SELF-GUIDED PRACTICE WORKBOOK [N65]
CST Transformational Learning

WORKBOOK TITLE:

Provider: Medical Microbiologist

Last update: April 5, 2018 (v2.1)

CLINICAL + SYSTEMS TRANSFORMATION
Our path to smarter, seamless care

TRANSFORMATIONAL LEARNING

TABLE OF CONTENTS

Provider: Medical Microbiologist

SELF-GUIDED PRACTICE WORKBOOK

Duration	**2 hours**
Before getting started	▪ Sign the attendance roster (this will ensure you get paid to attend the session). ▪ Put your cell phones on silent mode.
Session Expectations	▪ This is a self-paced learning session. ▪ A 15 min break time will be provided. You can take this break at any time during the session. ▪ The workbook provides a compilation of different scenarios that are applicable to your work setting. ▪ Work through different learning activities at your own pace.
Key Learning Review	▪ At the end of the session, you will be required to complete a Key Learning Review ▪ This will involve completion of some specific activities that you have had an opportunity to practice through the scenarios.

Using Train Domain

You will be using the train domain to complete activities in this workbook. It has been designed to match the actual Clinical Information System (CIS) as closely as possible.

Please note:

- Scenarios and their activities demonstrate the CIS functionality **not the actual workflow**
- Some clinical scenario **details have been simplified** for training purposes
- Some screenshots may not be identical to what is seen on your screen and should be used for reference purposes only
- **Follow all steps** to be able to complete activities
- If you have trouble to follow the steps, immediately **raise your hand for assistance** to use classroom time efficiently

PATIENT SCENARIO 1 - Access and Navigation

Learning Objectives

At the end of this Scenario, you will be able to:

- Log on to the Clinical Information System (CIS)
- Access patient charts and identify correct encounters
- Navigate the default home page
- Navigate and review chart components
- Document consultation notes and recommendations

SCENARIO

In this scenario, a resident from internal medicine has called you with a request to investigate findings on a patient of theirs. [patient] is a 48 year old male who was seen with a recent history of fever, fatigue, abdominal tenderness, mild jaundice, conjunctivitis, and darkened urine over the past several days. His bloodwork revealed an elevated white cell count. Your colleague has admitted the patient with a diagnosis of acute cholangitis and started them empirically on piperacillin-tazobactam. However, [patient] has not seen improvement.

Further history taking and examination reveals palpable liver, and stiff neck. The patient mentions that he is a groundskeeper at a golf course and has been working extensively on improving the water hazards and spends most of his day in the water. Your colleague is investigating causes of hepatitis, but is concerned regarding more significant infective disease processes. He has requested a consult from a Medical Microbiologist.

You agree to examine the results as well as conduct a review of the patient chart to gain any important collateral information that may assist with diagnosis and treatment.

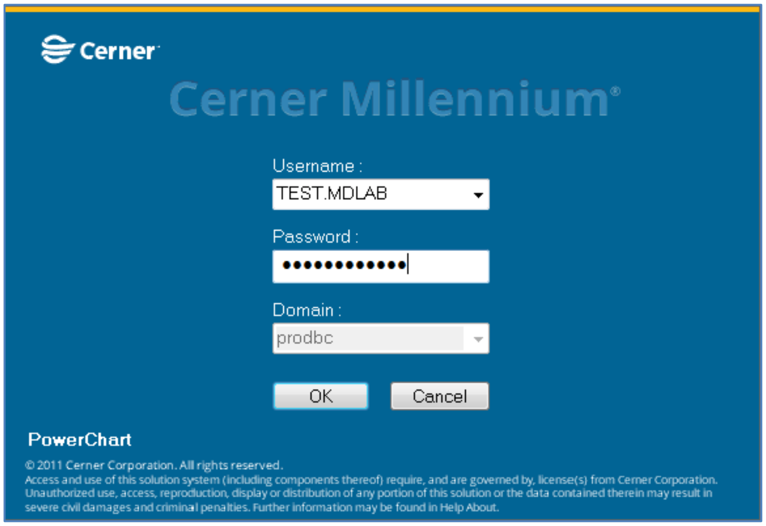
As a lab pathologist you will be completing the following activities:

- Log on to the Clinical Information System (CIS)
- Access patient charts and identify correct encounters
- Familiarize yourself with the CIS layout
- Familiarize yourself with your default home page
- Navigate the chart components
- Navigate the Lab Results Trending view
- Create, edit, and forward a note using Dynamic Documentation

Activity 1.1 – Log In and Access the Patient Chart

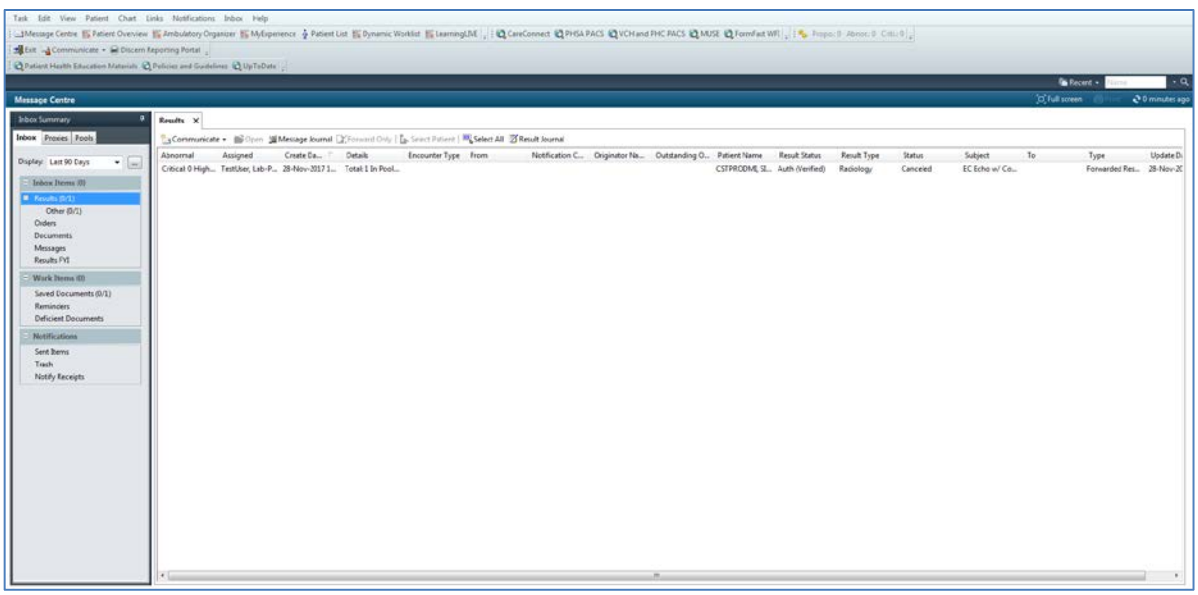
1 Username and Password

Begin by entering the provided Username and Password in to the Login screen.



2 Landing Page

Your landing page will be **Message Centre**.



NOTE: Most providers will interact with Message Centre multiple times a day, receiving information like results, order proposals, and patient notifications within this view. As a Medical Microbiologist, it is not expected that you will need to utilize the Message Centre functions; therefore it will not be explored in this workbook.

If you decide to investigate the Message Centre in depth, you can access the **Quick Reference Guide** (QRG) that has been created to help you familiarize yourself with its functionality.

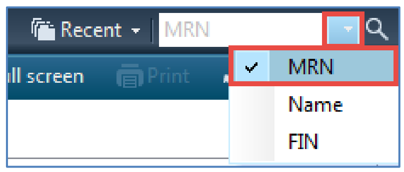
3 Patient Search

Your colleague has provided you with both the patient’s name and MRN. You can use either piece of information to begin searching for patients.

1. Navigate up to the patient search box in the upper-right corner of the page

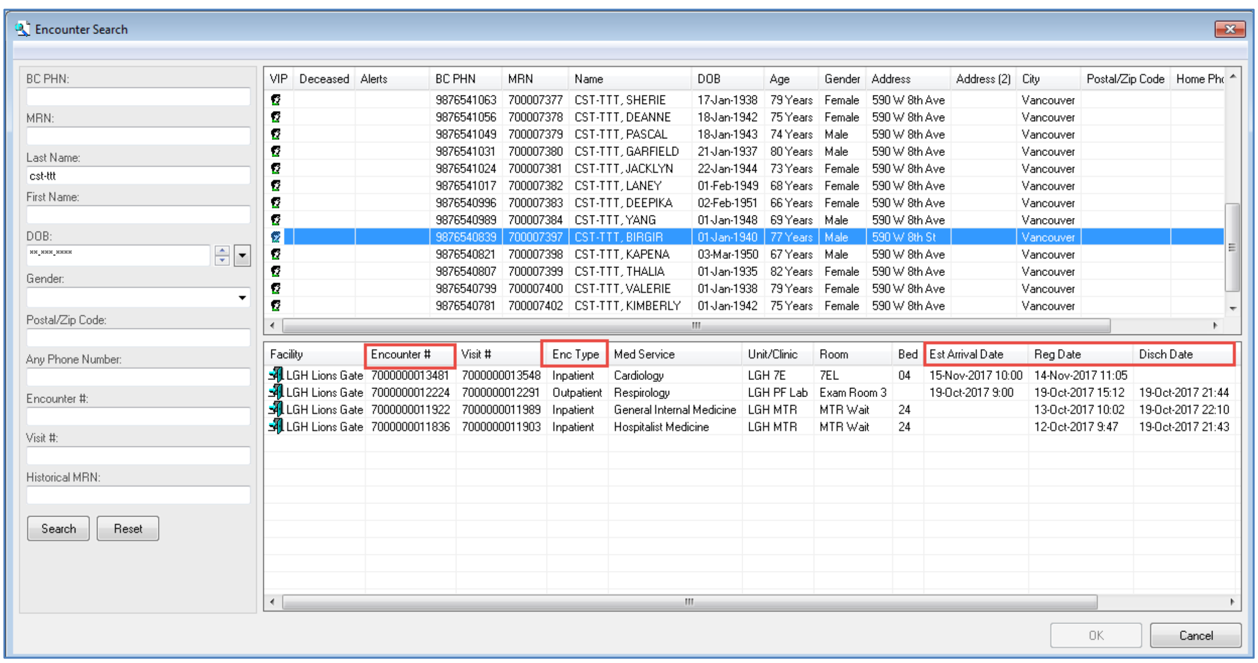
2. a) Type in [patient]’s name and click the magnifying glass icon to search. 

   b) If only an MRN is provided, click the drop down arrow beside the name search box and select MRN to change the search criteria to MRN.



4 Correct Patient and Encounter

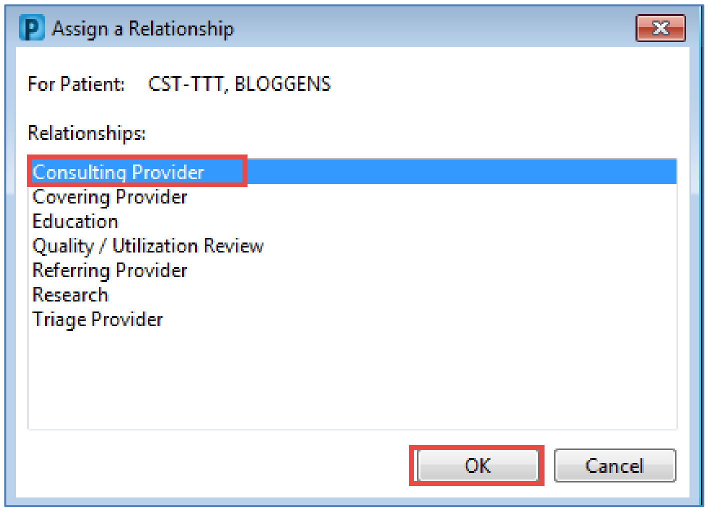
Select the correct patient and encounter from the results list



1. Click on the correct patient from the results list of names. A list of encounters will appear in the field below.
2. Examine the details of the **encounte**r to ensure it is correct.
3. Click **OK**.

NOTE: Several encounters can be active at the same time. Remember “Right Patient, Right Encounter.”

5 Assign a Relationship



When opening a patient chart, the Clinical Information System (CIS) requires you to create a relationship.

- Additional step for ensuring patient privacy and correct patient selection.
- Depending on your role, relationships can last for an encounter (ex. consulting providers), a shift (ex. bedside nurse), or even be a lifetime relationship (ex. general practitioner).

1. Choose **Consulting Provider** and click **OK** to open the patient chart.

Key Learning Points

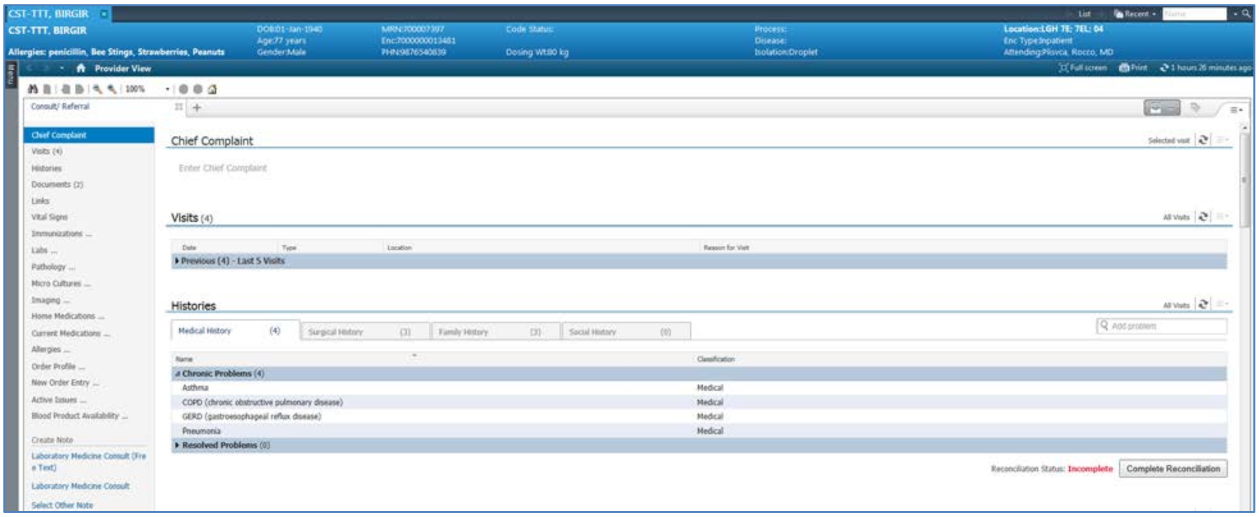
- Patients can be searched for using name or MRN and the search box can be changed to accommodate either option.
- Patients can have more than one actively open encounter at a time.

Activity 1.2 – Familiarization with the Patient Chart

This activity will give you a brief overview of the broad elements in **PowerChart** (the patient chart program) before exploring more interactively.

1 Single Patient Chart view and Provider View

PowerChart will open to the **Provider View** page.

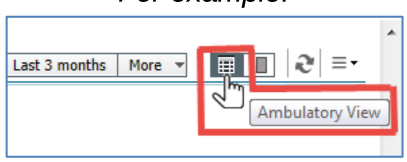


This is your default landing page for all patient charts and contains several different components used to both review patient information and actively complete work within the system.

These may be referred to as Summary views and Workflow views depending on their function.

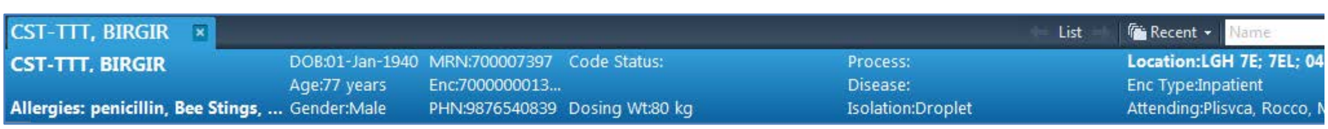
Users can use their mouse pointer and **"hover to discover"** details about different icons, headings, or links by holding their pointer over the desired aspect of the element in question.

For example:



2 Banner Bar

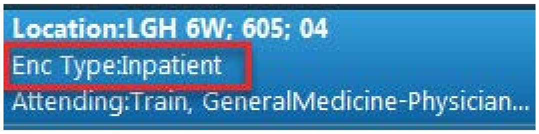
The **Banner Bar** is located at the top of the screen. It displays demographic data, alerts, information about patient's location, and current encounter.

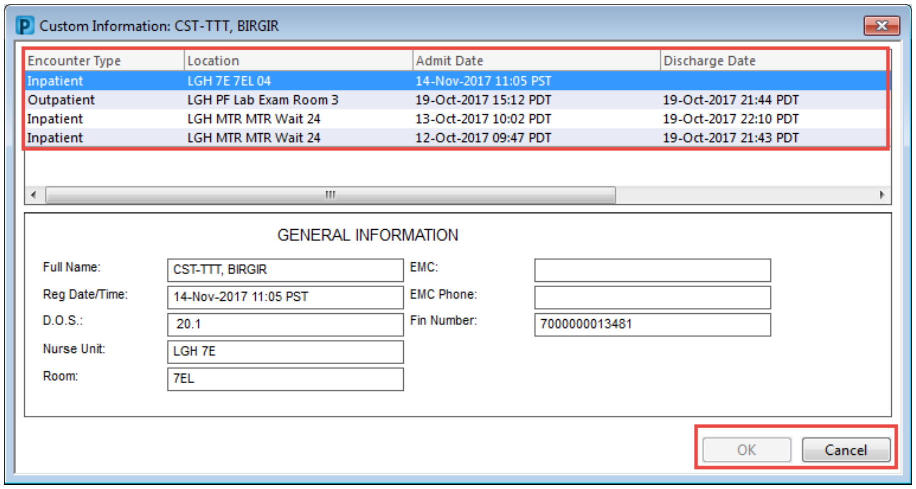


1. Move your mouse pointer over each piece of information contained in the Banner Bar and note when the pointer changes from an arrow icon to a hand icon.

   This means the piece of information is interactive and can be clicked on for a snapshot of convenient information that does not require you to change pages or views to see.

2. Click on **Enc Type** to open a window containing a summary of all patient encounters.

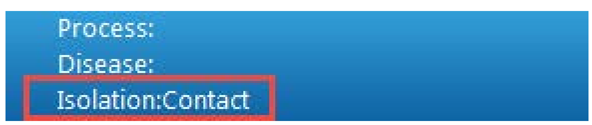




From here, you can review all other encounter types and verify that you have selected the correct encounter. You can also quickly choose to open a different encounter from this window if desired.

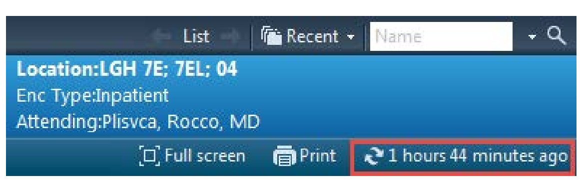
3. Click on **Cancel** to close the window, since you are not changing encounters.

NOTE: Along the **Banner Bar** that there are three **Alert** categories that can be populated with important information.



- **Process** - Things of special note to clinical and other staff like violence risk, falls, risk, or difficult airway.
- **Disease** - A coded list of diseases that only ICP can add to or remove. **This is a multi-select list and will follow patient charts across encounters.**
- **Isolation** – Isolation types that stem from isolation orders. This is **single-select list and will not follow a patient across encounters**.

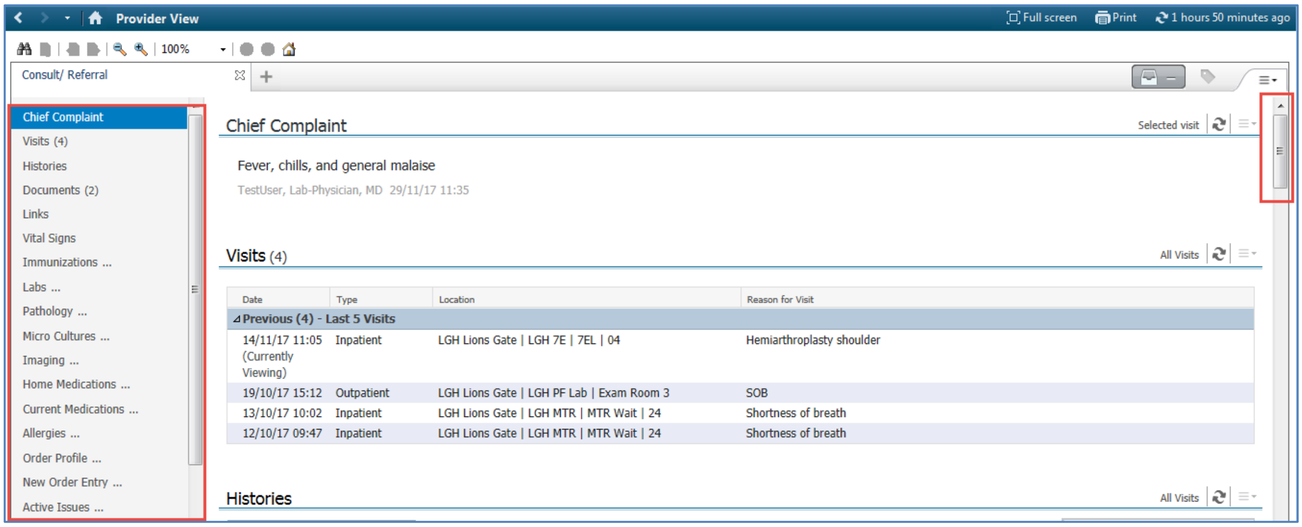
Below the Banner Bar, note the **Refresh** icon and timer showing how long ago the information on your screen was last updated. Refresh pages regularly and after completing tasks to ensure that your entries are up to date.



3 Components

On the left side of the screen is a list of components. These may differ depending on your specialty.

You can scroll through the list of components or click on the name of a specific component to review clinical information documented.



Key Learning Points

- Almost all aspects of your workflow that take place in the Clinical Information System (CIS) can be completed within Provider View
- Use the Refresh function regularly and after completing actions to update your view of the chart
- Components can either be scrolled through in order or can be clicked on from the components list to jump to the desired selection

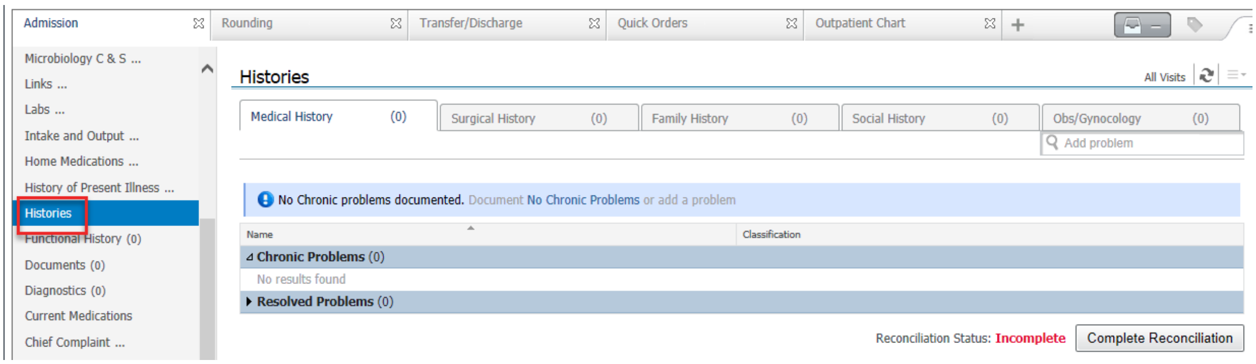
Activity 1.3 – Review of Collateral Information

As you have been asked by your colleague to review [patient]'s chart, you will now begin by accessing several components of the chart to search for information relevant to the consult note you intend to write.

You may choose to scroll through all components, but functionality of many different components is the same; therefore you will not be tasked with exploring all components listed in the left hand column.

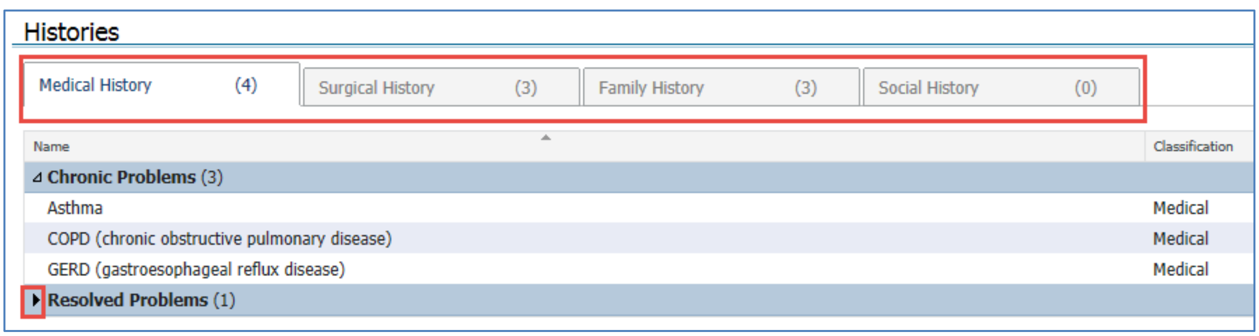
1 Review Histories

1. Click on the **Histories** band within the components list to bring the Histories component to the top of the page.

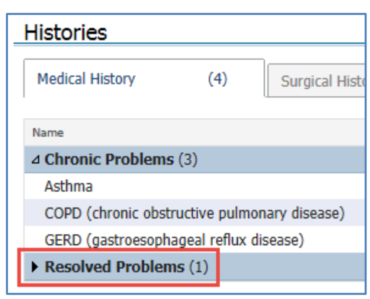


The **Histories** component is divided into four sections: Medical, Surgical, Family, and Social History.

2. Click on each of the **tabs** to review any previously recorded patient history within that section.



3. Subsections of Histories that are collapsed can be expanded clicking on the subsection title.

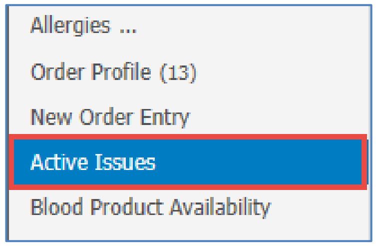


NOTE: You have the functionality to add to, remove from, or modify Histories. However, as a Medical Microbiologist, this will not be a function expected of you, so it has not been shown.

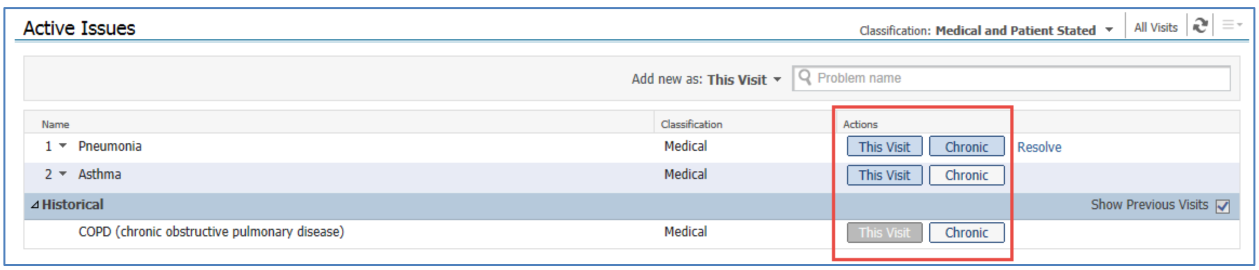
2 Review Active Issues

In addition to patient history, you also want to review [patient]'s present diagnoses and past health issues that have been recorded.

1. Click on the **Active Issues** band within the components list to bring the Active Issues component to the top of the page.

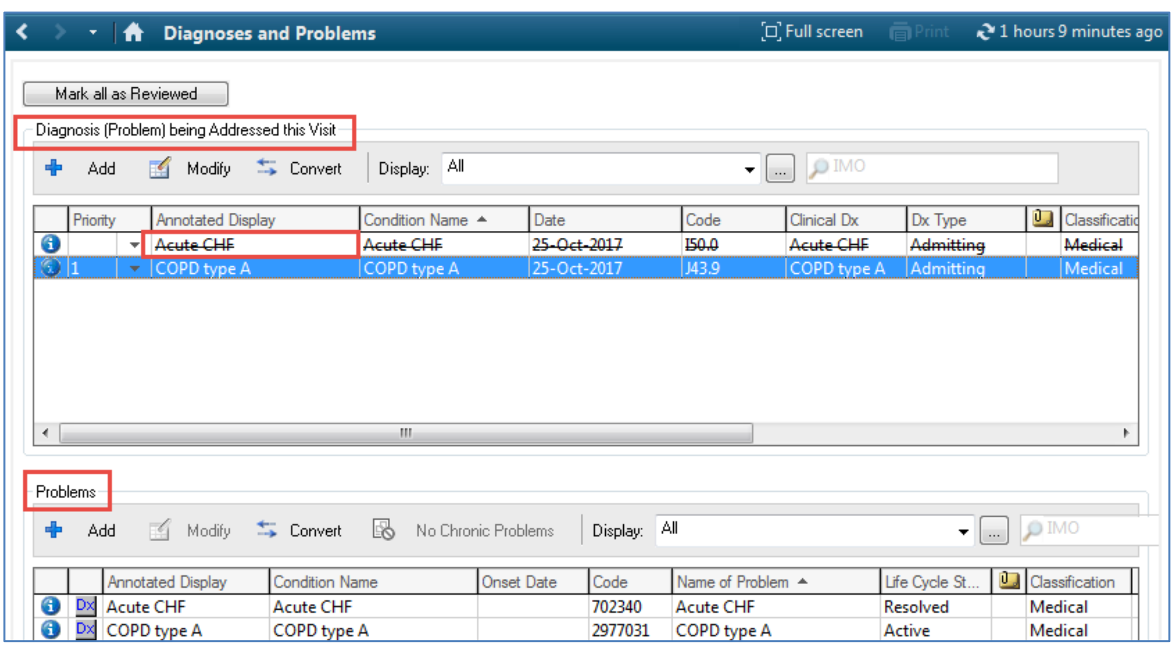


The Active Issues component allows you to view both current diagnoses as well as chronic problems. It pulls relevant information from patient histories as well as from problems and diagnoses.



The **This Visit** and **Chronic** buttons denote if the issue is strictly for the current encounter, a chronic problem, or both. Clicking these buttons can add or remove the issue from both active and chronic lists.

2. Click on the **Active Issues** heading to open the **Diagnoses and Problems** page.



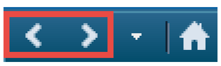
Active diagnoses that are being addressed this visit are listed in the top field, while chronic problems are listed in the bottom field.

If a diagnosis has been treated and resolved, all information associated with it will contain a strikethrough. ~~Acute CHF~~

While reviewing the Diagnoses and Problems page, you note the presence of hepatitis and conjunctivitis

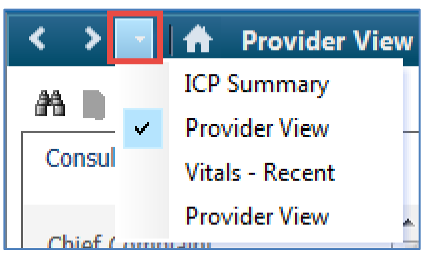
3. Use the navigation buttons  to return to the **Provider View**.

Arrow icons will take you back and forth between the previous view and current view.



Home icon will take you back to your default home page, **Provider View**. 

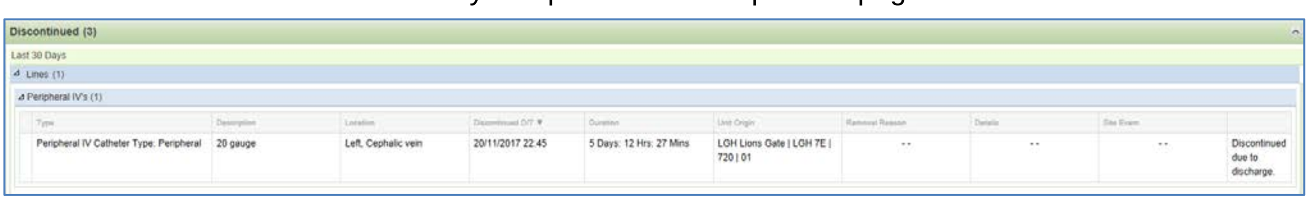
Drop down arrow icon will open a short list of the most recently viewed components or pages to select from.



3 **Lines/Tubes/Drains Summary** page provides you with a summary view of any invasive lines, tubes, or drains that are both currently in situ or discontinued within the last 30 days. The summary page contains useful information such as:

- Type and location
- Insertion/discontinuation date and time
- Duration of insertion period
- Indications for use
- Site appearance

1. Click on the **Lines/Tubes/Drains Summary** band within the components list to bring the Lines/Tubes/Drains Summary component to the top of the page.


Discontinued (3)
Last 30 Days
Lines (1)
Peripheral IV's (1)

Type	Description	Location	Discontinued D/T	Duration	Unit Origin	Removal Reason	Details	Site Exam	
Peripheral IV Catheter Type: Peripheral	20 gauge	Left, Cephalic vein	20/11/2017 22:45	5 Days: 12 Hrs: 27 Mins	LGH Lions Gate | LGH 7E | 720 | 01	--	--	--	Discontinued due to discharge.

NOTE: This information is “pulled forward” and populated from charting that is completed by caregivers and is only as complete and up to date as the charting that has been done by bedside staff.

4 Immunizations

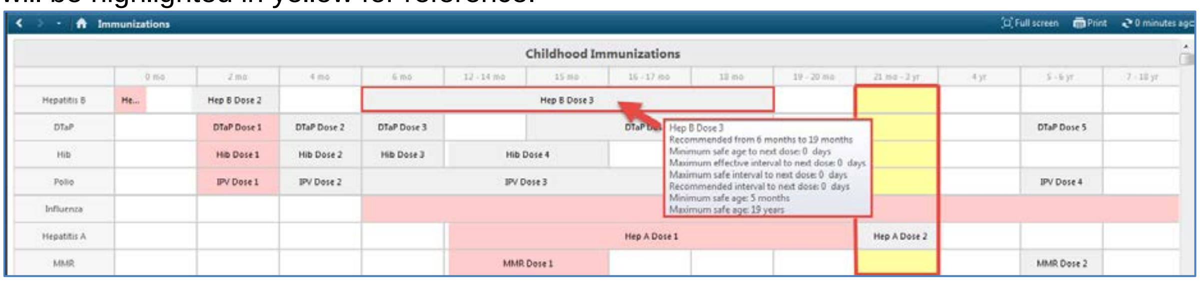
1. Click on the **Immunizations** band within the components list to bring the Immunizations component to the top of the page.

The **Immunizations** page is used to view, add, and modify historical immunizations as well as viewing future forecasted immunizations.

NOTE: This information is populated by clinical staff and may not be a complete representation of a patient's full immunization record.

Some immunizations that are either given in hospital or are high priority to document may be populated in this page view.

If a patient is a child, the childhood immunization schedule will be provided for reference within the **Immunizations** view. You can hover to discover dosing intervals and the child's current age range will be highlighted in yellow for reference.



If a patient has future immunizations scheduled, they will appear in the **Future Immunization Schedule** field.

Future Immunization Schedule

Vaccine	Due Date	Due Date	Due Date	Due Date	Due Date
DTaP	#1: 28-Apr-2015	#2: 27-Jun-2015	#3: 26-Aug-2015	#4: 25-Aug-2016	#5: 25-Aug-2019
Hepatitis A	#1: 27-Feb-2016	#2: 25-Aug-2016			
Hepatitis B	#1: 27-Feb-2015	#2: 28-Apr-2015	#3: 20-Aug-2016		
Hib	#1: 28-Apr-2015	#2: 27-Jun-2015	#3: 26-Aug-2015	#4: 27-Feb-2016	
Influenza	#1: 01-Aug-2017	#1: 29-Aug-2017			
MMR	#1: 27-Feb-2016	#2: 25-Feb-2021			
Polio	#1: 28-Apr-2015	#2: 27-Jun-2015	#3: 26-Aug-2015	#4: 21-Feb-2019	
Varicella	#1: 27-Feb-2016	#2: 26-Feb-2019			

Past immunizations that have been charted within the CIS will appear within the **Previous Immunization** field.

Previous Immunizations ☐ Hide Uncharted Records

Vaccine	Contraindicated	Admin Date
diphtheria/tetanus/pertussis (DTaP) ped		_01-Mar-1948
Hepatitis A		#1: 01-May-1949
Hepatitis B		#1: 01-Jan-1947
hepatitis B pediatric vaccine		_01-Mar-1948
Preventive Care: HPV Vaccine		#1: 01-Jan-2016

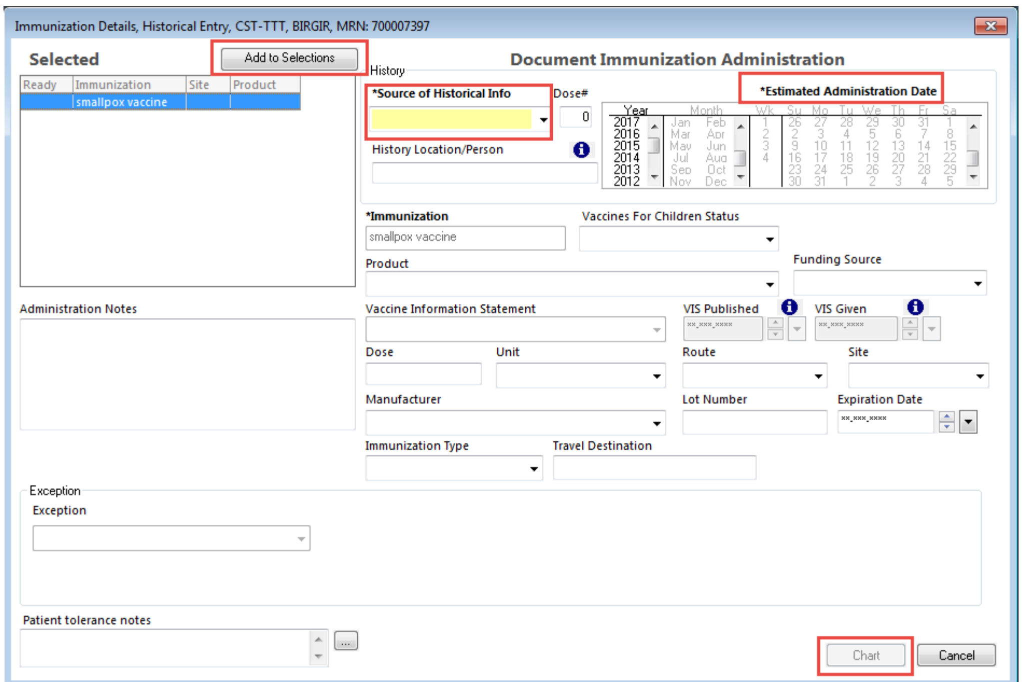
To add an immunization to the patient's **Previous Immunization** record, click on the **History** button.

NOTE: Adding immunizations is a shared task. Bedside clinical staff are able to document immunization history.

Within the **Immunization Details, Historical Entry** window, click the **Add to Selections** button and choose the appropriate immunization from the list.

Source of Historical Info and **Estimated Administration Date** are required fields and must be filled in before the form can be charted.

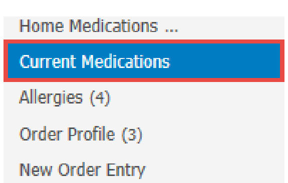
Once all relevant fields are completed, you can click the **Chart** button to add to the **Previous Immunizations** section of the Immunizations view.



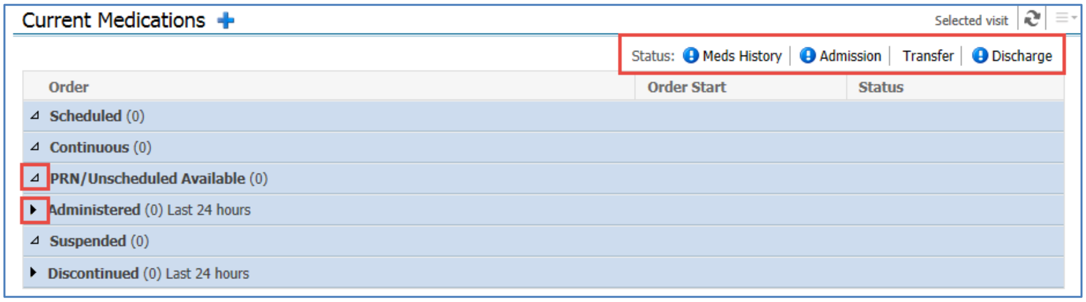
During your review of patient vaccinations, you note that clinical staff have recorded a Hepatitis A vaccination, but not Hepatitis B.

5 Current Medications

Click on the **Current Medications** band within the components list to bring the component to the top of the page.



The Current Medications component lists medications administered during the current encounter.



Within the component, a list of active medication orders can be viewed as well as recently discontinued medications.

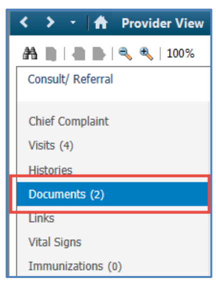
Each section can be expanded or reduced for organization.

The status bar at the top of the component is only used for recording best possible medication history (BPMH) and medication reconciliation upon admission, transfer, and discharge.

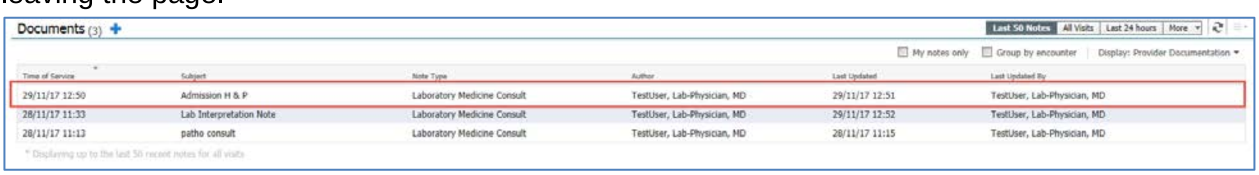
6 **Review Documents in Provider View**

You now wish to review the Emergency and Admission documentation by your colleagues to gain more information on [patient] and their current encounter.

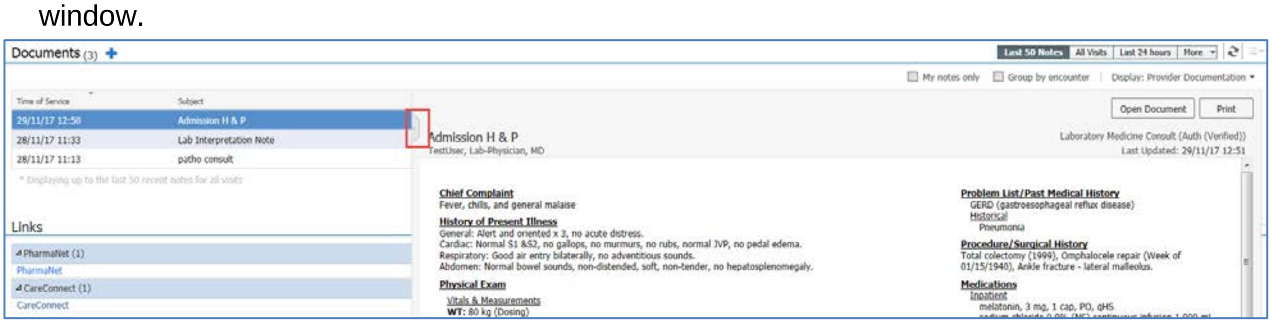
Click on the **Documents** band within the components list to bring the **Documents** component to the top of the page.



1. Click on a **Note**. A slide-out window will open, displaying the content of the document without leaving the page.

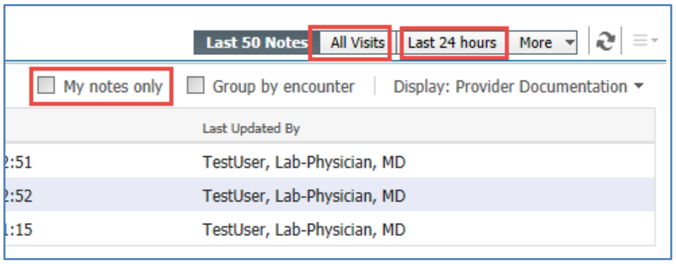


7. Click the **tab** to close the split screen. Double-click or select **Open Document** to open a new window.



In the workflow view, you can filter documents in many ways.

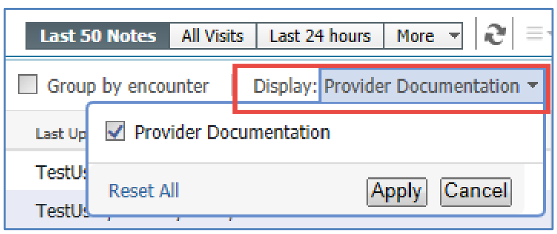
For example, you can display documents associated will **All Visits**, **Last 24 hours**, or **My notes** only**.**



2. After adjusting filters, you can click on the **Refresh** icon associated with the Documents component instead of the **Refresh** icon 24 minutes ago associated with the whole page. This will only update the specific component and apply the changes you have made to the filters. It will avoid resetting your screen back to the top of the **Provider View** page.

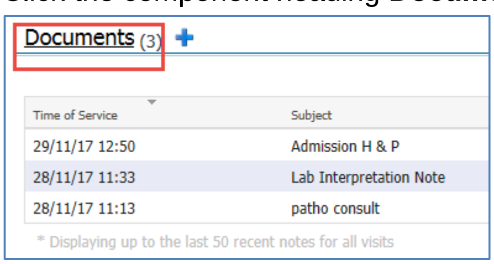
7 Review All Documents

One important filter is **Display.** As a provider, the CIS is configured to filter documents that are created by other providers only. This helps limit excessive results within the Documents component.



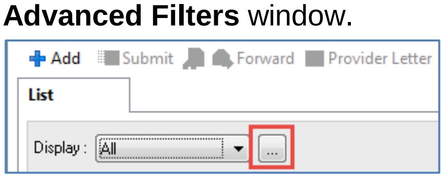
As a Medical Microbiologist, you will potentially want to review additional documentation created by other designations as well as scanned lab results. These can be easily viewed by following the steps:

1. Click the component heading **Documents** to display the **Documentation** view.

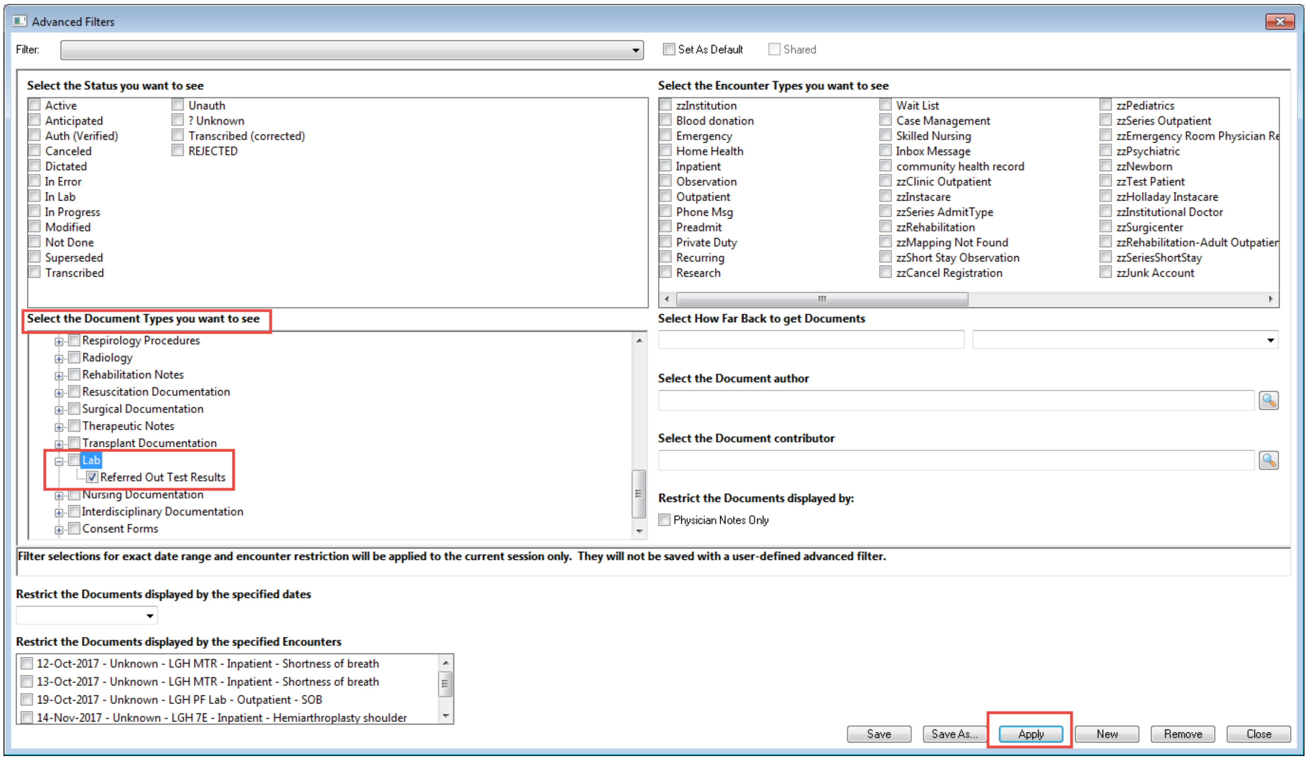


This view provides a comprehensive list of documents with more options. Here you will also be able to find any lab results that have been scanned in from other systems.

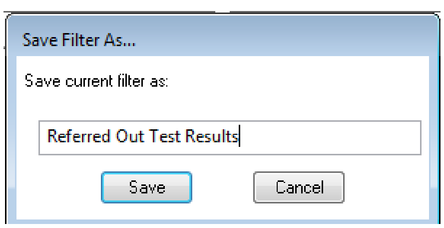
2. Filter results in the Documentation page by clicking on the Elipsis button ... to bring up the **Advanced Filters** window.



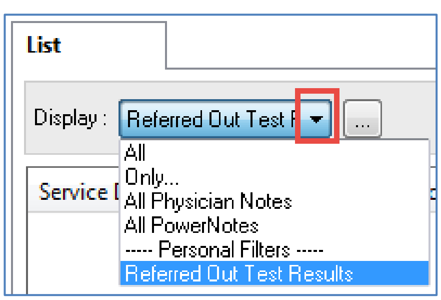
3. Under **Select the Document Types you want to see**, scroll down to **Labs** and click on the check box for **Referred out Test Results**. This is the title associated with all scanned lab result documents.



4. Click on **Apply**.
5. When prompted to save the filter, choose **Yes**.
6. Name your new filter "Referred out Test Results" and click **Save**.



This **Personal Filter** will now be available in the Documentation page for quick filtering of scanned lab documents.



After reviewing all documentation, you confirm that the patient has a palpable liver, fever, stiff neck, conjunctivitis, and jaundice. You also have now learned that he has recently been

spending much of his time at work in the water.

Click on the Home icon to navigate back to the Provider View.

Key Learning Points

- Component headings can be clicked on to open up pages with more functions
- Components can be individually refreshed by clicking the Refresh icon localized to the component.
- Scanned lab documents can be viewed by clicking on the Documents heading to open the full Documentation page and searching for the Referred Out Test Results filter.

Activity 1.4 – Labs and Diagnostics

Relevant labs, pathology, and microbiology can quickly be viewed directly within the **Provider View,** which may be enough for some providers however, as a Medical Microbiologist you may wish to use a more in-depth page available to review results.

Results Review provides you with more detailed information regarding:

- Labs
- Pathology
- Microbiology
- Transfusion
- Diagnostics
- Vital Signs and key clinical documentation

1 Results Review Page

1. Navigate to the **Microbiology** components within Provider View, noting that they are split into **Microbiology C&S** and **Microbiology Other**.
   - The Microbiology C&S component pulls results directly from the Microbiology module in Sunquest.
   - The Microbiology Other component is populated with all other microbiology results.

Microbiology C & S (50) | Last 50 Reports | Last 12 months | Last 6 months | More

Order	Susceptibility	Growth	Organism(s)	Source/Site	Collected	Last Updated	Status
Blood Culture		See Result	Gram Positive Bacilli	Blood	07/12/17 06:00	07/12/17 14:19	Result, Preliminary
Respiratory (lower) Culture		--	Staphylococcus aureus	Bronchial aspirate	06/12/17 11:30	06/12/17 15:18	Completed
Respiratory (lower) Culture		See Result	Pseudomonas aeruginosa	Sputum	14/11/17 08:00	20/11/17 13:40	Result, Preliminary
Trichomonas vaginalis		See Result	--	Genital	26/10/17 06:00	26/10/17 08:52	Completed
Respiratory (lower) Culture		See Result	Abiotrophia species	Sputum	25/10/17 08:00	31/10/17 12:07	Completed
Wound Culture		See	Coagulase negative	Abscess	04/10/17 08:42	04/10/17 09:07	Completed

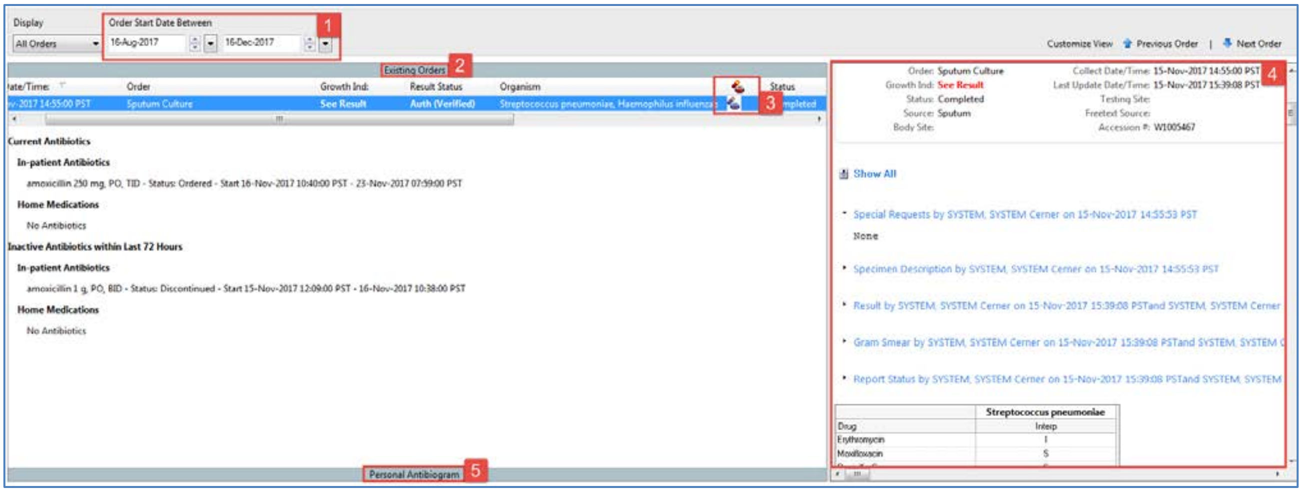
* Displaying up to the last 50 recent reports for the last 12 months

2. Click on the **Microbiology C&S** header to open up the **Results Review** page.

NOTE: Clicking on the **Lab**, **Pathology,** or **Microbiology Other** headers will also open the **Results Review** page, but with a different tab opened to view.

Lab - Recent | Lab - Extended | Pathology | Micro Cultures | Transfus

Within the **Results Review** page, the **Microbiology** tab will display several main sections:



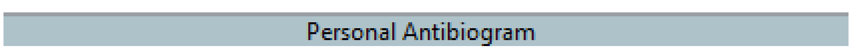
1 Dates for viewing microbiology specimens can be adjusted for desired ranges

2 **Existing Orders** subsection displays the current microbiology orders. When the order is clicked on, antibiotic information is displayed.

3 The pill and petri dish icon indicates that susceptibility results have been documented for this order.

4 When an order is clicked on, a **Specimen Information** window appears. This window contains information such as specimen description, susceptibility results, and gram smear results. Clicking on the order a second time will close the **Specimen Information** window.

5 **Personal Antibiogram** allows you to view a patient's susceptibility results for one or multiple specimens at a single view.

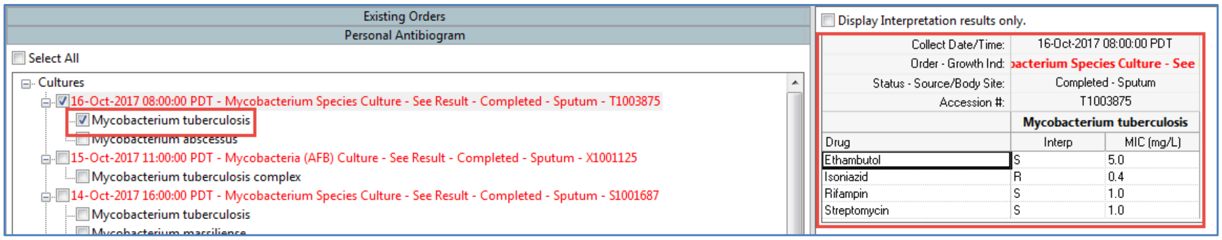


Click on this band to expand the subsection.

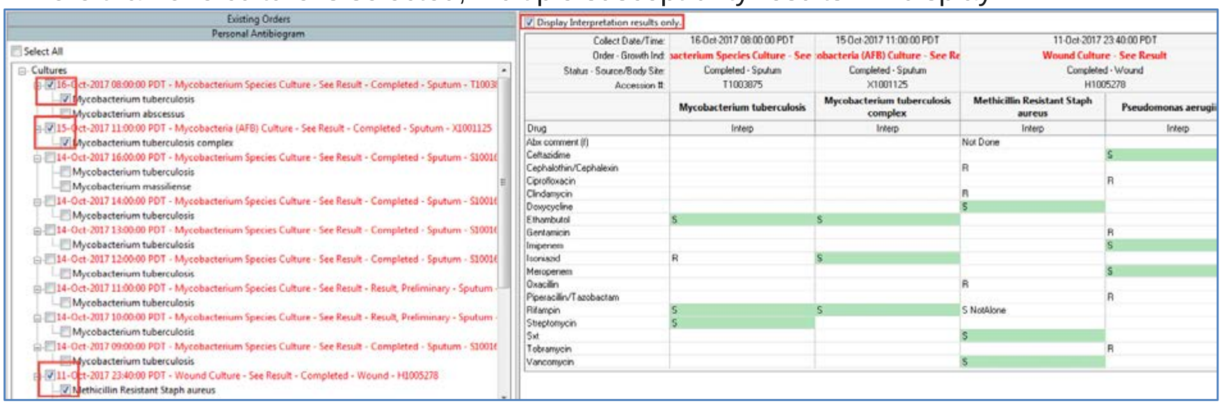
The list of qualified culture orders with susceptibility results is displayed. When available, each qualified order row displays the following:

- Collection Date and Time
- Order Name
- Susceptibility Result
- Status
- Source
- Body Site
- Accession Number

Selecting one culture will display the susceptibility results for that specific culture.



If more than one culture is selected, multiple susceptibility results will display.



Clicking on the **Display Interpretation results only** check box will remove the dilution results for antibiotics in the susceptibility window, making the layout easier to read.

The list of displayed cultures is sorted by collection date and time in reverse chronological order.

To view a full report for a selected culture, double-click the order's row.

3. Navigate through each results tab to familiarize yourself with potential content that could be under each category.

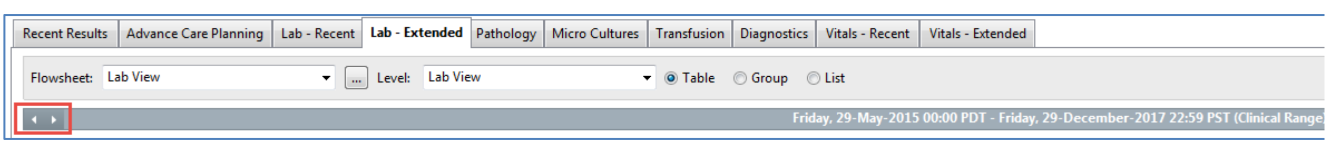
2

Adjusting Date Ranges

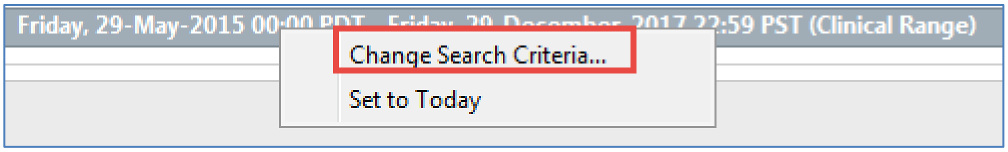
With the exception of **Micro Cultures**, date ranges for all other result tabs are set to default time spans.

1. Click on the **Lab-Extended** tab.
2. Click on the arrow icons to the left of the date header to adjust the range of results appearing on your screen.

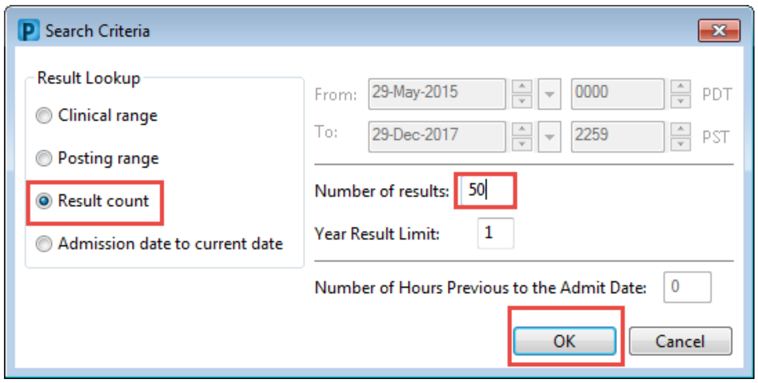
The arrows will only adjust the start date of the range, while the end date will stay constant.



3. To create custom date ranges for viewing, right-click on the date bar and select **Change Search Criteria**.



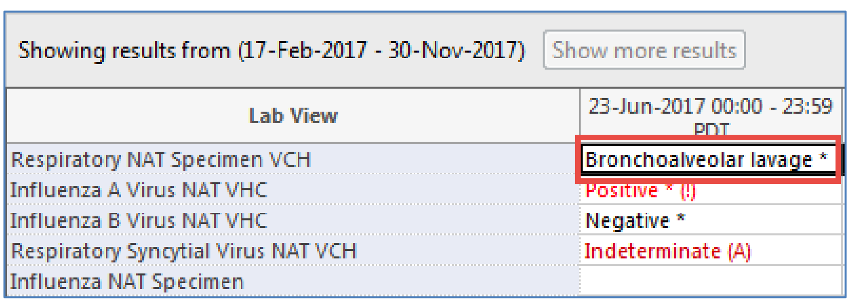
4. In the Search Criteria window, choose **Result Count** for **Results Lookup** and set the **Number of Results** to *50*. Click **OK**.



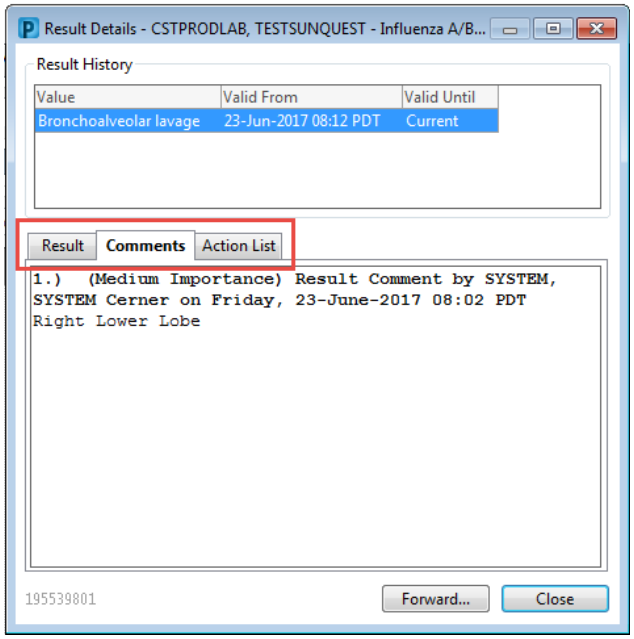
3 Results Details

Additional results details can be explored including comments associated with the result (ex. specimen criteria) and actions (ex. who performed the testing).

1. Choose the result you wish to see the details of and double-click the cell within the results table.



2. Within the **Results Details** window, navigate through the tabs to review the **Comments** and **Actions List**.

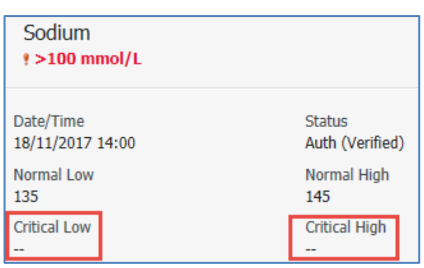


3. Click **Close** to return to Results Review.

Lab results may have additional characters or colours added to them to denote extra information:

- Critical values are in **bright red** and have an exclamation point **(!)** 32.4 mmol/L (!)
- High values are in **orange** and have an **(H)** or up arrow 18.5 mmol/L (H) **/** ↑ 56.2
- Low values are in **blue** and have an **(L)** or down arrow 3.1 mmol/L (L) **/** ↓ 10
- Positive results are in **bright red** and have an exclamation point **(!)** Preliminary Positive * (!)
- Abnormal results are in **dark red** and have an **(A)** Indeterminate (A)
- Results with a comment in the Details window have an asterisk **(*)** Bronchoalveolar lavage *
- Results that have been corrected have a **(C)** Negative * (C)
- Abnormal textual results are in **brown** and have a jagged line **(~)** ≀ Preliminary result
- If a column contains more than one results that occurred within the timeframe represented, a number will be visible noting how many results are available to view **(2)** 30 mmol/L [2]

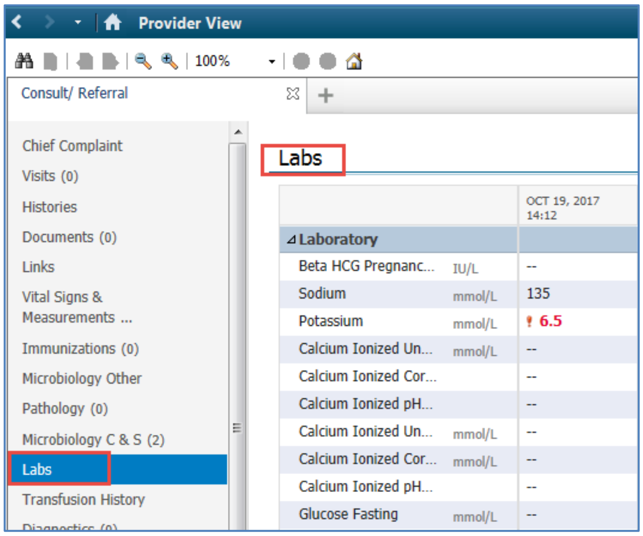
NOTE: Critical high and critical low results are based on Sunquest flagging values. Results will appear in bright red with exclamation points 32.4 mmol/L (!) but the critical ranges will not actually be stated within the CIS.



4 Lab Results Trending View

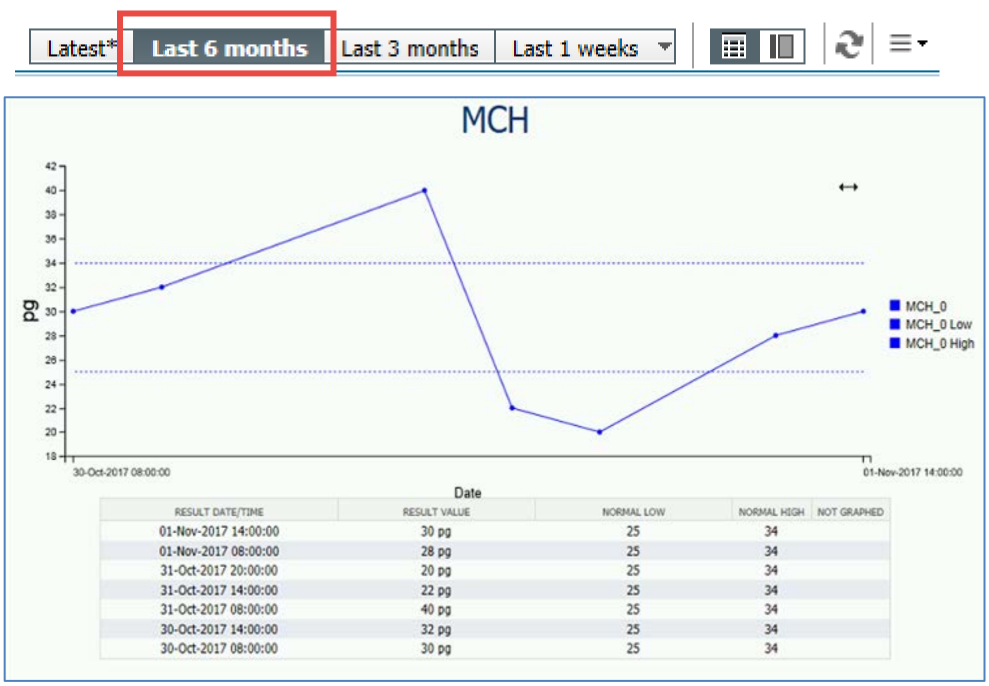
Lab Results Trending view is used for displaying lab results in an easy to read, visual graph for the purpose of viewing trends.

1. Navigate back to the **Labs** component within **Provider View**.

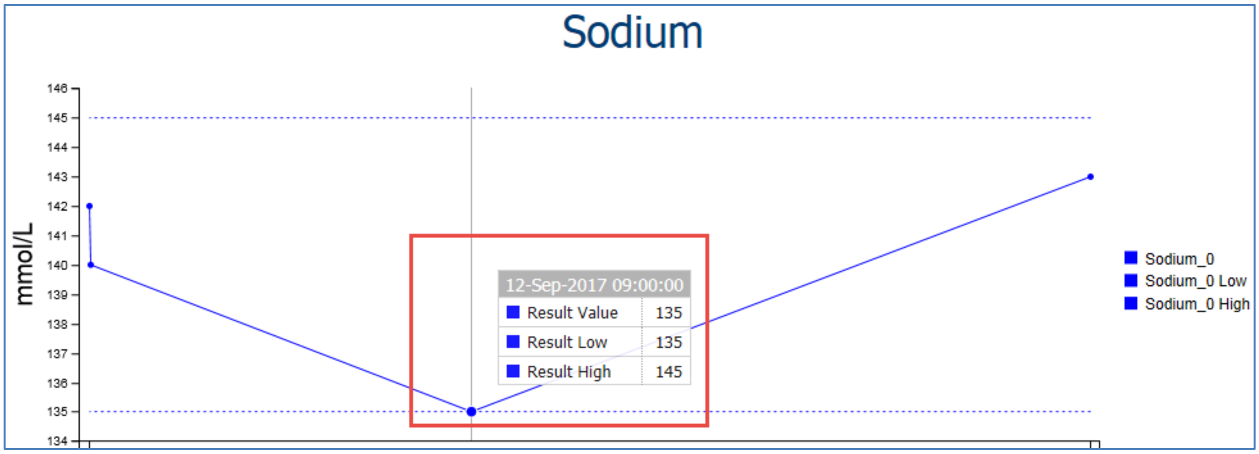


To view lab test values in a graph format:

2. Click on the desired test name. This will open the **Lab Results Trending** window, displaying a graph of all results data points for that test within the timeframe specified by the filter.

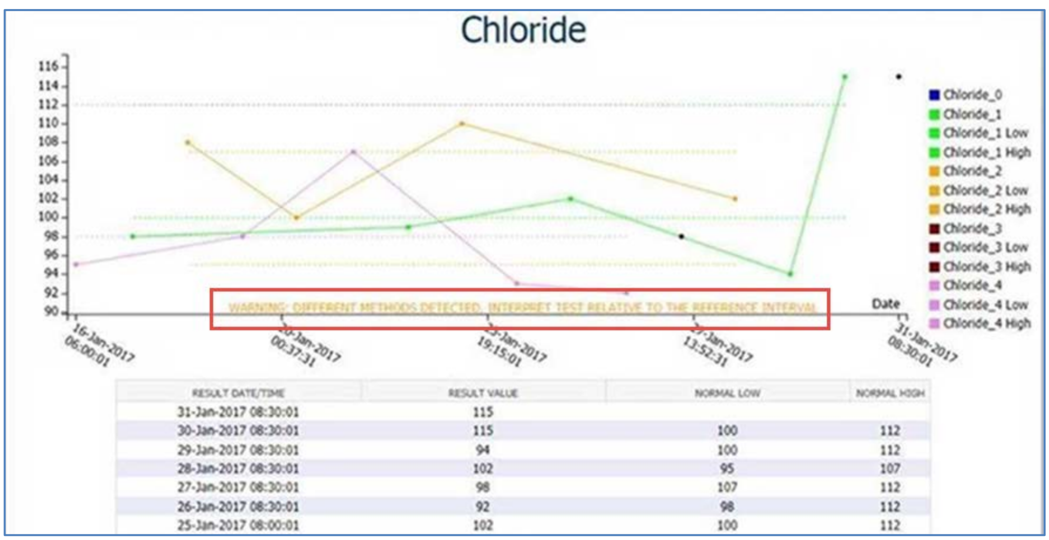


3. Use hover to discover with data points on the graph to view the result value and reference range associated with it.



Lab results may occasionally be produced on different analyzers/test kits, or may have come from a different Health Organization. This may result in lab work having different references ranges.

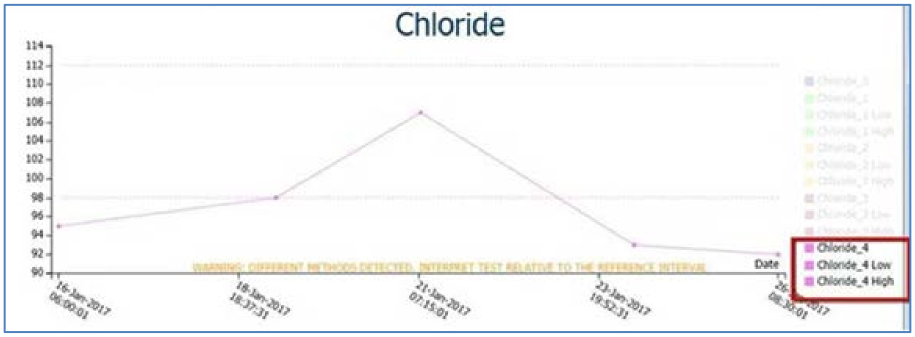
If the results you are viewing have several different reference ranges, the **Lab Results Trending** view will provide multiple graphs on the same page, complete with visible reference ranges.



RESULT DATE/TIME	RESULT VALUE	NORMAL LOW	NORMAL HIGH
31-Jan-2017 08:30:01	115		
30-Jan-2017 08:30:01	115	100	112
29-Jan-2017 08:30:01	94	100	112
28-Jan-2017 08:30:01	102	95	107
27-Jan-2017 08:30:01	98	107	112
26-Jan-2017 08:30:01	92	98	112
25-Jan-2017 08:00:01	102	100	112

WARNING: DIFFERENT METHODS DETECTED. INTERPRET TEST RELATIVE TO THE REFERENCE INTERVAL

To isolate individual series of results, you can click on the desired results in the legend along the right-hand side of the graph.



Values will not be graphed if:

- Only one data point
- Textual values
- Contain other non-numeric characters (such as < > ?)

The results grid below the graph will display a message that a result was not graphed in this instance.

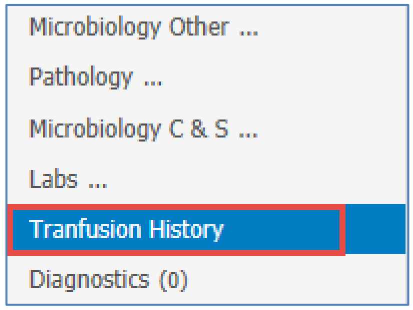
* List of results not trended on the graph :- Low Fibtem A10 suggests fibrinogen deficiency.Low Fibtem A10 suggests fibrinogen deficiency. on 07-Sep-2017 06:00:00

RESULT DATE/TIME	RESULT VALUE	NORMAL LOW	NORMAL HIGH	NOT GRAPHED
20-Sep-2017 09:17:00	143 mmol/L	135	145	
12-Sep-2017 09:00:00	135 mmol/L	135	145	
07-Sep-2017 10:55:00	140 mmol/L	135	145	
07-Sep-2017 10:40:00	142 mmol/L	135	145	
07-Sep-2017 06:00:00	Low Fibtem A10 suggests fibrinogen deficiency. Low Fibtem A10 suggests fibrinogen deficiency.	135	145	YES

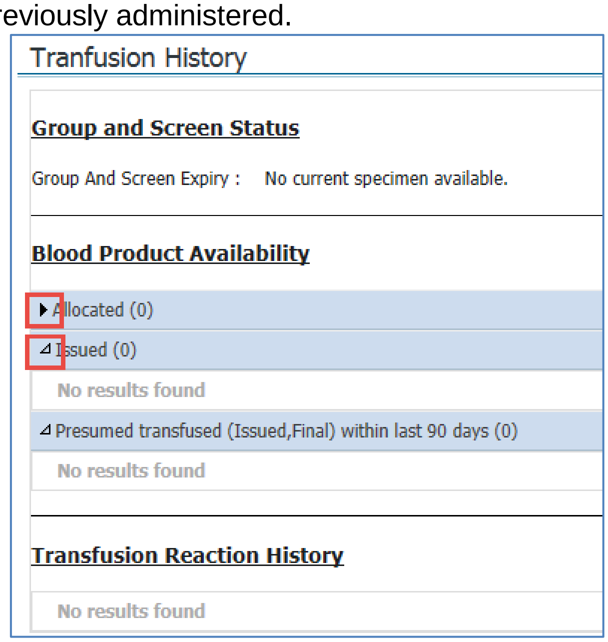
5 Transfusion History

The **Transfusion History** component is used to review any blood-related information.

1. Click on **Transfusion History** within the components list to take you to the Transfusion History component.



2. Within this section, you will find information broken down to three categories
   - **Group and Screen Status** displays the most current Group and Screen specimen and its expiry date.
   - **Blood Product Availability** displays past transfusions, blood products that have been allocated to the patient for use, and blood products that have actually been issued.
     These sections can be expanded or collapsed by clicking on the arrow beside the section title.
   - **Transfusion Reaction History** displays any recorded issues or reactions to blood products previously administered.



Key Learning Points

- Results Review can be accessed by clicking on any of the component headings for: Labs, Pathology, Microbiology C&S, or Microbiology Other.
- Double-clicking a result will open the Details window with more information about the test and result.
- Lab Results Trending window displays results for the selected test only within the timeframe specified by your filtering preferences.
- Hover to discover result values and reference ranges when viewing labs in Lab Results Trending view.

Activity 1.5 – Infection Prevention Summary

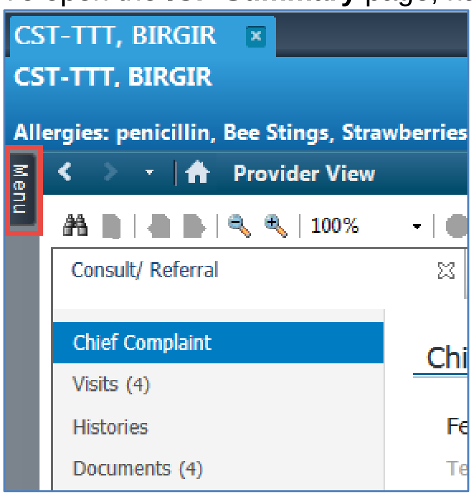
As a Medical Microbiologist, in addition to the Provider View page which contains clinically relevant patient details to review, you also have access to the **Infection Prevention Summary** (or **ICP Summary**) page**.**

This view provides several similar pieces of information already contained in the Provider View, but they are arranged and grouped in a more succinct manner. This means they are also more abbreviated and less interactive.

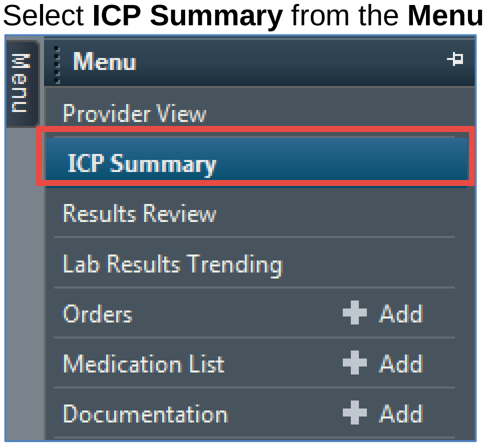
1 **Accessing ICP Summary Page**

Similar to the **Lab Results Trending** page, the **ICP Summary** page is not placed within the Provider View page. It also must be accessed via the **Menu** tab

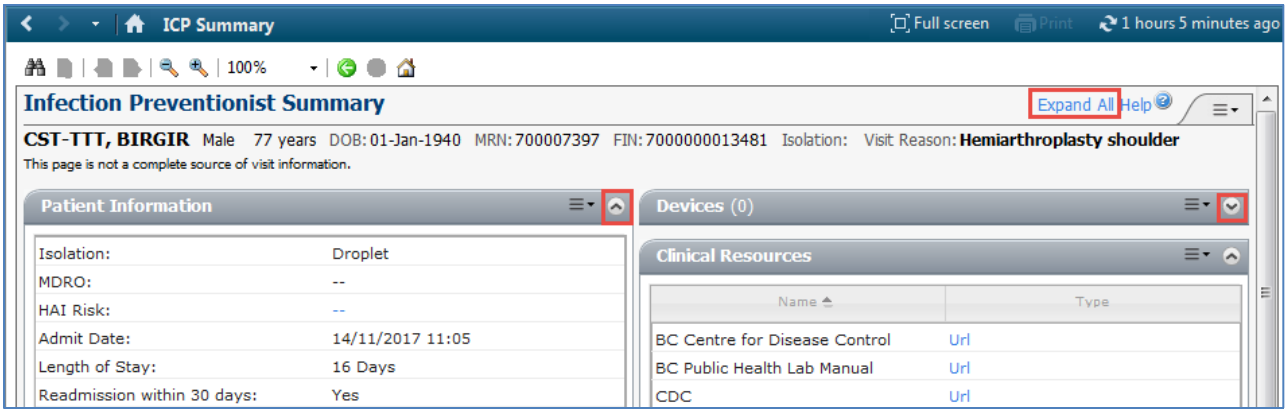
1. To open the **ICP Summary** page, navigate up to the small **Menu** tab below the Banner Bar.



2. Select **ICP Summary** from the **Menu** when the window slides out.



3. The ICP Summary page contains numerous summary components in compact, collapsed views.
4. Each component can be expanded individually by clicking the Expand arrow icon or all components can be expanded at once by clicking the **Expand All** button. Expand All



5. Take time to explore each component and consider the content available in the **ICP Summary** page compared to what is available in **Provider View**.
6. Use the navigation buttons to return to the Provider View when done viewing the **ICP Summary**.

Key Learning Points

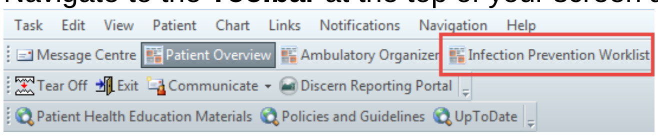
- The ICP Summary page is accessed through the Menu tab just below the Banner Bar.
- ICP Summary contains similar information found within other components, but is grouped in a more condensed fashion for quick reference.

Activity 1.6 – Infection Prevention Worklist

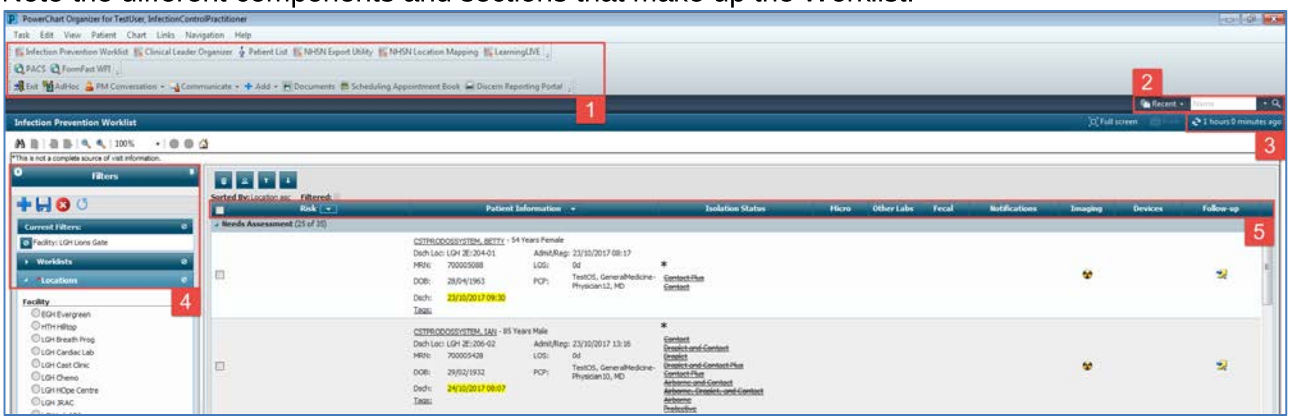
1 **Infection Prevention Worklist**

Occasionally, you will be tasked with reviewing patients from an infection control perspective and need to view more succinct details on multiple patients before opening individual charts. The **Infection Prevention Worklist** can aid in doing this.

Navigate to the **Toolbar** at the top of your screen and click on **Infection Prevention Worklist.**

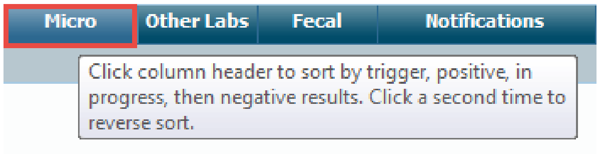


Note the different components and sections that make up the Worklist.



- **Toolbar** – Contains links to various applications and tools within the CIS.
- **Patient Search** – Users can quickly search for individual patients by name or MRN using this function.
- **Refresh** – Clicking here will refresh the page currently displayed on screen with any updated information in real time. Note the time since last refresh is displayed for user reference.
- **Worklist Filters** – Users can selectively filter locations to create worklists of relevant patient care areas.
- There are several categories used to filter and organize patients that have either: triggered infection prevention criteria, have positive results, negative results, or in progress results for that particular category.

Users can use their mouse pointer and **"hover to discover"** details about each category by holding their pointer over the category header.



i. **Risk column:**

The Risk column has the ability to display HAI alerts, AROs, and Reportable conditions.

ii. **Isolation Status column:**

Any change to isolation status is considered a **Qualifying Event** and will trigger the patient to the ICP Worklist. Canceled isolation orders appear in **~~strike-through font~~**.

iii. Micro column:

Positive Microbiology tests display on the ICP Worklist with the following icon.

Positive results are defined by the presence of the "Positive" indicator on the result.

Negative tests will display the following icon.

Tests that are still pending or in progress will display the following icon.

iv. Other labs column:

Positive Serology/Immunology or other general lab tests display on the ICP Worklist with the following icon.

Negative tests will display the following icon.

Tests that are still pending or in progress will display the following icon.

v. Fecal column:

Positive Serology/Immunology or other Gen Lab tests that are categorized as fecal tests display on the ICP Worklist with the following icon.

Negative tests will display the following icon.

Tests that are still pending or in progress will display the following icon.

vi. Notification:

The Worklist will display a clipboard icon to represent Infection Control notifications.

Infection Control notifications can include consult orders, certain documentation and ordering of certain tests.

vii. Imaging column:

If a patient has undergone diagnostic imaging, this column will display a radiation icon

viii. Devices column:

If a patient has any active lines, tubes, or drains, this column will display a device icon.

ix. Follow-up column:

If a patient has a reference note for follow-up placed on their Worklist profile, this column will display a sticky note without a plus sign. Sticky note icons with a plus sign mean you are able to add a Follow-up note.

NOTE: Many triggers will automatically bring a patient to the ICP Worklist; however, it is important to remember that positive laboratory results won't automatically place a patient on your Worklist.
ICPs will continue their current state of using printed reports to review new laboratory results that they need to be aware of.

Below is a list of all **Qualifying Events and Orders and Tests:**

Adenovirus/Rotavirus Antigen Stool BCCDC	Measles Virus Antibody IgM
Adenovirus NAT	Mumps Virus Antibody IgG
Clostridium difficile Toxin Stool	Mumps Virus Antibody IgM
Creutzfelt-Jacob Disease (CJD)	Mycobacteria (AFB) Blood Culture
Ed Consult to Infection Control Practitioner	Mycobacteria (AFB) Culture
Ed Consult to Infectious Diseases	Norovirus NAT
Fancisella tularensis Antibody	Pertussis NAT BCCDC
Hantavirus antibody	Rabies Virus Antibody
Hantavirus NAT	Respiratory syncytial Virus NAT CWH
Influenza Virus A NAT	Rubella Virus Antibody IgG
Influenza Virus B NAT	Rubella Virus Antibody IgM
IP Consult to Infection Control Practitioner	Varicella Zoster Virus Antibody IgG
Measles Virus Antibody IgG	Varicella Zoster Virus NAT

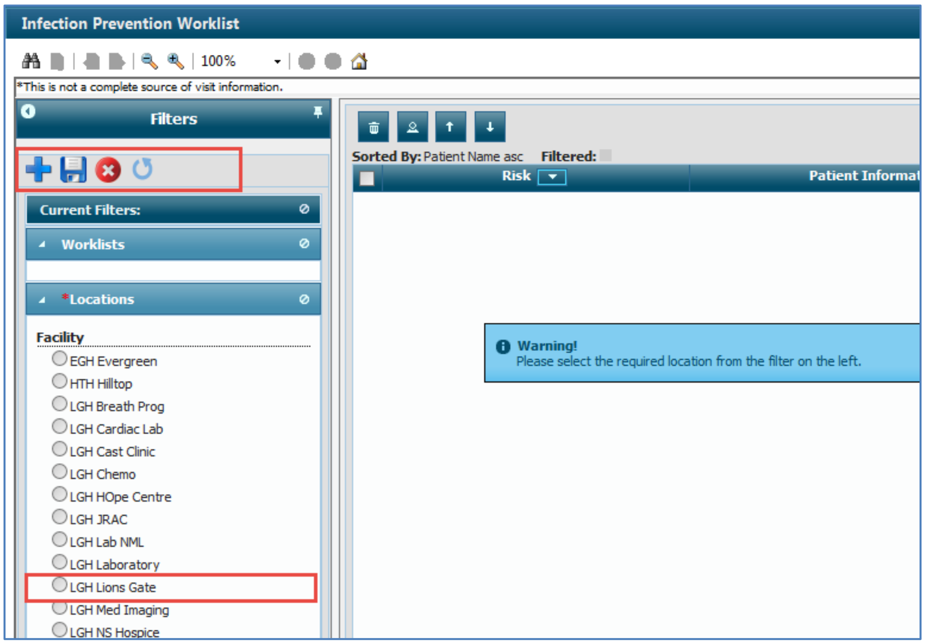
Documentation of Risk Factors:

Qualifying Event	**Actions within CIS**
Healthcare outside of Canada within the last year	Contact Precautions, ICP Worklist
Household contact with known CPO in the last year	Contact Precautions, ICP Worklist
"History of AROs"	Contact Precautions, ICP Worklist
"History of CPO"	Contact Precautions, ICP Worklist
Active Pulmonary TB	Airborne Precautions, ICP Worklist
"Diarrhea"	Contact Plus Precautions, ICP Worklist
Exposure to Measles	Airborne and Contact precautions, ICP Worklist
Exposure to Mumps	Droplet precautions, ICP Worklist

Exposure to Chicken Pox	Airborne and Contact precautions, ICP Worklist
Recent Exposure to TB	Airborne Precautions, ICP Worklist

2 Create Custom Worklists

Your Worklist will initially be blank. Now is the time to create custom Worklists for daily use.



User-defined Worklists can be created based on your defined workflow. Examples would include ARO by location, all reportables possible Hospital Associated Infections, or specific locations. These user-defined Worklists can be saved and reused by the user

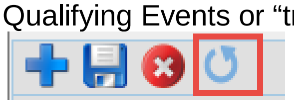
NOTE: Saved Worklists cannot be proxied to other users and are only available to the user who creates them.

3 Create a Facility-Wide Worklist

Begin by creating a broad Worklist of the entire facility Lions Gate Hospital.

1. Choose **LGH Lions Gate** from the Locations menu on the left hand side. The **Current Filters** box will populate with filters that you are adding to the custom Worklist.
2. Click on the **Save List** symbol to create this new list with the one filter you have chosen.

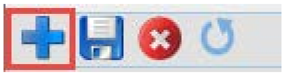
3. Enter the name "LGH" for the list when prompted and tick box beside the **Default** option to make this your default Worklist when opening PowerChart.
4. Clicking **Generate List** will now populate your Worklist screen with all patients that have Qualifying Events or "triggers" for infection control review within the filters you have chosen.



4 Create a More Specific Worklist

Regularly, you may need to create Worklists that are specific to certain wards or areas within a facility. Within the Infection Prevention Worklist view, you can create custom lists that filter locations.

1. To create a more specific Worklist, begin by clicking the **New List** icon. Note that the **Current Filters** clear.



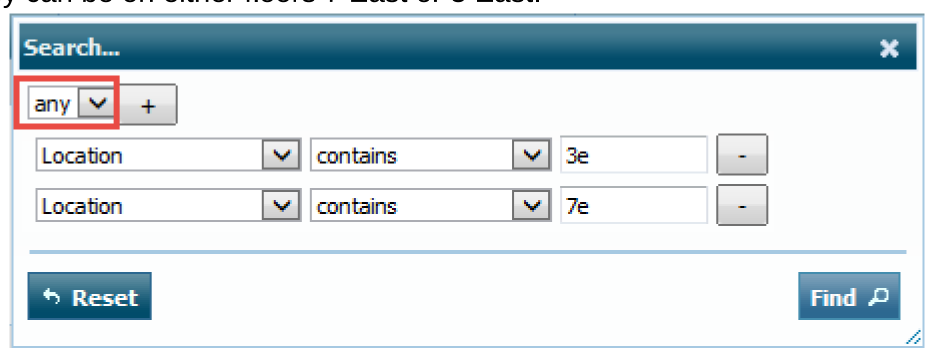
2. Choose "LGH Lions Gate" Facility from the **Locations** list first. Note the red asterisk for a required field.

3. Select **Find Records** located along the bottom of the Worklist page. The user will then be able to filter the ICP worklist based on information available in the **Patient Information** worklist columns.

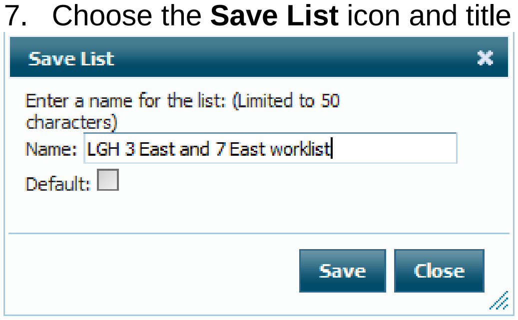
4. Choose criteria **Location** from the drop down menu to **contain** the term "3E"
5. Click the plus symbol to add another filter criteria
6. Choose **Location** and **contains** "7E".

When selecting criteria, pay attention to the **All/Any** dropdown. "All" is more exclusive, "Any" is more inclusive.

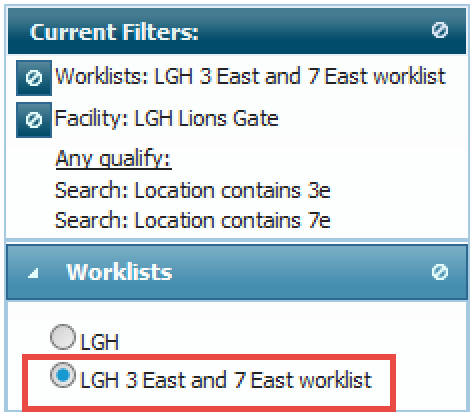
The "Any" in this example means that **either** criteria can be **True**. In order for a patient to qualify, they can be on either floors 7 East or 3 East.



7. Choose the **Save List** icon and title your new list "LGH 3 East and 7 East worklist"



You now have multiple custom Worklists to choose from when searching for specific patient criteria.

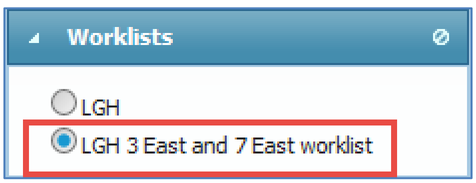


5

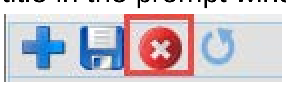
Delete a Worklist

If a worklist is unneeded, you can remove it from your Worklists

1. Select “LGH 3 East and 7 East worklist” by clicking the radio button beside it.



2. Click on the **Delete List** icon. Ensure this is the correct list to remove by reviewing the list title in the prompt window and choose **OK.**



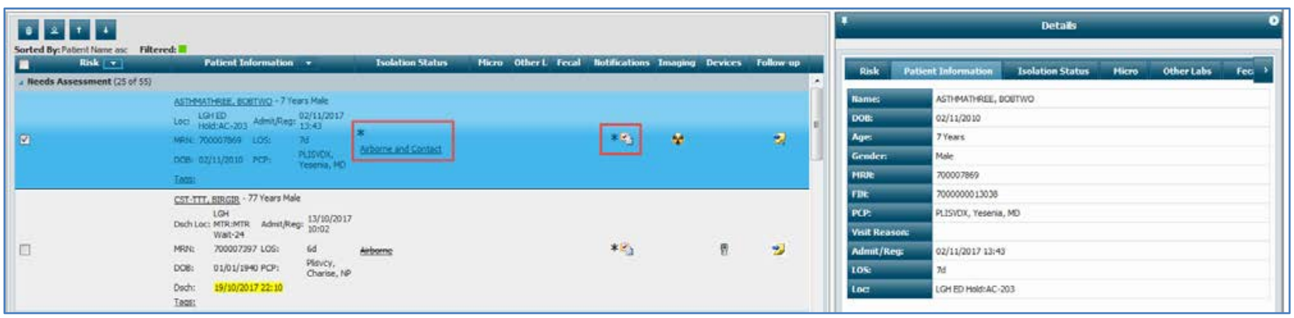
6 Reviewing Patient Details

Within the Worklist page, you can review the details of the triggers or **Qualifying Events** that cause a patient to appear on the Worklist.

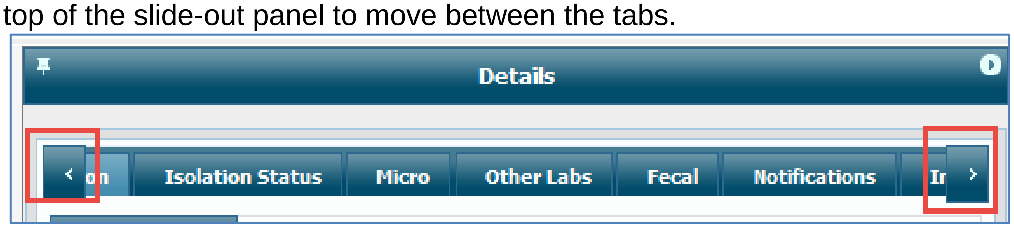
NOTE: Certain icons have asterisks beside them. These are the Qualifying Events that caused the patient to populate on the Worklist.

1. To review the details behind the icons that appear on the Worklist, highlight the patient's row to open the **Slide-out panel** on the right side of the Worklist. Do this by clicking in any of the "white" space.

   Clicking directly on an icon will not cause the **Details** panel to appear.



2. Once the **Details** panel appears, click on the icons to review specific results. This will cause the correct tab of the slide-out panel to appear. You may also use the left and right arrows at the top of the slide-out panel to move between the tabs.



3. Click through the **Details** tabs to briefly review the infection control-relevant information currently collected for a patient of your choosing.

Key Learning Points

- “Hover to discover” when unsure of icons, buttons, or categories.
- You can create multiple Worklists based on what information you want to filter.
- General Worklists can also be reorganized by different categories by clicking the title/header of each column.
- Open the **Details** panel by clicking the white space within the desired patient’s row of information.
- Click on individual icons to jump to that section of the **Details** window.

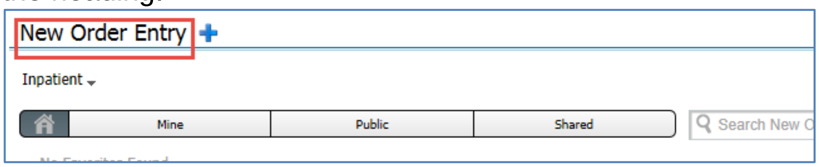
Activity 1.7 – Order Entry

After reviewing [patient]'s chart, you feel that he needs to be tested for Leptospirosis and wish to order the appropriate lab test.

1

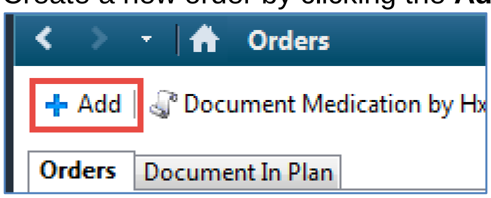
Create a New Order for Lab Test

1. Return to **Provider View** by clicking on the **Home** icon. 
2. To access a patient's orders, navigate to the **New Order Entry** component and click on the heading.



This will bring up the **Orders** page where you can review all active orders.

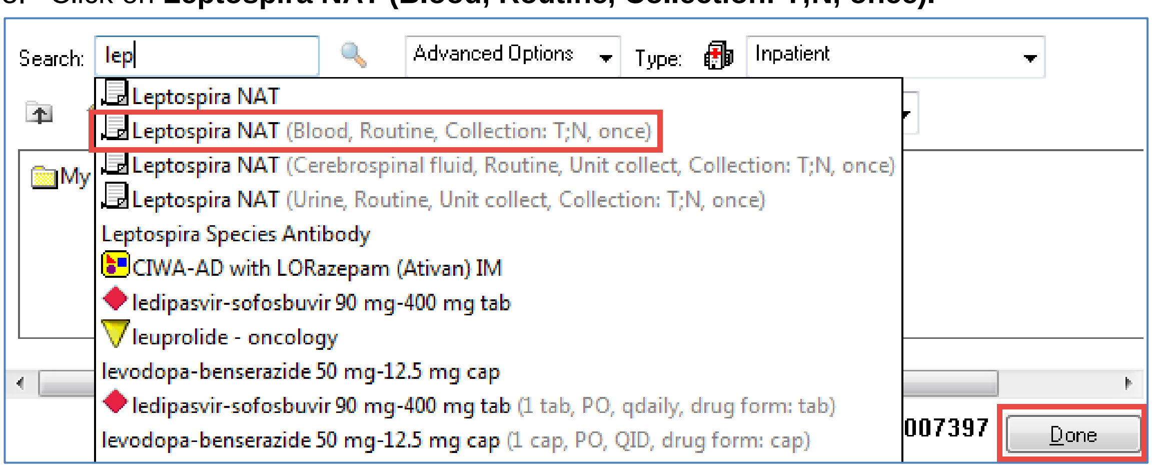
3. Create a new order by clicking the **Add** icon in the upper-left corner of the **Orders** page.



4. A new **Add Order** window will appear. Within the search box, begin to type "Lep". The search function is equipped with predictive text and will attempt to autofill the remainder of the order sentence. If unsure of an order sentence, try typing only the start of a key word to see suggestions.

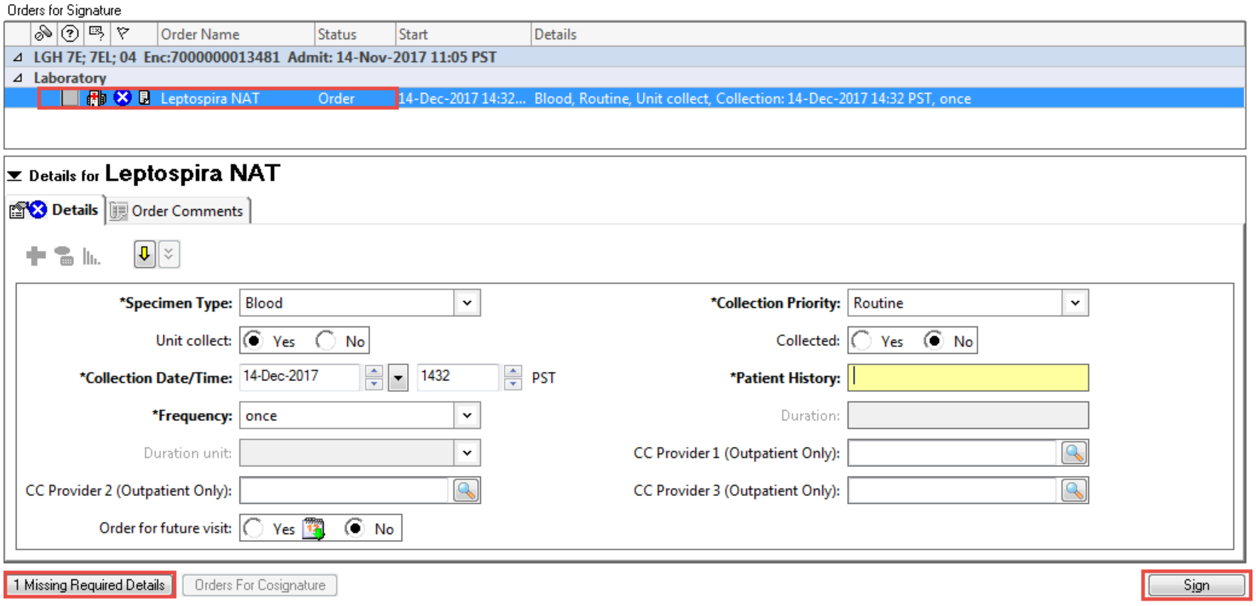
NOTE: Make sure to read the full order sentence to verify it is the correct order, as there may be several similar orders.

5. Click on **Leptospira NAT (Blood, Routine, Collection: T;N, once).**

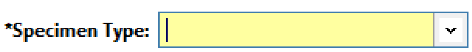


6. If placing another order, you would continue this sequence of events. Since you are only entering one order, click **Done** to close the **Add Order** window, returning you to **Orders** page.

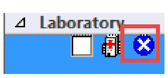
2 Review Order Details and Sign



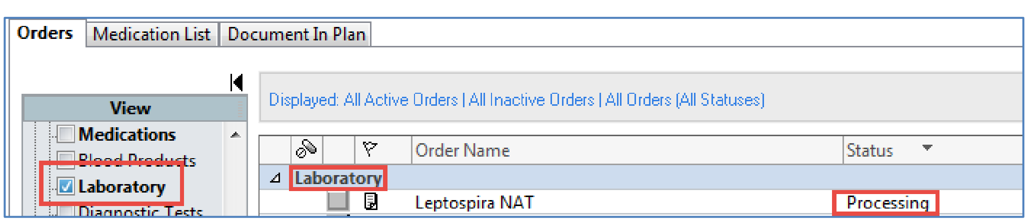
7. Click on the new lab test order sentence to bring up **Order Details**.
8. Review the details of the order. Note all required fields have an asterisk beside them and will appear yellow if no information is currently entered.

   Incomplete orders will also be indicated by a blue and white X icon If required fields remain empty when you attempt to sign an order. An error message will appear and redirect you to the missing fields for completion.

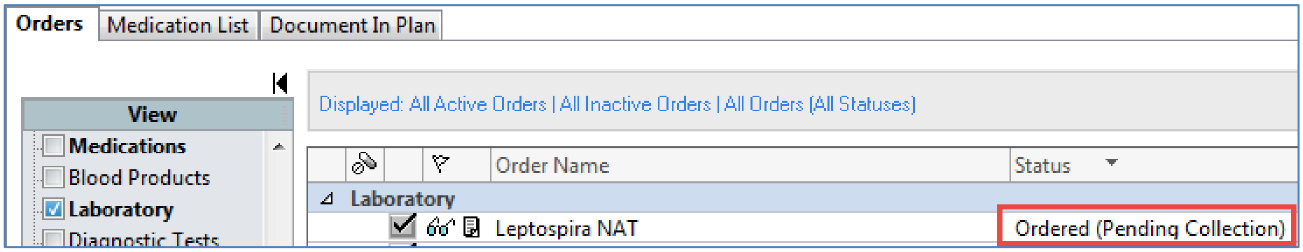
   

   A **Missing Required Details** button will also appear below the **Order Details** field. When clicked, it will redirect the user to the missing field for completion.
9. Free-text in your choice of information for the **Patient History** field. Note that the blue and white X icon will disappear and the Missing required Details button will now become greyed-out.
10. Click **Sign.**



The new lab test order will be visible under the **Laboratory** header of the orders with a **Status** of **Processing.**

11. **Refresh** the patient chart. 



The **Status** is now **Ordered.** Since you did not state that the specimen was already collected in your order, it appears with the information that it is still pending collection.

Note the icons beside your **Order Name.**

Common Icons for Orders:

- - The order is part of a PowerPlan (order set)
- - This order is yet to be reviewed by a nurse
- - This order is yet to be reviewed by a pharmacist
- - This order is due to be renewed
- - This order is available to be scheduled as an appointment

Additional information about most icons can be viewed by using the “hover to discover” ability.

Key Learning Points

- The **Order** search function has predictive text and will attempt to automatically bring up order sentences as you type. If unsure of an order sentence, try typing in key words, or only partial words to see results.
- Not all **Order Details** fields are required to place an order. Make sure to review all fields to determine if appropriate to fill them out.

Activity 1.8 – Creating a Document

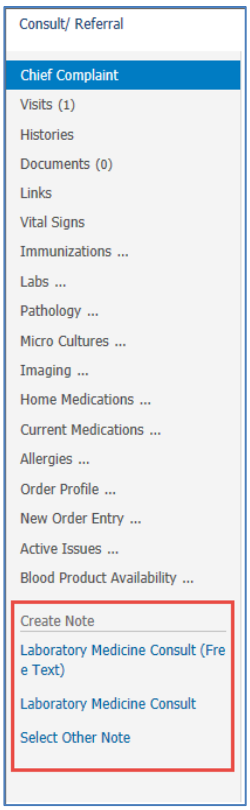
After reviewing [patient]'s chart, as well as external sources such as CareConnect or Sunquest/Sunset, you have decided to write a consult note to convey your recommendations and findings to the other members fo the care team.

The CIS uses a function called **Dynamic Documentation** to pull all existing and relevant information into a comprehensive document, using standard templates of your choosing.

Dynamic Documentation can save you time by allowing you to populate your documentation with items you have reviewed and that have previosuly been entered into the patient chart.

1 Create a Note

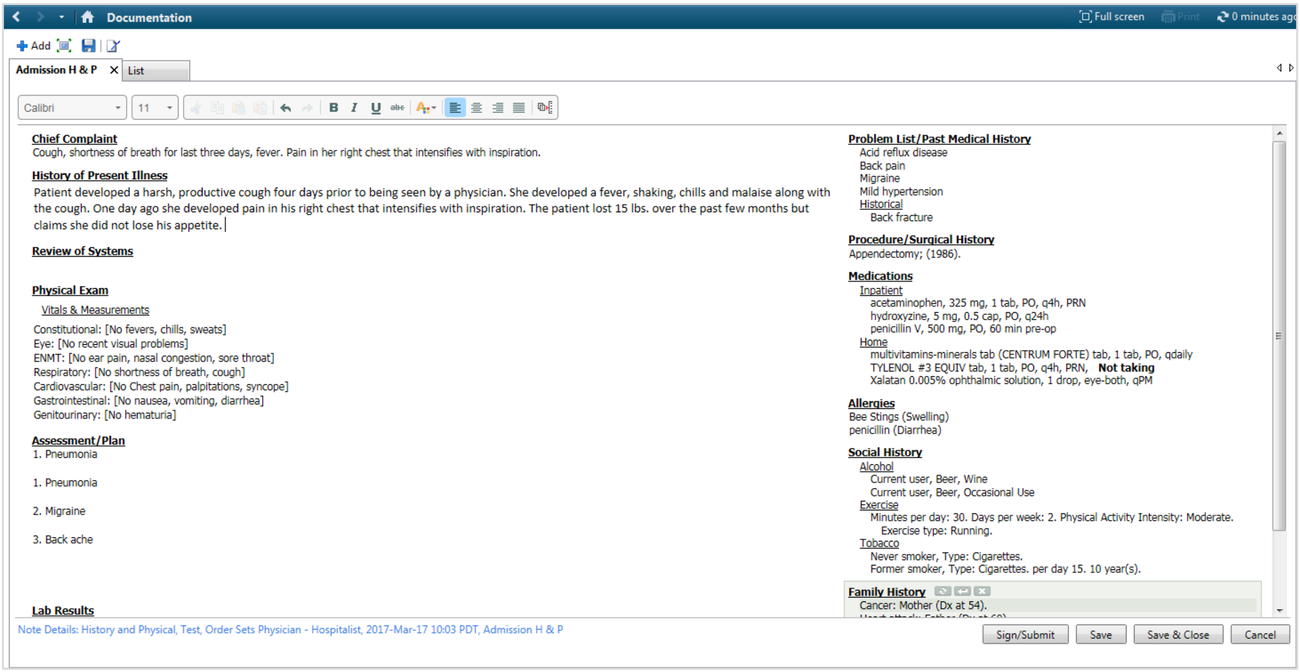
1. Navigate to the **Create Note** section under the components list.



This section displays a short list of note types that are commonly used for Laboratory Pathologist consultations.

2. Click on **Laboratory Medicine Consult** to open the consult note template.

The draft note displays in edit mode ready for your review. Review the different sections of this note. Many of the sections will automatically populate with the information captured by you and other clinicians. This is Dynamic Documentation in action.



2 Editing Documents

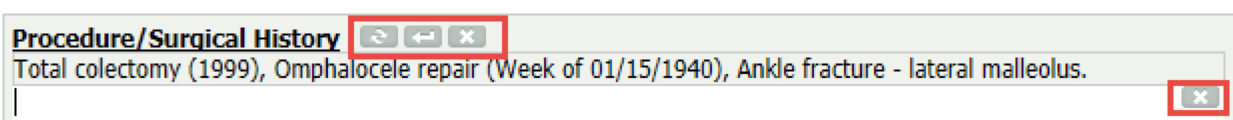
If any information is missing, you can add it directly in the note. You can also delete any unwanted information.

1. Position your cursor over the heading **History of Present Illness** to modify. The small toolbar activates:

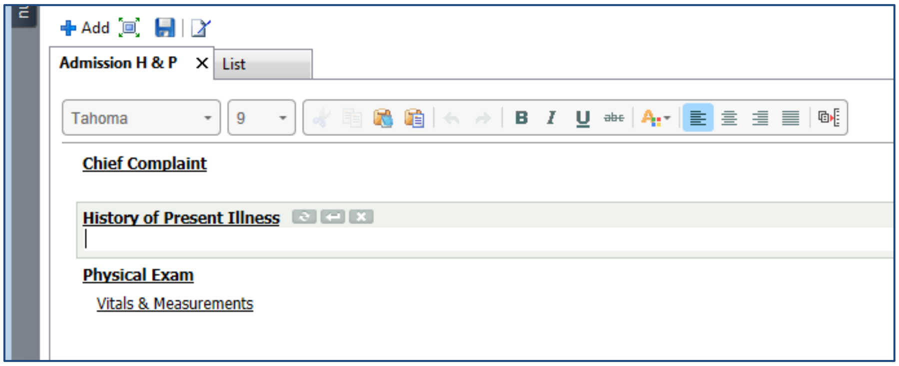
refreshes the dynamic information in the box

activates the box for edits or new entries

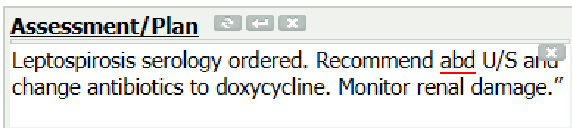
removes all content associated with that line or box



2. Activate the **History of Present Illness** box to edit by pressing the arrow icon beside the header.
3. Once you click the content box, it becomes active. Edit the note as necessary.
4. Add "*Stiff neck, hepatitis, and conjunctivitis coincide with long exposure to standing water,*" or a note of your choosing.

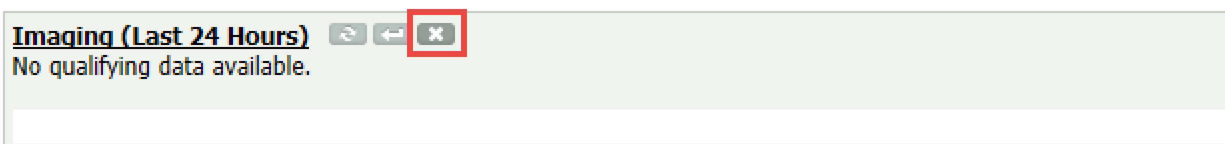


5. Navigate to the **Assessment/Plan** box and click the content box to activate.
6. Add "*Leptospirosis serology ordered. Recommend abd U/S and change antibiotics to doxycycline. Monitor renal damage,"* or a note of your choosing.



Navigate to the **Imaging (Last 24 Hours)** box. Since there is no data, you will choose to delete this unnecessary header from your consult note.

7. Click the X icon to remove the section from your note.

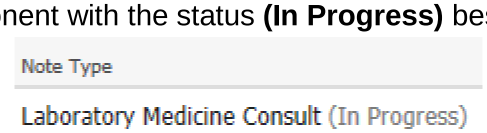


8. This note is now ready for the decision to be **Signed** or **Saved**.

3 Signing or Saving a Document

Once your consult for [patient] is finished, you can choose between four options:

- **Sign/Submit** will begin the process of posting your document to the patient chart.
- **Save** will save your progress and let you continue to edit within the consult note.
- **Save & Close** will save the document and return you to the Provider view.
  Until you choose to sign and submit it, the note will only be viewable by you and will appear in your **Documents** component with the status **(In Progress)** beside the note title.

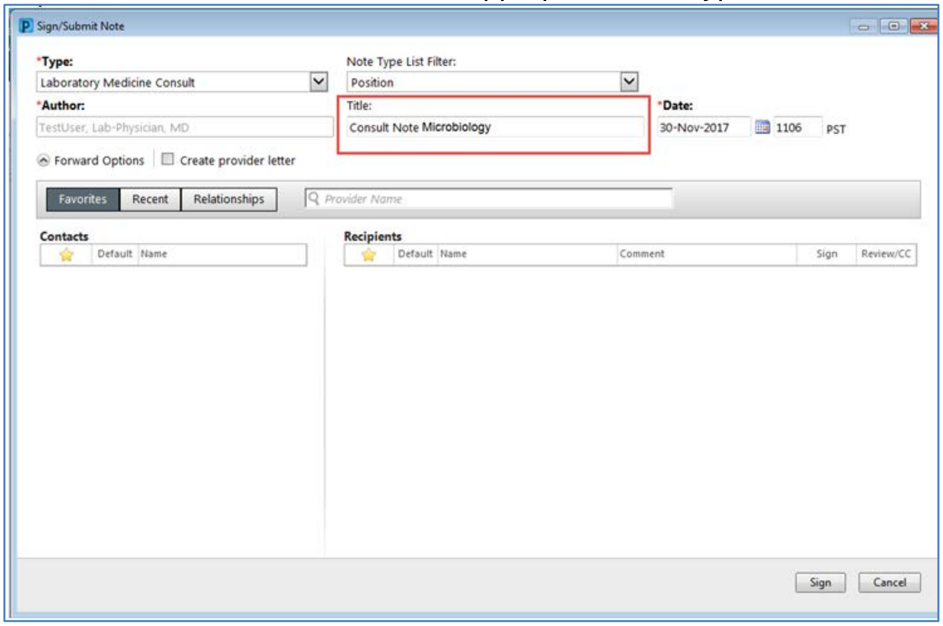


- **Cancel** will delete the document if it was created in error.

1. Click **Sign/Submit**.

This will bring up the Sign/Submit Note window.

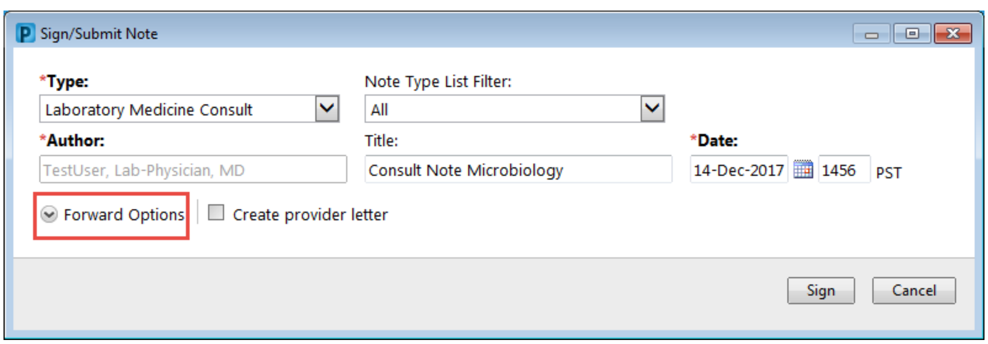
2. Click on the **Title** box and create an appropriate title. Type in: *Consult Note Microbiology.*



If you want to simply complete your consult note and place it in the patient chart, you can now click **Sign**.
This will not send any additional alert or notification to individual providers that a new document is added to the chart.
However, since you have been consulted by a specific colleague, you would like to send them this note. In the CIS you can electronically forward the note.

4 **Forwarding a Note**

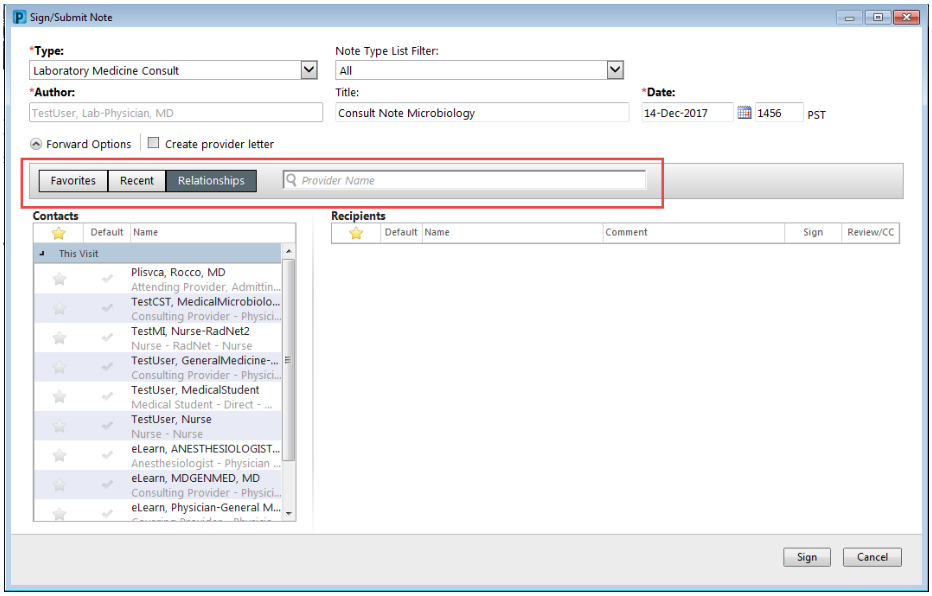
1. Click the arrow to display **Forward Options** if not already displayed.



2. There are several options to use when choosing others to cc on your note:

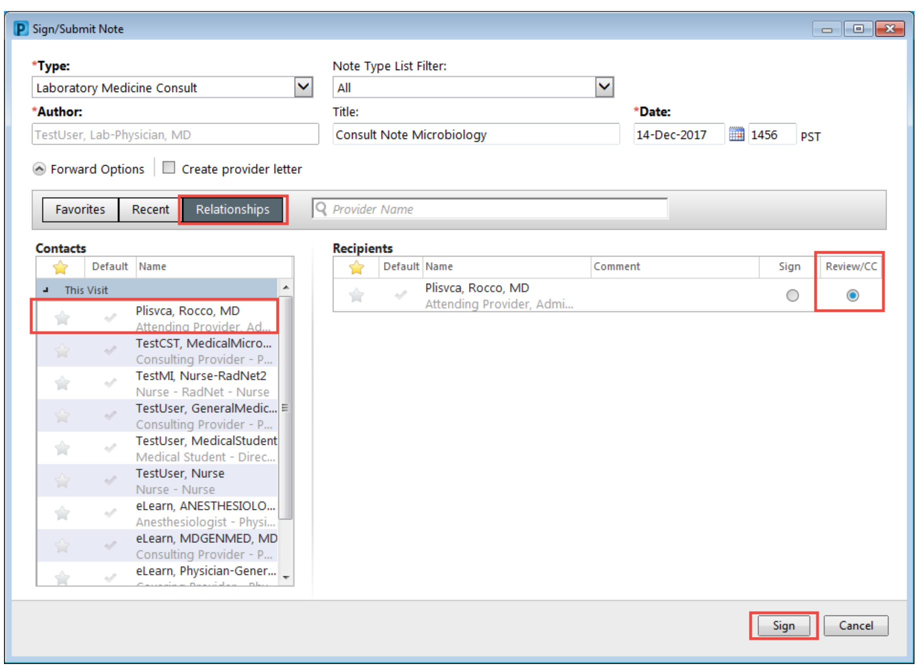
- **Favorites** folder is where you add frequently cc'd providers. You will learn how to manage favorites during a more personalized learning session.
- **Recent** folder lists all providers who recently accessed patient's chart
- **Relationships** folder contains care team members that are part of the patient's record and include care providers for this visit and those that have lifetime relationships. Remember that specific notes such as an admission or discharge are automatically sent to patient's GP and lifetime relationships physicians so there is no need to add them manually.

- **Search** box- here you can also search for any provider registered with the College of Physicians and Surgeons that also have registered with Excelleris.



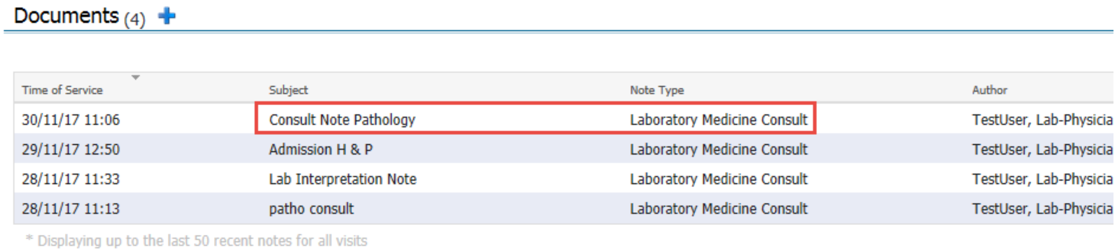
3. For your example, select [attending provider seen in Banner Bar] from the **Relationships** list and double-click to add the name under **Recipients**.
4. Ensure that the appropriate action is checked off: either **Sign** or **Review** to indicate the action required.

5. Click **Sign.** The consult note will now be placed in [patient]'s chart under the Documents component as well as sent to [provider]'s **Message Centre.**



After signing the note, you are transferred back to the Provider view. Remember to click the

Refresh button located within the **Documents** component. The admission note is now listed under **Documents** and is visible to the entire care team.



Time of Service	Subject	Note Type	Author
30/11/17 11:06	Consult Note Pathology	Laboratory Medicine Consult	TestUser, Lab-Physicia
29/11/17 12:50	Admission H & P	Laboratory Medicine Consult	TestUser, Lab-Physicia
28/11/17 11:33	Lab Interpretation Note	Laboratory Medicine Consult	TestUser, Lab-Physicia
28/11/17 11:13	patho consult	Laboratory Medicine Consult	TestUser, Lab-Physicia

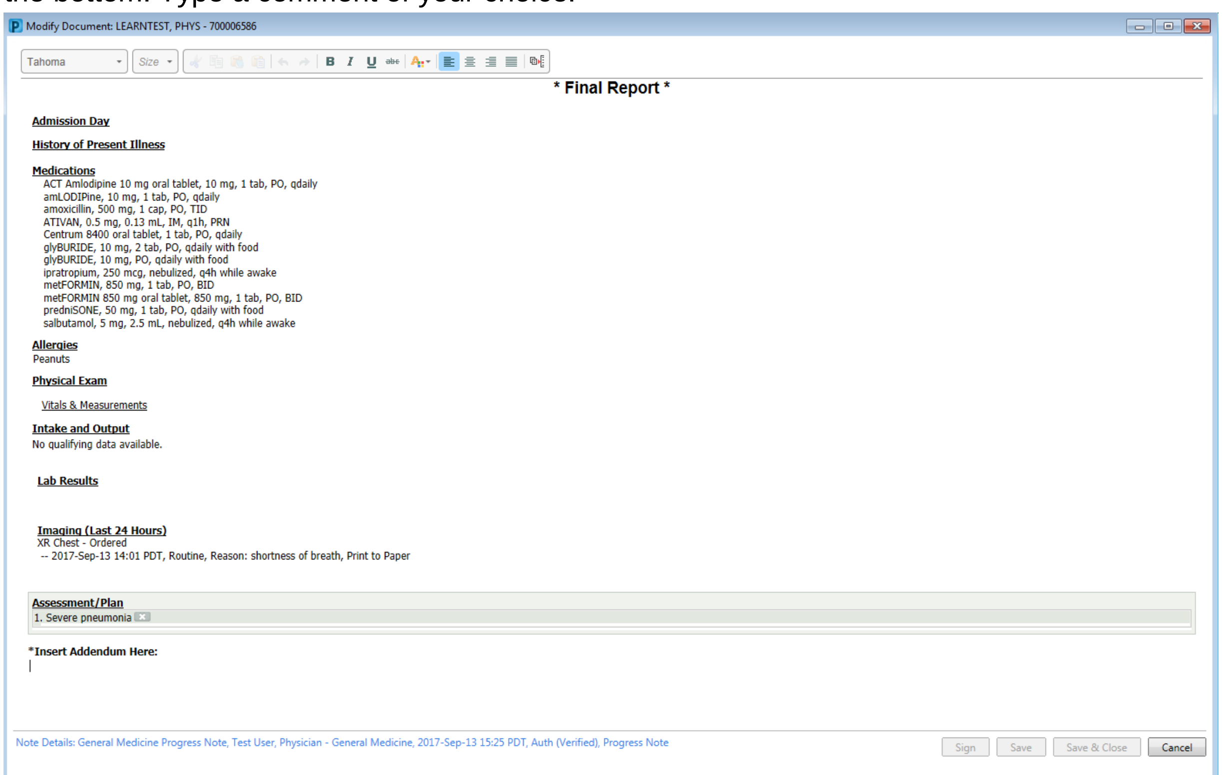
* Displaying up to the last 50 recent notes for all visits

5 Adding an Addendum

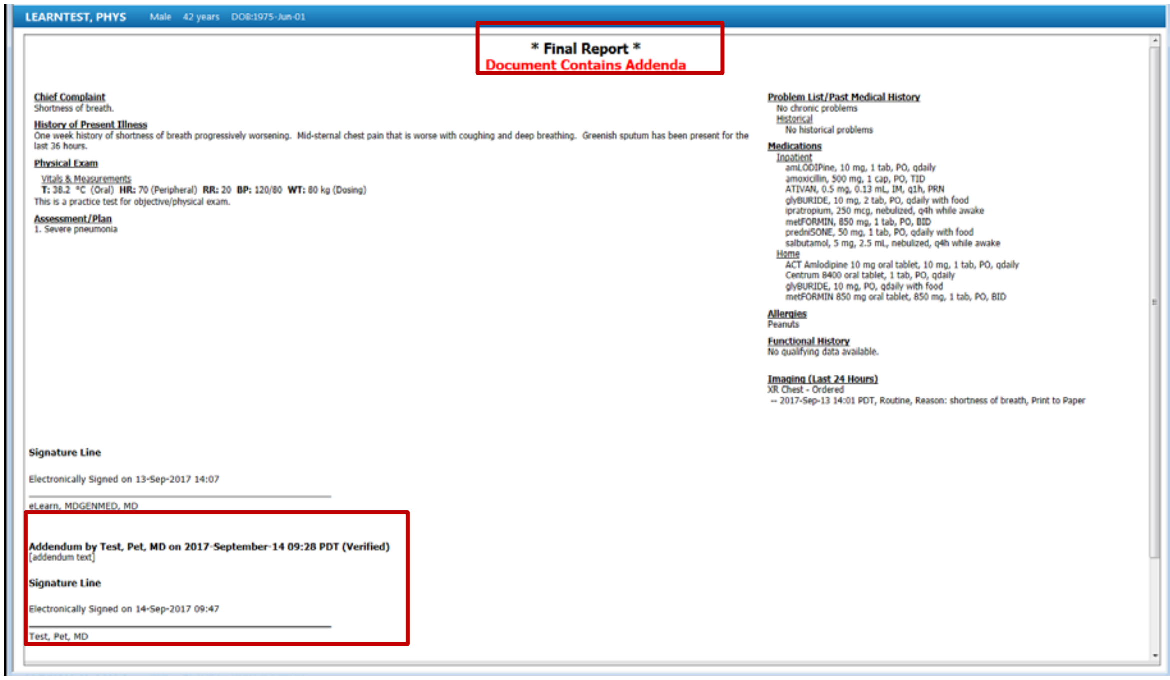
After documents have been finalized, the body of their content cannot be edited. Instead, addendums can be created to reflect any changes that were needed after document submission.

1. Double-click on the consult note you just created under the **Documents** component.
2. Once the document opens in a new window, click on the **Modify** icon located in the tool bar.

3. The **Final Report** displays in edit mode with the added section **Insert Addendum Here** at the bottom. Type a comment of your choice.



4. Add information and click **Sign/Submit** to complete the note. The updated note will be automatically distributed to all previously selected recipients. The addendum is stamped by the electronic signature.



Key Learning Points

- Dynamic Documentation will "pull forward" content into predefined sections of note templates for more accurate and easier note writing.
- Note template sections can be edited or removed if unwanted when writing a note.
- Save and Close instead of Sign/Submit will send a note to your Documents component, but will not be finalized or visible to other users until signed and submitted.
- Notes can be forwarded to individual providers in addition to adding the note to the patient chart.
- If you create an addendum to a note, these are also distributed to any recipient who received the original note

End of Workbook

You are ready for your Key Learning Review. Please contact your instructor for your Key Learning Review.