

User Guide

HINcontext

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Welcome to the HINcontext Application

HealthInfoNet's HINcontext application allows providers to receive specific information concerning a patient's medical history from the statewide Health Information Exchange (HIE) while working in context of their electronic health record (EHR) system.

The application has been flexibly designed to allow EHR systems to query HealthInfoNet's HIE database from within existing provider workflows and to return and display the HIE data in a fashion most convenient for both the EHR technology and the provider viewing the information.

HealthInfoNet's HINcontext application was designed and developed in partnership with the Chesapeake Regional Information System for our Patients (CRISP), a regional HIE serving Maryland, the District of Columbia, and West Virginia, intended to provide a solution that adapts and advances as clinical workflows and needs change across the care continuum.



We're Here to Help

HealthInfoNet's Customer Support team is trained, experienced, and ready to work with you. If you have a question, we'll help find the answer. Reach out to us using the coordinates below and we'll be in touch shortly with more information.

Contact Us Directly

- **Hours:** Monday through Friday – 8am to 4:30pm ET
- **Phone:** 207-541-9250
- **E-mail:** customercare@hinfonet.org

Support at Your Facility

HealthInfoNet has trained a member of each participating organization to assist with support issues so that our users have a local resource. This is typically a member of your Help Desk or IT team. If this is an urgent request, you may decide to contact your local resource first.



Obtaining Access to the Application

The HINcontext application has been designed to be readily available to authorized users within context of their native EHR technologies. For that reason, each individual organization's Help Desk or IT team controls the application's access and authorization permissions for its users.

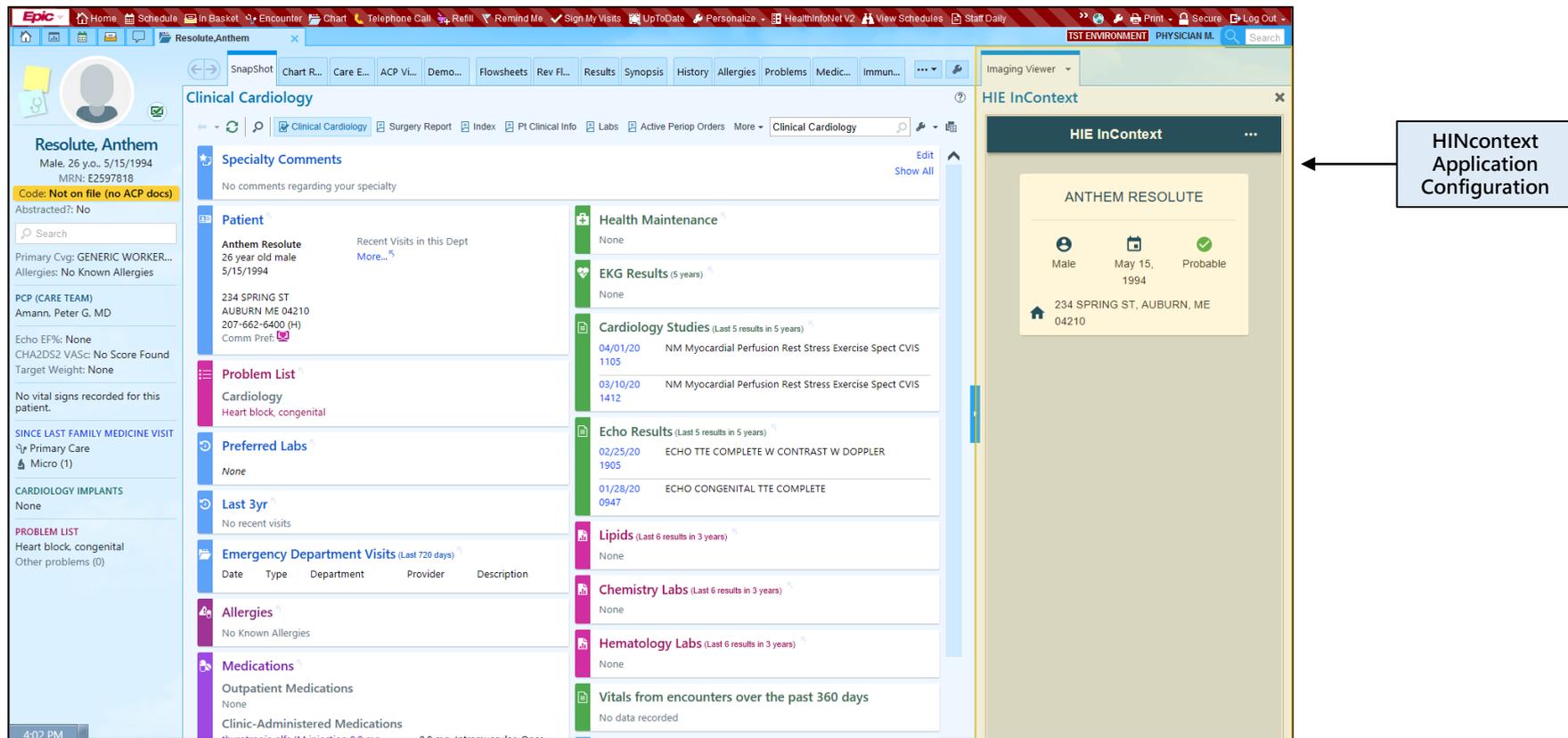
1. **New Users** – If you are interested in obtaining access to the HINcontext application, ask your local Help Desk or IT team for assistance in extending the appropriate permissions to your Epic account.
2. **Help Desk/IT Teams** –
 - a. For questions about how to extend permissions for new users to access the HINcontext application, please reach out to your organization's Epic Technical Services for assistance.
 - b. Once you have successfully extended permissions, please contact HealthInfoNet's Customer Support team at customercare@hinfo.net to provide us with the new users' **Epic IDs** and **Affiliated Facility Names** to ensure that auditing and compliance reporting is configured appropriately within our system.
 - i. In the event that HealthInfoNet cannot identify certain users' Epic IDs in our review of the HINcontext audit logs, our Customer Support team will reach out directly to the organization's Help Desk or IT teams for confirmation.



Finding the Application in EHR Workstations

Upon obtaining access to the HINcontext application, users should find the application pinned to a portion of their screen (per configuration decisions by an organization's Help Desk/IT team) within their Epic EHR workstations (Figure 1).

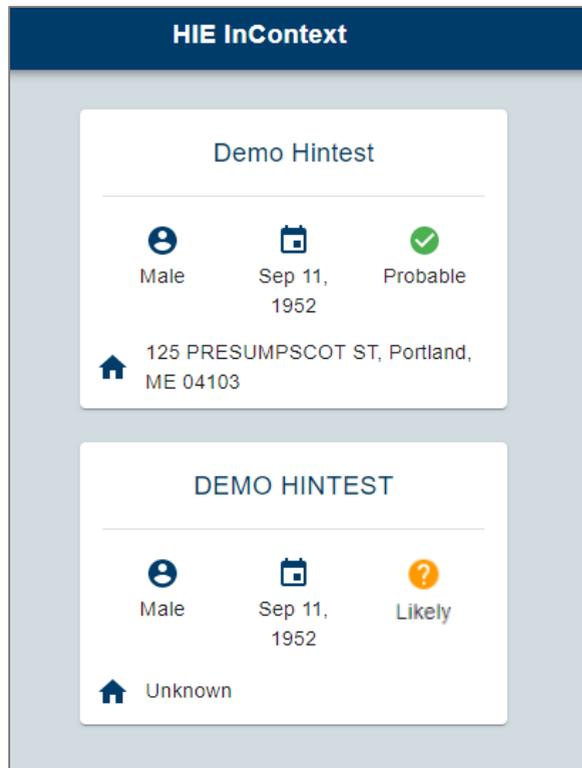
Figure 1. HINcontext Embedded Configuration Within Epic HER Workstation



Searching for & Matching Patient Records

From within their EHR, users can conduct a demographics-based search of an individual patient. Doing so initiates a query within HealthInfoNet to identify all patient records in the HIE that meet the desired criteria. HealthInfoNet will then send back to the HINcontext application all possible patient matches to display in the application's "Patient Match Screen" (Figure 2).

Figure 2. Patient Match Screen



Within the "Patient Match Screen," individual records for each possible patient match are provided for users to review to assist in making an accurate identification of the wanted patient.

These records contain the following patient information:

1. First Name
2. Last Name
3. Sex
4. Date of Birth
5. Physical Address
6. Match Score (i.e., indication of how closely the original search criteria matches the information returned by HealthInfoNet)

Knowing What's Included in a Patient's Record (cont.)

Additionally, since the HINcontext application handles the HIE's patient consent requirements differently than HealthInfoNet's Clinical Portal, it is worth highlighting a few key considerations:

1. **Patients who are included in the HIE** – Upon selecting an individual patient record from the "Patient Match Screen," users are not required to "break the privacy seal" in order to view that patient's HIE information.
2. **Patients who have sensitive information in the HIE** – Regardless of whether patients have opted-in to sharing their sensitive information (i.e., mental health information) with HealthInfoNet or providers require access to it in the case of an emergency, the HINcontext application does not currently contain any sensitive information for patients. If this information is needed by users in their clinical workflows, HealthInfoNet recommends logging in to the Clinical Portal to obtain more information about the wanted patient.



Knowing What's Included in a Patient's Record (cont.)

Additionally, since the HINcontext application handles the HIE's patient consent requirements differently than HealthInfoNet's Clinical Portal, it is worth highlighting a few key considerations:

1. Patients who have opted-out of the HIE –
 - a. Should the user's desired search criteria for the wanted patient correspond with an exact match within HealthInfoNet for a patient who has previously opted-out of the HIE, the HINcontext application will not display the "Patient Match Screen" but instead will provide an error message indicating that the patient could not be found in the system ([Figure 4](#)).

Figure 4. Opt-Out Patient Match Screen Error

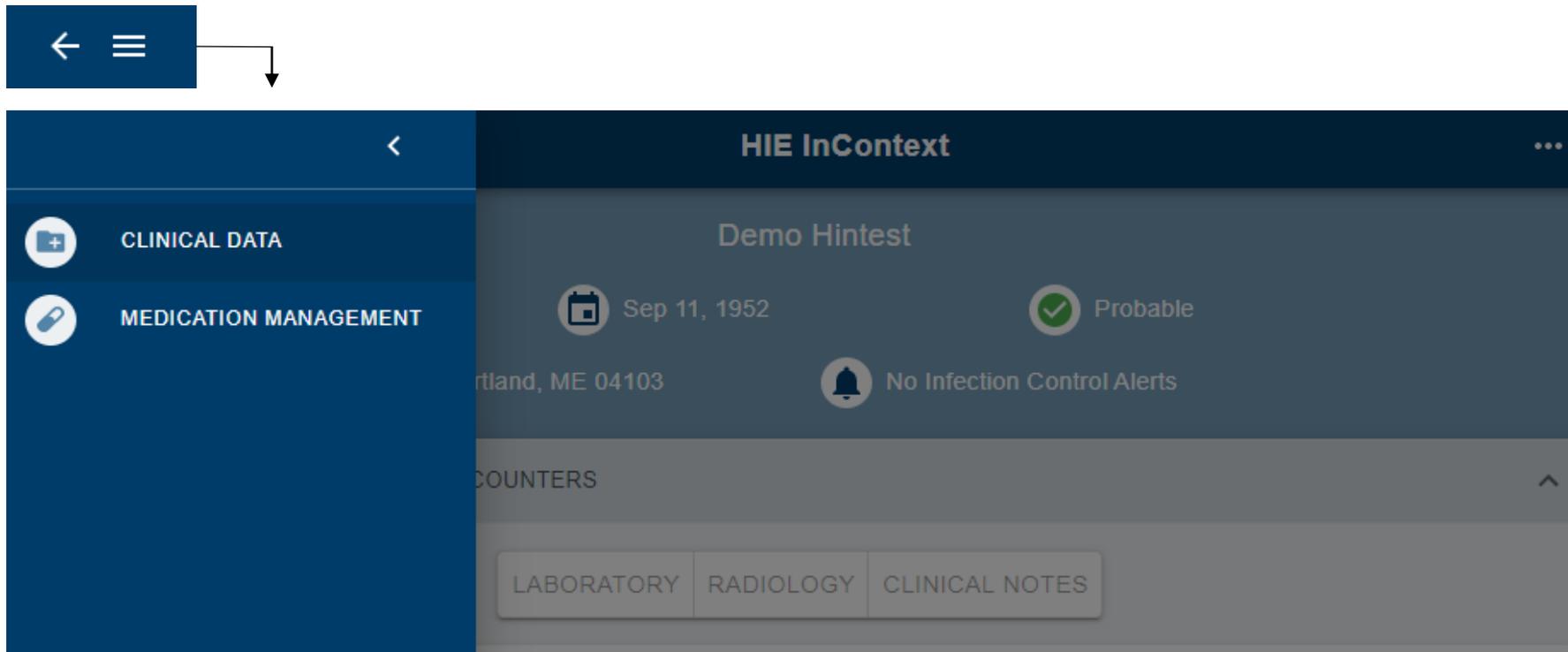


- b. Should the user's desired search criteria for the wanted patient correspond with multiple patient matches, mixed of both patients who are included in the HIE and patients who have previously opted-out of the HIE, the HINcontext application will display the "Patient Match Screen" but will not show the individual records for those patients who have opted-out.

Navigating the Application's User Interface

Upon selecting an individual patient record from the "Patient Match Screen," users will arrive to the user interface's default landing page – the selected patient's "Health Records" view. Access to the application's navigation can be found by selecting the tri-bar icon located in the upper-left hand corner of the screen, with options for "Clinical Data" or "Medication Management" modules ([Figure 5](#)).

Figure 5. Application Navigation Options



Viewing Demographic Information

In the upper portion of every screen within the user interface, the selected patient's demographic information is provided, including their Full Name, Sex, Date of Birth, Physical Address, and Match Score (i.e., indication of how closely the user's original search criteria matched the information returned by HealthInfoNet) ([Figure 6](#)).

Figure 6. Demographic Information



Viewing Clinical Data – Health Records

Within the "Clinical Data" module, the "Health Records" component contains information on the selected patient's Laboratory Results, Radiology Reports, and Clinical Notes (Figure 7). By selecting the type of health record of interest, the view will filter accordingly to display only those documents.

Figure 7. Health Records Component

The screenshot shows the "Health Records" component in a software application. At the top, there are two tabs: "HEALTH RECORDS" (selected) and "ENCOUNTERS". Below the tabs, there is a filter menu with three options: "LABORATORY" (highlighted with a yellow box), "RADIOLOGY", and "CLINICAL NOTES". An arrow points from the "LABORATORY" filter to a larger, detailed view of the "Health Records" component. This detailed view shows a table with the following data:

Date ↓	Source	Description
2018-09-14	Central Maine Medical Center	Colonoscopy St...
2018-09-14	Central Maine Medical Center	Colonoscopy St...
2018-09-13	Central Maine Medical Center	procedure note
2016-03-12	Eastern Maine Medical Center	Discharge sum...
2016-01-22	Eastern Maine Medical Center	Nutrition and die...
2015-12-11	St Joseph Hospital	Spine Lumbar M...

The detailed view also shows the filter menu with "LABORATORY" selected, and the table is filtered to show only laboratory records. The table data in the detailed view is as follows:

Date ↓	Source	Description
2012-04-21	Eastern Maine Medical Center	Potassium [Moles/volume] in Serum or Plasma
2012-04-20	Eastern Maine Medical Center	Potassium [Moles/volume] in Serum or Plasma
2011-07-11	Eastern Maine Healthcare Systems	Renal Function Panel

Viewing Clinical Data – Health Records (cont.)

By selecting an individual record within the "Health Records" view, a pop-up window will appear with additional information about the document in the format it was received by HealthInfoNet (Figure 8).

Figure 8. Individual Health Records Views

The screenshot displays three overlapping windows from the HealthInfoNet application:

- Prealbumin [Mass/volume] in Serum or Plasma (2011-02-18):**
 - Notes:** Performed at Affiliated Laboratories Inc. 417 State Street, Suite 240, Bangor, ME 04401 (207)973-6900
 - Observations:** A table with a header 'Name' and one entry: Prealbumin [Mass/volume] in Serum or Plasma.
 - Specimens:** A table with a header 'Name' and no visible entries.
- HC_Care Plan (2013-04-02):**
 - Patient's HI Claim No.:** 0201A
 - Start Of Care Date:** 3/31/2013
 - Certification Period:** 3/31/2013 7/31/2013 11:59:59 PM
 - Medical Record No.:** HIN1234-99999999
 - Provider Number:** 101740000
 - Patient's Name and Address:** HINTEST, DEMO 125 PRESUMPCOT ST
 - Provider's Name, Address and Telephone Number:** BANGOR AREA VISITING NURSES 8 UNION STREET
 - Date of Birth:** 9/11/1952
 - Sex:** M
 - Medications:** LISINOPRIL 5 mg TABLET (N) 1 ORAL Daily; SPIRIVA 18 mcg CAP W/DEV (N) 1 INHALATION Daily; TRAMADOL HCL 100 mg TAB.SR 24H (N) 2 ORAL 4 times daily as needed; ATIVAN 1 mg TABLET (N) 1 ORAL 3 times daily as needed; WELLBUTRIN 75 mg TABLET (N) 2 ORAL Daily; OMEPRAZOLE 20 mg CAPSULE DR (N) 1 ORAL 2 times daily; POTASSIUM CHLORIDE 10 mEq TABLET SA (N) 1 ORAL Daily; LASIX 20 mg TABLET (N) 1 ORAL Daily; METOPROLOL TARTRATE 25 mg TABLET (N) 1/2 ORAL; ASPIRIN 81 mg TABLET (N) 1 ORAL Daily.
- Chest X-ray 2 views (2013-02-06):**
 - Location:** St. Joseph Hospital, Medical Imaging Department, 360 Broadway, Bangor, Maine 04401
 - MR#:** HINSJH
 - Patient Name:** HINTEST, DEMO
 - DOB:** 09/11/1952
 - Sex:** M
 - Account #:** 0012
 - Sequence #:** 00001
 - Report Status:** VALIDATED REPORT
 - Exam:** XR Chest Two Views
 - Reason:** pneumonia due to other specified bacteria
 - Chest two views**

Viewing Clinical Data – Health Records (cont.)

Upon selecting an individual record within the "Health Records" view, users may encounter two kinds of application error messages ([Figure 9](#)):

1. **"No notes available for this record"** – Indicates that there is no additional information for the selected record that HealthInfoNet was able to receive/process from the provider and therefore display to users in the HINcontext application.
2. **"Unable to parse narrative for this report"** – Indicates that there may be additional information for the selected record but the HINcontext application is unable to display the content due to formatting constraints (e.g., PDF and non-XML documents). In these cases, HealthInfoNet recommends logging in to the Clinical Portal to obtain more information about the wanted record.

Figure 9. Health Records Error Messages



Viewing Clinical Data – Encounters

Also within the "Clinical Data" module is the "Encounters" component, which provides a list containing all of the selected patient's encounters/visits over time ([Figure 10](#)).

Fields included in the "Encounters" component include the following:

1. **Admission Date** – The date when the patient was admitted for the encounter
2. **Discharge Date** – The date when the patient was discharged for the encounter
3. **Source** – The facility of the provider who saw the patient for the encounter
4. **Service Type** – The type of visit (e.g., IP, OP, ED) for the encounter
5. **Primary Diagnosis Description** – The description of the patient's primary diagnosis recorded for the encounter

Figure 10. Encounters Component



HEALTH RECORDS		ENCOUNTERS		
Admission Date	Discharge Date	Source	Type	Reason
2014-07-12	—	St. Joseph Hospital	Emergency	—
2014-02-18	2011-09-10	Cary Medical Center	Inpatient	Diabetes with unspecified complication

Viewing Medication Management – Medications

Within the "Medication Management" module, the "Medications" component provides a list containing all of the selected patient's prescription medications dispensed within the last 120 days ([Figure 11](#)).

Fields included in the "Medications" component include the following:

1. **Medication** – The name/description of the patient's prescription
2. **Date Filled** – The date when the patient's prescription was dispensed
3. **Days Supply** – *This field is not currently supported by HealthInfoNet's medication data*
4. **Quantity Dispensed** – The quantity amounts for the patient's prescription
5. **Prescriber** – The provider who prescribed the patient's prescription
6. **Pharmacy Name** – The pharmacy where the prescription was dispensed to the patient

Figure 11. Medications Component



Medication	Date Filled	Days Supply	Quantity Dispensed	Prescriber	Pharmacy Name
LISINOPRIL 10 MG	2015-01-15	—	90	Mary Smith	WALGREENS
ATENOLOL 50 MG	2015-01-15	—	90	Robert Andrews	CVS

Using Additional Functionality

In many of the data components available throughout the application, there are additional ways to optimize user experience and space within the user interface, including:



Allows users to search a view based on keywords and phrases



Gives users the option to add/remove columns from a view



Provides users with the ability to filter a view based on a number of criteria

Additionally, in the banner of each component title there is an **up-arrow** that allows users to collapse the Demographics Information portion of the screen. When collapsed, users can alternatively select the **down-arrow** to expand the Demographics Information portion of the screen again ([Figure 12](#)).

Figure 12. Demographic Collapse/Expand Functionality



Clinical Education & Training Opportunities

- In-person and online trainings available for all services; contact clienteducation@hinfonet.org for more information
- Public resources available at <https://hinfonet.org/resources/clinical-education/>
- HealthInfoNet's online training site also provides courses and CNE credits to better understand and effectively use the HIE; visit <http://hinfonetacademy.org/> for more information



Change Log

The following change log provides information about updates and revisions made to the HINcontext application and this version of its user guide (for Epic EHR user roles) ([Table 1](#)).

Table 1. User Guide Change Log (Epic EHR user roles)

Version	Description	Effective Date
1.0	Released the “HINcontext User Guide” for Epic user roles.	June 25, 2020



www.hinfonet.org



info@hinfonet.org



60 Pineland Drive
Portland Hall, Suite 230
New Gloucester, ME 04260



207-541-9250



[@hinfonet](https://twitter.com/hinfonet)