CERNER TRAINING MANUALS

DEPARTMENT ORDER ENTRY



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INTRODUCTION

Department Order Entry (DOE) is the Cerner application for placing orders within the laboratory. This application allows you to register patients, place orders, and add orders onto existing Accession numbers.

OPEN DOE by clicking the icon from the App-Bar. 1

¹ ■ Refer to the APP-BAR PROCEDURE if you need help adding it.

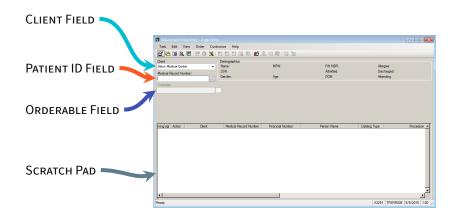
TERMS TO KNOW:

CLIENT FIELD: The location of the patient encounter. In most cases, it's best to leave this **blank**.

PATIENT IDENTIFIER FIELD: The field used to search for patients.

ORDERABLE FIELD: The field used to search for tests.

SCRATCH PAD: A list of tests waiting to be ordered. Tests in the scratch pad can be removed, or edited before placing an order.



CUSTOMIZING DEPARTMENT ORDER ENTRY

There are a few options within DOE which should be changed based on your location or workflow. Most of the options in this section will only need to be changed once.

DEFINE DEFAULT VALUES

☐ Click TASK from the menu bar.

□ Select Define Default Values

HERE IS A LIST of options that can be set.

CURSOR POSITION: The starting position of the cursor when DOE is first opened. "Patient Identifier Field" is the recommended setting.

CLIENT: Keep this set to (NONE). Changing it will cause issues later on.

LABEL PRINTER: The location where labels on new orders will print. It's recommended to set this to the label printer used most often.

ALIQUOT PRINTER: The Label Printer used to print Aliquot Labels. It should be set to the same printer as Label Printer.

MEDIA LABEL PRINTER: The label printer used to print Microbiology media labels. It should be set to the nearest Microbiology media label printer.

REQUEST ID LABEL PRINTER: This is a mystery.

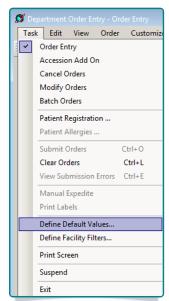
Modify Default Search Field

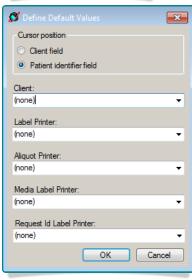
By default, DOE searches for patients by Name. This can be changed to search using: Medical Record Number, Social Security Number, or Financial Number.

info: This option is **STICKY**. This means the option you choose will be set until the next time it's changed.

THE FAST WAY

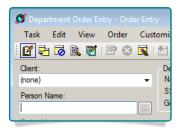
To cycle through the different options:²





² Medical Record Number, Social Security Number, or Financial Number.

☐ Click on the PATIENT IDENTIFIER FIELD.



☐ Hit ☐ CTRL + TAB on the keyboard.

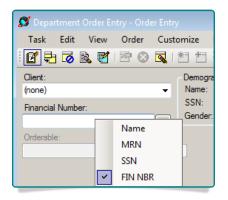


YOU'LL NOTICE THAT the label above the field has changed from Person Name to Medical Record Number.

☐ Continue to Hit ☐ CTRL + TAB until you land on the search method you're looking for.

THE OTHER FAST WAY

Right Click on the PATIENT IDENTIFIER field.



 \blacksquare Select the new search option.

PATIENT LOOKUP

From Department Order Entry there are two ways to search for a patient. The quickest way to find a patient is using a UNIQUE PATIENT IDENTIFIER such as a Medical Record Number (MRN), or Financial Number (FIN).

If that information is unavailable the ENCOUNTER SEARCH window can be used to find patients using information such as Partial name, date of birth etc...

USING A UNIQUE PATIENT IDENTIFIER

☐ Enter the **Patient Identifier** in the Patient Identifier field.³



³ Make sure that the PATIENT IDENTIFIER entered matches the description above the text box.

☐ Click to pull up the patient.⁴

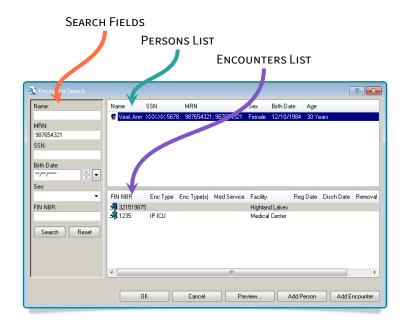
⁴ Hotkey: Hitting Enter also works

IF THE PATIENT HAS only one encounter, DOE will use that encounter. The demographics in DOE will update with the selected patient.

However, if there are multiple encounters, or DOE could not find the patient, then the "Encounter Search" window will appear.

USING THE ENCOUNTER SEARCH WINDOW

The ENCOUNTER SEARCH WINDOW can be used to find patients in the event that a UNIQUE PATIENT IDENTIFIER is missing.



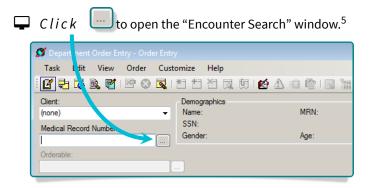
THE ENCOUNTER SEARCH WINDOW is divided into three sections:

SEARCH FIELDS: This is where the search criteria are entered.

PERSONS LIST: A list of persons matching the search criteria.

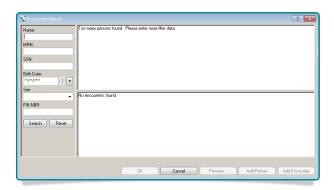
ENCOUNTERS LIST: A list of encounters for the Person selected in the "Persons List."

TO OPEN THE ENCOUNTER SEARCH window:



⁵ Hotkey: The ENTER will also work.

☐ Enter any known information into the search fields. ⁶



- Click Search to search.
- \blacksquare Select the appropriate patient from the Persons List.



 \blacksquare Select the appropriate encounter from the Encounters List.





⁶ ▲ IMPORTANT: Be as specific as possible. If the search is too vague Cerner will simply display "Too many persons found. Please enter more filter data."

F TROUBLESHOOTING: If any of the search fields are populated when the window opens, but the Persons List says "No Persons Found" Fefer to: TROUBLESHOOT-ING TIPS pg. 8

These are the patients which match the search criteria.

These are the encounters for the, currently selected, patient.

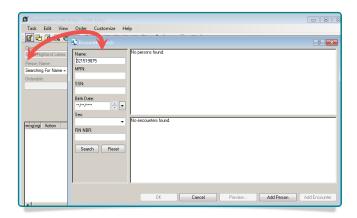
DOE will update with the patient's demographics, and orders can now be placed.

TROUBLESHOOTING TIPS

If you're having trouble finding a patient, don't fret. Here are some things to look for when the "Encounter Search" window says: "No persons found" but the patient *is* in the system.

CHECK THE SEARCH FIELDS

IN THE EXAMPLE BELOW, the "Patient Identifier" field was set to search for a patient name, however the user entered a FIN.

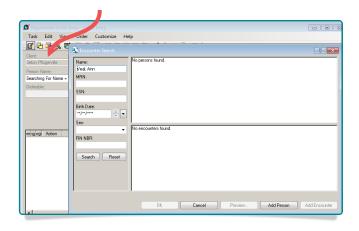


The "Encounter Search" window will say "No persons found."

SOLUTION: This is easily fixed by typing the FIN into the FIN NBR field, and deleted the contents of the "Name" field.

CHECK THE CLIENT FIELD

THE PATIENT BELOW has never been to Pflugerville. Cerner cannot find the patient, because she does not have a Pflugerville encounter.

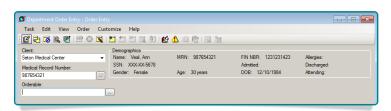


The ENCOUNTER SEARCH window will say "No persons found."

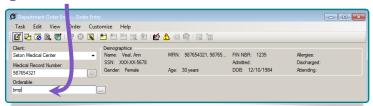
See the next page for the solution

PLACING NEW ORDERS

SEARCH FOR THE patient using a unique patient identifier, e.g. MRN, or FIN; or by using the "Encounter Search"

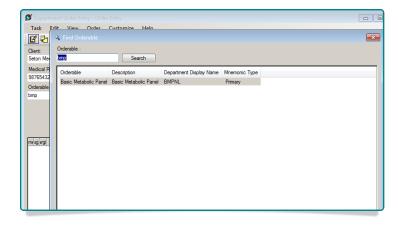


 \blacksquare Enter the test to be ordered in the "Orderable Field"⁷



⁷ info: An Orderable is anything that can be ordered in the laboratory. It can be an individual assay (e. g. Glucose,) a panel (e. g. Basic Metabolic Panel,) or a care-set (e. g. Glucose Tolerance Test.)

☐ Click the button to search.



A WARNING: There are cases where DOE will not present this window e.g. If you search for Thromboelastography tests using the keyword: "teg" DOE will load Tegretol.

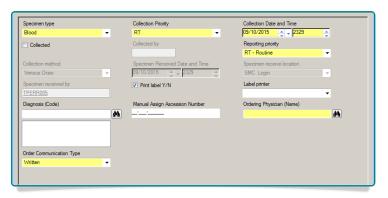
 \blacksquare Select the appropriate test from the list of orderables.⁸

⁸ Refer to: ■ Refer to: TIPS AND TRICKS pg. 23

☐ Click OK

UPDATING ORDER INFORMATION

ONCE AN ORDERABLE has been selected, the order information needs to be defined.



info: The fields in yellow are required. Orders cannot be placed until they have been filled in.

A DESCRIPTION of the options above.

SPECIMEN TYPE: The type of sample e. g. Blood, Body Fluid, Urine etc...

COLLECTED CHECK Box: Has the sample been collected? If so, check this.

COLLECTION METHOD: The method used to collect the sample – more applicable to urines and body fluids.

SPECIMEN RECEIVED BY: The person who is "receiving" the sample. This will default to your user name.

COLLECTION PRIORITY: The priority of which the sample is to be collected. It can be Routine, Stat, Time Study *etc....* If this order is for a future collection, this option determines *when* labels will print.

COLLECTED By: The person who collected the sample.

SPECIMEN RECEIVE DATE AND TIME: When was the sample brought to the lab. This defaults to now.

PRINT LABEL: Do you want a label to print after you place the order?

MANUAL ASSIGN ACCESSION NUMBER: This is used for downtime, see the downtime procedure.

COLLECTION DATE AND TIME: The date and time the sample was collected, or the date and time it will be collected. It defaults to now.

Tip: Resize your window so there are three columns of text boxes (as shown.)

REPORTING PRIORITY: The priority of the sample when it reaches the laboratory.

SPECIMEN RECEIVE LOCATION: The current location of the sample. In most cases this will be set to your current location, e.g. SMC Login.

LABEL PRINTER: The location where labels should print after placing the order.

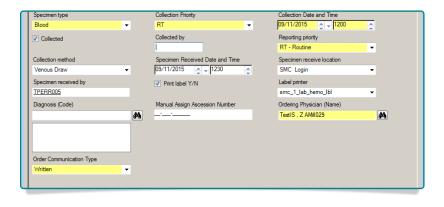
ORDERING PHYSICIAN: The Physician who ordered the test. This will usually default to the patients attending physician.

UPDATING THE ORDER INFORMATION

- \blacksquare Select the appropriate Specimen Type from the drop-down menu.
- \Box Check the Collected check-box.
- ☐ Select the Collection Priority. 10
- ☐ Update the Specimen Received Date and Time. In most cases this value does not need to be changed.
- \Box Check the Print Label Y/N check-box.
- \Box Update the Collection Date 11 and Time. 12
- **☐** *Update* the REPORTING PRIORITY.
- \Box Check that the Specimen Receive Location is correct. This should be set to your current location.
- \Box Check that the LABEL PRINTER is correct. This should be set to the label printer closest to you.
- \Box Check that the Ordering Physician is correct.

A IMPORTANT: If an attending physician has been set for the patient, it will automatically populate the Ordering Physician field. In most cases, they will be the same physician. However, if another doctor has placed these orders it is important to update the Ordering Physician field.

DOE SHOULD NOW look something like this:



⁹ This will enable the receiving options.

10 Note: COLLECTION PRIORITY is a SEMI-STICKY option, if you set it to "ST" it will stay that way until you change it, or the window is closed.

11 Hotkey: Press T for "Today" 12 Hotkey: Press N for "Now"

info: Use the + and - to increase or decrease

the Date by 1 day and the time by 1 minute.

== + to INCREASE

IF THE INFORMATION is correct, the order can be added to the Scratch-Pad.

SCRATCH-PAD

The Scratch-Pad is used to temporarily hold orderables before they are "Submitted.¹³" While in the Scratch-Pad, orderables can be modified or removed.

▲ IMPORTANT: If you need to order multiple items, do not click Submit Orders until you've added them all to the Scratch-Pad.

Submitting orders individually will put them on separate accession numbers and Cerner will be unable to perform it's duplicate checking magic.

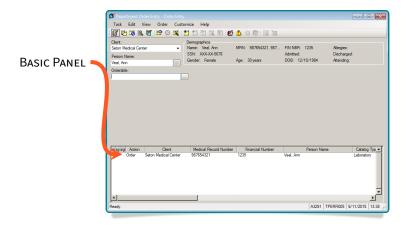
 \Box Click the ADD TO SCRATCH-PAD icon the tool-bar¹⁴



¹³ "Submitting Orders" is another way of saying "Hey Cerner, these orders are good to go." Cerner will perform duplicate checking and assign an accession number.

¹⁴ Hotkey: Ctrl+A will also add orders to the Scratch-Pad

THE TEST WILL be moved down to the Scratch-Pad, and DOE is ready to accept another test.



FOLLOW THE STEPS above for any additional tests that need to be ordered.

▲ IMPORTANT: If you need to place orders for more than one specimen type, it's best to order them in groups.

This means, add all of the blood orders to the Scratch-Pad. Next, add the urine orders; and finally add the body fluid orders.

The reason for this is that the fields in DOE change based on specimen type. If you're not very careful, strange things can happen.

¹⁵ **info**: The information entered for the first order will be copied to each additional test (e. g. Collection date and time, Received date and time, etc...)

Modifying Orders in the Scratch-Pad

TO MODIFY AN ORDER in the Scratch-Pad:

□ Double-Click the order in the Scratch-Pad.

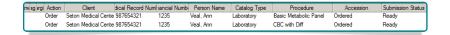
THE ORDER INFORMATION will be brought back up to DOE.

- \square Modify the information that needs to be changed.
- ☐ Click the New Order icon when you're finished. 16

 16 Alternatively, if you've finished with the order you move to the next section.

SUBMITTING THE ORDERS

AFTER ALL OF THE TESTS have been added, the orders can be "Submitted." This will finalize the order, and generate an Accession Number.



Notice that the SUBMISSION STATUS is READY. This means Cerner is waiting for the order to be "Submitted".



17 Hotkey: Ctrl+O will also submit orders

THE "SUBMISSION STATUS" should change from "Ready" to "Submitted," an Accession Number will be generated and the labels should print.

DUPLICATE ORDERS

Cerner should be able to handle most instances when duplicate orders are placed. It won't allow the same ORDERABLE to be placed twice.

If there are duplicate assays within the orderables, Cerner should automatically perform any cancellations or modifications as needed.

A IMPORTANT: Duplicate checking occurs at several steps throughout the ordering process. PRefer to: Notes on Duplicate Checking pg. 25 for more information.

SUBMISSION STATUS

The Scratch-Pad has a column titled Submission Status, these can be used to troubleshoot order submissions.



STATUS	MEANING
READY	The order is ready to be submitted.
VALIDATING	Cerner is checking for errors.
SCHEDULED	The order has been placed for the future.
SUBMITTED	An accession number has been assigned.
Error	A problem has Occurred during Processing.

Table 1: DOE Submission Statuses

TROUBLESHOOTING SUBMISSION ERRORS

After Submitting the orders in DOE Cerner will check for duplicates and errors. If something is wrong with the order, Cerner will return Submission Errors or Submission Warnings.

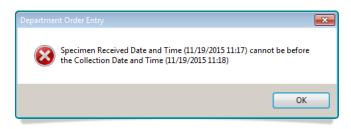
SUBMISSION ERRORS

SUBMISSION ERRORS will be highlighted in red in the Scratch-Pad.



ightharpoonup Click the $\ensuremath{ igotimes }$ icon from the tool-bar.

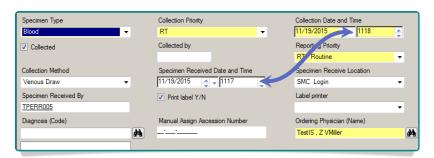
A DIALOG WILL appear describing the error. 18





¹⁸ In this case it's saying we can't receive a sample before it was collected.

 \blacksquare Modify the order to correct the error. ¹⁹



¹⁹ In this case, collected time, or received time needs to be modified.

Re-submit the order if all the errors have been corrected.

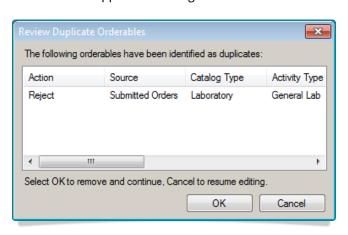
SUBMISSION WARNINGS

These are mostly caused by duplicate ORDERABLES. They will be highlighted in yellow in the Scratch-Pad.



ightharpoonup Click the \bigcirc icon from the tool-bar.

A DIALOG WILL appear describing the error.²⁰



²⁰ In this case it's saying the CBC is a dupli-

- ☐ Click to remove the duplicate order.
- Re-submit the order if all the warnings have been corrected.

THIS ERROR CAN be caused by two situations:

SUBMITTING DUPLICATES: You've added an ORDERABLE to the Scratch-Pad multiple times.

Order Already exists: You're trying to order something which has been done recently. 21 This does not apply to CANCELED orders.

info: For more information regrading duplicates ■ Refer to: NOTES ON DUPLICATE CHECKING pg. 25.

²¹ e. g. You're ordering a Potassium, and the patient had a Potassium recently.

ACCESSION ADD-ON

There are certain situations in which orders need to be added on to an existing accession number (e.g. Glomerular Filtration Rate.) This is done in DOE through the Accession Add-On screen.

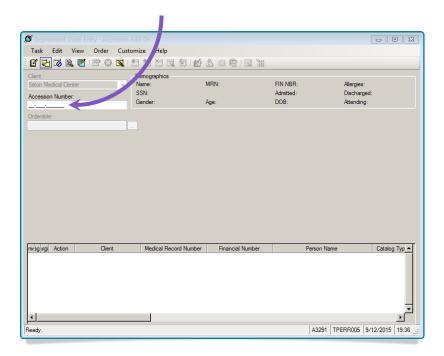
SWITCH TO ACCESSION ADD-ON mode:

 \Box Click the \Box icon from the toolbar.



DOE WILL UPDATE.

The main difference between this mode, and the normal ORDER ENTRY mode is that the PATIENT IDENTIFIER field gets replaced with an accession number field.



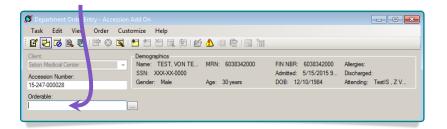
ADDING ON ORDERS

☐ Enter the Accession Number²² into the accession number field.²³



- ²² The accession number of the sample the orders will be added to.
- ²³ See the ACCESSION NUMBER handout for more information.

- ☐ Press ENTER on the keyboard.
- **Enter** the test to be ordered in the ORDERABLE FIELD.



We're looking for a Basic Metabolic Panel.

 \square Search for the new test.

To Override or Not to Override

When orders are added onto an existing accession number they need to be assigned to a container. 24 This section will help walk you through the processes. It may sound more confusing than it is. 25

Before you begin, it's helpful to know which containers are on the original accession number. To find out, we can use our buddy Container Inoury. 26

²⁴ Refer to the Accession Numbers Procedure.

²⁵ sorry⊗

²⁶ Refer to the **CONTAINER INQUIRY** procedure for more information.

IF YOU'RE ASKED to "OVERRIDE," you can think of the question like this:

"Can the add-on use an existing container?"²⁷

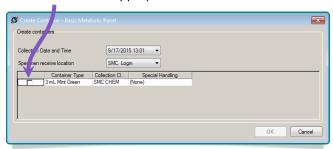


²⁷ "Can a Basic Panel be run on a Lavender?" or

"Can a Basic Panel be run on a Gold Top?"

NOT OVERRIDING

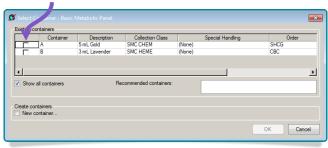
 \blacksquare Select the appropriate container.



☐ Click and continue the order as normal. You clicked "No" when asked to override.

OVERRIDING

☐ Choose an existing container.

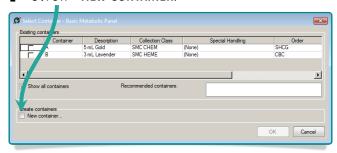


-OR-

You clicked "Yes" when asked to override.

▲ IMPORTANT: Only **S**one of these boxes. Selecting multiple containers will assign the order to multiple containers, and that's just asking for trouble.

☐ Click New Container.



☐ Click to add the test onto the selected container. This is the same as clicking "No" to the override question.

▲ IMPORTANT: Do not **S**both "New Container..." AND an existing container. Again, just asking for trouble.

SUBMITTING ORDERS

Finally, when all the appropriate orders have been added:

☐ Click the SUBMIT ORDERS icon from the tool bar. 28

²⁸ Hotkey: Ctrl+O will also submit orders.

RETURN TO ORDER ENTRY MODE

To go back to the normal ORDER ENTRY MODE:

 \blacksquare Click the \square icon from the toolbar.



Alternatively, closing and re-opening DOE will also work.

DUPLICATE ORDERS

Cerner should be able to handle most instances when duplicate orders are placed. It won't allow the same ORDERABLE to be placed twice.

If there are duplicate assays within the orderables, Cerner should automatically perform any cancellations or modifications as needed.

▲ IMPORTANT: Duplicate checking occurs at several steps throughout the ordering process. ■ Refer to: NOTES ON DUPLICATE CHECKING pg. 25 for more information.

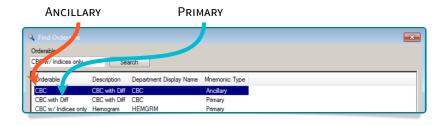
TIPS AND TRICKS

ANCILLARY VS. PRIMARY ORDERABLES

Learning how to locate orderables on any new system can be challenging. Fortunately, Cerner has made this a bit easier with the addition of Ancillary Orderables.

Ancillary Orderables are aliases for the real (Primary Orderables) orderables.²⁹ They have been built in to help us search for orderables.

²⁹ Basically, it's another name for the same test.



In this example, "CBC" is an "Ancillary" to "CBC with Diff." Without this ancillary, "CBC w/Indices only" would appear first when searching for "CBC".

THERE IS NO DIFFERENCE between the Primary Orderable and its Ancillary Orderables.

SEARCH TIPS

As you get familiar with placing orders, you'll begin to notice that some search terms will trigger Cerner to choose the orderable for you.

A WARNING: This means Cerner may select an order different than you intended e.g. "Teg" will select "Tegretol."

THE FASTEST WAY TO FIND common orderables:

• D-Dimer: dimer

• Glucose: "glucose r"

• Intra Operative PTH: "intra"

• Troponin: "trop"

• Most fluid counts: "cdx"³⁰

If you can't find the order you're looking for, try synonyms (e. g. Synovial Fluids are often called "Joint fluids.")

³⁰ "cd" will bring up CD markers.

KEYBOARD SHORTCUTS

DEPARTMENT ORDER ENTRY KEYBOARD SHORTCUTS

Table 2: Department Order Entry Short-

CTRL+O	SUBMIT ORDERS
CTRL+A	ADD ORDER TO SCRATCH-PAD
CTRL+R	REMOVE SELECTED ORDER FROM SCRATCH-PAD
CTRL+E	VIEW SUBMISSION ERRORS
CTRL+L	CLEAR PATIENT
CTRL+TAB	Change the method of searching for a patient

Notes on Duplicate Checking

▲ WARNING: This section describes some complicated rules and concepts.

Cerner will check for, and correct, duplicate orders at three points before the sample gets to the laboratory. At each point, it will look for different types of duplication.

▲ WARNING: After the accession number has been assigned, Cerner will not be able to perform the more complicated duplicate checking. The following rules work in most normal situations; however, it does not apply to Add-Ons or orders placed incorrectly.

WHEN ORDERS ARE PLACED

When orders are "Submitted," Cerner will look back to ensure that we are not creating duplicate orders.³¹

If a previous order exists for one you've placed in the Scratch-Pad it will need to be removed before continuing.³²

WHEN ORDERS ARE DISPATCHED

Cerner will check for duplicates within the orders³³ on the Scratch-Pad. Any duplicates will be canceled immediately after being ordered.

Similar checking also occurs for scheduled orders placed by the floors. It happens before the accession number is assigned and the order is *Dispatched*.

WHEN ORDERS ARE LOGGED-IN

There are cases where two orderables have partial duplications. The Renal Function Panel is the best example of this.

Most of the assays in a Renal Function Panel are also in a Comprehensive Metabolic Panel, Phosphorous being the one exception.

In these situations, when the sample is LOGGED-IN, Cerner will cancel the Renal Function Panel and order a Phosphorous.

³¹ The amount of time it will look back depends on the test it is checking.

³² This is checking for duplicates at the OR-DERABLE level *e.g. if two Basic Panels were* ordered.

³³ This is checking for duplicates at the Assay level e. g. If an Electrolytes Panel (or even just a Potassium) was ordered with a Basic Panel.

EXAMPLE

Here is an example of duplicate checking which demonstrates the last two situations.

An order was placed for a CMPNL, RENPNL, and LYTES

Collect Date	Accession	Order	Specimen	Priority	Status	Co	Su	Order Date	Order P	ersonnel ID	0	Canor	el Date	Cancel Perso	Cancel Reason
9/26/2015 22:38	15-269-000065	CMPNL	Blood	RT - Routine	In-Lab			9/26/2015 2	Perry , 1	Thomas J MLS					
9/26/2015 22:38	15-269-000065	RENPN	Blood	RT - Routine	Canceled			9/26/2015 2	Perry ,	Thomas J MLS		9/26/	2015 22:38	SYSTEM	Lab Operations Cancel
9/26/2015 22:38	15-269-000065	PHOS	Blood	RT - Routine	In-Lab	(F)		9/26/2015 2	SYSTE	M					
9/26/2015 22:37	15-269-000065	LYTES		RT - Routine	Canceled			9/26/2015 2	Perry .	Thomas J MLS		9/26/	2015 22:37	SYSTEM	System Cancel

When the order was *Dispatched*, ³⁴ the Electrolytes Panel was canceled. Again, this happened because the Electrolytes is included in a Comprehensive Metabolic Panel.

34 at 22:37

When the sample was $Logged-in^{35}$ the Renal Function Panel was canceled and the Phosphorus was added-on.

35 at 22:38

THE END RESULT, a **COMPREHENSIVE METABOLIC PANEL** and **PHOSPHORUS**, contains all the original assays without any duplication.

THOSE OTHER FUNCTIONS

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As you familiarize yourself with DOE, you may notice that it has some additional modes *i. e. Cancel Orders, Modify Orders, and Batch Orders.*

For the time being, we have little use for those modes. It's much easier to perform those functions in other applications.