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## WHITE PAPER

# Enhance Controlled Substance Inventory Control While Improving Workflow Efficiency

Most ambulatory pharmacies still use a manual process to record the receipt and disposition of controlled substances. This manual process involves hand written log entries to show the receipt and disposition of each controlled substance.

## The Challenges with Manual Inventory Record Keeping

Since the movement of all hydrocodone products to a CII designation, many ambulatory pharmacies are filling between 25-50% more CII's than before. When the change happened in October 2014, hydrocodone containing medications were the most prescribed medications in the U.S. and as a result CII volumes and related workflows have gone up considerably. The processing of a CII prescription is longer than non-inventories drugs. Because these prescriptions take longer, a dramatic shift in volume or percentages of these types of prescriptions can and do adversely affect the pharmacy's workflow efficiencies.

## Legibility and Calculations

A problem with handwritten inventory logs is that the transactions are usually performed in haste and can be difficult to read. The pharmacist entering the transaction must subtract or add their transaction count based off of a number from a previous transaction that can be difficult to read. The legibility of the transaction is critical for the correct calculations of receipt and dispensation. In addition, the logs must be easy to follow in the event of a DPS or DEA audit. If the Rx Number of the prescription that the drug is used on is logged in the book with an illegible number, an audit trail would be in question. This is a common problem found in controlled substance audits.

Manual calculations are also prone to mistakes. The pharmacist subtracting the values in the log books are usually multitasking and can either make a simple math mistake, log on the wrong page, or forget to enter the transaction. Either way, when an inventory count is done comparing the

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book count with the actual inventory, the two counts will not match and a time intensive audit must be performed to identify and correct the error. These audits can take up to 30 minutes of valuable pharmacist time and are workflow nightmares. The following image is a real life example of a CII inventory sheet in a thick binder with many years' worth of transactions. It highlights both difficult legibility, calculation errors, and at least one time consuming audit to rectify the count.

DRUG	STRENGTH	MANUFACTURE	
hydrocodone / APAP	5/300	WATSON	
BEGINNING BALANCE # <u>581</u>			
LABEL	#	LABEL	#
Rx 229113 10/16/14 -60	524	Rx 232021 2/10/15 -10	366
Rx 229254 10/23/14 -180	341	Inventory 2/27/15	366 TR
Inventory 10/30/14	341	Inventory 3/18/15	366 TR
Rx 229833 11/14/14 -40	301	233222 3/27/15 -40	326
2209920 11/18/14 -25	276	Rx 233442 4/30/15 -30	306 TR 296
Inventory 11/23/14	276	Rx 233499 4/30/15 -20	286 TR 276
Rx 230480 12/10/14 -20	256	Inventory 4/30/15	276 TR



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## **Inefficiency**

One of the biggest drawbacks with handwritten manual logs is that they are time consuming and negatively affect workflow. Busy pharmacists cringe when they are presented a CII prescription. This is because it will take additional time to read, decipher, and log the transaction as well as the additional counting requirements that come with a perpetual inventory drug. The average time to log a CII prescription varies from 1 minute to 1 minute and 45 seconds depending on the size and orderliness of the log book. Specific data elements from the transaction must be logged for each one done. For dispensations, these usually include the Drug, Rx Number, Quantity, Date of Transaction, and optionally Patient information. For receipt of drugs from a wholesaler, the Drug, Quantity, 222C number, Invoice Number, and Date of Receipt are logged by hand in the book. In a busy pharmacy, these log books can become very large and difficult to sort through based on sheer weight.

## **The Solution: Computerized Inventory Management**

By utilizing technology to help with the problems of handwritten inventory logging, a more efficient and accurate model can be achieved.

## **Calculations and Barcode Scanning**

A software designed for controlled substance inventory management would allow calculations to be done by a computer rather than by a busy pharmacist prone to human error. By incorporating a barcode on the pharmacy information system (PIS) prescription label, software could improve the logging time to 15 seconds rather than the minute and a half that it is taking in most manual systems today. The barcode scan auto populates all the necessary fields in the system and the inventory count is automatically decremented by the accurate amount on the PIS label.


CS MANAGER RX<sup>®</sup> WORKSPACE
Log In

About

**WELCOME**

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Access the program by clicking the Log In button in the upper right hand corner.



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RxNumber	00010		Count	10	
Drug	Diazepam				
NDC	00591561901	Strength	5 mg		
					

The long barcode above is a combination of NDC, RX Number, and Quantity Dispensed. These data elements basically make logging the transaction a simple scan. This will greatly improve pharmacy workflow efficiency and accuracy as it relates to the inventory management of CII prescriptions from dispensations.

	3000780493051	00078049305	Focalin XR	15 mg	100.000000
	3000780432050	00078043205	Focalin XR	20 mg	100.000000
	3000780433057	00078043305	Focalin XR	30 mg	100.000000
	3000780430056	00078043005	Focalin XR	5 mg	100.000000

Additionally, the receipt of inventory is equally fast with the simple scanning of the UPC code on the bottle from the wholesaler. The software converts the code into an NDC and quantity and logs the appropriate data in the system with just a scan.

## Reporting and Blind Inventory Capability

With computerized order entry, all transactions are easily retrievably and reportable. Inventory, drug activity, user activity, and order history are just a few of the reporting options.

**CS MANAGER RX<sup>®</sup> WORKSPACE**
Thomas Renshaw Logged In at Healthco Pharmacy #2
Log Out

About

**REPORT MENU**

<input type="checkbox"/>	<b>Current Inventory</b>
<input type="checkbox"/>	<b>Activity Report</b>
<input type="checkbox"/>	<b>Below Par Order Report</b>
<input type="checkbox"/>	<b>Form 222C/CSOS Ordering Report</b>
<input type="checkbox"/>	<b>Search Dispensation History</b>

Date Filter:

Start Date:

End Date:

Drug Filter:

Select a drug for report filtering.

Main Menu

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## Easy and Efficient Audit Trails

The inefficiency of a manual system is never more apparent than when a pharmacist is faced with an agent from a regulatory body asking for specific data elements from an historical timeframe. By using an electronic inventory management system, the pharmacist could provide the agent the data they requested in a matter of minutes with a few mouse clicks. The following is a sample activity report from the system.

### CS Activity for Healthco Pharmacy #2

### Controlled Substance Activity

Event Date/Time	Activity Type	Performed By	Details
4/30/2015 2:17:23 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #30 tablets to Pat:1251257 NDC: 64376064805
4/30/2015 2:22:47 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:22:47 PM
4/30/2015 2:23:17 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #30 tablets to Pat:123123 NDC: 64376064805
4/30/2015 2:30:13 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:30:13 PM
4/30/2015 2:32:48 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:32:48 PM
4/30/2015 2:34:35 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #30 tablets to Pat:123123 NDC: 64376064805
4/30/2015 2:34:36 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #30 tablets to Pat:123123 NDC: 00591561901
4/30/2015 2:34:50 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #30 tablets to Pat:123123 NDC: 64376064805
4/30/2015 2:34:50 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #30 tablets to Pat:123123 NDC: 00591561901
4/30/2015 2:41:01 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:41:01 PM
4/30/2015 2:46:34 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:46:34 PM
4/30/2015 2:49:43 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 325 mg-10 mg oral tablet #30 tablets to Pat:234324324 NDC: 68308022301
4/30/2015 2:49:43 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #20 tablets to Pat:234324324 NDC: 00591561901
4/30/2015 2:49:44 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 325 mg-10 mg oral tablet #30 tablets to Pat:234324324 NDC: 68308022301
4/30/2015 2:49:44 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #20 tablets to Pat:234324324 NDC: 00591561901
4/30/2015 2:52:11 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 2:52:11 PM
4/30/2015 3:01:50 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 3:01:50 PM
4/30/2015 3:07:03 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #20 tablets to Pat: NDC: 64376064805
4/30/2015 3:07:03 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #20 tablets to Pat: NDC: 00591561901
4/30/2015 3:10:37 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 3:10:37 PM
4/30/2015 3:12:35 PM	Dispense	Thomas Renshaw	Dispensed acetaminophen-HYDROcodone 300 mg-5 mg oral tablet #20 tablets to Pat:34543543 NDC: 64376064805
4/30/2015 3:12:35 PM	Dispense	Thomas Renshaw	Dispensed diazepam 5 mg oral tablet #20 tablets to Pat:34543543 NDC: 00591561901
4/30/2015 3:12:35 PM	Dispense	Thomas Renshaw	Dispensed methylphenidate 10 mg oral tablet #20 tablets to Pat:34543543 NDC: 00406114401
4/30/2015 3:16:33 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 3:16:33 PM
4/30/2015 3:18:14 PM	Login	Thomas Renshaw	User - Thomas Renshaw successfully authenticated. 4/30/2015 3:18:14 PM



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## **The Apex Custom Software Solution: CS Manager<sup>®</sup>**

Apex Custom Software, Inc. offers the ambulatory pharmacy a hosted web based solution for computerized inventory management of controlled substances. An asp.net 4.0 web-based solution offers rapid deployment with no desktop rollout or workstation installation. Reports are generated as a PDF file that can be printed at the workstation or saved if needed. The system uses Microsoft SQL Server 2012 as the backend database so scalability is not an issue.

### **Cost Justification and ROI Schedule**

- I. By using defined barcodes and the software, a pharmacist can reduce at least 1 minute off of the logging time required in a manual inventory system. If the pharmacy fills 60 CII prescriptions in a day, that equates to a full hour of pharmacist time that can be reallocated. The time spent correcting and clarifying erroneous log entries can be 30 to 60 minutes per event as well.
  - a. The daily time saved translates to 1 hour per day in time saving or roughly \$55/day.
  - b. If there are two log reconciliation events per month, which would translate into another \$110 dollars of saved time.
  - c. Since the software is sold as a service and the cost is \$50/ month, the savings and ROI is captured literally in the first day of a busy CII filling pharmacy.
- II. The other huge advantage of using the software is the peace of mind the Pharmacist in Charge gets knowing that all of their data is backed up in two disparate data center locations and that they are always ready for any audit that might come their way.



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## About Apex Custom Software

Apex Custom Software was founded in 1997 to meet unique clinical and operational needs within the healthcare industry. We develop and support all solutions with in-house resources. Our staff includes clinicians, developers, and implementation experts. All of our staff comes from a healthcare background and they all have a passion for improving patient outcomes and processes. Our applications are developed to fill specific needs in workflow processes that are best addressed by implementing a structured, rules based software solution.

To learn more about Apex Custom Software or CS Manager<sup>®</sup> visit <http://www.apexcustomsoftware.com>