

# Codonics SLS Administration Tool Software

**Release Notes**

## Version 1.5.0 SLS Administration Tool Release Notes

### Summary

Version 1.5.0 is a software release for Codonics Safe Label System™ (SLS) Administration Tool (AT). The software is compatible with SLS 500i™ systems installed with 1.5.0 software.

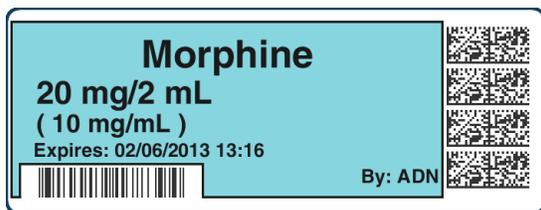
This document provides information about new product features, improvements and defects corrected in 1.5.0 SLS AT software. The SLS AT User's Manual version 1.3.0 provides further information about the AT.

#### Recommended PC requirements for AT:

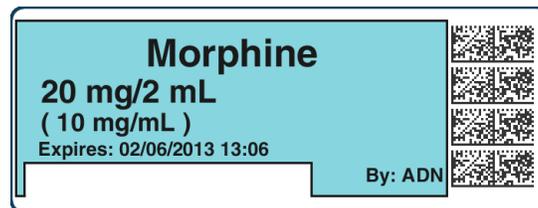
Intel Core™ 2 Duo Processor  
4 GB RAM  
2.66 GHz  
Windows® XP or newer (not Windows 8)  
Internet Explorer (IE8)  
Excel 2003 or greater to open reports

### New Features

- ◆ **The AT now includes JAVA runtime.** The computer that is running the AT does not require JAVA to be installed.
- ◆ **In addition to the traditional label format, 500i now supports labels with an Auxiliary 1-D barcode or labels with a Patient Write-In area on the Standard 22x60mm label (STD-2-v02).** Refer to Codonics SLS Auxiliary Barcodes Technical Brief (901-264-001) for configuring the label in the AT. The functionality now prints the following labels depending on which of the following options is selected in the AT: a 1-D barcode on the standard label that provides compatibility with legacy BCMA (e.g., MediTech, Epic) and AIMS (e.g., McKesson, DocuSys, GE) systems that read NDC codes.



Alternatively in the AT, you can select to have a blank area print on 500i to write-in information such as patient name.



Or, configure the use of a traditional label format.



- ◆ **500i now supports integration with the B.Braun Space pump.** B.Braun barcodes can be included on printed SLS syringe labels and then used to transfer data (i.e., drug name, concentration value, and concentration units) to a B.Braun Space pump. A feature key is required to enable this feature. Contact your Codonics Sales Representative to purchase the key. Refer to Codonics B.Braun Technical Brief (901-265-001) for complete instructions.
- ◆ **500i now supports variable length container IDs in Other mode.** SLS supports scanning and reading of variable-length Container IDs. For example, 500i will now scan a drug container that uses a Data Matrix barcode with a 10-digit Container ID and a different container that uses an EAN-13 barcode with a 13-digit Container ID. Refer to Codonics Variable Length Container IDs Technical Brief (901-266-001) for complete instructions for setting up variable length rules in the AT.

**WARNING:** Some barcode parsing rules may not operate properly when minimum or maximum values are changed. This can result in drugs not being found when the container is scanned. Review all barcode parsing rules to ensure drug containers are recognized when scanned.

- ◆ **500i now supports Named Devices.** The network interface(s) on 500i can be assigned dynamic IP addresses by the hospital network. Because the IP address of 500i can change over time, providing a static device name will make it easier to configure the AT and Email Server to communicate with individual units. Each 500i system includes a pre-defined device name that is unique to the Ethernet or Wireless interface on that device. The pre-defined device name(s) are associated with the SmartDrive to allow the device name(s) to remain the same when the 500i unit is swapped and the SmartDrive is transferred to the new 500i.

**NOTE:** The pre-defined device names conform to a uniform naming structure: SLS-PPP-LLLLL-N

Where: "SLS" is a static string

PPP = Codonics 500i product code (i.e., 060)

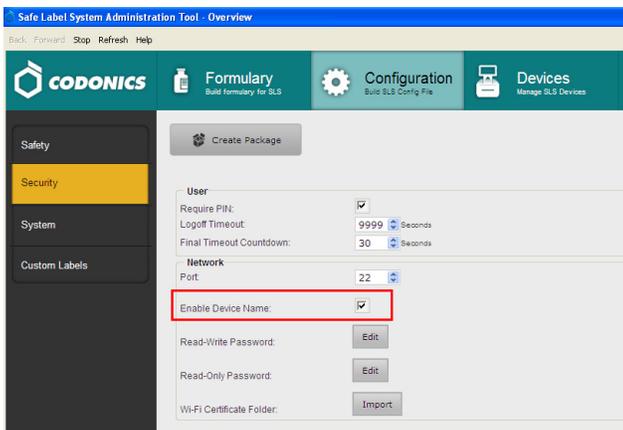
LLLLL = SmartDrive license code

N = "E" for Ethernet, "W" for WiFi

Example: SLS-060-12345-W

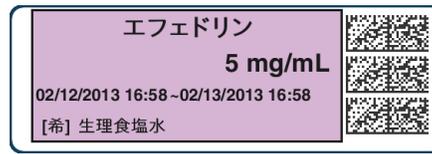
Users should setup their Master Device List (MDL) in the same manner as they did previously using a Comma Separated Value (CSV) file with the first column being the pre-defined device name and the second column being the device name you want to represent 500i. For example, SLS-060-12345-W, OR-1. For further instructions on setting up an MDL, refer to the 1.3.0 AT User's Manual.

Named Devices by default is enabled in the AT Configuration tab but can be disabled by unchecking the box.

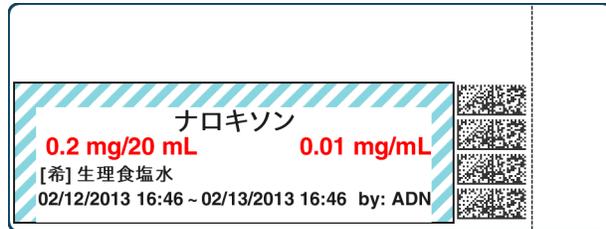


## Product Improvements

- ◆ **A new Japanese small and large label version provides a "Use" date range (e.g., 02/12/2013 16:58 ~ 02/13/2013 16:58) when printed.** The label template packs are selected in the Configure Locale and are JP-S1-v02 and



JP-L1-v02.

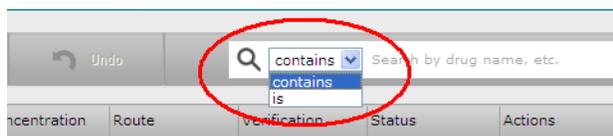


- ◆ **Now a single character, [希], is provided to represent the word Dilution on the Japanese small and large labels.**
- ◆ **Additional Lexicomp import capability is provided.** The enhancements included to the Lexicomp import are:
  - ◆ An Update Matches option has been added to the Import Results dialog box to allow you to update matching drugs in addition to overwriting or skipping them.
  - ◆ All drugs added or updated during a Lexicomp import will be assigned the drug status Active so that users can control the assignment of the Obsolete status.
  - ◆ The drug status Recall has been added to the MDD so that recalled drugs can be more clearly identified as Recalled. These drugs no longer have to be assigned a status of Obsolete to prevent their labels from being printed.

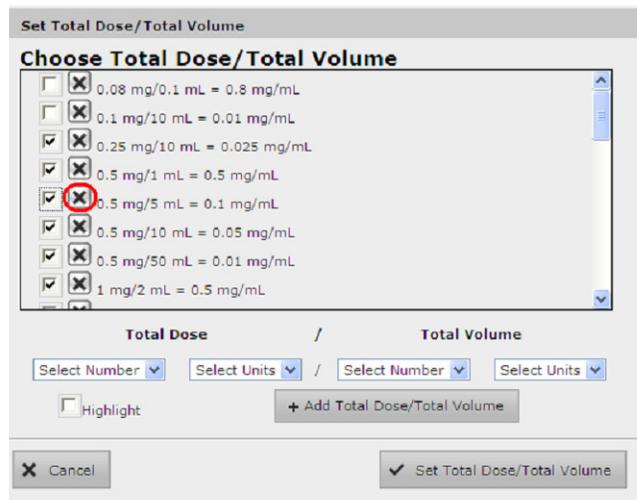
Refer to Codonics SLS Lexicomp Import Enhancements Technical Brief (901-263-001) for details.

- ◆ **The AT and 500i support new concentration numbers.** The new numbers included are 2.25, 3.375 and 40.5.
- ◆ **The AT and 500i support new concentration units.** The new concentration units included are ng (nano-grams), ng/mL (nano-grams per milliliter) and K Units/mL (thousand units per milliliter).

- ◆ Older localization packs (i.e., 1.4.0 or newer) can now be used with newer software releases on SLS and AT. For example, JP-1.4.0 will now work with 1.5.0 software. If words or WAV files are not translated into the local language, they will default to English.
- ◆ Improved the AT-DM messaging when installing SW or packages from AT-DM to 500i. The message will now indicate a progress of Transferring and then transitions to Installing. When 500i reboots, the device will go Offline until the software restarts.
- ◆ Improved the Search functionality in the MDD and Formulary. Now a user can search by an exact match (i.e., is) or by a partial match (i.e., contains).



- ◆ Users now have the ability to delete dilutions and TD/TVs by clicking on the X next to the dilution or TD/TV value you want deleted from the list.



- ◆ AT passwords that were too short could cause the AT to stop working. Now, entering a new password with less than 6 characters causes the error message: Password is too short to display.
- ◆ Users can now create a formulary package of 50K drugs. Previously the AT would stop working.

- ◆ The migration tool now transfers custom audio files for drug names. You will not need to reload the custom audio files in the AT and then set each drug to the proper custom audio file.
- ◆ Selecting Enter after filling in the Package Profile name previously cleared a package build and returned the user to the main formulary page. Now when selecting Enter, a formulary or configuration package will be properly created.
- ◆ Speed improvements were made to AT operations. For example, responsiveness of the Edit Selected button and package creation time were improved.

### Defects Corrected

- ◆ Additional warnings are now displayed when using Total Dose/Total Volume. For example, set a drug in the formulary to use TD/TV and assign the drug a TD/TV with the same concentration units (e.g., mg/mL) as the original container concentration. Then, if you enter the MDD and change the same drug's concentration unit to a different unit (e.g., mcg/mL), the warning: The units of the following entries do not match the original drug concentration units is displayed to the user. You should review the Formulary Report to make sure all entries in a formulary are correct before installing the formulary on a 500i.
- ◆ Additional warnings are now displayed in the formulary report Safety section when using Total Dose/Total Volume. For example, set a drug in the formulary to use TD/TV and assign the drug a TD/TV with a concentration (e.g., 0.5 mg/mL) lower than the original container concentration (e.g., 1.0 mg/mL). Then, if you enter the MDD and change the original container concentration to a value lower (e.g. 0.25 mg/mL) than the TD/TV concentration entered, a warning is provided in the TD/TV WARNINGS (number 5) of the Safety section of the formulary report.
- ◆ Additional warnings are now displayed when using Total Dose/Total Volume. For example, set a drug in the formulary to use TD/TV and Dilution Allowed or Dilution Required. Then add some TD/TV values where the equivalent concentration (e.g., 0.5 mg/mL) is a dilution of the original concentration (e.g., 1.0 mg/mL). After saving those values, change the Dilution Status to Dilution Not Allowed. You will now receive a warning on the AT that there are dilution values for that drug. If a formulary with these values is then installed on a 500i, when the drug is scanned with dilution switch off, the dilution values are presented, but a warning is given on 500i that the value(s) may be a dilution. You should review the Formulary Report to make sure all entries in a formulary are correct before installing the formulary on a 500i.

- ◆ **Additional warnings are now displayed when using Total Dose/Total Volume.** For example, set a drug in the formulary to use TD/TV and Dilution Not Allowed. Then add some TD/TV values where the equivalent concentration (e.g., 1.0 mg/mL) is equivalent to the original concentration (e.g., 1.0 mg/mL). After saving those values, change the Dilution Status to Dilution Required. You will now receive a warning on the AT that The Dilution Status of this drug is Dilution Required. The following entries have concentrations that may not be dilutions of the original drug. You should review the Formulary Report to make sure all entries in the formulary are correct before installing a formulary on a 500i.
- ◆ **The Formulary Changes worksheet was corrected in the Formulary Report to be more complete.** If you demote a formulary, edit an existing drug in the formulary, and then delete the drug entry in the formulary, it will be deleted from the Formulary Report when promoted, and it will now be included in the Formulary Changes worksheet.
- ◆ **The Formulary Changes worksheet was corrected in the Formulary Report to be more complete.** If you demote a formulary, add a drug to the MDD, add it to the formulary, then edit the drug, promote the formulary and create a report, the changes report will show the as added.
- ◆ **Added a message of maximum expire time.** If a user inputs an expiration time greater than 672 hours, a message is now displayed Formulary drug Expire Time must be from 0-672 hours.
- ◆ **Added support for non-Motorola/Symbol scanners to scan UPC barcodes in the AT with the US\_NDC preset.** Some hand scanners do not include the system character when a UPC barcode is scanned. A rule to support UPC without a system character was added to the stock US\_NDC preset.
- ◆ **WARNING: Replacing drug names with non-Latin characters (e.g., Kanji, Hebrew) causes duplicate drug entries in the MDD.** When the MDD screen is sorted by drug name, changing a drug name to start with a non-Latin character causes the drug to display twice. When the issue occurs, editing either duplicate drug entry on the MDD changes the other entry properly. Re-sorting the MDD list or refreshing the MDD by switching to another page in the AT and then back causes the drug name to only display once, sorted after the names that start with Latin characters. If the drug is already in the 500i formulary, then the drug name will display with the changed characters in the formulary and will be listed only once.
- ◆ **WARNING: The pre-import report does not identify duplicate drug IDs when importing via a CSV.** You are required to run a Formulary Report before generating an approved formulary, and should review the Duplicate reports in the Safety worksheet to make sure all duplicates or potential duplicates in the MDD and formulary are identified.
- ◆ **WARNING: Group editing does not display warnings about using custom templates.** The warning is WARNING: Using custom defined labels will deviate from ISO and ASTM standards governing user applied labels. End-users must take responsibility for confirming legibility and usability of the resultant labels. When performing a single drug edit using a custom template, the warning is provided.
- ◆ **WARNING: A reinstall of the AT over the same, previous AT install doesn't work.** For example, if you install 1.5.0 AT and then try to reinstall 1.5.0 AT over top of the original install, the AT will not properly work. Contact Codonics Technical Support if there are questions.
- ◆ **WARNING: The Formulary Changes worksheet in the Formulary Report can be incomplete.** If you are deleting drug(s) from the MDD and then perform an Undo, there is no net change to the formulary. However, these drug(s) are reported as deleted in the Formulary Report.
- ◆ **WARNING: Changing the Database Mode from Other to US NDC does not change the Barcode Parsing Rules to the preset US NDC.** Without changing the preset, some barcode parsing rules may not operate properly. This can result in drugs not being found when the container is scanned. Review all barcode parsing rules to ensure drug containers are recognized when scanned.
- ◆ **An exception dialogue for allowing Java through the firewall will be display when first installing of the 1.5.0 AT.** You should click Allow.

### **Known Common Issues**

This section details common issues with 1.5.0 SLS AT software that are likely to be experienced by most users.

- ◆ **WARNING: The Formulary Report does not sort duplicates.** Duplicate Container IDs in the formulary are reported but are displayed in a way that may not put the duplicates together. You can sort the Excel spreadsheet on Container ID.

- ◆ **Custom drug classification templates are not preserved when changing Active Label Template packs (e.g., STD-1 to STD-2).** The custom drug classification templates are erased and drugs using the custom drug classification template in the formulary will have the drug template changed to None. You will need to recreate the custom templates and then edit those drugs with None.
  - ◆ **When a feature key is about to expire, installing a formulary, configuration or software package can cause the SLS to freeze.** If a 500i feature key is about to expire and you install a package, when 500i goes to reboot, the system will freeze. If this occurs, power-off your system, turn it on, and install the package again.
- NOTE:** It is recommended for any new SLS that has a temporary clinical key, you should install a permanent feature key and reboot the SLS before installing a package. This will prevent the issue from occurring.
- ◆ **Using medium and large font sizes in Windows 7 distorts AT startup dialogs.** Parts of the dialog boxes will be cut off. You should use the small font sizes when using Windows 7.
  - ◆ **The AT Device Manager system information window does not refresh while open.** In order to have the information screen update, close and reopen the window.
  - ◆ **Saving and downloading a report will default to the location from previous versions of the AT.** When running a Formulary Report the first time in a new version of the AT software and clicking Download to save the file to disk, the AT will open the previous folder where reports were saved. You should clearly locate and name your reports for easy identification.
  - ◆ **The Maximum Invalid Login Attempts setting in the configuration manager has no effect when logging into 500i.**
  - ◆ **The maximum length of a drug name in the custom BLANK labels is 10 characters.** A drug name such as Propofol will fit on a label, but a drug name such as Epinephrine will be truncated as Epinephrin.
  - ◆ **If a package transfer fails (e.g., Wi-Fi connection disconnects or Ethernet cable becomes unplugged during transfer), the AT Device Manager that sent the package will indicate Failed while any other AT Device Managers that are opened will indicate Transferring.** You can resend the same named package from the same AT Device Manager which originally sent the package only if the same AT session is running. If you have logged out of the AT that sent the package, refreshed the AT Device Manager, or opened the Device List again, you will need to cycle the power on 500i to transfer a package.
  - ◆ **The AT will stop working if the AT Device Manager is left open for greater than six hours when using Windows 7 with Internet Explorer 9 (IE9).** Using IE8 with Windows 7 is recommended.
  - ◆ **If the AT is used on a PC with Internet Explorer 7 (IE7), the AT may exhibit slow performance if the AT is left open for multiple hours.** To correct the issue, close the AT application and restart it. No data should be lost because the AT updates as data is entered. For better performance results, install IE8 on the PC.
  - ◆ **When using IE8, leaving the AT open and idle with the Pre-Import Results window displayed for more than 15 hours can cause the AT to lock up.** Leaving the AT open and idle for more than 15 hours in this case can lead to a blank Import Results window. The only way to exit is to click Discard and Confirm the discard.
  - ◆ **Both the post-import user interface notification and the report shows the incorrect Total # of drugs with no changes that were skipped.** The number reported is actually the number of import operations being skipped. To confirm what was actually imported, you should look at the post-import report which shows exactly what was imported.
  - ◆ **Importing 万単位 (i.e., man-tani) in the default (en-US) locale and then changing to the Japanese (ja-JP) locale causes the units to remain custom units.** There will be two man-tani units, the new one that is added by default and the custom unit, that show up in the drop down. To prevent this from occurring, a user should first change to the Japanese locale and then import.

- ◆ Searching for either the value (e.g., 0.2) or the units (mg/mL) of the concentration works as expected, but searching for both in the Formulary Manager does not return any results.
- ◆ Searching for % or PE or Unspecified will return all drugs in the MDD or formulary. You should select a different identifier (e.g., drug name) to search.
- ◆ Searching for the string 万单位 (i.e., man-tani) does not return any values, but a subset of man-tani (i.e., 万单) does search correctly. You can also select a different identifier (e.g., drug name) to search.
- ◆ Not all MDD fields are searchable. Searching in the MDD on drug name (e.g., Propofol), Master IDs, Container IDs, Concentration values, or Tallman works as expected, but searching on Status (e.g., Active), Verification (e.g., Verified) and Route (e.g., Intravenous) terms does not return any results.
- ◆ Not all formulary fields are searchable. Searching in the formulary on Master ID, Container ID, Drug Names (e.g., Propofol), Concentration values, Tallman, Template Name, Warnings, Dilutions, Audio or Audio2 values works as expected, but searching on Dilutions (e.g., Other), Expire Time (e.g., 24), Route (e.g., Intravenous), Verification level (e.g., Verified), Dilution Status (e.g., Allowed), and Status (e.g., Active) values does not return any results. You should select a different search parameter or sort the column first to find the information.
- ◆ Saving and downloading a report will default to the location from previous versions of the AT. When running a Formulary Report the first time in a new version of the AT software and clicking Download to save the file to disk causes the AT to open the previous folder where reports were saved. You should clearly locate and name your reports for easy identification.
- ◆ As dilutions are created in the Edit Formulary Drug user interface, they are saved to the group of available dilutions for all drugs. All dilutions (e.g., 5 mg/mL, 1 mcg/mL, 1000 units) created in the Edit Formulary Drug in the SLS formulary remain as options to be selected for the next drug edited. You should scroll through the existing dilution options and check an existing box before creating new dilution entries.

- ◆ Deleting a drug from MDD and then undoing the deletion clears TD/TV values to defaults in the formulary. For example, if a drug is configured with TD/TV settings in the formulary, then the drug is deleted from the MDD, and then the undo button is selected, the drug is added back to the MDD and the formulary. However, the formulary will be set to the defaults (i.e., Dilution Status: Not Allowed, Preparation Method: Normal Dilutions, Dilutions: none, Total Dose /Total Volume: none).

### **Known Uncommon Issues**

This section details uncommon issues with 1.5.0 SLS AT software that are unlikely to be experienced by most users.

- ◆ **WARNING: Drug Dilution Status of Not Allowed allows dilutions (e.g., 5 mg/mL, 1 mg/mL) to be defined.** However, when trying to create a formulary package on the AT, the package will not be created and an error message will be displayed.
- ◆ **WARNING: Drug Dilution Status of Not Allowed allows dilutions of only Other to be used in creating a formulary package.** However, when the formulary is installed on 500i, a dilution will not be allowed to occur for that drug when scanned.
- ◆ **WARNING: If a drug record is modified in the MDD after it has been added to the formulary, the AT does not automatically update the audio file association.** If the drug name is changed in the MDD, the associated audio file will not change, resulting in a possible incorrect association. As a work around, you can either remove and then add the drug to the formulary to trigger a new audio file association, or manually select the correct audio file from the formulary edit dialog box.
- ◆ **WARNING: A concentration length of greater than 15 characters is converted to an incorrect value in the MDD when imported.** For example, a number such as 12345678901234567890 is converted to 92,233,720,368,547.77.
- ◆ **WARNING: Combination drugs with long drug names do not display the second drug name.** Combination drugs with very long drug names only display the first drug name as truncated. There is no indication as to what the second drug name is. Users should look to modify the entry of the drug name (e.g. Calcium can be entered as Ca).
- ◆ **Rarely, the AT does not recognize that TD/TVs are entered.** A warning message will show indicating that TD/TV needs to be entered. If this occurs, close and then restart the AT.

- ◆ **The edit drug window does not provide a warning if there are no TD/TV values entered when Dilution Status is set to Not Allowed.** You will be notified when trying to create a formulary package during formulary validation and the package will not be able to be created.
- ◆ **The EAN-13 symbology is hidden from US NDC custom preset default view of the Configure Barcode Parsing window.** If you slide the grid line to the right, EAN-13 will appear.
- ◆ **If the computer that the AT is running on has its Windows temporary folder full up, the AT will not start.** An error will occur when starting the AT. You should contact your system administrator, and have them open the temp folder and determine which, if any, files can be deleted.
- ◆ **Test Print Every in the Configuration tab cannot be set to zero (i.e. 0).** If you want to disable Test Prints, then uncheck Enable Test Prints in the Configuration tab, create a configuration package and deploy it to 500i's that require no test prints.
- ◆ **Entering a Master ID without any zero is accepted in the MDD.** When the database mode is US NDC, an 11-digit Master ID without any zero is accepted, but cannot be mapped to a scanned 10-digit Container ID on 500i (or the AT). Thus, you can define an invalid drug that will never be used and still successfully generate a formulary.
- ◆ **A valid Formulary Report will not be created if you don't select Open, Save or Cancel within 3 minutes after selecting Download.** If a corrupt Excel file is generated (indicated by an Excel error message) then create a new Formulary Report in a timely manner.
- ◆ **The AT may experience errors or stop functioning if you perform consecutive imports without restarting the AT.** If a file or filter is between 10,000 and 50,000 entries, you need to restart the AT before importing the file or filter the second time. Contact Codonics Technical Support if there are questions.
- ◆ **The ALL and ORAL filters are not available in the AT.** Due to issues with large imports, these filters are now disabled.
- ◆ **The AT doesn't support consecutive imports of large files (i.e. > 50,000 entries) even when restarting the AT.** If you try consecutive imports of files or filters > 50,000 entries (i.e., Lexicomp ORAL or ALL filter), the AT will not work the second time you try to import a file even if you restart the AT. It will display an error. Do not use these filters or import a file this large. Contact Codonics Technical Support if there are questions.
- ◆ **An invalid barcode scan in Learn Mode does not provide information.** Occasionally, when an invalid barcode is scanned (e.g. one without an AIM code) in Learn mode, the window is simply dismissed, and the focus is on the main screen again. There is no indication that the barcode is invalid or that the scanner needs to be configured properly.
- ◆ **Undo re-sorts MDD and Formulary entries when the drugs are filtered or sorted on drug name.** For example, filtering on a list of fentanyl's, deleting one of the entries, then undoing it does not place the drug in the same location in the list as it was prior to being deleted.
- ◆ **In Japanese, group editing drugs in the Formulary Manager has some fields in English.** After selecting multiple drugs, the fields that are different will show on the label template as "{CONCENTRATION}" and "{NAME}" instead of a translated version of these fields.
- ◆ **Deleting drugs one at a time can cause an error contacting server message.** This occurs with large (35K+) MDDs and a message Confirm: Delete this drug from the Master Drug Database "undefined (undefined)" is also present. If you want to delete multiple drugs from the MDD, select all the drugs and then group delete them.
- ◆ **Group editing large numbers (e.g., 35K+) of drugs at once causes Error Contacting Server error.** Clear the error by clicking the X and then select a smaller number of drugs to group edit.
- ◆ **Unable to edit drugs in a formulary if there are > 100K drugs in a formulary.** If you try to edit a drug, an Error Contacting Server message appears.
- ◆ **Unable to create a Formulary Report in a formulary if there are > 64K drugs in formulary.** Excel does not support greater than 65,536 entries. The Formulary Report creation status bar will complete. However, the download button will be grayed out and a message Writing report data will appear in red in the Formulary Report creation dialog.

- ◆ **Not all drugs appear selected even though you selected a large group of drug entries and then scrolled through them.** After a large number of drugs in the AT are checked and highlighted, sometimes drugs load in a manner where every other drug is highlighted and a group of contiguous drugs is not checked if you scroll through the list. Scrolling up or down so that the list loads again resolves the issue.
- ◆ **Custom labels in the BLANK tab of the configuration manager can be deleted.** Deleting any of the default Custom labels is not recommended. If you accidentally delete all the Custom Blank Labels, contact Codonics Technical Support.
- ◆ **After shift clicking large amounts of drug entries (e.g., 25,000) in the MDD, when scrolling through the list some may look like they are unchecked.** If you select the first drug in the MDD and then scroll down and shift click at the bottom, selecting 25,000 drugs in total, when scrolling up through the list you may find some that appear not to be selected. Although it appears that they are not selected, if you chose to Add to Formulary all of them (e.g., 25,000), all of the drugs would then be added to the formulary.
- ◆ **Search for Other will not find drugs with Other as a valid dilution.** You should select a different search parameter in this case or sort the dilutions column and scroll to find Other.
- ◆ **An error message can be caused by moving a custom label from one section (e.g., Lines) to another section (e.g., IV).** Close the error by selecting the X in the banner and then retry.
- ◆ **Custom labels in the BLANK tab of the configuration manager can be deleted.** Deleting any of the default Custom labels is not recommended. If you accidentally delete all the Custom Blank Labels, contact Codonics Technical Support.
- ◆ **The AT will not accept csv files if the specified path contains an extension that is capitalized (e.g., CSV). If this occurs, rename the file with the extension in lower case (e.g., .csv).**

### **Technical Support**

If problems occur during software installation or operation, contact Codonics Technical Support at any time.

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