# Codonics SLS Lexicomp Import Enhancements

# Overview

Version 1.5.0 software or newer for Codonics Safe Label System<sup>TM</sup> Administration Tool (AT) includes enhancements to the Lexicomp import function:

- 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.
  - NOTE: Starting in 1.7.0 SW, when importing from a Lexicomp database, a drug's status field will be set to OBSOLETE in the MDD if the drug's end of manufacture date is prior to the Lexicomp database creation date. In addition, when importing into the AT via the Update action, the status field will not be updated if a drug in the AT is already edited, in the formulary or verified.
- The drug status Recall has been added so that recalled drugs can be more clearly identified as Recalled and no longer have to be assigned a status of Obsolete to prevent those labels from being printed.

#### Lexicomp Import Behavior Prior to Version 1.5.0

In software versions prior to version 1.5.0, when Lexicomp data was imported into an existing Master Drug Database (MDD), the AT identified drug matches based on the Master ID (i.e., the 11-digit NDC value).

The AT user then had two options: either overwrite all matching entries or skip importing all matching entries.

If the **Overwrite Matches** option was chosen, the following fields were overwritten (i.e., all fields except Tallman and Verification):

- Drug Name or Combination Drug Name
- Container ID
- Concentration (number and units), or Combination Concentration (number and units)
- Route
- Status

Both the Overwrite Matches and Skip Matches options always added new (non-matching) drugs.

To apply potential Lexicomp updates, the AT user would select the **Overwrite Matches** option, potentially undoing local edits to the drug records in the MDD.

To avoid undoing drug edits in the MDD, the user would select the Skip Matches option. However, this would cause some updates to be missed, such as to 10-digit Container IDs.

# **Update Matches Option**

In version 1.5.0, the Lexicomp import function now includes an Update Matches option. This option allows you to update matching drugs when performing a Lexicomp import, rather than just overwriting or skipping the drugs. This provides a more intelligent update to the MDD, based on Lexicomp updates and the state of the MDD.

**NOTE:** The Update Matches import option is only available for Lexicomp imports. CSV imports do not support this function.

# Which Drugs Will Not Be Updated

When selecting the **Update Matches** option, drugs with the following conditions will not be updated:

- Drugs that have already been verified, since their data has already been confirmed during the verification step.
- Drugs in the MDD that have been edited, so that edits are retained.
- Drugs in the formulary.

However, even for drugs with these conditions, if you select the Update Matches option during the Lexicomp import, the following will be updated:

- The Route value, so you can correlate drugs in the MDD with the import filter used to import them from Lexicomp.
- The Container ID value if it has not already been assigned in the MDD. This eliminates learning before verifying a drug on the AT and eliminates learning a drug on the SLS.

#### When Drug Records in the MDD Are Considered Edited

A drug entry in the MDD will be considered edited if any of the following conditions are true:

 The drug entry was manually created by a user via Learn mode or manual text entry (i.e., not via Lexicomp import).



- The drug entry was imported from a CSV file.
- Any of the drug data was manually edited and saved (except Tallman data).

#### **Database Migration and the Edited State**

When a database (MDD and formulary) is migrated from a previous version to version 1.5.0, all of the drugs in the MDD will be considered and set to an Edited state. This is because it is impossible to know in databases from previous versions whether a drug has been edited or not.

#### Lexicomp Imports and the Edited State

Once migrated, and then after a Lexicomp import is performed, drugs in the MDD that have the same attributes as in the Lexicomp database will be considered and set to an Unedited state. This is because when the MDD values match what is in Lexicomp, the system determines that the drug records in the MDD have not been edited.

Similarly, any drugs that are selected for Overwrite Matches will be considered Unedited, since they will also match the Lexicomp database attributes after the import is completed.

#### **CSV** Imports and the Edited State

After a CSV import, all drugs that are added or overwritten will be considered Edited, since CSV importing is considered to be similar to manual editing.

# **Performing an Update Matches Import**

When importing Lexicomp data using the AT, the Import Results dialog box includes an Update Matches button, as shown below.

Master ID	Container ID	Name	Concentration	Туре	Description
					More results exist. Download Report for details.
00002238501		Na nitrite/Na thiosulfate/amyl nitrite	0.3 mL	Error	Unsupported combination drug.
00006473900	0006473900	pneumococcal 23- polyvalent vaccine	0	Error	Drug concentration units are missing.
00006473950	0006473950	pneumococcal 23- polyvalent vaccine	0	Error	Drug concentration units are missing.
00006494300	0006494300	pneumococcal 23- polyvalent vaccine	0	Error	Drug concentration units are missing.
00008033204	0008033204	antivenin (Crotalidae) polyvalent	0	Error	Drug concentration units are missing.
00008033302		sodium chloride- bacteriostats	0.009 g/mL	Error	Drug combination concentration units are missing.
0008033305		sodium chloride- bacteriostats	0.009 g/mL	Error	Drug combination concentration units are missing.
00008033308		sodium chloride- bacteriostats	0.009 g/mL	Error	Drug combination concentration units are missing.
00008033350		sodium chloride- bacterioctate	0.009 g/mL	Error	Drug combination concentration units are micrino
Discard			Pre-Import Report	✓ Update	Matches 🗸 Skip Matches 🖌 Overwrite Matche

button

#### Drug Information in the Pre-Import Report Enhancements Related to the Update Matches Option

The Pre-Import Report includes two new columns relative to the Update Matches option:

- Edited. Values are Yes (the drug has been edited in the MDD) or No (the drug has not been edited).
- Is In Formulary. Values are Yes (the drug has been added to the formulary) or No (the drug has not been added to the formulary).

A		C	D			6	н			ĸ		M	N	0	P	
Safe Label Syste	m Administrat	ve Tool														16
Preimport Report	1															
Formulary Name:		SLS Form	ulary Version 1													
Prepared By:		Administ	trator													
Prepared On:		02/11/20	13 08:48													
Formulary Status:		Under De	evelopment													
Total # of drugs in impor	t file:	5602										_				
Total # of drugs to be imp	orted	4828					Edited	le l	n Fo		lanı					
Total # of matching drugs	with no changes that	w 4828					Eulleu	15 1	II FU	mu	ary	_				
1	_	_		_	_	-	No	No					_	_	_	-
Master ID	Container ID	Name	Lexicomp Generic Product Name (For Reference Only)	Concentration	Status	1324	140	140				_				
00002120001	0002120001	Syrbetapi	Robetapir F 18 intravenous solution	2	null	Eng	No	No				_				
00008040703	0000040703	arthenin	(fantivenin (Micrurus fuhius) intravenous kit		null	Engr	110	140				_				
00015355841	nul	mesna-do	ić mesna intravenous kit	100 mg/mL	null	Env	No	No				_				
00015355941	nd	mesna-fo	e mesna intravenous kit	100 mg/ml.	null	Engl	140	140				_				
00019270703	nd .	perfutren	perfutren intravenous suspension	2	null	Enu	No	No				-				
00026017220	0026037220	anthemos	plantihemophilic factor recombinant intravenous injection	2	mail	Eng		140				_				
00026037230	0029037230	anthemos	p antihemophilic factor recombinant intravenous injection	-	mult.	Enter	No	No				_				
00026017250	0029037250	antheme	p antihemophilic factor recombinant intravenous injection	-	mul.	Enge		140		_		_				
00026017920	0026037920	archerroy	plantihemophilic factor recombinant intravenous injection	-	mult.	Enter	No	No				_				
00020017930	0020037930	and a second	partnerophilit factor recombinant intravenous ejection	6	-	Cours	Concerning to service of the service		_			-				
00028017990	0020037950	and a state of the	pareneropeat actor recombinant intravenous injection	6	-	Contra	Crug concin									
0002000130	0020000130	angena rep	r apra - provenase intotor numan intravenous injection	6	-	Contra	Crug concin									
0002000135	0020000135	agent right	r apra - prosenase inspirer numan incluences injection	6	-	Code	Could concise									
200036063650	-	Sector N c	varies II complex human intransmust injection	6	100	E and	Days cases 1									
200036066430		and homes	a settlementally factor human interaction interface	5	100	Enter	Dava cancel									
2000360666300		and he may	a antihemosphile factor human internetional interfact	6	100	E and	One care									
200036066430		anthema	a antihemosphile factor human internetwork injection	5	100	Error	Dava cancel									
00025056450	and a	anthance	antihamoshilir factor human intravanous injection	5	and it	Eng	Drug canoult	- N								
00026066520	0020046520	anthame	antihemosphile factor human intravenous intertion	5	nd	Ente	Drug cancult	a 14								
00025056330	0026066530	athene	antihemosphile factor human intravenous intertion	5	nd	Free	Drug cancult	a 14								-12
t t m Pre-Import Report				-		1	-									1

You can use this information to determine which drugs have been edited in the MDD or added to the formulary and, therefore, could be affected by choosing the Update Matches option.

**NOTE:** The Pre-Import Report contains the Lexicomp values for all the drugs considered for import, so it is a valuable reference for manually reconciling any drugs post-import that were not completely updated.

After reviewing the Pre-Import Report, if you select the Update Matches option, the following will occur:

- All new drug entries will be added to the MDD.
- Existing drug entries that are verified in the MDD will not be updated.
- Drug entries that have Yes entered in the Edited column or Yes entered in the Is In Formulary column will be updated but will have only their Container ID value filled in, if not already filled in, or their Route value updated if the route has changed.
- Drug entries that have No entered in the Edited column AND No entered in the Is In Formulary column will be updated for all attributes (except Tallman and Status) in the MDD with any different values from Lexicomp for those drugs.



#### Selecting the Update Matches Option

After clicking the **Update Matches** button, you are prompted to confirm the operation.

Import Drugs	
Confirm: Accept the current import set, updating any existing matches	;?
× No	✔ Yes

#### Drug Information in the Post-Import Report Enhancements Related to the Update Matches Option

Once the import occurs, a Post-Import Report is generated.

The Post-Import Report now includes the new Edited and Is In Formulary columns that are in the Pre-Import Report.

A		c	0	1	1		G	H			ĸ	
Safe Label System A	dministrative Tool											
Postimport Report												
Formulary Name:		5LS Formulary Version 1										
Prepared By		Administrator										
Prepared On:		02/11/2013 08:55										
Formulary Status:		Under Development				-						
Total # of Matching Drugs with	h Changes that were Skipped	0									_	
Total # of Matching Drugs with	h No Changes that were Skip	4828				Editod		le In I	Form	ular	v	
Master ID	Container ID	Name	Concentration	Status	Description	Luiteu		13 111 1		Turai	* +	-
00003344403	and and	uncomparing the	500 mg	ACTIVE	Matching due reced was imposed during	No		No				
00002144410	ad	vancamycin	500 mg	ACTIVE	Matching drug record was ignored during	140		140				
00002144425	a.d	vancemucia	500 ma	ACTIVE	Matching drug record was ignored during	Ma		Ma			- 1	
00002144501	and a	methohesital	5.0	ACTIVE	Matching dup record was innoved during	140		140			- 1	
00002144601	nd	methohesital	500 mg	ACTIVE	Matching drug record was ignored during	AL.		Mar.				
00002144625	nul	methohexital	500 mg	ACTIVE	Matching drug record was ignored during	INO		110			- 1	
00002144825	nul .	methohexital	25.0	ACTIVE	Matching drug record was ignored during						_	
00002145201	null	vinBLAStine	10 mg	ACTIVE	Matching drug record was ignored during	No		No				
00002146501	null .	methohexital	500 mg	ACTIVE	Matching drug record was ignored during impor		No	No				
00002714001	0002714001	abciximab	2 mg/mL	ACTIVE	Matching drug record was ignored during impor	e	No	No				
00002717501	nul	DOBUTamine	12.5 mg/ml,	ACTIVE	Matching drug record was ignored during impor	e	No	No				
00002717510	null	DOBUTamine	12.5 mg/mL	ACTIVE	Matching drug record was ignored during impor	6.	No	No				
00002719401	nut	verCRIStine	1 mg/ml,	ACTIVE	Matching drug record was ignored during import	ε.	No	No				
00002719501	null	vinCRIStine	1 mg/ml,	ACTIVE	Matching drug record was ignored during import	ε	No	No				
00002729601	nul	vinCRIStine	1 mg/mi,	ACTIVE	Matching drug record was ignored during import	ε.	No	No				
00002729801	null	vinORIStine	1 mg/mi,	ACTIVE	Matching drug record was ignored during import	e	No	No				
00002719809	nut	verCRIStine	1 mg/ml,	ACTIVE	Matching drug record was ignored during import	ε.	No	No				
00002729901	nul	vinCRIStine	1 mg/ml,	ACTIVE	Matching drug record was ignored during import	ε	No	No				
00002729909	nul	vinCRIStine	1 mg/mi,	ACTIVE	Matching drug record was ignored during impor	e	No	No				
00002729701	nul	vancomycin	500 mg	ACTIVE	Matching drug record was ignored during import	6.	No	No				
00002729750	nul	vancomycin	500 mg	ACTIVE	Matching drug record was ignored during impor	e	No	No				
00002729801	nul	vancomycin	1g	ACTIVE	Matching drug record was ignored during impor	e	No	No				
* * * Post-Import Report					1							

You can use this information to determine which drugs had been previously edited in the MDD or added to the formulary. You might want to manually edit these drugs to restore drug information that had been manually added or changed prior to the Lexicomp import.

If you had selected the Update Matches option, all new drug entries in Lexicomp will be added to the MDD. In addition, the Post-Import Report will include status messages for the following cases when drug entries in Lexicomp matched drug entries in the MDD:

 Drug entries that were verified in the MDD will not have been updated. The following message will be included in the report for these drug entries:

Matching drug was skipped during import because it was already verified.

Since you had previously verified the drug information (drug name, drug concentration, and Container ID) against an actual container, no further action for these drug entries is suggested.

Drug entries that were not previously verified and now have Yes in the report's Edited column or Yes in the Is In Formulary column will have been partially updated but will have had only their Container ID value entered (if not already entered) or their Route value updated (if it was changed). The following message will be included in the report for these drug entries:

Matching drug was partially updated during import.

If Yes is entered in the Edited column, then there is a difference in the drug entry between the MDD and Lexicomp. If Yes is entered in the Is In Formulary column, check the drug entry to make sure that its data is correct. A formulary report can be generated to evaluate the data and compare it to the Pre-Import Report, which contains the Lexicomp values for all of the drugs that were partially updated.

 Drug entries that have No in the report's Edited column AND No in the Is In Formulary column will have been updated for all attributes (except Tallman and Status) in the MDD with values from Lexicomp. Therefore, these drug entries will now be the same for the MDD and Lexicomp. The following message will be included in the report for these drug entries:

Matching drug was updated during import.

You should evaluate these drug entries if you are going to add the drug to the formulary.

# **Changes to Drug Status Settings**

In versions prior to version 1.5.0, the Lexicomp drug status values, Active or Obsolete, were included in the imported drug information. However, there was an issue with this approach: Given only the two statuses Active and Obsolete, users were not able to indicate that a drug had been recalled. To prevent the label of a recalled drug from being printed, users had to assign a status of Obsolete to it, causing potential confusion about a drug's actual status.



To address this issue, the following enhancements to the drug Status settings are included in version 1.5.0:

- All drugs being imported during a Lexicomp import will be assigned a status of ACTIVE. Any existing drug entries in the MDD will no longer have their Status value altered as the result of a Lexicomp import.
  - NOTE: Starting in 1.7.0 SW, when importing from a Lexicomp database, a drug's status field will be set to OBSOLETE in the MDD if the drug's end of manufacture date is prior to the Lexicomp database creation date. In addition, when importing into the AT via the Update action, the status field will not be updated if a drug in the AT is already edited, in the formulary or verified.
- In addition to the ACTIVE and OBSOLETE drug statuses, a RECALLED status is now supported and can be set in the MDD, as shown in the following Editing Master Drug(s) dialog box.

Editing Master	Drug(s) Propofol
Combination	Drug
Master ID:	Enter 11 Digit ID
Container ID:	6332327050
Name:	Propofol _
Tallman:	Enter Tallman
Concentration:	10 w mg/mL v . Select Number v Select Units v
Route:	Enter Route
Status:	ACTIVE ACTIVE
X Cancel	✓ Save

The Safe Label System<sup>TM</sup> SLS 500i<sup>TM</sup> handles drugs with a RECALLED status the same way that it handles drugs with an OBSOLETE status; that is, by not printing the label and displaying and announcing the following message:

Drug not approved for use.

### **Technical Support**

If problems occur when using the AT, contact Codonics Technical Support.

Phone:	+1.440.243.1198
Email:	support@codonics.com
Website:	www.codonics.com

# *Get it all with just one call* 800.444.1198

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