

Codonics® Safe Label System® Administration Tool Software

Release Notes

Version 2.4.0 Safe Label System Administration Tool Release Notes

Summary

Version 2.4.0 is a software release for the Codonics Safe Label System® (SLS) Administration Tool (AT). The software is compatible with SLS Point of Care Stations (PCS) installed with 2.4.0 software. As of this release, this version of software is considered the most current, stable, safe and effective version for SLS PCS.

This document provides information about New Features (i.e., Adaptive Updates), Product Improvements (i.e., Perfective Updates) and Product Corrections (i.e., Corrective Updates) in 2.4.0 SLS AT software.

The SLS AT User's Manual version 1.3.0 and User's Manual Addendum 1.8.0 provides further information about the AT.

PC requirements for AT Stand-alone:

Hardware: Intel Core i5 or i7 processor with 4 cores, 2.6 GHz base frequency (or faster), 8 GB RAM

Hard Drive Space: Minimum 5 GB free space for the application. Recommended 30 GBs total at install.

Computer OS: Windows® 7 or newer, 64-bit required.

Browser support: Internet Explorer IE8 or newer

Applications: Excel 2003 or greater to open reports

Screen Resolution: Minimum 1440 x 900; use default browser fonts

Additional Feature:

Configurable inactivity logout: Maximum 18 hours

Recommended - Requirements for AT Server:

Hardware: Intel Quad Core (i5, i7 or Xeon) with 4 cores, 8 GB RAM.

Hard Drive Space: Minimum 5 GB free space for application. Recommended 30 GB total at install.

Computer OS: Windows® 7, Windows 10, Windows Server 2008, 2012R2 and 2016. 64-bit required.

Concurrent access: Not supported

Recommended requirements for AT Client:

Browser support: Internet Explorer IE 8 or newer

Screen Resolution: Minimum 1440 x 900; use default browser fonts

Computer OS: Windows 7 or newer.

Applications: Excel 2003 or greater to open reports

Additional Feature:

Configurable inactivity logout: Maximum 18 hours

New Features

- ◆ **AT software now provides AT User Management.** This provides access of the AT by more than one user and allows control over which users have access to the AT. Authorized users can now log into the AT with their Active Directory username and password. Refer to AT User Management Technical Brief 901-287-001 for details.
- ◆ **SLS PCS integration with Cerner BCMA.** A SLS syringe label barcode and barcode parsing rule for vaccine vials are being released that contains GS1 formatted data. The syringe barcode can be read into Cerner BCMA recording the full content including Container ID (i.e., NDC), expiration date and lot number in the patient record.

NOTE: In this case, the printed expiration date/time on the SLS syringe label is different than the expiration date/time included in the custom barcode. Note the provider is responsible for making sure the expiration date/time of the container and the syringe has not expired.

The new barcode parsing rule is Rule #14 and looks like:

The screenshot shows the 'Configure Barcode Parsing' window. At the top, there is a 'Preset' dropdown menu set to 'US_NDC' and a '+ Add New Rule...' button. Below this is a table with columns: 'Number', 'Symbology', 'Rule', 'Check Digit', and 'Actions'. The table contains 7 rows of rules, with rule 14 highlighted. Below the table is a 'Test Rules' section with a text input field for 'Original Barcode Data' (containing 'Scan Container Barcode'), a 'Test' button, and a 'Clear' button. Below that is a 'Container ID Results' field showing 'No results'. A 'Close' button is at the bottom right.

Number	Symbology	Rule	Check Digit	Actions
8	Interleaved 2 of 5, ITF-14	303#####	GTIN	[Copy] [Delete]
9	Data Matrix	#####	No Check Digit	[Copy] [Delete]
10	GS1 DataBar	01000#####	GS1	[Copy] [Delete]
11	GS1 DataBar	01003#####*	GS1	[Copy] [Delete]
12	Code 128, ISBT 128	#####-	UPC12	[Copy] [Delete]
13	Data Matrix	NDC####-###-###*	No Check Digit	[Copy] [Delete]
14	Data Matrix	01003#####*	GS1	[Copy] [Delete]
15	Data Matrix	#####-###-###	No Check Digit	[Copy] [Delete]

Test Rules
Original Barcode Data: Test Clear
Container ID Results: No results

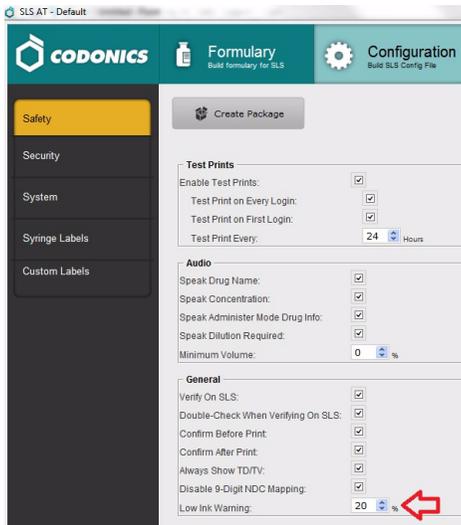
NOTE: If your site is:

A new AT Installation - Your AT will automatically include this new barcode parsing rule.

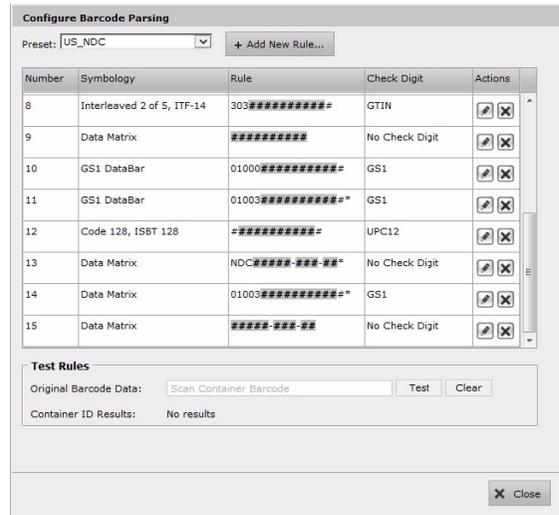
An existing AT Installation with NO Custom Rules - In order to include this barcode in the Configure Barcode Parsing dialog (shown above), click on the Preset dropdown, then click on Custom. The Custom barcode screen will appear. Click on the Preset dropdown again, and then click on US_NDC. The US_NDC Preset will reappear with the new barcode parsing rules included. Click Close and then click Save on the Configuration Localization dialog page.

An existing AT Installation with Custom Rules - If you want to add the new barcode parsing rule, contact Codonics Technical Support for help in adding it.

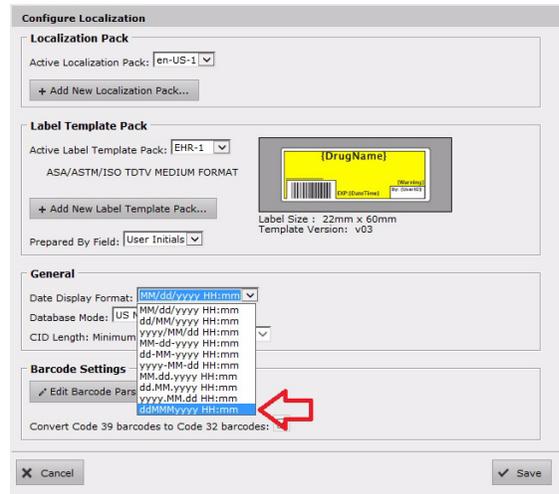
- ◆ The AT now provides capability for configuring the **Low Ink value on SLS**. This feature allows the AT user to adjust the Low Ink value from 20% (default) down to 5%. Based on the new value set in the Configuration, Safety tab, SLS will now alert users on SLS and via email notifier that ink is low at the configured setting.



- ◆ A new barcode parsing rule was added for an Exparel medication that includes hyphens in the NDC. The new rule is #15.

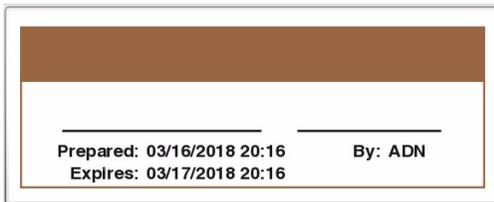
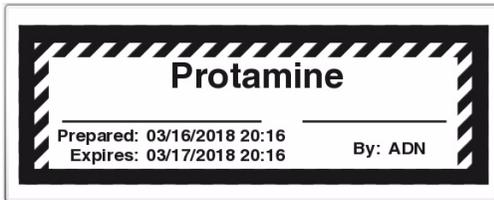
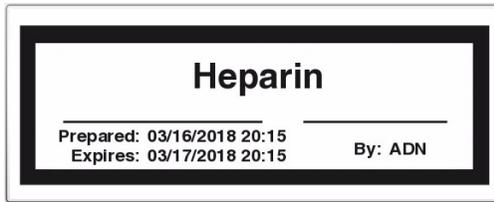


- ◆ The AT now provides capability for configuring the **Health Canada standard for drug preparation and expiry dates**. A new date format was added for displaying 3 character (capitalized) month abbreviations (e.g., 13FEB2018 11:18). To choose this option, select Date Display Format in the Configure Localization in the Formulary tab and select this format.



Product Improvements

- ◆ There are two new Custom Blank Label templates added as defaults. Custom-label-template-3.svg (Heparin and Protamine) and custom-label-template-4.svg (Beta Blocker) were added to the Blank Section in the Configuration tab.



Create Custom Label

Position:

SVG Template:

- Select a template
- custom-iv-template.svg
- custom-label-template.svg
- custom-label-template-2.svg
- custom-label-template-3.svg
- custom-label-template-4.svg
- patient-id-template.svg
- patient-template.svg

Title Text:

Copies:

Pattern:

Color:

Primary Stripe:

Secondary Stripe:

Text Color:

Text Background:

Expire Hours:

To set a Heparin custom template select Solid in the Pattern drop down or to set Protamine select Striped.

Create Custom Label

Position:

SVG Template:

Title Text:

Copies:

Pattern:

- Striped
- Solid
- Striped blur

Color:

Primary Stripe:

Secondary Stripe:

Text Color:

Text Background:

Expire Hours:

- ◆ Barcode rule #11 was modified. The rule now includes a check digit while supporting variable length information in the barcode.

Configure Barcode Parsing

Preset:

Number	Symbology	Rule	Check Digit	Actions
8	Interleaved 2 of 5, ITF-14	303#####	GTIN	<input type="checkbox"/> <input type="checkbox"/>
9	Data Matrix	#####	No Check Digit	<input type="checkbox"/> <input type="checkbox"/>
10	GS1 DataBar	01000#####	GS1	<input type="checkbox"/> <input type="checkbox"/>
11	GS1 DataBar	0100#####*	GS1	<input type="checkbox"/> <input type="checkbox"/>
12	Code 128, ISBT 128	#####	UPC12	<input type="checkbox"/> <input type="checkbox"/>
13	Data Matrix	NDC#####-###-##*	No Check Digit	<input type="checkbox"/> <input type="checkbox"/>
14	Data Matrix	01003#####*	GS1	<input type="checkbox"/> <input type="checkbox"/>
15	Data Matrix	#####-###-##*	No Check Digit	<input type="checkbox"/> <input type="checkbox"/>

Test Rules

Original Barcode Data:

Container ID Results: No results

- ◆ SLSs are now alphabetized in the Email Notifier.

Devices	3
Events	7
Offline	0
Faults	0
Alerts	2
Failed Installs	0

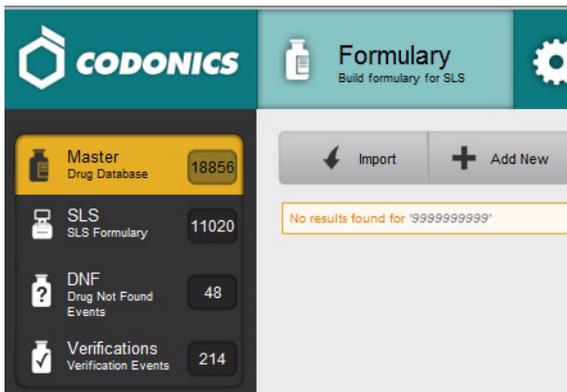
CODONICS SLS™
SLS Events

SLS A	03/20/2018 12:17	Alert	Install: OK
Timestamp			
03/20/2018 12:08 Drug not found			
03/20/2018 12:05 The SLS has started.			
03/20/2018 12:05 Printer ink low. Please replace ink cartridge soon.			

SLS B	03/20/2018 17:17	Ready	Install: OK
Timestamp			
03/20/2018 17:09 Drug not found			
03/20/2018 17:04 The SLS has started.			

SLS C	03/20/2018 11:58	Alert	Install: OK
Timestamp			
03/20/2018 11:50 Drug not found			
03/20/2018 11:47 The SLS has started.			

- ◆ **The AT supports new drug names.** The drug names are Alcohol Dehydrated, Belomycin, Cangrelor, Cepacol, Chorinic Gonadotropin, Cladribine, Codeine, Colistimethate, Dakin's Solution, Dextromethorphan, Dolasetron, Ganciclovir, Guaifenesin, Healon, Homatropine, Ifosfamide, Isopropyl Alcohol, Lactulose, Lidocaine Viscous, Maalox Plus, Magnesium Hydroxide, Mesna, Mitoxantrone, Patent Blue, Proparacaine, Racepinephrine, Sinalcide, Sodium Acetate, Sterile Irrigating Solution, Sucrose Solution, Tear Gel, Tear Ointment, Tobradex, Tromboject, Tropicamide, and Vinorelbine.
- ◆ **A new color option was added to custom labels.** #A881AF which is a shade of purple was added.
- ◆ **A message is now displayed after performing a search where no results are found.** The message says No results found for as shown below.



- ◆ **The Network Dialog Password Authentication process in AT Device Manager (AT-DM) was improved.** The AT-DM will no longer prompt for a Enter Network Password when first clicking on the AT-DM.



Instead, the default password of codonics will automatically be attempted.

NOTE: If the password has been changed on any SLS, those SLSs will show as **Offline - Wrong password**. In that use case, users should enter the correct Network password and select OK.

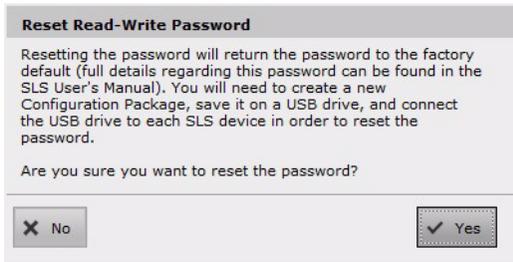
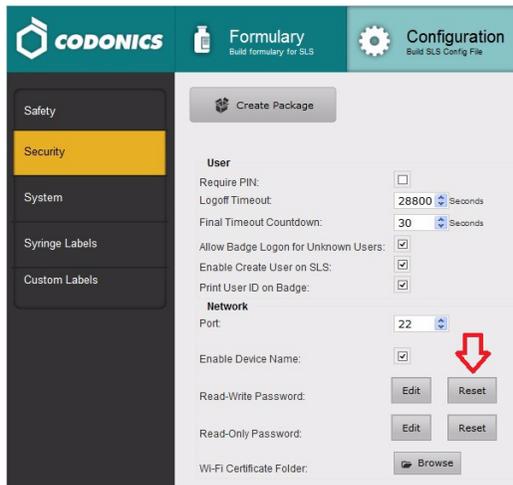
Clicking the Enter Network Password button in the AT-DM will still allow the user to enter a password. Additionally, the password prompt has a new checkbox option labeled (disabled by default): Automatically prompt for password.



NOTE: When checked, the prompt will appear on first connection to AT-DM just as it did in SLS 2.3.0 and earlier SW.

NOTE: If a user sets a Read-Only or Read-Write password in the AT configuration, the Automatically prompt for password configuration will be automatically checked.

- ◆ You can now reset the **Network** password back to the default. You can Reset the network password for either or both Read-Write and Read-Only back to codonics (and only codonics) should you accidentally change your password or want to revert back to not having a password.



NOTE: If you reset the password, you will need to create a new Configuration Package, save it on a USB drive, and connect the USB drive to each SLS device in order to reset the password.

When changing a network password, a Hint was added to recall your password in the AT Read-Only and Read-Write Password settings in the Security tab of the Configuration settings.

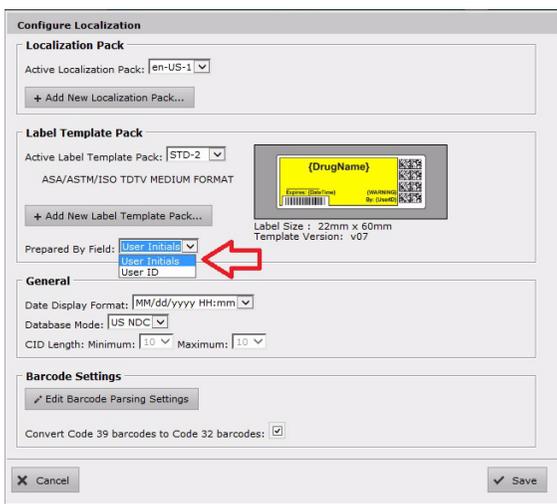
NOTE: A password hint will appear on the network password prompt in the AT-DM, only if a non-default password has been saved in AT Security tab of Configuration settings.

The Hint field is required to be filled out in order to save a new password.

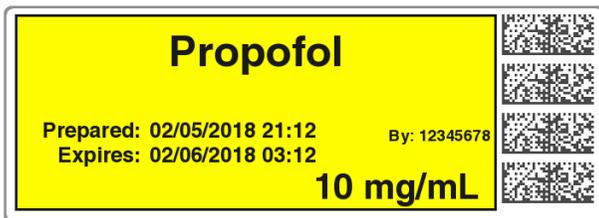


- ◆ SLS labels can now be configured to switch between **User ID and User Initials on supported label templates.**

The switch works with EHR-1, STD-1, and STD-2 label templates when using Common Login. As of Omnicell AWS 20.5 software, Omnicell started communicating their User ID to SLS. To configure this choice, select Configure Locale. Select EHR-1, STD-1 or STD-2 label template. Then select in the drop down User ID or User Initials.



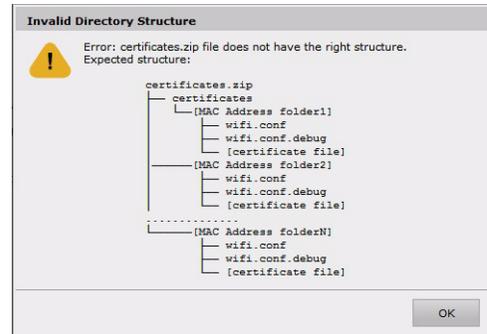
Create a new formulary package and deploy to the SLS PCs. See below for a label example.



NOTE: The ID-1 label template was removed from the available template choices in 2.4.0 SW. However, if you are currently using ID-1 in a previous version of SW, it will remain working after migrating to 2.4.0 SW.

NOTE: User ID does not support a 2nd set of preparer's initials.

- ◆ Wifi certificates are now validated for correctness when added to the AT. The structure of the certificates.zip file is checked when the user adds it to the AT and will show an error message indicating when there is something wrong (e.g., wrong MAC address, missing wifi.conf file) with it. The AT logs will provide further details of what the problem is.



- ◆ The AT supports new concentration numbers. The numbers are 2.9, 10.15, 13.2, 270, 473, 2,250, 2,700.

Product Corrections

- ◆ Migrated custom barcode definitions did not work when migrating a custom barcode definition from pre-2.3.0 to 2.3.0 AT. If the custom definition was loaded into the 2.3.0 AT, the labels printed correctly on SLS with the barcodes. This is now fixed in 2.4.0.
- ◆ Previously, User Management allowed User ID to be imported with non-alphanumeric characters (e.g. "!", "#", "&"). The on-screen keyboard for the SLS did not allow the user to enter these characters so the user would not be able to log in. Now, the User ID field is restricted to only numbers and upper-case letters (A-Z) which SLS does support.
- ◆ The rules for verification and unverification of drugs in the MDD were changed.

A drug will now be unverified if one of the following four fields is changed: Drug Name, Tallman, Concentration, or Container ID. For combination drugs, this applies to changes of either drug in the combination drug.

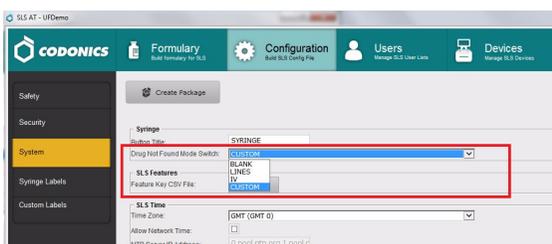
A drug will not be unverified if any other field (e.g., Status, Route) is changed.

A drug that is already verified will not be unverified if a new drug entry is added which maps (Master ID) or matches (Container ID) to the original verified drug.

A drug can still be verified even if the drug maps (Master ID) or matches (Container ID) to one or more different drugs.

- ◆ AT dialog boxes do not move from their location when the AT is now minimized and opened again. Previously, if the AT was in full screen mode, when it was minimized and reopened the menu may move to a lower position on the screen or even disappear from the screen. This no longer occurs.

- ◆ **Drug Not Found (DNF) drugs would be Ignored unexpectedly.** Previously, in the DNF tab under the Unresolved filter, if a drug or drugs were added to the Formulary and then more than one drug was selected and Ignored, all the drugs including the one moved to the formulary were marked as Ignored. This no longer occurs.
- ◆ **The migration utility now provides a warning to the user if a time zone is not successfully migrated.** If a time zone was used in the previous version of AT but is not available in the new version, a dialog message will alert a user that the time zone isn't available and also indicate what time zone was selected. If needed, you can change the time zone in the System tab of the Configuration settings once the migration is complete.
- ◆ **Previously, the formulary package name was appended incorrectly in Transferring state in AT.** A package that was named MultiSLSForm, for example, would be displayed as PKG = SLS-FORMULARY-SLS-FORMULARY-MULTISLSFORM-APPROVED-001--01. It had an additional SLS-FORMULARY added to the beginning of the string and an extra 01 added to the end. In 2.4.0, this was corrected.
- ◆ **Previously, when selecting User ID on supporting templates, test prints used User Initials instead of User ID.** Now when selecting User ID in the AT, test prints print the user ID on it. If User Initials is selected then the user initials will be printed on the test print.
- ◆ **SLS no longer stops working if the Drug Not Found Mode Switch references a disabled Custom Label.** The setting for Drug Not Found Mode Switch is located in the AT.
- ◆ **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.
- ◆ **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 of the duplicate drug entries on the MDD properly changes the other entry. 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 SLS PCS 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.
- ◆ **Certain time zones (e.g., US/Eastern) do not always behave as expected on the SLS due to adjustment for daylight savings time.** See table below for alternatives timezones that properly set the time.



Known Common Issues

This section details common issues with 2.4.0 AT software that are likely to be experienced by most users. These issues are specific to the current release; previous issues can be found in previous Release Notes. None of the issues included in the document are considered to render the product unsafe or ineffective for clinical use.

Current	Alternative
US/Eastern	America/Toronto
US/Central	America/Resolute
US/Pacific	PST8PDT
US/Pacific-New	PST8PDT
US/Alaska	America/Yakutat
America/Chicago	America/Resolute
America/Los Angeles	PST8PDT
America/Anchorage	America/Yakutat
America/Halifax	America/Thule
Canada/Atlantic	America/Thule

Known Uncommon Issues

- ◆ This section details uncommon issues with 2.4.0 AT software that are unlikely to be experienced by most users. These issues are specific to the current release; previous issues can be found in previous Release Notes. None of the issues included in the document are considered to render the product unsafe or ineffective for clinical use.
- ◆ **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: 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: 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). Another option is to enter the drug name in the Tallman field of the AT which will reduce the font size.
- ◆ **Running the AT Stand-Alone on a laptop and undocking the laptop will cause the AT to stop working.** Close the AT before undocking your laptop.
- ◆ **Adding invalid feature keys displays a Error Contact Server (ECS).** When adding a feature key that has any of the following properties (e.g., Empty field, single or double or special characters, all numbers or mix of numbers and characters) results in the AT displaying an ECS instead of Invalid Feature Key Error message.

- ◆ **The Drug Classification templates interface does not always show the correct or any barcode.** The 1D barcode in the EHR-1 label template and the 2-D barcode in the STD-1 label template are not always displayed properly.
- ◆ **For 2.1.1 through and including 2.2.0 software releases, hidden (i.e, nonbroadcasted) SSIDs for enterprise WiFi require different configuration settings.** The set up for the conf and conf.debug file within the certificates folder of each Wifi MAC Folder require an updated entry. Here are the additional network configuration settings required for the files:
wifi.conf
wpa-ssid [HiddenSsid]
wpa-ap-scan 1
wpa-scan-ssid 1

wifi.conf.debug
ap_scan=1
network={
 scan_ssid=1
}
- ◆ **Refer to AT User's Manual, Codonics Part Number 905-063-030 section 6, for all other network configuration file settings.**
- ◆ **Changing barcode parsing rule presets from US_NDC to Custom does not warn you that custom rules will be removed.**
- ◆ **Second preparer's initials are not supported on a small label template pack (e.g., STD-S1 and ZH-S1).** Small labels do not support preparer's initials.

Technical Support

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

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