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ADVANCING INTEROPERABILITY THROUGH FHIR APPLICATIONS

Mark Gingrich, Chief Information Officer

December 5, 2017

THE ROAD TO HEALTHCARE INTEROPERABILITY IS COMPLEX AND CHALLENGING…

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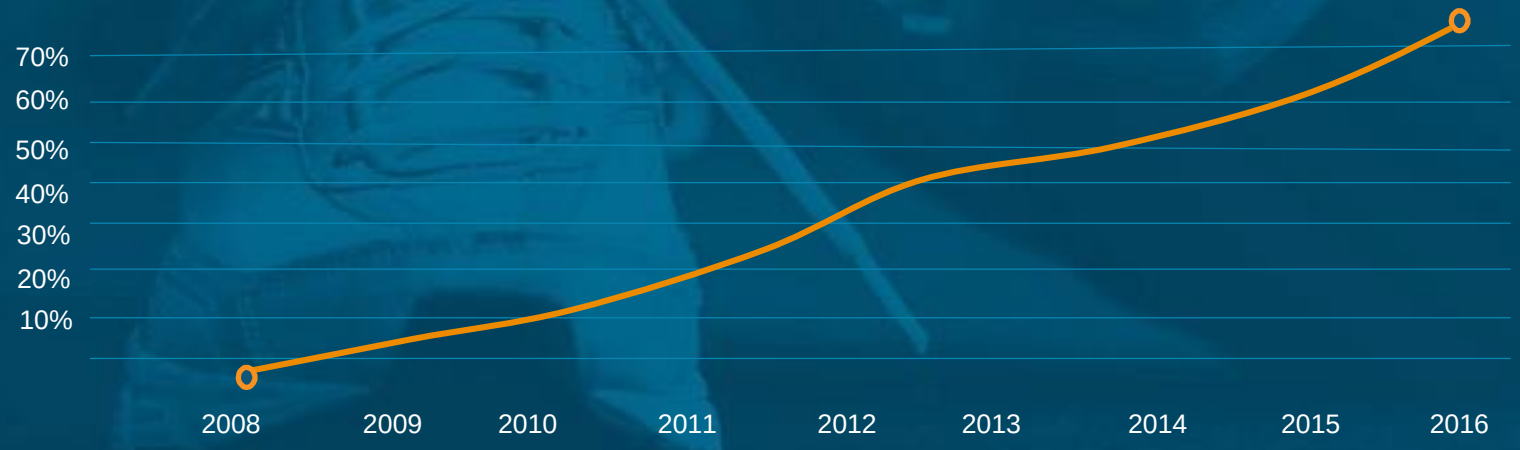
…BUT WE'RE SEEING PROGRESS THROUGH E-PRESCRIBING WITH MORE THAN 73% OF PRESCRIPTIONS DIGITIZED

4.4 million
electronic prescriptions daily

1.6 billion
electronic prescriptions in 2016

10.9 billion
transactions in 2016



RATE OF E-PRESCRIBING NATIONWIDE

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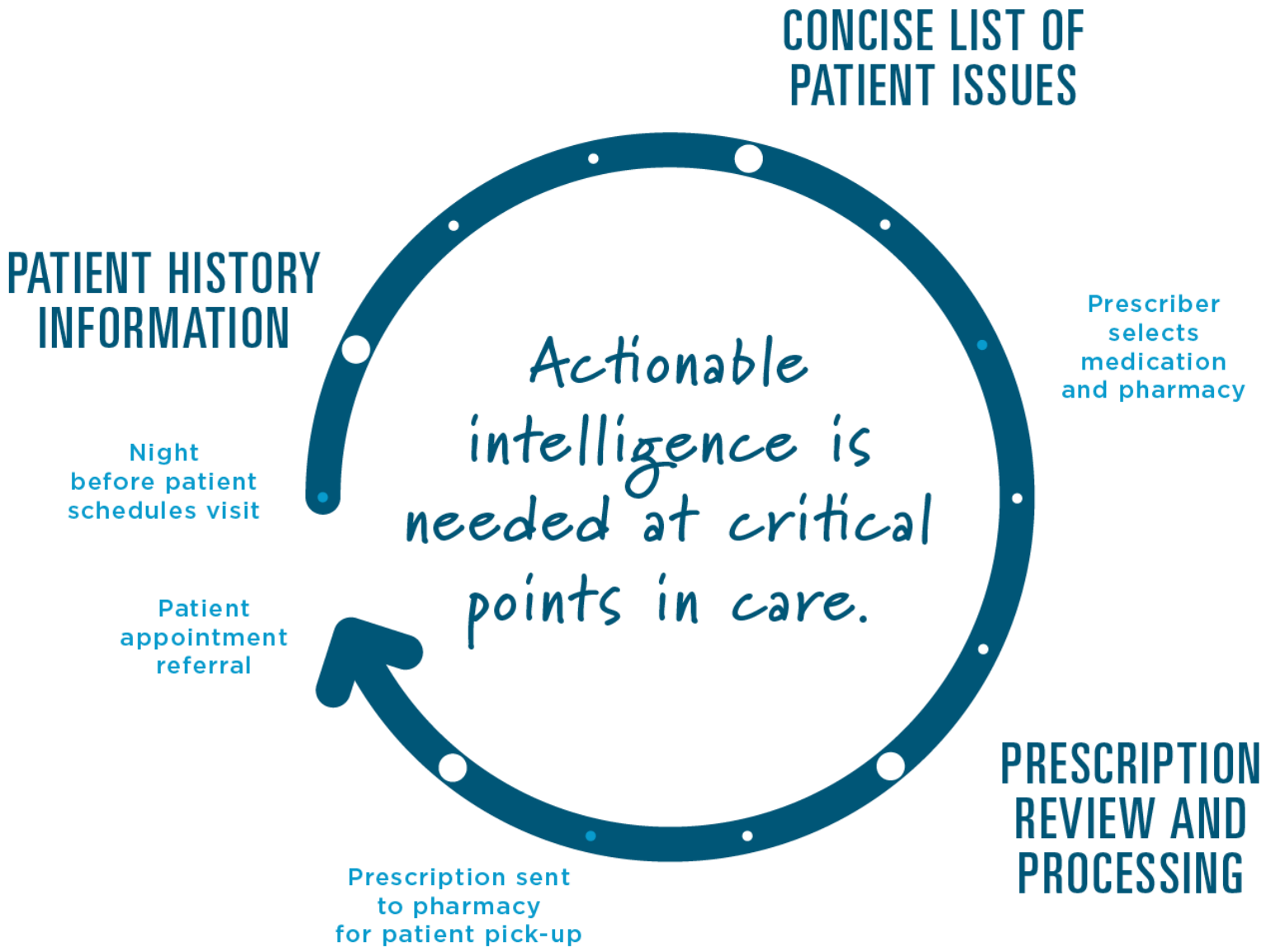

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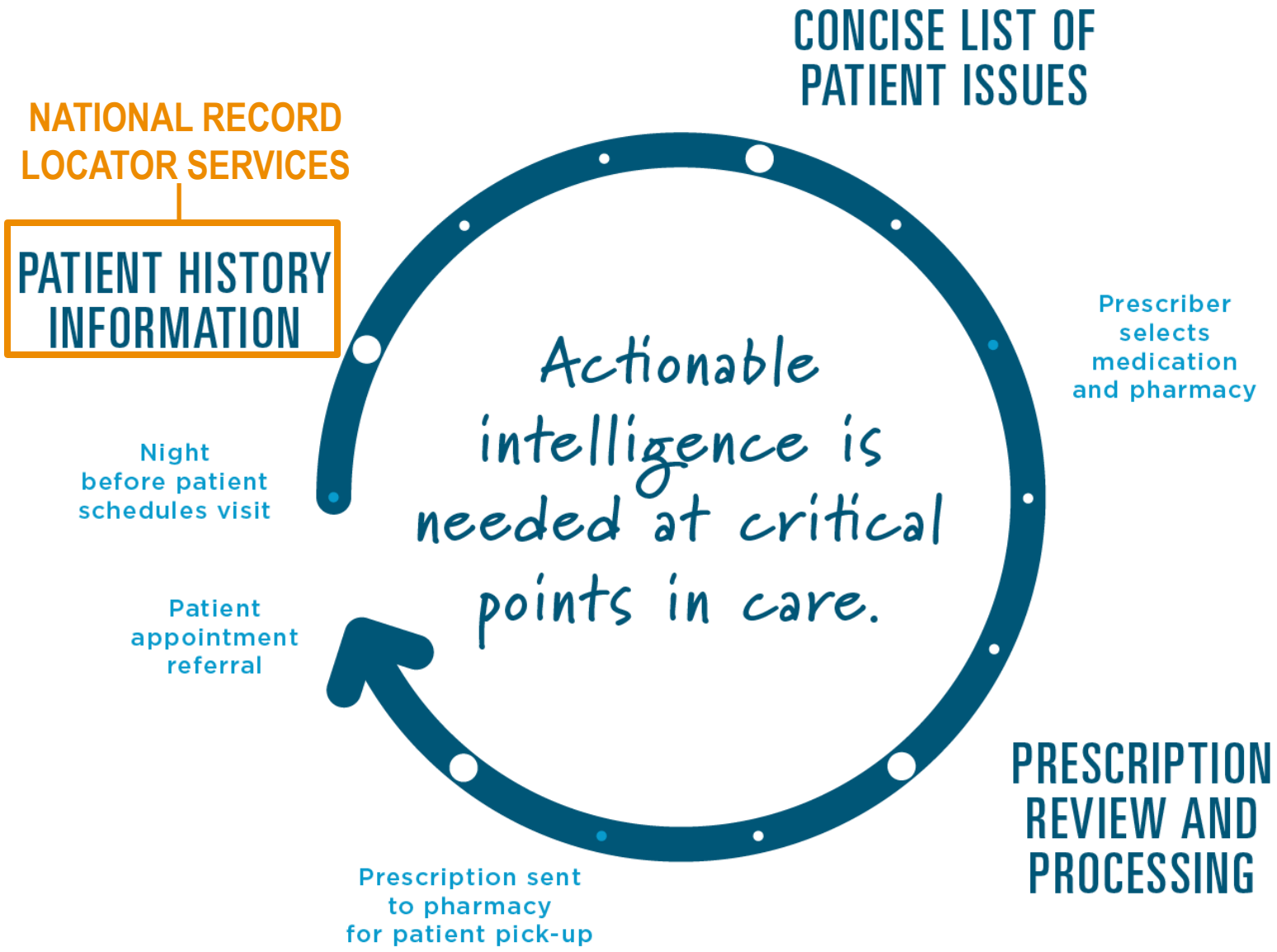

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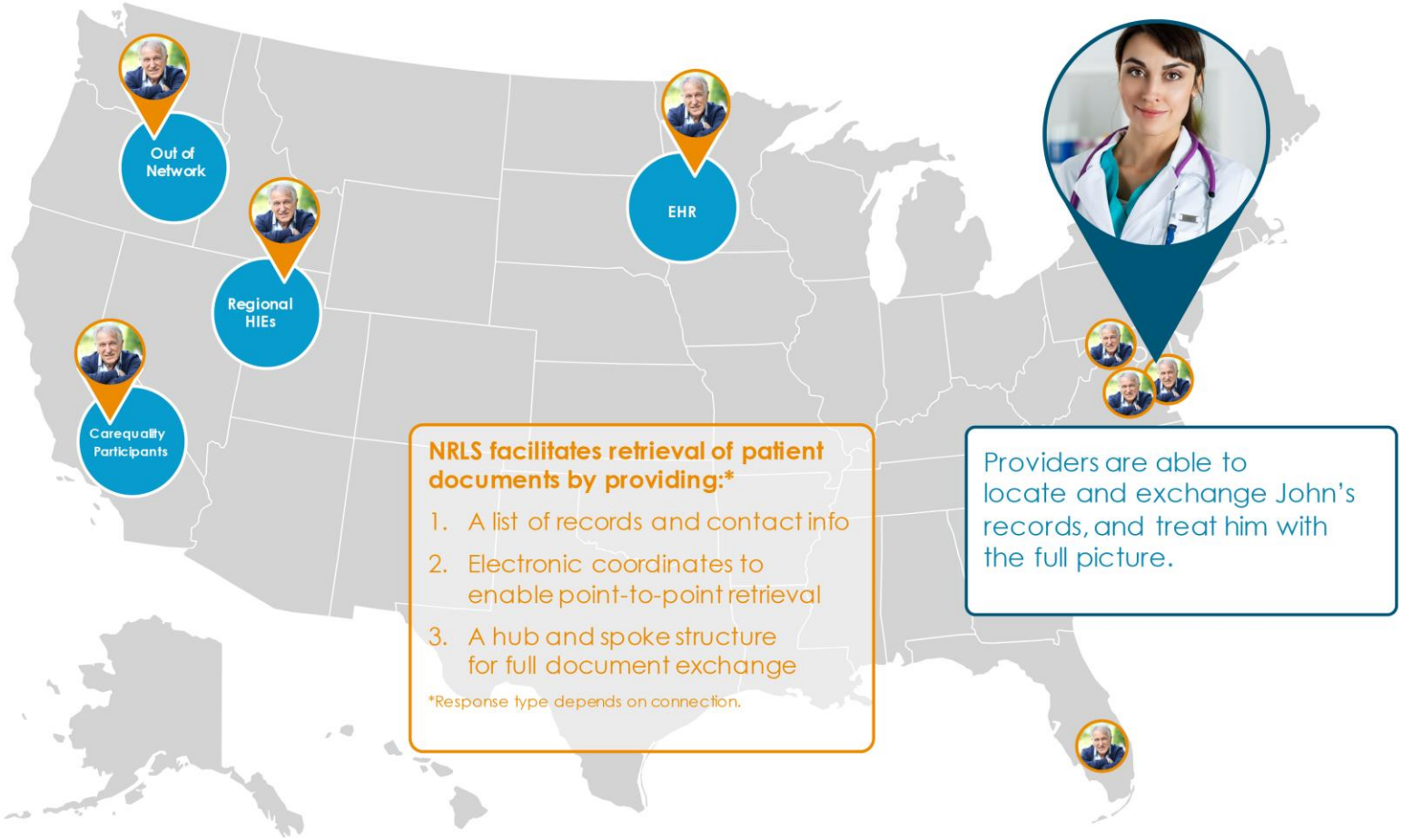
NATIONAL RECORD LOCATOR SERVICES DELIVERS VISIT HISTORIES NO MATTER WHERE PATIENTS RECEIVE CARE



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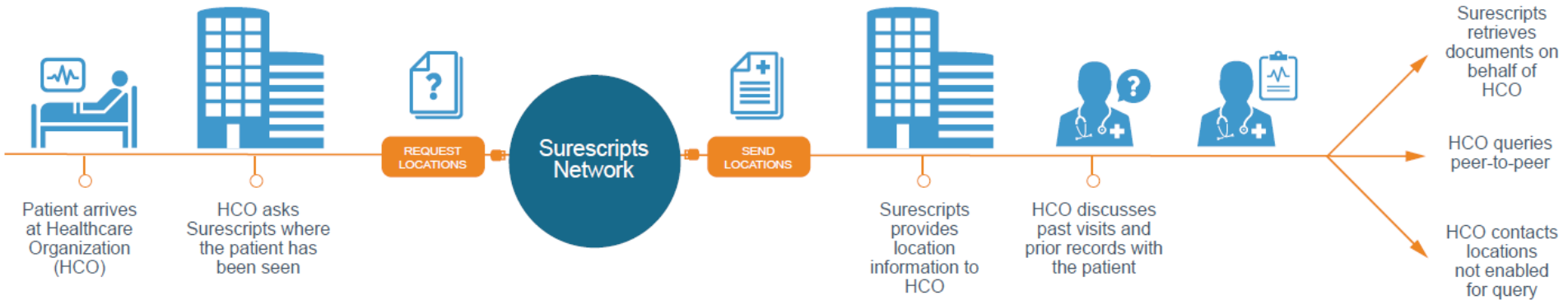
NATIONAL RECORD LOCATOR SERVICES PROCESS FLOW



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HOW FHIR HELPS NATIONAL RECORD LOCATOR SERVICES DELIVERS KEY BENEFITS

1.

INCREASED LOCATIONS

By adding FHIR as a way to exchange patient data, Surescripts increases the pool of health systems that can exchange data.

2.

EXPAND BEYOND CAREQUALITY

By adding FHIR Surescripts makes it easier to connect Carequality members to non-Carequality systems.

3.

EASE FOR IMPLEMENTERS

By adding FHIR, EHRs with modest development budgets can implement and integrate National Record Locator Services in a shorter timeframe.

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NATIONAL RECORD LOCATOR SERVICES USES FHIR

- **Bridge IHE and FHIR Interactions**
  - Both IHE to FHIR and FHIR to IHE supported
  - National Record Locator Services abstracts the differences between the standards
- **Patient Resource**
  - Search using Patient-Match Operation
  - Return a patient resource if a match is found
- **DocumentReference Resource**
  - Find all available documents for a patient at any location across the country
- **Documents**
  - Currently returned as CDAs for maximum interoperability
  - Future enhancements to return discrete resources

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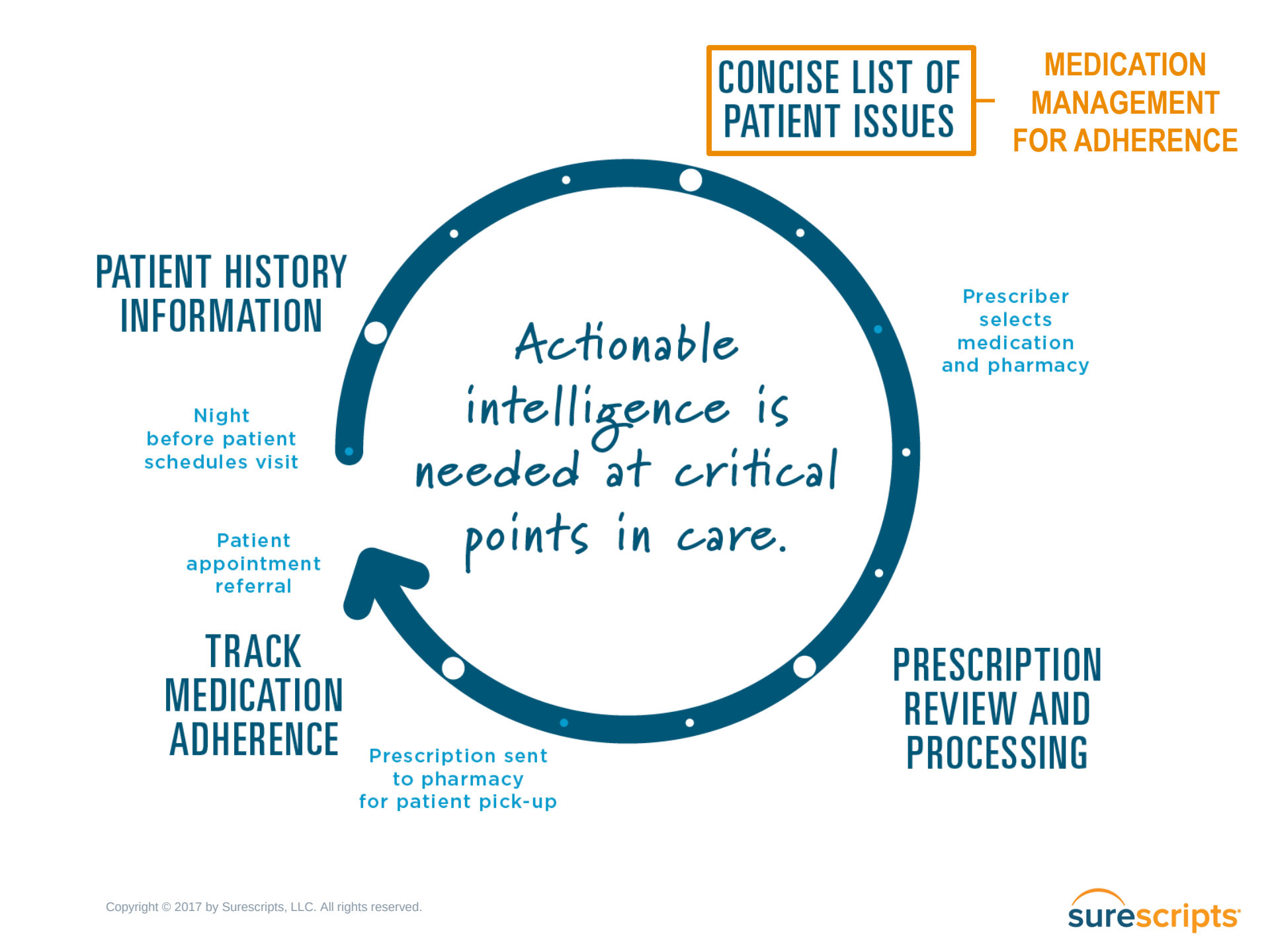

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WE DELIVER MEDICATION INSIGHTS FROM PAYERS DIRECTLY INTO THE PROVIDER'S EHR

MEDICATION MANAGEMENT FOR ADHERENCE

Gaps in Care and adherence summaries (using Portion of Days Covered by disease class)

RESULTS

Over **4%** increase in medication adherence in first 3 months[1]

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1. Walsh, Andrew, Report from MediCenter Pilot Study, Health Monitoring Systems, 2010. Study demonstrated that using Medication History identified these drug types at rates greater than the average rates at which they are reported using the patient interview process only.

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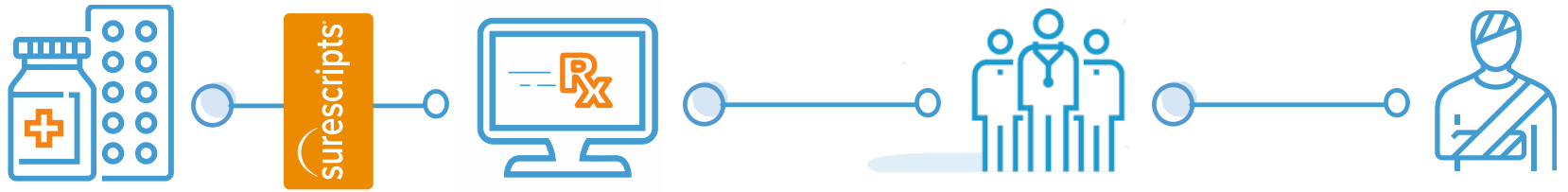
FHIR STANDARDIZES LOCAL AND NETWORK DATA TO IMPACT DECISION-MAKING AT THE POINT OF CARE



Payers

Sends Portion of Days Covered ratios and patient specific messages

EHRs

Adherence summaries integrated with existing workflows

SMART on FHIR Standard

Providers

Information is displayed within provider's EHR

Patients

More informed care for better outcomes

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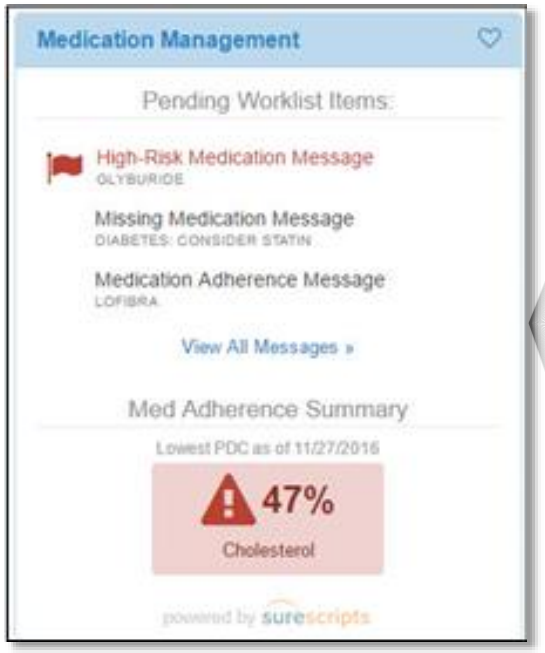
MEDICATION MANAGEMENT FOR ADHERENCE FHIR RESOURCES

Adherence summaries

Medication Adherence

Missing Medications

High Risk Medications



Med Adherence, Missing Med and High Risk Messages:

- Message Header
- Communication Request
- Contraindication
  - Text
  - Medication Prescription
  - Medication
  - Severity
- Patient
- Practitioner
- Organization

Adherence Summary:

- Message Header
- Communication Request
- Observation
  - Medication Dispense
  - Medication Prescription
  - Medication
  - Extension (disease category)
  - Value (PDC score)
- Patient
- Practitioner
- Organization

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EXAMPLE DISPLAY OF MESSAGE DETAIL FOR A PATIENT

Sollors, Harry

MRN766879 | 08/24/1952 (65) | (293) 768-2217

MEDICATION ADHERENCE MESSAGE
SOLLORS, HARRY 08/24/1952

Received: 09/13/2017

Payor ABC records indicate this patient may have discontinued taking niacin as instructed. Please discuss adherence with your patient.

PLEASE RESPOND:

Is adherence a confirmed issue?

Yes | No

List of relevant Medication Adherence summaries by disease classification

MEDICATION ADHERENCE PROFILE

58% Cholesterol 09/07/2017

Medication	Filled	Supply
niacin, 1000mg NDC: 0093-7394-98	07/29/2017	90 days

64% Diabetes 09/04/2017

Medication	Filled	Supply
No medication details received.		

96% Hypertension 09/08/2017

Medication	Filled	Supply
propranolol, 60mg NDC: 54868-5564-0	08/08/2017	60 days

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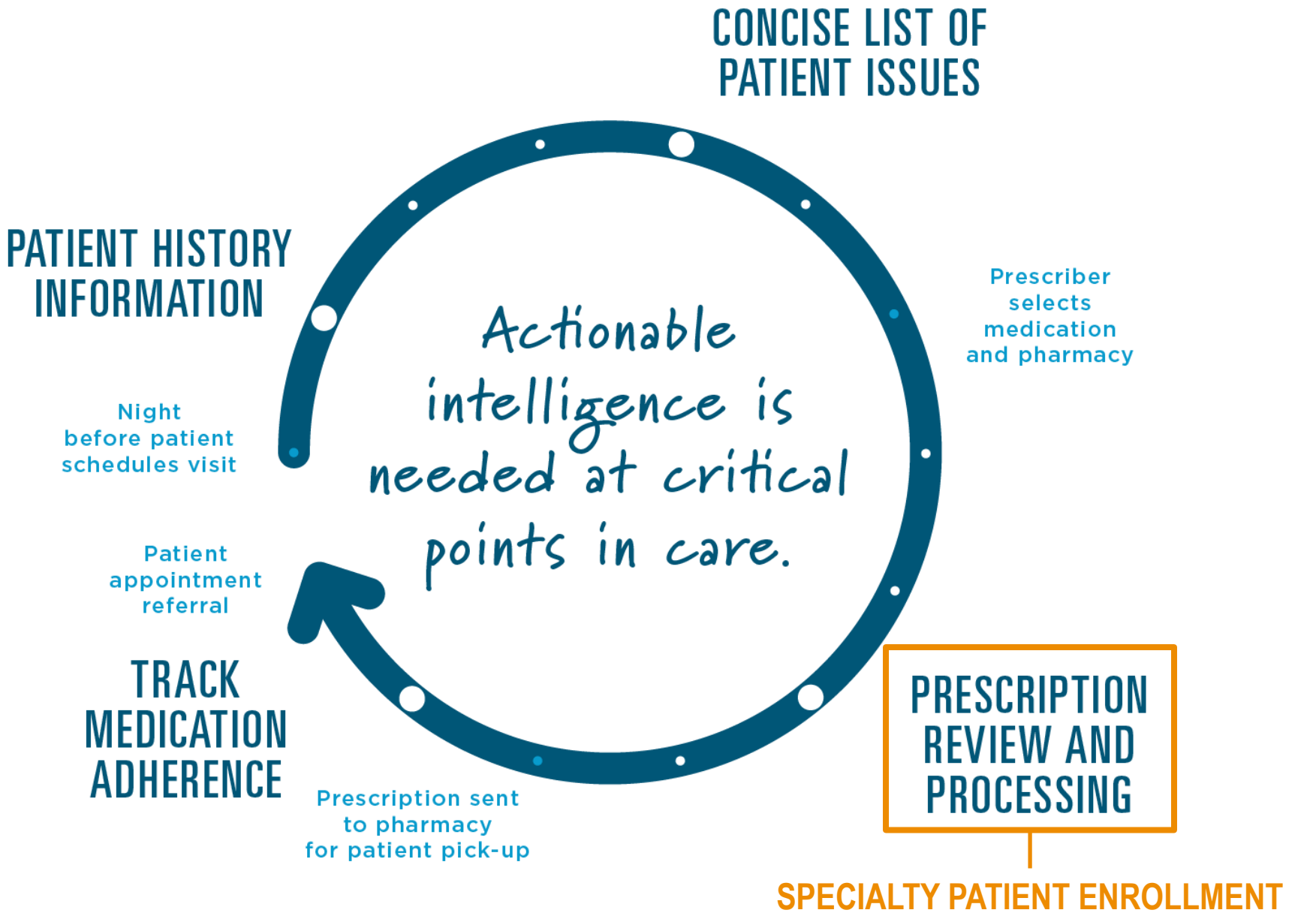

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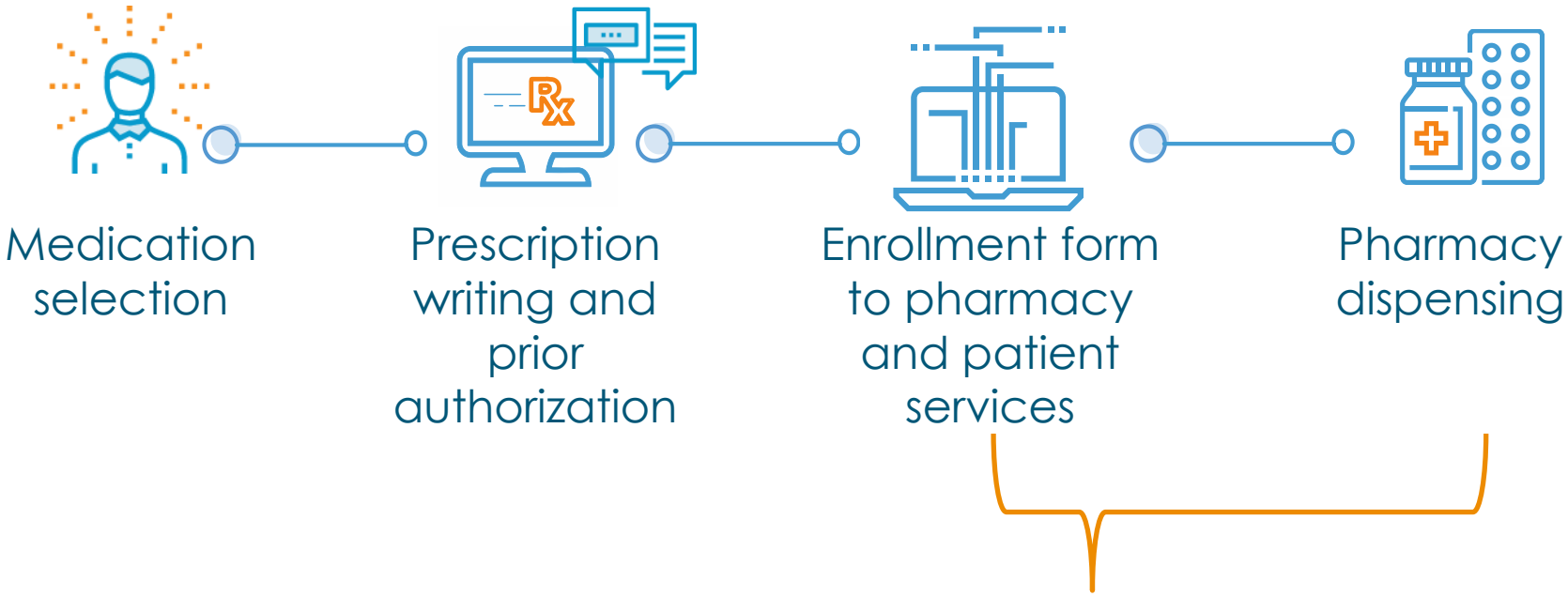
A NEW ENROLLMENT SOLUTION WILL ENABLE THE SPECIALTY PRESCRIBING PROCESS TO GO ELECTRONIC



- Enrollment forms are FHIR (STU 3) Questionnaire resources
- Argonaut has guidelines for exchanging clinical information using FHIR resources
- Condition-specific information required for all specialty enrollment (e.g., CRP & ESR for RA, and LFTs for Hepatitis C)

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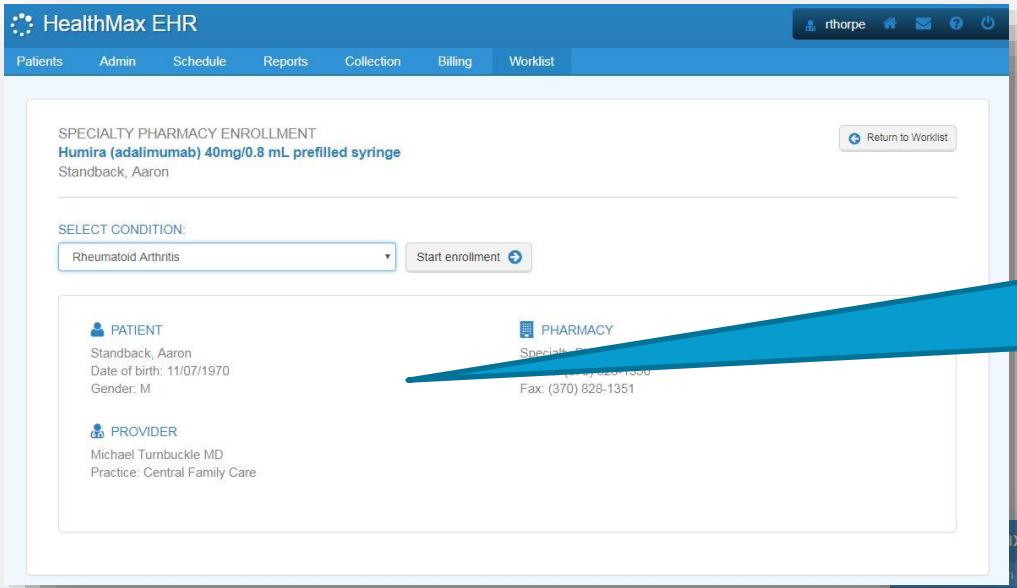
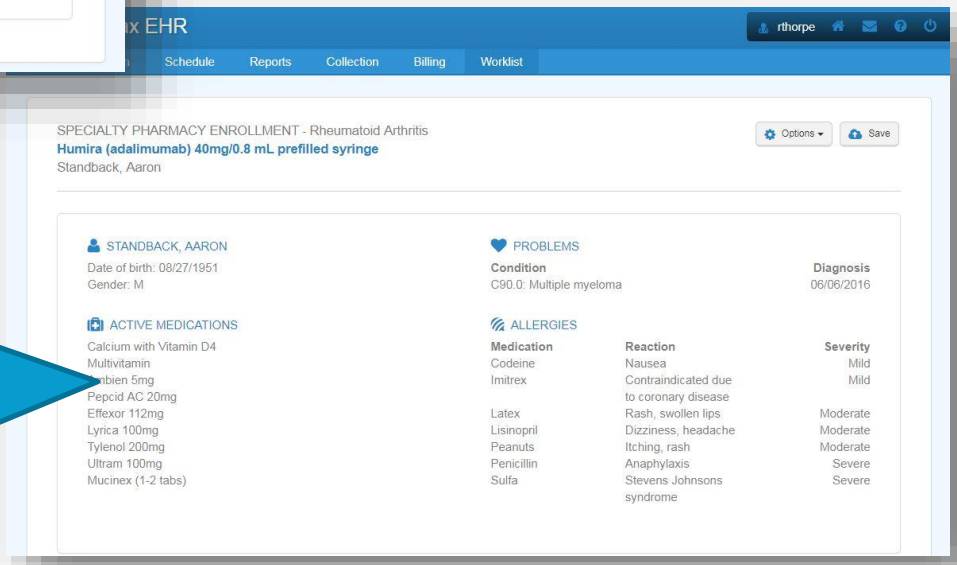
THE PATIENT ENROLLMENT SOLUTION INTEGRATES INTO THE PROVIDER'S EHR WORKFLOW



Standardized forms across Specialty Pharmacies by disease state/drug for prescriber to select from.



Prepopulates enrollment form with patient information, including demographic, insurance, clinical and lab data.

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EXAMPLE – BODY HEIGHT (QUESTIONNAIRE)


```
“linkId”: “PatientBodyHeight”,   “text”: "Body Height",
    "code": [{       "system": "http://loinc.org", "code": "8302-2", "display": "Body height“ }],
    "extension": [{  "url": "http://surescripts.com/fhir/StructureDefinition/fhir-callback-query",
                     "valueString": "GET /Observation$lastn"          }],
    "type": "group", ...
    "item": [{ "linkId": "PatientBodyHeight_Value",
                "text": "Height",
                "type": "decimal",
                “extension": [{"url":"http://surescripts.com/StructureDefinition/allowedUnits", "valueCoding":
                        {"system":"http://unitsofmeasure.org","code":"cm", "display":"cm“} },
                        {"url":"http://surescripts.com/StructureDefinition/allowedUnits","valueCoding":
                        {"system":"http://unitsofmeasure.org","code":"[in_i]","display":"inches"}       } ]   },
            {   "linkId": "PatientBodyHeight_Date",
                "text": “Height date",
                "type": “date"
             }
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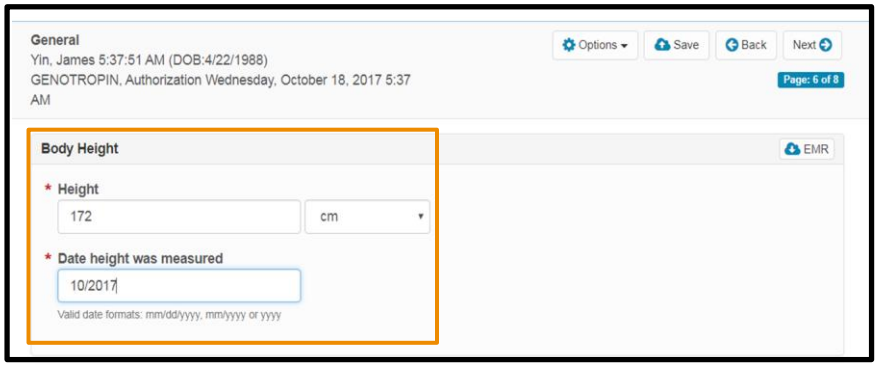

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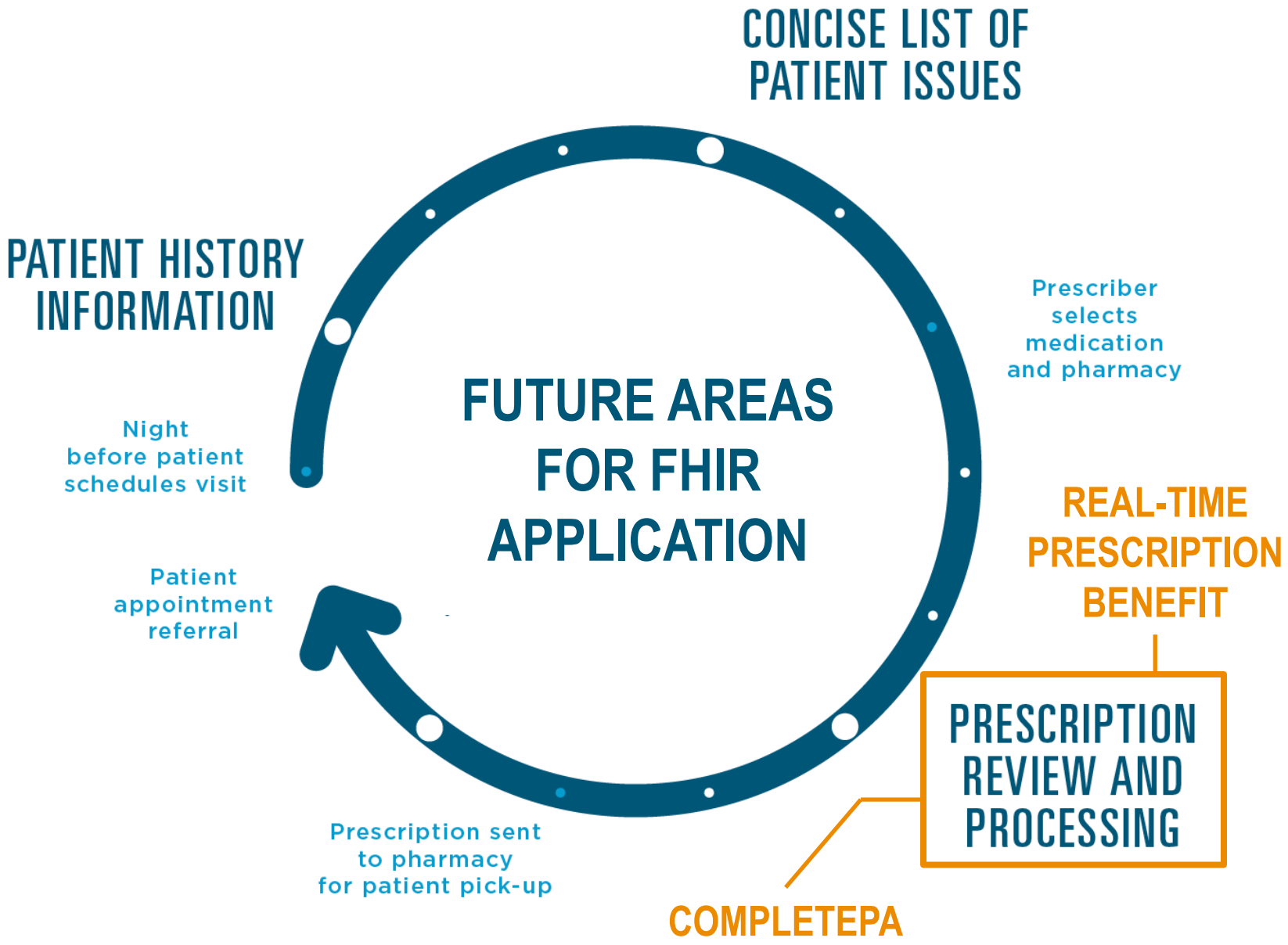

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