devices** authorized to access our network
- C. Control inventory of **mobile devices** authorized to access our network
- D. Inventory personal devices accessing our network
- E. Approve devices accessing our network
- F. Monitor devices accessing our network
- G. Approve users accessing specific device
- H. None

# (PDF-015) Which of the following capabilities has your organization implemented and used as part of your organization's security processes? New question (Check all that apply)

#### A. Technical security capabilities

- A. Encryption
- B. Data loss prevention (DLP)
- C. Intrusion prevention or detection systems (IPS, IDS)
- D. Security Information and Event Management (SIEM) system
- E. Next generation endpoint protection systems; EDR (Endpoint Detection and Response), XDR (Extended Detection and Response), EPP (Endpoint Protection Platform)
- F. Network segmentation
- G. Network monitoring and analytics
- H. Cloud access security broker (CASB)
- I. None

#### B. Data protection capabilities

- A. Database monitoring
- B. Privacy monitoring/auditing systems (end-user behavior analytics)
- C. Basic spam/phishing protection (signatures, digests, spam blacklists, etc.)
- D. None

#### C. Process control capabilities

- A. Log management
- B. Governance, risk, and compliance (GRC) systems
- C. Vulnerability management

# (PDF-016) Which of the following security processes does your organization currently use to safeguard information? New question (Check all that apply)

- A. Encryption at rest (device encryption)
- B. Encryption in motion (data sent outside an organization's firewall)
- C. Medical device password/access controls
- D. Consumption of threat intelligence information from other organizations (ISAC, ISAO, DHS, etc.)
- E. Procurement/contracting with security firm including vendor risk assessment
- F. Segmentation of medical devices on specialized network segments
- G. 24/7/365 Security operations center (insourced, outsourced, hybrid)
- H. Data classification
- I. Secure system baseline images
- J. Privilege access management
- K. None

(PDF-017) How often does your organization conduct each of the following? (Check one per row) For each activity, please indicate if the activity...

- i. is unannounced (select if "Yes")
- ii. involves a third party (select if "Yes").

(e.g. quarterly wireless penetration tests that are unannounced)

#### A. Assessments

|   |   | Approach Fi |                       | Frequ     | equency  |         |             |
|---|---|-------------|-----------------------|-----------|----------|---------|-------------|
|   |   |             |                       | Quarterly |          |         | Less than 2 |
|   |   |             |                       | or more   |          | Every   | years/      |
|   | Activity                                    | Unannounced | 3 <sup>rd</sup> Party | often     | Annually | 2 years | Never       |
| Α | Risk (identify compliance gaps and security |             |                       |           |          |         |             |
|   | vulnerabilities)                            |             |                       |           |          |         |             |
| В | Cybersecurity Maturity                      |             |                       |           |          |         |             |
| С | 3 <sup>rd</sup> parties/vendors             |             |                       |           |          |         |             |

#### B. Audits/tests

|   |                                  | Approach Frequenc |                       |           | iency    |             |        |
|---|----------------------------------|-------------------|-----------------------|-----------|----------|-------------|--------|
|   |                                  |                   |                       | Quarterly |          | Less than 2 |        |
|   |                                  |                   |                       | or more   |          | Every       | years/ |
|   | Activity                         | Unannounced       | 3 <sup>rd</sup> Party | often     | Annually | 2 years     | Never  |
| Α | Vulnerability scanning           |                   |                       |           |          |             |        |
| В | Wireless penetration testing     |                   |                       |           |          |             |        |
| С | System/application access audits |                   |                       |           |          |             |        |
| D | Red/Blue Team Exercises          |                   |                       |           |          |             |        |

#### C. Exercises

|   |                              | Approa      | pproach Frequency     |         |          |         |             |
|---|------------------------------|-------------|-----------------------|---------|----------|---------|-------------|
|   |                              |             | Quarterly             |         |          |         | Less than 2 |
|   |                              |             |                       | or more |          | Every   | years/      |
|   | Activity                     | Unannounced | 3 <sup>rd</sup> Party | often   | Annually | 2 years | Never       |
| Α | IT/Security                  |             |                       |         |          |         |             |
| В | Enterprise                   |             |                       |         |          |         |             |
| С | Tabletop exercises or drills |             |                       |         |          |         |             |

## (PDF-018) How often are the results of the following reported to your organization's executive team? (Check one per row) New question

|   | Activity  | Quarterly or more often | Annually | Every 2 years | Never |
|---|---|-------------------------|----------|---------------|-------|
| Α | Progress on security enhancements                     |                         |          |               |       |
| В | Gaps or continuing deficiencies                       |                         |          |               |       |
| С | Business units are involved helping to prepare        |                         |          |               |       |
|   | remediation plans after the work (above) is performed |                         |          |               |       |

## (PDF-019) Which of the following cybersecurity related insurance coverages does your organization currently carry?

#### (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. Natural disaster
- H. Self-insured
- I. None

#### (PDF-020) N/A for International

## (PDF-021) Which of the following groups regularly receive formal reports from your risk management? (Check all that apply)

- 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. We do not have a documented risk management program

# (PDF-022) Which of the following components are included in your risk management program? (Check all that apply) Updated question IDENTIFICATION OF...

- A. Risks
- B. Who is responsible for managing/mitigating those risks
- C. Contingency/mitigation plans
- D. Risk level/ranking

#### **DETECTION OF...**

- E. Threats
- F. Vulnerabilities

#### **PROTECTION BY...**

- G. Mitigation (people, process, technology)
- H. Training and education

#### **RESPONDING THROUGH...**

- I. Notification processes
- J. Mitigation processes
- K. Initiation of response, recovery and contingency plans

#### **RECOVERY BY...**

- L. Getting back to normal
- M. Incorporation lessons learned into all areas after an exercise or incident
- N. We do not have a documented risk management program

# (PDF-023) Which of the following activities are included in your business vendor and/or third-party risk management program?

#### (Check all that apply)

- A. An inventory of all business vendors
- B. The ranking of business vendors based on the potential risk they pose our organization
- C. An evaluation of high-risk vendors
- D. An assessment of sub-contractors used by our business vendors
- E. We do not have a business vendor or third-party risk management program

## (PDF-024) Which of the following components are included in your organization's incident response plan?

#### (Check all that apply)

- A. System/network outages regardless of cause.
- B. Security/Privacy incidents
- C. IT/Security incident response exercises
- D. Enterprise-wide incident response exercises
- E. Disaster Recovery (IT) plan tied to organizational Business Continuity plans (Operations)
- F. Recovery and response plans are updated after exercises/incidents
- G. No comprehensive incident response plan

# (PDF-025) How quickly can your organization restore mission critical operations should a disaster cause the complete loss of your organization's primary data center?

#### (Check one per row)

|    |  | <24<br>hrs. |  | 8 days –<br>1 month | Don't<br>Know |
|----|--|-------------|--|---------------------|---------------|
| a. | Clinical information systems (EHR, lab, radiology) |             |  |                     |               |
| b. | Financial systems (payroll, patient accounting)    |             |  |                     |               |
| c. | Human resources and staffing systems               |             |  |                     |               |
| d. | Supply chain management systems                    |             |  |                     |               |

# (PDF-026) Which of the following communication equipment and services could your staff potentially use in the event of an emergency?

- A. Fixed line network
- B. First Responder Network
- 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

## Administrative Supply Chain

(PDF-027) Select the method best describing how your organization completes the majority of the following <u>pharmacy supply activities</u>.

(Check one per row)

- **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

| Ph | armacy Supply Activity             | Automated | Semi-Automated | Manual/Phone/Fax |
|----|------------------------------------|-----------|----------------|------------------|
| Α  | Check Product price/Contract Price |           |                |                  |
| В  | Check product availability         |           |                |                  |
| С  | Process Purchase Requisition       |           |                |                  |
| D  | Process Purchase order             |           |                |                  |
| Ε  | Check order Status/routing         |           |                |                  |
| F  | Received Order/Check-in            |           |                |                  |
| G  | Receive Invoice                    |           |                |                  |
| Н  | Pay Invoice                        |           |                |                  |

(PDF-028) What percentage of your <u>pharmaceutical supply</u> orders are electronically generated once 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

# (PDF-029) Select the method best describing how your organization completes the majority of the following medical/surgical supply activities.

#### (Check one per row)

- **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

| Me | edical/Surgical Supply Activity    | Automated | Semi-Automated | Manual/Phone/Fax |
|----|------------------------------------|-----------|----------------|------------------|
| Α  | Check Product price/contract price |           |                |                  |
| В  | Check Product availability         |           |                |                  |
| С  | Process Purchase Requisition       |           |                |                  |
| D  | Process Purchase order             |           |                |                  |
| Ε  | Check order status/routing         |           |                |                  |
| F  | Receive Order/Check-in             |           |                |                  |
| G  | Receive Invoice                    |           |                |                  |
| Н  | Pay Invoice                        |           |                |                  |

# (PDF-030) What percentage of <u>medical/surgical supply</u> orders are electronically generated once 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

## (PDF-031) Which of the following deliverables does your organization's revenue-cycle and contracts-management application offer:

- 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 clinicians, 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 copayments 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

### (PDF-032) What percentage of the following <u>payer-related transactions</u> involve HIPAA compliant transactions.

(Check one per row)

| Pa | yer-Related Transaction Activity | >90% | 50-90% | <50% | None |
|----|----------------------------------|------|--------|------|------|
| Α  | Claims Status Inquiry            |      |        |      |      |
| В  | Claims Submission                |      |        |      |      |
| С  | Electronic Funds Transfer        |      |        |      |      |
| D  | Eligibility Inquiry              |      |        |      |      |
| Ε  | Pre-certification                |      |        |      |      |
| F  | Referral and authorization       |      |        |      |      |
| G  | Remittance Advice                |      |        |      |      |
| Н  | Address Verification             |      |        |      |      |

## (PDF-033) What percentage of the following payer-related validation activities are accomplished using automated electronic 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 clinicians, 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.

| Pay | ver-Related Validation Activity   | >90% | 50-90% | <50% | None |
|-----|-----------------------------------|------|--------|------|------|
| Α   | Charge and order matching         |      |        |      |      |
| В   | Charge Capture Reconciliation     |      |        |      |      |
| С   | Contract Management               |      |        |      |      |
| D   | Denial management                 |      |        |      |      |
| Е   | Medical necessity criteria checks |      |        |      |      |
| F   | Physician-performance comparisons |      |        |      |      |

(PDF-034) Which of the following settings in your organization use a bed/exam room tracking or patient-flow software system (bed tracking/patient-logistics management may be functionality included within your electronic health record)?

(Check one per row)

|   | System  | Yes | No |
|---|---|-----|----|
| Α | N/A for LTPAC   |     | •  |
| В | N/A for LTPAC   |     |    |
| С | Tracking system for in-patient beds   |     |    |
| D | N/A for LTPAC   |     |    |
| Ε | Integrated patient logistics system (includes patient status, pending orders, |     | •  |
|   | critical lab results and room availability for the entire enterprise)         |     |    |
| F | RFID/RTLS patient location system integrated into the bed-tracking system to  |     |    |
|   | automate patient movement   |     |    |
| G | N/A for LTPAC   |     |    |

# (PDF-035) Which of the following employee management tools are available electronically/online throughout more than 50% of your organization? (Check all that apply)

- A. Self-scheduling of open shifts
- B. Enterprise HR management system or online HR manager portal
- C. Performance-improvement scorecards (organizational improvement)
- D. Goal Management System (employee goals)
- E. Real-time operational budget versus expense monitoring, financial modeling, and budget forecasting
- F. Recruitment/onboarding tools
- G. Benefits/compensation tools
- H. Learning management system
- I. Workforce management tool (productivity and cost trends)
- J. None

## (PDF-036) Which of the following types of computer-based education offerings do you provide to your clinicians?

|   | 11 77                                     | Physicians | Nurses | Other licensed Providers |
|---|---|------------|--------|--------------------------|
| Α | Privacy Training                          |            |        |                          |
| В | Information Security Training             |            |        |                          |
| С | EHR Training                              |            |        |                          |
| D | CPOE Training                             |            |        |                          |
| Ε | Data Analytics Training                   |            |        |                          |
| F | Voice Recognition Software Training       |            |        |                          |
| G | Sharing Best Practices for patient Safety |            |        |                          |
| Н | Mobile Device Applications Training       |            |        |                          |
| I | Biomed Bar Code Reader Training           |            |        |                          |

## Analytics and Data Management

(PDF-037) Does your organization's clinical and business intelligence analytics effort utilize an Enterprise Data Warehouse and/or an Operational Data Store? New question

- A. Yes
- B. No [skip to PDF-039]

(PDF-038) IF YES, which of the following data does your Enterprise Data Warehouse and/or Operational Data Store receive? New question (Check all that apply)

- A. Clinical/EHR
- B. Revenue cycle management
- C. Supply chain management/ERP
- D. CRM
- E. Near real time data from patient monitors/similar sources

(PDF-039) How does your organization deliver data to your organization's clinical and operational leaders?

- Clinical and business intelligence: Reports and/or insights derived from the analysis of relevant data
- **Realtime analytics:** Offer the ability to turn data into insights as it is collected and used when time is of the essence
- **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 and 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

|   |                                   | Real<br>time<br>analytics | Self-service and<br>Visualization<br>tools | Visualization<br>tools | Spreadsheets/<br>Graphs/Pivot<br>Tables | Paper/<br>PDF<br>Reports |
|---|-----------------------------------|---------------------------|--|------------------------|---|--------------------------|
| Α | Clinical quality metrics          |                           |  |                        |   |                          |
| В | Clinician productivity metrics    |                           |  |                        |   |                          |
| С | Patient volume metrics            |                           |  |                        |   |                          |
| D | EHR utilization/ performance data |                           |  |                        |   |                          |
| Е | Population health metrics         |                           |  |                        |   |                          |
| F | Patient engagement/ satisfaction  |                           |  |                        |   |                          |
|   | metrics                           |                           |  |                        |   |                          |
| G | Social Determinants of Health     |                           |  |                        |   |                          |
|   | (SDOH) metrics                    |                           |  |                        |   |                          |

(PDF-040) How does your organization deliver data to individual clinicians (nurses, doctors, pharmacists, etc.) within you organization? (Check all that apply)

- Clinical and business intelligence: Reports and/or insights derived from the analysis of relevant data
- **Realtime analytics:** Offer the ability to turn data into insights as it is collected and used when time is of the essence
- **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 and 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

|   |  | Real time analytics | Self-Service and visualization tools | Visualization<br>Tools | Spreadsheets/<br>Graphs/Pivot<br>Tables | Paper/PDF<br>Reports |
|---|--|---------------------|--------------------------------------|------------------------|---|----------------------|
| Α | Clinical quality metrics                     |                     |                                      |                        |   |                      |
| В | Clinician productivity metrics               |                     |                                      |                        |   |                      |
| С | Patient volume metrics                       |                     |                                      |                        |   |                      |
| D | EHR utilization/ performance data            |                     |                                      |                        |   |                      |
| Ε | Population health metrics                    |                     |                                      |                        |   |                      |
| F | Patient engagement/ satisfaction             |                     |                                      |                        |   |                      |
|   | metrics                                      |                     |                                      |                        |   |                      |
| G | Social Determinants of Health (SDOH) metrics |                     |                                      |                        |   |                      |

(PDF-041) Does your organization automatically review patient data in your EHR to alert caregivers when their patients are out of compliance with key quality indicators (e.g. CMS' Core Quality Measures)? New question

- A. Yes Organization wide
- B. N/A for LTPAC
- C. N/A for LTPAC
- D. N/A for LTPAC
- E. Yes At discharge/checkout
- F. No
- G. We do not have this capability

## (PDF-042) Which of the following data storage models does your organization use? (Check all that apply)

- A. Cloud services for clinical systems
- B. Cloud services for non-clinical systems
- C. Data as a service (DaaS)
- D. Infrastructure as a service (laaS)
- E. Storage virtualization
- F. Off-site redundant data center
- G. None

(PDF-043) Which of the following business functions in your organization receive input from your Machine Learning, Predictive Analytics and/or Artificial Intelligence technologies? New question (Check all that apply)

- Machine Learning: Process of developing algorithms that can improve automatically through experience and by the use of data; it is seen as a building block of artificial intelligence.
- **Predictive Analytics**: A variety of statistical techniques from data mining, predictive modelling, and machine learning that analyze current and historical facts to make predictions about future or otherwise unknown events.
- Artificial Intelligence: A system that may utilize machine learning and predictive analytics to assess a situation and either recommend or take actions that maximize chances of success/positive outcomes.

|    |                             | Machine Learning | Predictive<br>Analytics | Artificial Intelligence |
|----|-----------------------------|------------------|-------------------------|-------------------------|
| A. | Clinical workflows          |                  |                         |                         |
| B. | Revenue cycle management    |                  |                         |                         |
| C. | Supply chain management/ERP |                  |                         |                         |
| D. | CRM/Patient Engagement      |                  |                         |                         |

(PDF-044) How would you characterize the deployment of Machine Learning, Predictive Analytics and/or Artificial Intelligence in each of the following business functions in your organization?

New question

(Check one per row)

|    |                             | Fully deployed and measuring outcomes | Deployed but not yet measuring outcomes |
|----|-----------------------------|---------------------------------------|---|
| A. | Clinical workflows          |                                       |   |
| В. | Revenue cycle management    |                                       |   |
| C. | Supply chain management/ERP |                                       |   |
| D. | CRM/Patient Engagement      |                                       |   |

Thinking about Data Governance in your organization...

| (PDF-045) Does your organization have a formal Data Governance program/committee? New question                      |
|---|
| A. Yes  |
| B. No   |
| (PDF-046) IF YES, does your organization's Data Governance committee report to a C-level executive?  New question   |
| A. Yes  |
| B. No   |
| (PDF-047) IF YES, does your organization's Data Governance committee use Master Data Management tools? New question |
| A. Yes  |
| B. No   |
| (PDF-048) IF YES, does your organization govern all data sets/repositories at the enterprise level? New question    |
| A. Yes  |
| B. No   |
| (PDF-049) Which of the following best describe the management of data analytics in your                             |

- C. Analytics is in one unit and directly reports to a C-level executive
- D. Analytics is in one unit and reports directly to an executive below the C-level
- E. Analytics are in multiple units but there is a central team that supports the infrastructure and tools
- F. Analytics is in multiple units and support for the infrastructure and tools is also distributed

## (PDF-050) How would you characterize the utilization of data analytics to support the following business functions in your organization? New question

|    |  | Used extensively | Used but not extensively | Not used |
|----|--|------------------|--------------------------|----------|
| A. | Setting enterprise strategy/driving transformation       |                  |                          |          |
| B. | Patient care, care paths, and/or other clinical purposes |                  |                          |          |
| C. | Operational decision making                              |                  |                          |          |
| D. | N/A for International                                    |                  |                          |          |

(PDF-051) Does your organization you have a Data Literacy Program (an effort designed to assist data analysts/scientists in reading, writing and communicating data in context)? New question

- A. Yes
- B. No

## Interoperability and Population Health

(PDF-052) Which of the following types of healthcare entities external to your organization, receive discrete patient data from your organization and claim they can incorporate the data into their patient record system? Updated question

- (Check all that apply)
  - A. Hospital/hospital system
  - B. Physician practiceC. Home health agency
  - D. Long-Term/Post-Acute Care facility (Skilled nursing facility, Rehab/extended/chronic care facility
  - E. Retail pharmacy
  - F. Government data/records such as immunizations, death records, syndromic surveillance
  - G. Laboratories
  - H. Health information exchange (HIE)
  - I. Insurance companies/payers
  - J. Emergency Ambulance agency
  - K. Urgent care/Freestanding Emergency centers
  - L. Referral networks
  - M. Community Partners (patient advocacy orgs, behavioral health providers, community orgs.
  - N. We cannot send discrete data to external entities

(PDF-053) Which of the following types of healthcare entities external to your organization is your organization able to receive discrete data from and can incorporate their data into your organization's patient record system? Updated question (Check all that apply)

- A. Hospital/hospital system
- B. Physician practice
- C. Home health agency
- D. Long-Term/Post-Acute Care facility (Skilled nursing facility, Rehab/extended/chronic care facility
- E. Retail pharmacy
- F. Government data/records such as immunizations, death records, syndromic surveillance
- G. Laboratories
- H. Health information exchange (HIE)
- I. Insurance companies/payers
- J. Emergency Ambulance agency
- K. Urgent care/Freestanding Emergency centers
- L. We cannot consume any discrete data into our EHR

(PDF-054) For transitions of care and referrals involving automated electronic processes, please indicate the percentage of cases in which your organization provides a summary care record...: (Check one per row)

| Functions              | >90% | 50-90% | <50% | None |
|------------------------|------|--------|------|------|
| Directly from your EHR |      |        |      |      |
| From a HIE             |      |        |      |      |

## (PDF-055) Are you using an electronic disease registry to identify and manage gaps in care across a population?

- A. Yes
- B. No [skip to PDF-057]C. Unsure [skip to PDF-057]

## (PDF-056) IF YES, which data sources contribute to your registry? And can this data be accessed at the point of care? Updated question

(Check two per row)

|                                   | Does this data source contribute to your registry? |  |     |    |     | ta be accessed<br>pint of care? |  |
|-----------------------------------|--|--|-----|----|-----|---------------------------------|--|
|                                   | Yes No N/A   |  | Yes | No | N/A |                                 |  |
| Ambulatory EHR and billing system |  |  |     |    |     |                                 |  |
| Acute EHR and billing system      |  |  |     |    |     |                                 |  |
| ADT feeds                         |  |  |     |    |     |                                 |  |
| Payer/claims data                 |  |  |     |    |     |                                 |  |
| HIE                               |  |  |     |    |     |                                 |  |
| Post-acute (continuum of care)    |  |  |     |    |     |                                 |  |

#### (PDF-057) Do you contribute patient and clinical data to external registries? New question

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

#### (PDF-058) Do you have a system to track chronic-care management?

- A. Yes, integrated in the EHR/electronic patient record
- B. Yes, not integrated into the EHR/electronic patient record
- C. No
- D. Unsure

(PDF-059) N/A for LTPAC

(PDF-060) N/A for International

# (PDF--061) Which technologies does your organization use in addressing the following population health activities? (Check all that apply)

#### A. Data aggregation:

| Activities  | EMR | 3 <sup>rd</sup> Party | Home grown | NA |
|---|-----|-----------------------|------------|----|
| Compilation of a longitudinal patient record to include clinical, |     |                       |            |    |
| claims, and care-management data                                  |     |                       |            |    |
| Creation of a reliable master patient index (to include duplicate |     |                       |            |    |
| record merging/deletion)  |     |                       |            |    |
| Aggregation of other data sources (social determinants of         |     |                       |            |    |
| health, genomics, imaging data, etc.)                             |     |                       |            |    |

#### B. Data analysis:

| Activities   | EMR | 3 <sup>rd</sup> Party | Home grown | 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   |     |                       |            |    |

#### C. Care management:

| Activities  | EMR | 3 <sup>rd</sup> Party | Home grown | 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   |     |                       |            |    |

#### D. Administrative and financial reporting:

| Activities   | EMR | 3 <sup>rd</sup> Party | Home grown | NA |
|--|-----|-----------------------|------------|----|
| N/A for International  |     |                       |            |    |
| Total cost of care analytics                                   |     |                       |            |    |
| Network utilization tracking and network optimization analysis |     |                       |            |    |
| (i.e. leakage and steering)                                    |     |                       |            |    |
| Tool to monitor care management performance                    |     |                       |            |    |

#### E. Patient engagement

| Activities  | EMR | 3 <sup>rd</sup> Party | Home grown | 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                                 |     |                       |            |    |

#### F. Clinician engagement

| Activities  | EMR | 3 <sup>rd</sup> Party | Home grown | NA |
|---|-----|-----------------------|------------|----|
| Ability to track clinician usage of population health tools and |     |                       |            |    |
| activities  |     |                       |            |    |
| N/A for International   |     |                       |            |    |
| Prioritized guidance on patient care-gaps and statuses          |     |                       |            |    |

# (PDF-062) Which of the following care coordination activities involving your clinical partners are performed leveraging information technologies? Updated question (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. Wellness and prevention
- I. None

### Patient Engagement

(PDF-063) Of the patients your organization serviced during the last 12 months, what percentage accessed your organization's patient portal?

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

## (PDF-064) Which of the following capabilities are available to patients through your organization's web site or patient portal?

- A. Test results
- B. N/A for LTPAC
- C. Discharge/checkout instructions
- D. OpenNotes (progress notes, H&P, discharge summary, operative notes)
- E. Self-management tools for chronic conditions
- F. Immunization records
- G. Wayfinding via wireless guidance
- H. Parking assistance and payments
- I. N/A for LTPAC
- J. Secure messaging with provider/care team
- K. Provide medical history elements that can be directly included in EHR
- L. Asynchronous provider visits
- M. Complete questionnaires that can be directly included into EHR
- N. Transmission of information about a hospital admission to another care provider
- O. Access patient specific education
- P. Access patient specific education in non-English language(s)
- Q. Access family (or care team) education
- R. Access family (or care team) education in non-English language(s)
- S. N/A for LTPAC
- T. N/A for LTPAC
- U. Prescription renewal request tool
- V. Bill payment/ bill status check
- W. N/A for LTPAC
- X. Ability to update insurance information
- Y. Access to electronic copy of medical record
- Z. Ability to share electronic copy of medical record with external organizations
- AA. No patient portal capabilities are available or being used

(PDF-065) Which of the following services designed to empower patients and their families <u>outside</u> of your facility setting does your organization support via electronic tools? Please do not include pilots. All services/capabilities should be fully deployed HIT based products and services. (Check all that apply)

- A. Orienting patients and families 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/self-check-in
- O. Wayfinding via wireless guidance
- P. Schedule of individual activities, dining experiences, electronic maintenance requests
- Q. None of these services/capabilities are available

(PDF-066) Which of the following services designed to empower patients and their families <u>inside</u> of your facility setting does your organization support via electronic tools? 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 patient care 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. Use videos to educate patient and family about procedures
- I. Use videos to educate patient and family about medications
- J. Use videos to educate patient and family about lab tests and results when available
- K. View health education videos
- L. Staff video introductions
- M. None of these services/capabilities are available

(PDF-067) Which of the following patient interactive capabilities does your organization provide your staff members to help to promote patient and family engagement in your facility? Please do not include pilots. All services/capabilities should be fully deployed HIT based products and services. (Check all that apply)

- 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 engagement
- D. Training the family/resident on patient interactive devices
- E. None of these services/capabilities are available

(PDF-068) Which of the following functionalities are included in mobile apps your organization provides to your 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. N/A for LTPAC
  - 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. N/A for LTPAC
  - M. Secure messaging (one way/two way)
  - N. Wayfinding with floor plans and maps
  - O. Price list for different services
  - P. N/A for LTPAC
  - Q. Location Sharing for assistance
  - R. Health Maintenance Campaigns
  - S. Mobile Check In
  - T. Telemedicine Integration
  - U. Event Alerts
  - V. No mobile app is available

(PDF-069) Do you provide the ability for patients to create and/or edit a personal health record via your organization's patient portal? (Check one)

A. Yes, fully rolled out

B. Yes, pilot program [Skip to PDF-070]C. No [Skip to PDF-070]

(PDF-069a) IF YES, what percentage of unique patients have used this tool? \_\_\_\_\_

(PDF-070) Which of the following price transparency/price comparison capabilities does your organization make available to your patients/prospective patients via your organization's online resources (health portal, app, website etc.)? (Check all that apply)

- A. List of procedures/services and associated price
- B. N/A for LTPAC
- C. N/A for International
- D. N/A for International
- E. N/A for International
- F. N/A for International
- G. N/A for LTPAC
- H. N/A for LTPAC
- I. Provide definitions of key terms related to pricing, insurance, and/or service types
- J. Ability to estimate patients' cost burden based on insurance type without human intervention
- K. Provide access to education regarding services listed, price estimates, patient estimates, co-pays etc.
- L. Access to patient gifting/fundraising tools that integrates patient bills with social media to help with healthcare fundraising efforts and transparency
- M. No price transparency capabilities are available

(PDF-071) Which of the following telehealth services does your organization use to conduct diagnostic and therapeutic medical exchanges between patients and providers, and at which sites do you provide these services?

<u>Telehealth</u>: the use of telecommunication technology for office, hospital visits and other services that generally occur in-person

(Check all that apply)

|   | son an ende appryy                            | Physician |          | Post-Acute facilities (SNF, | Patient's |
|---|---|-----------|----------|-----------------------------|-----------|
|   | Telehealth Service                            | Office    | Hospital | LTC, etc.)                  | Home      |
| Α | Scheduled Consultations and office visits     |           |          |                             |           |
| В | N/A for LTPAC                                 |           |          |                             |           |
| С | Behavioral Health                             |           |          |                             |           |
| D | Rehabilitation                                |           |          |                             |           |
| Ε | N/A for LTPAC                                 |           |          |                             |           |
| F | N/A for LTPAC                                 |           |          |                             |           |
| G | N/A for LTPAC                                 |           |          |                             |           |
| Н | N/A for LTPAC                                 |           |          |                             |           |
| 1 | N/A for LTPAC                                 |           |          |                             |           |
| J | Addiction treatment and counseling            |           |          |                             |           |
| K | Remote monitoring in the home                 |           |          |                             |           |
| L | No Telehealth services available in this area |           |          |                             |           |

| (PDF-072) What percent of total patient visits are performed using telehealth?                           |  |
|--|--|
| (PDF-073) What percent of providers in your organization have integrated telehealth into their practice? |  |

(PDF-074) Please describe how your organization(s) is using personal health tracking data from patient's wearable(s):

(Check one from each row)

|    |   | Never | Sometimes | <b>Always</b> |
|----|---|-------|-----------|---------------|
| A. | Patient's wearable data is integrated with patient                |       |           |               |
| B. | Patient's wearable data is integrated with EHR                    |       |           |               |
| C. | Patient's wearable data is used in a meaningful way by clinicians |       |           |               |

## Clinical Quality and Safety

(PDF-075) Please identify the frequency with which the following orders are used throughout your organization?

(Slide percent bar next to each)

- A. CPOE
- B. Closed loop bar-coded (or RFID) meds administration to match patient to drug (formulation, dose, route, date/time)
- C. Closed loop bar-coded (or RFID) matching of patient to blood products administration
- D. Radiology orders supported by imaging decision support

# (PDF-076) How do clinicians electronically access the following functions at your organization? (Check all that apply)

|   | Functions  | Full<br>Read/Write<br>Capabilities | Limited<br>Read/Write<br>Capabilities | View<br>Only | No<br>Electronic<br>Access |
|---|--|------------------------------------|---------------------------------------|--------------|----------------------------|
| ^ | Clinical guidelines/pathways or evidence-based order sets with |                                    |                                       |              |                            |
| Α | links to reference literature                                  |                                    |                                       |              |                            |
| В | Medical image review   |                                    |                                       |              |                            |
| С | EHR/CPOE   |                                    |                                       |              |                            |
| D | Evidence/references  |                                    |                                       |              |                            |
| E | Image sharing from other organizations                         |                                    |                                       |              |                            |

## (PDF-077) Which of the following nurse activities are electronically enabled in your organization? (Check all that apply)

- A. Discharge/checkout/ADT checklist sends alerts for unmet criteria
- B. Discharge/checkout/ADT 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. Routine Regulatory Assessments
- J. Taking/Recording vital signs
- K. Medication Administration Documentation
- L. None

# (PDF-078) Which of the following patient monitoring equipment in your organization routinely send information directly to the EHR?

(Check one per row)

|   | (chican bir ber rem)             | Fully    | Partially | Not      |     |
|---|----------------------------------|----------|-----------|----------|-----|
|   | Equipment                        | Deployed | Deployed  | Deployed | N/A |
| Α | Blood pressure                   |          |           |          |     |
| В | Lab tests                        |          |           |          |     |
| С | Pulse oximetry                   |          |           |          |     |
| D | Temperature                      |          |           |          |     |
| E | Blood glucose                    |          |           |          |     |
| F | Cardiovascular catheter output   |          |           |          |     |
| G | EKG                              |          |           |          |     |
| Н | Fetal monitor                    |          |           |          |     |
| ı | N/A for LTPAC                    |          |           |          |     |
| J | IV pump                          |          |           |          |     |
| K | Ventilator                       |          |           |          |     |
| L | In-bed scale                     |          |           |          |     |
| М | Medication Dispensing Instrument |          |           |          |     |

## (PDF-079) 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
- L. Medication Management
- M. Deprescribing
- N. Polypharmacy
- O. Pharmacogenomics
- P. Other Decision Support (Falls Prevention, Pressure Ulcer Prevention, Chronic Disease Management)

# (PDF-080) Which of the following functionalities are fully deployed in your integrated surveillance system with the EHR?

#### (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. Monitor falls
- G. Monitor pressure Ulcers
- H. Monitor change of condition
- I. No surveillance system

# (PDF-081) In monitoring your patients, which of the following are supported by a surveillance system (integrated with your EHR)?

- A. Critical care units
- B. N/A for LTPAC
- C. N/A for LTPAC
- D. N/A for LTPAC
- E. Dementia units
- F. Residents Room
- G. No surveillance system

(PDF-082) Please estimate the percentage of discharge/check-out medication orders (for new or changed prescriptions) transmitted as an electronic prescription.

#### (Check one)

- A. >90%
- B. 50-90%
- C. <50%
- D. None

## (PDF-083) By what method does your organization 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

#### (PDF-084) N/A for LTPAC

## (PDF-085) Which of the following diagnostic images can be accessed via your enterprise imaging strategy?

#### (Check all that apply)

- A. Radiology ("plain films," CT, MRI, ultrasound)
- B. Interventional radiology static and video images
- C. Cardiac catheterization static and video images
- D. Echocardiography static and video images
- Endoscopy static and video images
- F. Bronchoscopy static and video images
- G. Intraoperative static and video images
- H. Ophthalmology images
- I. Microscopic pathology images
- J. Photography (dermatology, trauma, other)
- K. 3-D reconstruction images (CT, MRI, angiography)
- L. Cardiology diagnostic images
- M. None of the above

# (PDF-086) Are you using machine enabled detection to identify any of the following possible prescribing anomalies?

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

(PDF-087) Which of the following e-prescribing functions do you provide, and which physician practices do you provide them for?

|   |   |            | Independent |         |     |
|---|---|------------|-------------|---------|-----|
|   |   | Employed   | Practicing  | Do Not  |     |
|   | Functions   | Physicians | Physicians  | Provide | N/A |
| Α | Capture pharmacy dispense history                           |            |             |         |     |
| В | Check payer-based formulary                                 |            |             |         |     |
| С | Check allergies, drug-drug interactions                     |            |             |         |     |
| D | Prescription automatically faxed to retail pharmacy         |            |             |         |     |
| Ε | 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        |            |             |         |     |
| Н | 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                                       |            |             |         |     |

| (PDF-088) What percentage of controlled substances (   | (schedules 2-4) in your organization are |
|--|--|
| prescribed electronically (not printed or handwritten) | (percent slide bar)                      |

### Innovation

#### **New Section**

# (PDF-089) Whom on your executive team is primarily responsible for leading tactical technological innovation efforts in your organization? (Check one)

- A. Chief Innovation Officer, Chief Technology Officer (or similar technology related type title)
- B. CIO
- C. A non-technology related executive (e.g., CFO; COO)
- D. We outsource this function (external innovation leader/vendor)
- E. A non-executive team member (Director of Innovation)
- F. No one individual leads this effort
- G. We do not currently have an organized technological innovation effort in our organization

# (PDF-090) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's strategic management LEADERSHIP approach? (Check one)

- A. Little to no organizational awareness of strategic leadership.
- B. Knowledge exists, but no owner and sponsor for strategic management activities.
- C. An employee is assigned to strategic projects and activities.
- D. A team performs strategic activities; the team leader engages with other department managers.
- E. A particular office leads strategic management activities effectively; leaders and employees fully engage in strategic management processes.
- F. Strategic leadership encourages innovation at all levels; leaders transform the business and culture to become more innovative.

# (PDF-091) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of PLANNING and EXECUTING?

#### (Check one)

- A. Little to no organizational awareness of strategic planning.
- B. No strategic plan; some goals and objectives are defined.
- C. Strategic planning is the responsibility of one person and a multi-year strategic plan is prepared.
- D. A structured and interactive strategic planning process exists; actions plans are developed.
- E. Strategic plan/action plans are revised regularly; strategic initiatives are updated as deemed necessary.
- F. Strategy drives all critical organizational decisions; innovation is an important agenda of the strategic plan.

(PDF-092) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of PROCESSES and TOOLS?

#### (Check one)

- A. Little to no process and tools for strategic management activities.
- B. Some ad-hoc reports and tools are used, but processes are undocumented.
- C. A few key processes are documented; some basic tools are used for strategic planning and management.
- D. All strategic management processes are mapped out and analyzed, and strategy drives process improvements.
- E. All strategic processes are redesigned for continuous innovation; advanced tools/methods are used for strategic planning and innovation management.
- F. There is a structured innovation, management process; strategy guides selection of tools and technologies; all tools/systems are integrated into strategies.

# (PDF-093) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of ORGANIZATIONAL STRUCTURE and BUSINESS MODEL? (Check one)

- A. Organizational structure and business model are unknown.
- B. Ill-defined organizational structure; some components of business model are model are known.
- C. Functional organizational structure is created; business model is defined.
- D. Rigid structure (hierarchy is important and extensive); business model is not innovative; structure and model do not support strategies.
- E. Organizational structure and business model are redesigned to foster innovation and empower strategies; flat organization with low hierarchy.
- F. Organizational structure and business model are fully integrated into strategies; a unique/innovative business model; an agile structure.

# (PDF-094) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of PEOPLE and CULTURE?

#### (Check one)

- A. Few or no common values and personas.
- B. Values are undefined; an organizational culture is not formed yet.
- C. People share a common vision and values are understood; innovation is a critical value.
- D. Vision, goals and values are communicated; organizational culture is fully formed but culture is not linked to strategy; bureaucratic culture.
- E. Organizational culture is redesigned to support innovation strategies; less bureaucracy, a more adhocratic culture is forming.
- F. Organizational culture fully integrated into strategies; culture is innovation focused; people are encouraged to come up with new ideas.

# (PDF-095) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of PERFORMANCE MANAGEMENT?

#### (Check one)

- A. No assigned performance indicators.
- B. Few performance indicators are identified but no available data.
- C. All performance indicators and metrics are identified; no Key Performance Indicators (KPIs) for innovation.
- D. Strategic indicators are measured, and overall performance is managed at a broad level; KPIs are designed for innovation activities.
- E. Strategic indicators are revised according to performance results; innovation performance is managed at all levels.
- F. Systems are implemented for disruptive innovation; performance of radical innovation is measured on a daily basis.

# (PDF-096) When thinking about technological innovation in your organization, which of the following statements best characterize your organization's approach to the strategic management of INNOVATION?

#### (Check one)

- A. Innovation is not a strategic priority.
- B. Random innovations, not results of a structured approach.
- C. Innovation management process is defined but no tool and method are used for innovation.
- D. Innovation initiatives are started; structured innovation tools/techniques/methods are used at some organizational levels; mostly incremental innovation takes place.
- E. People fully engage in innovation activities at all levels; some radical innovations occur; characterized as a semi-innovative organization; a gap between strategy and innovation still exists.
- F. Innovation initiatives are well-aligned with corporate strategies; fully innovative organization; disruptive innovation is part of organization DNA; organizational collaboration is powered by a significant increase in the adoption of new tools amongst the workforce.

# (PDF-097) Which of the following types of digital health tools have your technological innovation assessment efforts addressed within the past three-years? (Select all that apply)

- A. Remote monitoring for operational efficiencies: Smart versions of common clinical devices such as thermometers, blood pressure cuffs, and scales that automatically record readings in the patient record eliminating the need for staff/clinicians to enter the data
- B. Remote monitoring for improved care and management: Apps and devices for use by chronic disease patients for daily measurement of vital signs such as weight, blood pressure, blood glucose, etc.; Readings are visible to patients and transmitted to the physician's office. Alerts are generated as appropriate for missing or out of range readings to assist in the management of care
- C. <u>Clinical decision support</u>: Modules used in conjunction with the EHR or apps that integrate with the EHR that highlight potentially significant changes in patient data (e.g., gain or loss of weight, change in blood chemistry)

- D. <u>Patient engagement</u>: Solutions to promote patient wellness and active participation in their care for chronic diseases (e.g., adherence to treatment regimens)
- E. <u>Tele-visits/virtual visits</u>: An audio/video connection used to see patients remotely (i.e., simple acute illness, adjusting therapy, etc.)
- F. <u>Point of care/survey workflow enhancement</u>: Communication and sharing of electronic clinical data to consult with specialists, make referrals and/or transitions of care
- G. <u>Consumer access to clinical data</u>: Secure access allowing patients to view clinical information such as routine lab results, receive appointment reminders and treatment prompts, and to ask for prescription refills, appointments and to speak with their physician
- H. We do currently/have had a technological innovation effort in our organization but not in one of the above areas
- I. We do not currently/have not had a technological innovation effort in our organization.

## (PDF-098) Of the following types of technologies, which do you currently use in your organization? (Select all that apply)

- A. Artificial Intelligence
- B. Robotics (Clinical / Non-clinical)
- C. 3-D printing
- D. Nanotechnology
- E. Biotechnology
- F. Quantum computing

## (PDF-99) Of the following types of technologies, which have you started to explore implementing in your organization?

#### (Select all that apply)

- A. Artificial Intelligence
- B. Robotics (Clinical / Non-clinical)
- C. 3-D printing
- D. Nanotechnology
- E. Biotechnology
- F. Quantum computing

#### (PDF-100)

What percentage of your IT spending can be attributed to experimentation and/or trials of technological innovation, new ideas, ventures, etc.? (Check one)

- A. 20% or more
- B. 10 19%
- C. 1-9%
- D. 0%

### Digital Transformation Priorities

(This section not scored)

(PRI-01) The following lists the various sections of the Digital Health Most Wired survey. To what extent do you project each of the following areas will be a priority for your organization during the next 12-months?

(Check one per row)

|   | DHMW Section                           | Essential | High<br>Priority | Medium<br>Priority                      | Low<br>Priority                         | Not a<br>Priority |
|---|--|-----------|------------------|---|---|-------------------|
| Α | Infrastructure                         |           | ,                | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ,                 |
| В | Security                               |           |                  |   |   |                   |
| С | Administrative and Supply Chain        |           |                  |   |   |                   |
| D | Analytics and Data Management          |           |                  |   |   |                   |
| Ε | Interoperability and Population Health |           |                  |   |   |                   |
| F | Patient Engagement                     |           |                  |   |   |                   |
| G | Clinical Quality and Safety            |           |                  |   |   |                   |
| Н | Innovation                             |           |                  |   |   |                   |

(PRI-02) Imagine an ideal healthcare provider organization transformed by digital technologies and capabilities that improve processes, engage talent across the organization, and drive new and value-generating business models. How close is your organization to that ideal?

Please rate on a scale of 1–10 where 1 = "Not at all close" and 10 = "Very close

(PRI-03) Where do you see your own organization currently when it comes to becoming more digital? (Check one)

- A. We are ahead of our schedule when it comes to becoming more digital
- B. We are right on schedule when it comes to being more digital
- C. We are behind schedule when it comes to being more digital
- D. We have not started to become more digital yet, but are planning our approach
- E. We have not started to become more digital yet, and have no plans to
- F. We have achieved our digital goals

(PRI-04) What are the biggest challenges that your organization has experienced in trying to undertake a successful digital transformation?

Rank your top 3 challenges from this list.

|    | , , ,                              |                 |                         |                 |
|----|------------------------------------|-----------------|-------------------------|-----------------|
|    |                                    | First Challenge | <b>Second Challenge</b> | Third Challenge |
| A. | Over reliance on legacy technology |                 |                         |                 |
| B. | Internal politics                  |                 |                         |                 |
| C. | Lack of dedicated budget           |                 |                         |                 |
| D. | Lack of the right in-house skills  |                 |                         |                 |
| E. | Lack of the right technology/tools |                 |                         |                 |

| F. | Cultural resistance                               |   |  |
|----|---|---|--|
| G. | Tendency for short-term thinking over long-term   |   |  |
|    | planning  |   |  |
| Н. | Data silos  |   |  |
| I. | Lack of central coordination/ownership            |   |  |
| J. | Lack of formal strategy/plan                      |   |  |
| K. | Lack of senior management sponsorship             |   |  |
| L. | Other   |   |  |
| M. | There are no challenges to digital transformation | _ |  |

# (PRI-05) What are the most critical steps to enable a successful digital transformation? Rank your top 3 steps from this list.

|    |  | First Step | Second Step | Third Step |
|----|--|------------|-------------|------------|
| A. | Invest in the right technologies and tools             |            |             |            |
| B. | Involve all departments in developing a strategy       |            |             |            |
| C. | Invest in staff training                               |            |             |            |
| D. | Draw up a comprehensive, yet flexible/adaptable budget |            |             |            |
| E. | Assign a board-level or c-level sponsor to the project |            |             |            |
| F. | Pilot the project in one part of the business first    |            |             |            |
| G. | Communicate strategy and goals with employees          |            |             |            |
| Н. | Communicate plans with customers                       |            |             |            |
| I. | Ensure Executive Commitment and Alignment              |            |             |            |
| J. | Other  |            |             |            |
| K. | I don't know   |            |             |            |