

 Covenant Health	Automated Dispensing Machines (ADM; Pyxis®)	Corporate Policy & Procedures Manual
		Number: VII-A-55
		Date Approved November 18, 2015
Approved by:  Vice President and Chief Medical Officer; and Vice President and Chief Operating Officer		Date Effective December 11, 2015
		Next Review (3 years from Effective Date) December 2018

## Purpose

This document outlines the required standards and responsibilities of managers and health care providers at Covenant Health sites when using an automated medication dispensing system (eg. Pyxis® Medstation).

## Policy Statement

Covenant Health sites equipped with automated dispensing machines shall ensure that appropriate processes and security measures are in place for use to safeguard and strictly manage access, privileges, medication security/inventory (including controlled substances), documentation, and patient confidentiality.

Depending on defined needs of the area, profiled and non-profiled systems may be utilized.

## Applicability

This policy and procedure applies to all Covenant Health staff, members of the medical staff, volunteers, students and any other persons acting on behalf of Covenant Health.

## Responsibility Cautions/Risks

Covenant Health health care providers will demonstrate commitment to patient safety by ensuring that they adhere to the requirements outlined herein.

## Principles

Automated dispensing machines help to decrease incidents of patient medication error. In order to sustain the integrity of automated dispensing machines, regular audits shall be completed to ensure compliance.

Failure to follow proper procedures may put patients/residents<sup>1</sup> at risk by potentially exposing them to medications that are not intended for them or that are not safe for them to receive.

New users will be granted access only after completion of required training.

## Procedure

### 1. Medstation Passwords

- 1.1 Pharmacy will be responsible for additions, deletions and changes to users on automated medication dispensing systems.
  - Notice shall be given to Pharmacy in advance to allow time for modifications (additions, deletions and changes). Requests shall be made between the hours of 0800-1500 Monday through Friday (excluding statutory holidays).
  - Evidence of completion of required training will be provided by the new user to their Manager.

<sup>1</sup> Hereafter, all references to 'patients' includes residents and clients.

- Password requests for new users shall be made by completing an "ID/Password/BioID Confidentiality" form (Appendix 1). The form must be approved by appropriate personnel.
- Requests for deletions, changes or password reset for existing users shall be made by completing a "Deletions/Changes/Password Reset Notification" form (Appendix 2). The form must be approved by appropriate personnel.
- Managers will retain the original form in the employees personnel file and forward a copy to Pharmacy for password assignment or completion of the requested change.

1.2 Personnel approved to authorize users:

- Pharmacy Manager (or designate)
  - For Pharmacy staff
- Patient Care Managers/Supervisors, Unit Managers (or designate)
  - For all non-Pharmacy staff and Physicians

1.3 The following personnel may be assigned a user ID and password if access is required within their assigned work area(s):

- Students of any recognized nursing program, psychiatric nursing program, or practical nursing program who are doing their practicum OR other students who may require access during practical training programs as approved by their program manager (e.g. Respiratory Therapy students, Pharmacy students, Pharmacy Technician students). Access may be granted for the duration that the individual is working or employed as a student.
  - An end date for their rotation must be filled out on the "ID/Password/BioID Confidentiality" form (Appendix 1) when the initial request is made.
  - Pharmacy will set access to expire on the end date indicated on the form at 2359 hours.

1.4 Users shall be authorized access only to automated dispensing machines within their assigned work stations(s) or unit(s).

1.5 Initial Passwords

- An initial password shall be assigned to users by Pharmacy during orientation.
- Initial passwords shall expire during the first access by the user at the medstation.

- If Bio ID will be used, it will be set up after the interim password has been changed.

1.6 Passwords may change every 90 days as prompted by the system.

1.7 If a user forgets their password:

- During regular Pharmacy hours: they must present hospital issued ID and complete a "Deletions/Changes/Password Reset Notification" form to Pharmacy to have their password reset.
- When Pharmacy is closed, or a superuser is not available, designated nursing staff can create a temporary user password for the user. This password will expire in a defined number of hours as set by site Pharmacy.
  - Access to this activity is limited to specific users to prevent diversion of drugs. Pharmacy will provide reports to Nursing to review this activity.
  - Nursing staff who have the ability to create temporary users:
    - Edmonton acute sites - Charge nurses
    - Camrose – Float nurses
- It will be the responsibility of this user to present hospital issued ID to Pharmacy, along with the "Deletions/Changes/Password Reset Notification" form to Pharmacy PRIOR to their next scheduled shift.

1.8 Terminated employees will have their access removed.

- Supervisor of the staff member will complete the "Deletions/Changes/Password Reset Notification" form and forward to Pharmacy immediately to advise of the termination. Refer to Covenant Health P/P #II-118, *Termination of Employment /Department Transfer* policy.
- Pharmacy removes login access or assigns "no privilege" template.
- Terminated employees should not be deleted until event reports have been run on their activities in the medstation(s).

## 2. Authorized Access

2.1 Access may be authorized to the following medication dispensing user groups;

- Anesthetic Technicians as per the unit manager's direction
- Emergency Medical Technician-A / Emergency Medical Technician-P
- Employed Pharmacy Students under supervision of a Pharmacist
- Graduate Nurses
- Health Care Attendants (HCA) as per the manager's direction

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- Licensed Practical Nurses (LPN)
- Nursing Students under the supervision of a RN/LPN
- Paramedic / EMT students under the supervision of a RN/LPN/EMTA/ EMT-P
- Paramedics
- Pharmacists
- Pharmacy Students
- Pharmacy Technicians
- Pharmacy Assistants
- Physicians / Residents
- Registered Nurses (RN)
- Registered Psychiatric Nurses (RPN)
- Respiratory Therapists (RT) or other support staff as per the unit manager's direction
- Undergraduate Nurse Employee under supervision of a RN/LPN

2.2 Access to controlled substances may be authorized for the following personnel:

- Emergency Medical Technician-A / Emergency Medical Technician-P
- Employed Pharmacy Students under supervision of a Pharmacist
- Graduate Nurses
- Licensed Practical Nurses (LPN)
- Nurse Practitioners (NP)
- Nursing Students under the supervision of a RN preceptor
- Pharmacy Assistants as designated by a Pharmacy manager
- Pharmacists
- Pharmacy Technicians
- Physicians
- Practical Nursing Students under supervision of a RN/LPN preceptor
- Registered Nurses (RN)
- Registered Psychiatric Nurses (RPN)
- Respiratory Therapists (RT) as per the unit manager's discretion
- Undergraduate Nurse Employee under supervision of a RN/LPN preceptor

### 3. System Set-up

- 3.1 Medications shall be configured so no "look alike" or "sound alike" medications are stored in the same matrix drawer, mini drawer or tower storage bins (within the same bin/door.)
- 3.2 All drawers and pockets shall be numbered according to the configuration of the medication set-up.
- A detailed inventory list of medications and pocket number location shall be available in a nearby location of automated dispensing machine in the event of power failure.

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- 3.3 Cytotoxic preparations (liquids, injectables, infusions, syringes) are NOT permitted to be stored in automated dispensing machines.
- 3.4 When removing medications, users will remove the exact amount of product indicated to the machine to ensure the inventory counts are correct.
  - Restocking by Pharmacy occurs when the inventory levels fall below the minimum amount which has been set for each medication.
- 3.5 Remote stock is those medications stored outside of the automated dispensing machine, but is managed by automated dispensing machine.
  - Users shall be required to access automated dispensing machines when removing remote stock medications to ensure the inventory counts are correct.
  - Restocking by Pharmacy occurs when the inventory levels fall below the minimum amount which has been set for each remote stock medication.
- 3.6 Requests for additional medications in automated dispensing machines will be directed to Pharmacy (addition of a drug or change in quantity of a drug).

#### **4. Controlled Substances: Transactions, counts and count verifications**

- 4.1 No end of shift count is required for controlled substances stored in the automated dispensing machines.
- 4.2 All controlled substances discrepancy icons shall be resolved by shift change. Refer to Covenant Health Policy/Procedure *Controlled Substances # VII-B-245*.
- 4.3 Transactions are recorded electronically. Additional manual recording may also be required. Reports are generated by Pharmacy and stored for two years.
- 4.4 All controlled substances require count verification.
  - The user will enter the physical count of the medication prior to withdrawal of doses.
  - If the dose removed is different than that requested, wastage will be required. Refer to section 5 of this policy.
- 4.5 An actual count may be performed weekly by Nursing staff on controlled medications that have been accessed since the last actual count in each area.
  - Two health care professionals are required to verify the count.

- The Weekly Count of controlled medications form should be completed to indicate the count was performed.
- The respective unit managers will monitor completion of the actual counts to ensure this activity is being performed.

## 5. Controlled Substances: Discrepancies

- 5.1 A discrepancy occurs when the inventory count of a controlled medication does not match the count expected by automated dispensing machine. An alert will appear on screen indicating a discrepancy exists and investigation must occur to resolve the discrepancy.
- 5.2 The person discovering the discrepancy is responsible for resolving the discrepancy.
- 5.3 If the person who discovered the discrepancy is a non-nursing staff member (e.g. Pharmacy or Respiratory) and they were not involved in the creation of the discrepancy, the discrepancy will be referred to the nurse in charge of the area.
  - If Pharmacy was involved in the creation of the discrepancy, the patient care unit will contact Pharmacy via telephone to resolve the discrepancy.
- 5.4 Resolution of controlled substance discrepancies requires a witness.
  - To search for information on the drug involved in the discrepancy, staff will review either the Discrepancy Report or Activity Report to identify the persons involved in the activity of that medication to aid in resolution of the discrepancy.
- 5.5 Irresolvable Discrepancies:
  - If a discrepancy remains irresolvable, the user shall indicate "Unresolved – *follow-up required*" and a *Narcotic and Controlled Substances Discrepancy Reporting form* shall be completed. (Refer to Covenant Health Policy/Procedure #VII-B-245, *Controlled Substances*)
  - Discrepancies that cannot be resolved shall be immediately reported to the Unit Manager or designate.
  - The unit manager is responsible to follow-up with the Patient Care Manager. Refer to Covenant Health Policy/Procedure #VII-B-245, *Controlled Substances*.
- 5.6 It is the charge Nurse's responsibility to ensure that no "Discrepancy Icon" remains at the end of a shift.

5.7 Controlled substance discrepancy reports shall be forwarded by Pharmacy to the Patient Care Manager.

- Inappropriate resolution reasons for controlled substances discrepancies will be reviewed and followed up with the individuals involved.
- Discrepancy reports must be retained by the Patient Care manager for the required time frame as indicated by Covenant Health Policy #III-55, *Records Management*.

## 6. Restocking

6.1 Pharmacy shall refill the automated dispensing cabinet in a timely manner to ensure that medications are available when needed.

6.2 During non-operational Pharmacy hours, medications not available from the automated dispensing cabinet shall be obtained from the Pharmacy Night Cupboard (if available at the site or via global find if multiple machines are available at the site).

6.3 Contents of remote drug stock located in trays or cassettes stored on the patient care unit must be pre-approved by Pharmacy.

- Items required to be restocked will be obtained from the automated dispensing cabinet by nursing staff.
- Expiry dates on medications for trays or cassettes filled on the patient care unit by nursing staff are the responsibility of the patient care unit to monitor.

## 7. Medication Access – Removal, Return and Waste

7.1 Medication Removal

- All medication must be removed under the name of the patient who is to receive the medication whenever possible. A generic patient may be utilized only when stock is being removed to restock wardstock areas.
- New patients shall be admitted through the site admissions/discharge/transfer system.
- For Profiled stations: The patient care order shall be sent to Pharmacy in a timely fashion, therefore ensuring users access to medication orders for the patient. Critical override should only be utilized after Pharmacy hours or for critical medications.
- All medication must be removed in the quantity that has been entered into the automated dispensing machine to avoid creation of



discrepancies or inventory errors.

- Certain medications may require a witness on removal.
- Health care professionals are encouraged to bring a copy of the patient care order or MAR to the automated dispensing machine to ensure a reference for appropriate medication removal
  - For rural sites only: Only remove the required number of doses to cover medication administration until Pharmacy reopens. Nursing staff from inpatient units will bring a sufficient number of patient labels to enable patient-specific labeling of each medication when removed. (Remove the required medication, place the doses for each specific medication in a zip-lock bag, attach patient label to outside of zip-lock bag.)

## 7.2 Medication Returns

### 7.2.1 Narcotic/Controlled medications:

- Only narcotic/controlled medications removed from automated dispensing machine but NOT administered to the patient may be returned using the return procedure.
  - If the original package is not intact, the medication must be wasted on the unit and with appropriate documentation as required.
- A health care professional may be required to witness when returning controlled medications. to the internal return bin
  - A witness in Pharmacy will be required to verify accuracy of the controlled medication return when the internal return bin is emptied and controlled medication inventory is returned to Pharmacy.
- EXCEPTIONS:
  - Do NOT return any medication that has entered a room in which the patient is on Additional Precautions. In this case, discard the medication and sign for the wastage (Refer to section 7.3 of this policy)
  - Non-controlled medications not administered to patients are NOT to be returned to the automated dispensing machine. Return these medications to Pharmacy (via external return bin on the unit).

## 7.3 Medication Waste

- All controlled substances wastage must be documented.
  - Documentation may occur on the automated dispensing machine, in the electronic patient-specific charting system at sites where on-line charting is used, or on manual records.



- Controlled substances wastage shall be completed by the user. An additional health care professional shall witness wastage. Wastage can be entered upon removal of the drug or at a later time when returning to the machine. Refer to Covenant Health Policy/Procedure *Controlled Substances #VII-B-245*.
- If documentation of wastage is not completed on the automated dispensing machine or on the on-line charting system, a hard copy of the wastage with two signatures must be forwarded to Pharmacy. (E.x. Anesthesia narcotic kit records). **EXCEPTION:** PCA, epidural and other infusion wastage records with two signatures must be retained on the chart.
- Non-controlled substances requiring wastage are to be discarded as per site processes.

## 8. Maintaining Inventory

- 8.1 Restocking of medications tracked by the ADM is the responsibility of Pharmacy and shall be performed according to set schedules, defined by medication usage.
- 8.2 Medication expiration
  - Recording and monitoring of expiry dates of medications contained within an automated dispensing machine shall be the responsibility of Pharmacy.
  - Expired items found by users shall be removed and placed into the return bin(s) on the nursing unit (external return bin for non-narcotic medications; internal return bin for narcotics).

## 9. Cleaning

- 9.1 All users are responsible for ensuring the automated dispensing machine is kept clean. Spills shall be cleaned immediately as they occur.
  - When needed, clean the unit with a damp cloth. Do not allow liquid to seep into any openings or seams. A nonabrasive cleanser can be used sparingly. Be sure to rinse off any residue with a clean, damp cloth. Do not leave behind a wet surface where dust may accumulate. Do not use alcohol to clean clear plastic components.
  - Regular cleaning schedules are to be determined on a site specific level.

## 10. Reports

- 10.1 The "Controlled substances (narcotic and controlled drugs) Discrepancy report" shall be generated and reviewed on a weekly basis by the manager of the unit or designate.
  - Inappropriate resolution reasons for controlled substances discrepancies shall be reviewed by the Patient Care Manager or designate for review and follow-up with the individuals involved.

- 10.2 Other reports shall be generated and reviewed by Pharmacy and may be sent to unit managers/supervisors/patient care managers upon request or as deemed necessary.
- For example, temporary user log and their activities to audit for potential drug diversion; Inventory Discrepancy Report, User Modification Information List, Restock-area list, Specific Drug Usage Reports, etc.

## 11. Downtime Procedures

(Refer to the Pyxis MedStation User Guide for Assistance)

- 11.1 Contact the automated dispensing machine support service desk by calling the number posted on the machine.
- 11.2 During regular Pharmacy hours, notify Pharmacy if issues have arisen with automated dispensing machine and medications are inaccessible.
- 11.3 Alternate Access: If available, medications should be accessed from another automated dispensing cabinet at the site using global find for the duration of the downtime.
- 11.4 Keys to unlock automated dispensing machines may be accessed in limited situations and are controlled by Pharmacy. Patient care areas shall notify the Pharmacy if these keys are required by a patient care area.
- During regular Pharmacy hours, contact the Pharmacy department.
  - After regular Pharmacy hours,
    - For Edmonton sites, the Pharmacist on-call will advise Protective Services of the patient care area that requires the keys. At sites without 24 hour Protective Services, patient care areas shall access automated medication dispensing machine keys from the night cupboard upon direction from the on-call Pharmacist. The Pharmacist on-call shall ensure follow-up occurs when Pharmacy re-opens.
    - For Rural sites, contact a site Pharmacist, who will return to obtain the keys to unlock the automated dispensing machine to enable accessing medications when deemed necessary. This Pharmacist shall ensure follow-up occurs when Pharmacy re-opens.
    - An alphabetical listing of medications shall be available to assist locating medications.
- 11.5 Security of controlled medications shall be maintained throughout downtimes.
- During normal hours of operation, Pharmacy shall be called if access to controlled substances is required.
  - The automated dispensing machine shall remain locked when not in use to ensure security of controlled substances or a health care

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professional may be assigned to stay at the station to control access.

- Controlled substances may be removed and temporarily placed in a locked cupboard.
- The charge nurse of the area will assume responsibility of the keys to access the locked cupboard.

#### 11.6 Recordkeeping for Controlled Substances during Downtime

- A manual recording sheet shall be initiated to record removal of all medications for the duration of the downtime to enable restocking by Pharmacy.
- For controlled substances, a manual controlled substance sheet shall be initiated and maintained (including end of shift counts) for the duration of the downtime. Refer to Covenant Health Policy/Procedure #VII-B-245, *Controlled Substances*.
  - The manual controlled substance sheets shall be forwarded to Pharmacy following the downtime.
  - Pharmacy shall be responsible for auditing the manual sheet and for storage of records.
- Automated dispensing cabinet inventory counts will be rectified by Pharmacy once downtime is complete.

## Definitions

**Bio ID** means the use of fingerprints to verify identification of the user.

**Controlled substances** - refers to any substance included in Schedule I, II, III, IV or V of the *Controlled Drugs and Substances Act* or those drugs deemed by the employer to be handled like a “controlled substance” at the patient care unit, site, or regional level.

**Health care professional** means an individual who is a member of a regulated health discipline, as defined by the *Health Disciplines Act* [Alberta] or the *Health Professions Act* [Alberta], and who practices within scope and role.

**Medstation** means an automated dispensing machine assigned to a specific location (e.g. nursing unit).

## Related Documents

*Covenant Health Policies/Procedures:*

- *Controlled Substances, #VII-B-245*
- *Termination of Employment or Department Transfer, #II-118*
- *Records Management #III-55*

Appendix 1 - ID/Password/BioID Confidentiality Agreement Pyxis® MedStation® 4000 system

Appendix 2 - Deletions/Changes/Password reset Notification Pyxis® MedStation® 4000 system

## References

Care Fusion Policy and Procedures Development Guidelines for Pyxis Medstation 4000 system

## Revisions

N/A



# ID/ Password/ BioID Confidentiality Agreement Pyxis® MedStation® 4000 system

Appendix 1

The following is your User ID/Initial Password for the Pyxis® MedStation® system. It will be used to access patient medications or supplies on your assigned nursing unit(s). The first time you access a Pyxis® MedStation® system, you will be required to enter a new, confidential password and enroll your finger scans using BioID (if you have chosen this option).

***It is your responsibility to keep your new password secret and utilize your BioID access for personal access only.*** You will be accountable for all transactions performed under this User ID and confidential Password/BioID. Please read and sign the following statement to verify that you understand this statement; and will maintain the integrity of your password/BioID access once it has been changed.

Below is a copy of my User ID and my initial password to the Pyxis® MedStation® system. Upon accessing the Pyxis® MedStation® system for the first time, I will change my password to a new confidential password and enroll my finger scan for BioID. I understand that my User ID and password/BioID will be used as my electronic signature for all transactions to the Pyxis® MedStation® system. I understand that no retrievable record of my new password or BioID exists. All of my transactions on the Pyxis® MedStation® system will be permanently recorded with my User ID and a date and time stamp. These records will be maintained and archived per the policies of this hospital; and will be available for inspection by the proper authorities and Pharmacy or other auditing agency, as is presently done with my handwritten signature for all controlled substance records.

I also understand that to maintain the integrity of my electronic signature, I must not give my password to any other individual. Unauthorized access, release or dissemination of this information shall subject me to disciplinary action. Should I have any suspicion that my personal password has become known to another individual, I will change it immediately and, if deemed appropriate, will immediately report such to my supervisor.

**New User's**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Print Name:** \_\_\_\_\_

**Dept/ Unit:** \_\_\_\_\_

**Bio-ID for Password:** ☐ Yes ☐ No

**Authorized By:**

**Supervisor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Print Name:** \_\_\_\_\_

**Dept/ Unit:** \_\_\_\_\_

**This user is a/ an:**

☐ RN

☐ Anesthetist

☐ Student/Resident\*

☐ Charge RN

☐ Nursing Unit Supervisor

☐ Pharmacist

☐ Patient Care Manager

☐ Physician

☐ Pharmacy Technician

☐ LPN

☐ Respiratory Therapist

☐ Other \_\_\_\_\_

\* If a student/ resident, indicate training program in which they are enrolled: \_\_\_\_\_

\* End date of training program: \_\_\_\_\_

☐ Orientation module and exam (with passing grade) completed

**Please enter above information correctly and forward signed form to site Pharmacy**

**Pharmacy Authorization:**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Print Name:** \_\_\_\_\_

**Entered into Console:** \_\_\_\_\_

\*\*\*\*\*

**Confidential**

Use this User ID and First Time Password to access the Pyxis® MedStation® system

**User ID:** \_\_\_\_\_

**Initial Password:** \_\_\_\_\_

(This password will expire when you first enter the system—press OK and then enter a new, personal, and private password.)

**Unit/Location =** \_\_\_\_\_

**Note:** Access privileges are determined by your company's Policies and Procedures. Please refer to the Policies and Procedures for any specifics.



# Deletions/ Changes/ Password reset Notification

Pyxis® MedStation® 4000 system  
Appendix 2

Date: \_\_\_\_\_ Unit/ Area: \_\_\_\_\_

User's name: \_\_\_\_\_  
(first name, middle initial, last name)

- ☐ **Delete from Pyxis®**
- Supervisor of the staff member to forward this form to Pharmacy immediately to advise of the termination. Refer to Covenant Health P/P # II-118, *Termination of Employment /Department Transfer* policy.
  - Pharmacy will remove login access and assigns "no privilege" template
    - Terminated employees should not be deleted in the event reports need to be run on their activities in the medstation(s)

☐ **Information change for user:**

Previous name: \_\_\_\_\_

Name change to : \_\_\_\_\_

New User ID: \_\_\_\_\_

Access area: \_\_\_\_\_

☐ **Password Reset**

☐ **Other:** \_\_\_\_\_

**Authorized By:**

Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Dept/ Unit: \_\_\_\_\_

**Please enter above information correctly and forward signed form to site Pharmacy**

**Pharmacy Authorization:**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Entered into Console: \_\_\_\_\_

\*\*\*\*\*

**Confidential**

For Password reset: Use this User ID and First Time Password to access the Pyxis® MedStation® system

User ID: \_\_\_\_\_

Initial Password: \_\_\_\_\_ (This password will expire when you first enter the system—press OK and then enter a new, personal, and private password.)

Unit/Location = \_\_\_\_\_