

Medication Management Code of Practice



Approving Authority

Position	Name	Position	Signature	Date
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DRAFT

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1.0. References

- *Health Canada Controlled Drugs & Substances Act (1996),*
- *Health Canada Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)*
- *Health Canada Section 56 Class Exemption for Advanced Care Paramedics, Critical Care Paramedics, Primary Care Paramedics and Infant Transport Team Paramedics in British Columbia of the British Columbia Ambulance Service (2014).*

2.0. Relevant Documents

- BCEHS Controlled & Targeted Substances Medication Registry **RED**
- BCEHS Controlled & Targeted Substances Exception Form
- Accreditation Canada (Medication Management Required Organizational Practices/High Priority Processes)
- Loss or Theft Report Form for Controlled Substances, Precursors and Cannabis
- BCEHS Clinical Practice Guidelines
- BCEHS Medication Monographs

3.0. Revision History

Version	Date	Updated By	Summary of Changes

4.0. Application

This Medication Management Code of Practice applies to all BC Emergency Health Service (BCEHS) **employees**, students, volunteers and other persons acting on behalf of BCEHS, including contracted services providers.

5.0. Purpose

This Medication Management Code of Practice describes the framework for the management of medications within BCEHS to comply with legislative requirements, as well as organizational requirements for the governance of all aspects of medication management and administration.

6.0. Rationale

BCEHS has a responsibility to ensure that all medications are obtained, possessed, supplied, administered, recorded, stored and disposed of in accordance with federal and provincial legislative requirements.

BCEHS is committed to the regulations set forth in the *Health Canada Controlled Drugs & Substances Act (1996)*, including *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)* & *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)*.

Authorized BCEHS **Employees** and Designated Administrators must remain in continuous compliance with the exemptions afforded BCEHS by Health Canada under Section 56 of the CDSA.

7.0. Responsibilities of BCEHS personnel

Medication Management Code of Practice describes the framework for the management of medications within BCEHS to comply with legislative requirements, as well as organization requirements for the governance of all aspects of medication management and administration.

The legislative requirements include:

- *Health Canada Controlled Drugs & Substances Act (1996)*
- *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)*
- *Health Canada Section 56 Class Exemption for Advanced Care Paramedics, Critical Care Paramedics, Primary Care Paramedics and Infant Transport Team Paramedics in British Columbia of the British Columbia Ambulance Service (2014)*.

Compliance with this policy is required by all BCEHS **employees**, students, volunteers and

other persons acting on behalf of BCEHS, including contracted services providers.

7.1 Chief Medical Officer

In regards to this Medication Management Code of Practice, the role of the Chief Medical Officer is to:

- Issue this Medication Management Code of Practice in accordance with *Health Canada Controlled Drugs & Substances Act (1996)*, including:
 - *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)*;
 - *Section 56 Class Exemption for Advanced Care Paramedics, Critical Care Paramedics, Primary Care Paramedics and Infant Transport Team Paramedics in British Columbia of the British Columbia Ambulance Service (2014)*;
- Align with any objectives, strategies and policies provided by the Executive Vice President, Clinical Service Delivery, PHSA;
- Provide overall accountability for ensuring medication management statutory compliance;
- Report to the Executive Vice President, Clinical Service Delivery PHSA, for matters relating to compliance;
- Review and update this Medication Management Code of Practice annually.

7.2 Provincial Director of Clinical Governance, Business Planning & Evaluation

The Provincial Director of Clinical Governance, Business Planning & Evaluation provides oversight on all aspects of operational compliance to this Medication Management Code of Practice. This will include:

- Providing advice to the Chief Medical Officer relating to compliance with the Medication Management Code of Practice within BCEHS;
- Reporting to the Chief Medical Officer on the compliance of the Medication Management Code of Practice within BCEHS;
- Approval and review of procedures associated with Controlled Targeted Substances (CTS) audit within this Medication Management Code of Practice;
- Ensuring statutory reporting of incidents involving medications;
- Planning, implementing, and monitoring compliance with province-wide audit processes (scheduled and random);
- Delegation or appointment of appropriate personnel to manage and report on the Medication Management Code of Practice compliance;
- Provide advice to the Director, Patient Care Delivery on the operational requirements associated with the Medication Management Code of Practice; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.3 Director, Clinical & Professional Practice

The Director, Clinical & Professional Practice will provide oversight on all aspects of compliance to this Medication Management Code of Practice. This will include:

- Advising and supporting the Provincial Director of Clinical Governance, Business Planning & Evaluation relating to compliance with the Medication Management Code of Practice;
- Working with the Medical Director(s) in the risk stratification and mitigation of clinical activities pertaining to the Medication Management Code of Practice;
- Ensuring statutory reporting of incidents involving medications;
- Assisting to plan, implement, manage and evaluate medication management programs;
- Providing advice to the Director, Patient Care Delivery on the operational requirements associated with the Medication Management Code of Practice; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.4 Director, Learning & Development

Provide support to the Provincial Director of Clinical Governance, Business Planning & Evaluation, ensuring:

- All BCEHS staff receive education in the management of medications which includes the requirements of the *Health Canada Controlled Drugs & Substances Act (1996)* as they relate to obtaining, possessing, recording, administering medications by staff;
- That the educational requirements of this Medication Management Code of Practice are incorporated into appropriate educational programs;
- Training in the management of medications meet the requirements set out in this Medication Management Code of Practice and associated procedures and is appropriate to the relevant level of staff member;
- A process is in place to ensure BCEHS employees conduct annual review of this Medication Management Code of Practice.
- All clinical courses and materials are approved and meet the approved standards; and
- Review and update this Medication Management Code of Practice annually.

7.5 Medical Director (acting as a Designated Administrator)

The Medical Director will provide oversight on all aspects of compliance to this Medication Management Code of Practice including:

- Provide advice and report to the Chief Medical Officer on the management of medications within BCEHS;
- Assist the Chief Medical Officer and Provincial Director of Clinical Governance, Business Planning & Evaluation, in reporting of incidents involving medications;
- Assist with the planning, implementation, and evaluation of medication management programs;
- Liaise with PHSA and the Provincial Health Authorities on matters relating to medication management;
- Contribute to ongoing education and development requirements pertaining to Medication Management Code of Practice;

- In consultation with the Provincial Director of Clinical Governance, Business Planning & Evaluation, provide oversight of the operation of this Medication Management Code of Practice; and
- Review and update this Medication Management Code of Practice annually.

7.6 Director, Patient Care Delivery

Provide overall responsibility for the implementation and operation of the management of medications within their region, by ensuring:

- Medications are managed in accordance with this Medication Management Code of Practice and the associated procedures;
- Conduct monthly and at random **CTS** medication audits in accordance with BCEHS CTS Policy;
- Sufficient resources are allocated to ensure the governance of medication management;
- Issues identified with the management of medications are raised with the Provincial Director of Clinical Governance, Business Planning & Evaluation;
- Incidents involving medications are reported, investigated and corrective actions taken in accordance with this Medication Management Code of Practice, BCEHS **CTS** Policy and the associated procedures;
- The use of medications within their region are monitored at station and staff level;
- The Manager, PCD conducts at random and quarterly audits;
- The Manager, PCD conducts a monthly and at random quarterly audit of each **repository** containing **CTS** at a station and/or hospital within their region;
- The Unit Chief conducts weekly audit of each **repository** containing **CTS** at a station within their command;
- Medication checks are undertaken in accordance with the Medication Management Code of Practice and BCEHS **CTS** Policy and associated procedures;
- Issues identified with the management of medications are raised at provincial meetings, corrective actions are implemented, and proof of lessons learned distributed;
- Incidents involving medications are reported, investigated and corrective actions taken with support from the Provincial Director of Clinical Governance, Business Planning & Evaluation where required and proof of lessons learned;
- Non-compliance with this Medication Management Code of Practice is monitored and managed;
- Strategies are implemented to prevent re-occurrence of non-compliance and provide education within the region; and
- This Medication Management Code of Practice is reviewed and updated annually.

7.7 Pharmacist

Provide support to the Chief Medical Officer and Provincial Director of Clinical Governance, Business Planning & Evaluation including:

- Reviewing and maintaining the Medication Management Code of Practice and the associated procedures;
- Provide advice to the Chief Medical Officer, Director, Clinical & Professional Practice and Director Learning and Development on policy and legislation relevant to the management and safe use of medications;
- Develop and implement improvement initiatives and practices relevant to the management of medications;
- Ensure statutory reporting of incidents involving medications;
- Monitor and review incidents involving medication management;
- Liaise with PHSA and the Provincial Health Authorities, and other health personnel and agencies on matters relating to medication management standards and regulatory compliance; and
- Review and update this Medication Management Code of Practice annually.

7.8 Manager, Patient Care Delivery

Provide support to the Director, PCD of their network by:

- Communication of Medication Management Code of Practice requirements with BCEHS staff;
- Assisting the Director, PCD through monitoring and reporting on compliance related issues of this Medication Management Code of Practice;
- Ensuring the completion of monthly and at random quarterly audits of each station containing **CTS** medications;
- Reporting incidents to the Director, PCD on issues within this Medication Management Code of Practice;
- Ensuring medications are managed according to this Medication Management Code of Practice and associated procedures;
- Ensuring medication audits are undertaken in accordance with this Medication Management Code of Practice and associated procedures;
- Ensuring reports are completed and forwarded to the Director, PCD in accordance with the requirements of this Medication Management Code of Practice and associated procedures;
- Ensuring issues identified with the management of medications are raised at the network meetings and corrective actions are implemented;
- Ensuring the Director, Clinical & Professional Practice is notified of all significant breaches of this Medical Management Code of Practice so that the appropriate Paramedic Practice Leaders can assist with any clinical or professional investigation;
- Ensuring incidents involving medications are reported, investigated and corrective actions taken;
- Ensuring familiarity and awareness of the Medication Management Code of Practice;
- Providing support and Medication Management education within the region; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.9 Unit Chief

Provide support to their Director, PCD and Manager PCD of their region by:

- Being the accountable manager ensuring compliance with this Medication Management Code of Practice and associated procedures within their station;
- Communicating Medication Management Code of Practice requirements to staff in their stations and across the region;
- Assisting the Director, PCD and Manager, PCD in monitoring and reporting on compliance related issues associated with this Medication Management Code of Practice;
- Ensuring staff receive the appropriate orientation, training and certification in the management, safe administration of medications and remain up to date;
- Ensuring reports required by this Medication Management Code of Practice and associated procedures are prepared and referred to the Manager, PCD in a timely manner;
- Ensuring incidents involving medications are reported in accordance with this Medication Management Code of Practice and associated procedures;
- Conducting informal daily reviews of medication movement and compliance with Medication Management Code of Practice;
- Ensuring the completion of weekly audit in station's that contain **CTS** medications;
- Reporting in real time any variation in audit findings or register counts of controlled medications or medications of dependence to the Manager, PCD;
- Ensuring familiarity and awareness of the Medication Management Code of Practice;
- Provide a comprehensive medication management handover to acting Unit Chiefs; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.10 Paramedic Practice Leader

Support the Director, Clinical and Professional Practice and Director, PCD by:

- Assisting with ongoing development and updates of the Medical Management Code of Practice;
- Communicating Medication Management Code of Practice requirements to staff in the organization;
- Assisting the Director, PCD and/or Manager, PCD with investigating low and medium level breaches of the Medication Management Code of Practice;
- Leading investigations where a significant patient safety, clinical or professional practice event has occurred in conjunction with the Director, PCD and/or Manager, PCD;
- Providing advice and education to all staff and leaders on the management of medications within the province;
- Assisting with compliance related activities with this Medication Management Code of Practice and associated procedures across the region; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.11 Paramedic Practice Educator

Support the Director, Learning and Development and Director, PCD of their region by:

- Communicating Medication Management Code of Practice requirements to staff in the region;
- Providing advice and education to all staff on the management of medications within the province;
- Assisting with compliance related activities with this Medication Management Code of Practice and associated procedures across the region;
- Assisting Director, PCD in monitoring and reporting on compliance related issues of this Medication Management Code of Practice;
- Ensuring the delivery of appropriate orientation, training and assisting staff with certification to credentialed staff in the management and safe administration of medications;
- Ensuring familiarity and awareness of the Medication Management Code of Practice; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.12 Paramedic

Will comply with this Medication Management Code of Practice by:

- Ensuring they are familiar with and comply with the requirements of this Medication Management Code of Practice and associated procedures;
- Ensuring incidents involving medications are immediately reported in accordance with this Medication Management Code of Practice and associated procedures;
- Reporting in real time any variation in audit findings or register counts of controlled medications or medications of dependence to the Unit Chief or Supervisor;
- Assisting the Unit Chief in random or scheduled audit requirements by acting as a co-signatory in accordance with this Medication Management Code of Practice;
- Ensuring familiarity and awareness of the Medication Management Code of Practice; and
- Reviewing and updating this Medication Management Code of Practice annually.

7.13 Paramedic Student

On induction to their placement, the paramedic student must provide evidence identifying what routes of administration and medication pharmacology they have covered within their curriculum. This will guide what they can administer and via what route, and only under circumstances deemed appropriate by their paramedic mentor.

The preparation and administration of any medication must be completed under the direct supervision of an authorised person.

Medication management documentation in the Patient Care Record requires completing by the supervising employee, not by the Paramedic Student, however the paramedic student should be recorded as providing the medication within the Patient Care Record.

7.14 Canadian Defence Force Health Personnel

Canadian Defence Force Health personnel may participate in the delivery of health care or treatment at a level within their scope of practice under the direct supervision of the paramedic mentor.

The preparation and administration of any medication must be completed under the direct supervision of an authorised person.

Medication management documentation in the Patient Care Record requires completion by the supervising paramedic, not by the **Canadian Defence Force Health personnel**, however the **Canadian Defence Force Health personnel** student should be recorded as providing the medication within the Patient Care Record.

8.0. Compliance with the Medication Management Code of Practice

It is the responsibility of all BCEHS employees to comply with this Medication Management Code of Practice. **Employees** found to be non-compliant may be subject to review and possible performance management improvement processes where necessary.

9.0. Possession of medications

BCEHS staff are only to possess medications they are authorized to as documented in the *Health Canada Controlled Medications & Substances Act (1996)*, including *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)* and *Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service (2014)*.

All medications are to be issued to a medication kit/pouch in the quantities specified in BCEHS **Designated Administrator** (see Appendix 1).

If a paramedic reasonably believes that due to his/her position/geographical location it is necessary to possess a quantity greater than specified in the **Appendix 1 - CTS and High Alert Medication Inventory List**, the paramedic must submit an application to the Manager, PCD through the Unit Chief. The Director, PCD can either support or reject the application prior to forwarding to the Director, Clinical & Professional Practice for final review. The Director, Clinical & Professional Practice may either approve or reject the application. A successful application will be effective for a period of 12-months from the date approved. Once the 12-month period has lapsed, the application will require re-evaluation and a new application submitted for consideration. It is the responsibility of the Manager, PCD/Unit Chief to ensure the application renewal is submitted prior to application expiry.

9.1 Possession of medications while on duty

While on duty or providing operational support, a paramedic must only have in their possession medications for which they are authorised to possess under the *Health Canada*

*Controlled Medications & Substances Act (1996), including Section 56 Class Exemptions and by BCEHS, as defined in the relevant **Medication Therapy Protocol/Monograph** or individual **employees** scope of to practice as outlined in the *Emergency Health Services Act and Emergency Medical Assistants Regulation*.*

BCEHS employees must ensure the security of CTS on their person, within facilities, stations and during transport within vehicles approved by BCEHS.

9.2 Possession of medications while not on duty

Paramedics are not authorised to possess medications unless they are performing BCEHS duties.

In the event a paramedic is unintentionally in possession of medications after completing their period of BCEHS duties, they are to make contact with the Supervisor immediately, and:

- Personally, return the medications to the station they were issued from without delay.
- Return the medications to the appropriate **repository** and complete the **CTS Medication Register RED** in the presence of a witness.
- Complete a CTS Exception Report; and,
- Complete a medication audit to verify the medication count.

An **employee** who is in possession of medications after completing their period of ambulance duties is held accountable for their own actions.

In instances where the **employee** has travelled a significant distance from the issuing station, the Manager, PCD is able to make a determination as to how, when and where the medications are to be returned back to an authorised BCEHS location based on individual circumstances.

10.0 Ownership of medications

BCEHS staff are not to place orders on behalf of BCEHS unless it is intended for use by BCEHS. All medication orders made on behalf of BCEHS remain the property of BCEHS.

11.0 Contact with pharmaceutical companies

All pharmaceutical company representatives marketing their product must be directed to BCEHS Pharmacist or delegate.

Paramedics are not to obtain medications or samples from pharmaceutical company representatives.

The procurement of medications outside the scope of this Medication Management Code of Practice are not authorized unless written approval/authorization has been obtained from the Chief Medical Officer, BCEHS.

12.0 Station and medication repository security

12.1 Keys, card, combination, personal identification number or passwords

Only BCEHS **employees** who are authorized to obtain, possess and/or administer approved medications are approved to have access to the key, card, combination or biometric scan portal to the approved BCEHS medication repository.

Where an **employee** has been issued with a key, card, combination or biometric scan to access medications, they must keep it either in their possession or inaccessible to non-authorized persons.

Where an **employee** has a key, card, combination, Personal Identification Number (PIN) or password to access medications it is not to be divulged to any other person. This includes Student Paramedics and **Canadian Defence Force Health personnel**.

For the purpose of medication management governance, the Director, PCD, Manager, PCD and/or Unit Chief are to be allowed access to BCEHS repositories for investigation, auditing and reporting requirements where they have the authority to obtain, possess and/or administer those medications in the **repositories** in which they wish to audit.

12.2 Station security

Where an **employee** has a key, card, combination, PIN or password to access the station, it is not to be divulged to any other person, including Student Paramedics and/or **Canadian Defence Force Health Personnel**.

All non-authorized personnel, such as cleaners and contractors, must be supervised at all times while in the medication storeroom and access codes are not to be given out at any time.

12.3 Medication repository security

12.3.1 Medication repository access

Repository key, card, combination must be unique to the repository. It cannot be a generic access code available to all staff across the province and is prohibited from being published on an online list (internal or external website).

Unit Chief's are to keep a register of all **employees** who have possession of a key, card or combination to the medication **repository** at their station.

The requirements for medication **repository** access are:

- Codes, combinations, cards must be changed at a minimum of every 12 months.
- Any factory set or previous medication **repository** manager/master codes are reset and not divulged.
- Changed at any time **repository** security is compromised.
- When an **employee** no longer requires possession of a key or card.
- When an **employee** no longer requires knowledge of the combination.

Each Regional Office must also maintain an up to date register of all station **repository** access codes as a master list.

12.3.2 Medication repository after-hours access

If an **employee** requires **repository** access after-hours i.e., overtime shift:

- The **employee** is to contact the Supervisor and request temporary access.
- The Supervisor must notify the Unit Chief via email for the reason for access and who was granted the **repository** access i.e. **employee** name and **employee** number.

12.3.3 Medication repository visibility

The medication **repository** within the medication storeroom must not be visible to the public and must be located in an area where the public does not have access.

Note: visibility to public includes through a glass door or window.

13.0 Storage of medications

All scheduled medications must be stored in accordance with the *Health Canada Controlled Drugs & Substances Act (1996)*, including *Section 56 Class Exemptions*.

This regulation dictates that medications should be stored in a **repository** with **dual access controls** at all times when not in use.

To the extent necessary for an **employee** to complete ambulance duties, an **employee** has the authorization to obtain, possess or administer a medication only for which they have been trained.

If an **employee** has not completed appropriate training, they are not authorised to obtain, possess or administer the medication. Therefore, this **employee** is not to have access to these medications and these medications must be secured in an appropriate medication repository/cupboard only accessible to authorised staff.

13.1 CTS repository

The medication storeroom is to remain locked at all times, with the exception when medications are being obtained, checked or audited.

All medications are to be stored within the recommended temperature range identified by the individual medication manufacturers.

13.1.1 CTS repository specifications

All **CTS** medications are to be stored in a locked repository. The **repository** is to be locked at all times, other than when a medication is being obtained, issued, checked or audited.

Medications are only to be accessible by **employees** authorized to obtain, possess and administer those medications as documented in the *Health Canada Controlled Drugs & Substances Act (1996)*, including *Section 56 Class Exemptions*.

CTS repositories must be set up according to scope of practice and authority to obtain, possess and/or administer.

Example: Primary Care Paramedics do not have authority to obtain, possess or administer Fentanyl. Therefore, the Fentanyl must be stored in a separate **repository** only accessible to **employees** (CCP/ITT/ACP) who have authority.

Repositories are to be provided with an identification number based on the station identification number and the number of repositories housed within the station.

Example: Station A's identification code is 123. If numerous repositories are housed in Station A, these need to be numerically labelled 123-1, 123-2 etc.

For the purposes of medication management and monitoring, the **repository** number corresponds to the number on the **CTS Medication Register RED**.

13.1.2 Non-CTS medications

All non-CTS medications are to be stored in a lockable cupboard, dispensary, drawer or storeroom (station medication store) which is inaccessible to the public.

The station medication store is to remain locked except when medications are being obtained, issued, checked or audited.

13.2 Medication pouches

Employees are accountable for their medication pouch and are required to be kept in their possession at all times.

All **CTS** medications with the exception of **Methoxyflurane** and Propofol are to be stored on the **authorized employee's** person in a medication pouch. **Methoxyflurane** and Propofol may be stored in an equipment kit bag however paramedics must ensure the security of the kit bag at all times when not stored in a secure location.

Medications are only to be accessible by **employees** authorized to obtain, possess and administer those medications as documented in the *Health Canada Controlled Drugs & Substances Act (1996)*, including *Section 56 Class Exemptions*.

It is the responsibility of the **employee** who possesses the medication pouch, to check the contents and expiry of the medications within the medication pouch prior to commencing their shift or call out.

Medication pouches must contain the quantities as outlined in **Appendix 1 – CTS and High Alert Medication Inventory List**. Medications must be signed in and out of the **repository** and **CTS Medication Register RED** as in **Appendix 4**.

13.2.1 CTS medications

CTS medications must be signed in and out of the medication **repository** and corresponding **CTS Medication Register RED** on commencing and finishing shift.

When the **employee** is no longer on duty (including on call), **CTS** medications are not to be stored in medication pouches and must be signed back into the repository.

13.2.2 Non-CTS Medications

Once issued, all non **CTS** medications can be stored within a medication kit. All medications are to be issued to a medication kit in the quantities specified in the **CTS and High Alert Medication Inventory List (Appendix 1)**.

13.3 Vehicles

If a vehicle is not operational, no **CTS** medications are to be stored in the vehicle and the vehicle must be locked at all times.

All operational and non-operational vehicles must be secured at all times, including when on station and at hospital. When left unattended, the vehicle must be locked and the vehicle key is to be held by the appropriate **employee**.

Additional supplies of non-**CTS** medications can be stored in the vehicle as per regular work practice.

13.4 Training rooms

Under no circumstances are in date or expired medications to be used for the purposes of training, except for Normal Saline and Water for Injection.

14.0 Medication registers

Medication Registers are considered legal documents. Therefore, all transactions entered must be accurate. It is recommended to use black or blue ink when documenting in legal documents.

14.1 Controlled Targeted Substance Medication Register RED

All **CTS & High Alert Medications** require recording in the **CTS Medication Register RED** (See Table 1):

For the purpose of this document, CTS medications will refer to all CTS medications and all **High Alert Medications**.

Table 1 – Medications required to be recorded in a CTS Medication Register **RED**

Diaze PAM	Fenta NYL
HYDRO morphine	Morphine
Midazolam	Methoxyflurane High Alert Medication
Ketamine	Propofol High Alert Medication

Note: **Methoxyflurane** and Propofol are not a CTS medication however have been identified as a **High Alert Medication** and have been placed in the CTS medication register to ensure heightened accountability and safe use of the medication. BCEHS requires all BCEHS employees to manage the record and administration of **Methoxyflurane** and Propofol as a CTS medication.

14.2 BCEHS medications not requiring an entry in a medication register

BCEHS is not required to maintain a medication register for non-CTS medications. When these medications are administered, an entry in the procedure section of the Patient Care Record against the patient is sufficient for recording purposes.

Table 2 – Medications not required to be recorded in a Medication Register

Adenosine	Amiodarone
Aspirin	Atropine
Calcium Chloride	Dextrose 10%
Dimeny HYDRINATE	Dimenhydramine
DOPamine	Entonox
EPINEH rine	Glucagon
Haloperidol	Hydrocobalamin
Ipratropium	Labetolol
Lidocaine	Magnesium Sulphate
Mannitol	Metoprolol
Naloxone	Nitroglycerin
Ondansetron	Oxygen
Phenylephrine	Rocuronium
Salbutamol	Sodium Bicarbonate
Tranexamic Acid	

14.3 Commencing a new CTS Medication Register RED

An entirely new **CTS Medication Register RED** is to be commenced immediately when any section in the old **CTS Medication Register RED** is full. This can be completed by any BCEHS employee.

New **CTS Medication Register RED** s may be ordered via an approved BCEHS supplier.

The **employee** commencing the new register and the **employee** checking the entry must complete all details of the new register including:

- The accurate transcribing of medication balances for all medications contained in the previous **CTS Medication Register RED**
- Complete the front cover of the **CTS Medication Register RED** using a permanent marking pen:
 - Station
 - Corresponding **repository** number
 - Date of first entry
 - Current **CTS Medication Register RED** number
 - Previous **CTS Medication Register RED** number on closing (**Appendix 2 –CTS Medication Register RED**, figure 2).

14.4 Closing off a completed CTS Medication Register RED

When closing off a completed **CTS Medication Register RED**, the **employee** closing the register and the **checking employee** are to ensure:

- They have completed the front cover of the medication Register using a permanent marking pen:
 - Date of last entry
 - Date to dispose of register (2 years from last entry date) as per Health Canada Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service.
 - New **CTS Medication Register RED** number.
- All medication balances are accurately recorded in the new register.
- All blank sections of the register are ruled off.

Once a single section in a book is full the entire book must be closed and a new **CTS Medication Register RED** commenced.

The blank tabs in the **CTS Medication Register RED** is to be reserved for any new medications introduced into service and are not to have a balance from a full section transferred into it.

An example is outlined in **Appendix 3 – Closing off CTS Medication Register RED**

14.5 Storage of CTS Medication Register RED

Once a register is closed off it is to be stored in a secure location i.e. lockable cupboard only accessible to the Unit Chief, at the respective station for a period of 2 years from last entry date) as per Health Canada Section 56 Class Exemption for Designated Administrators of the British Columbia Ambulance Service.

14.6 Disposal of CTS Medication Register RED

The information documented in the **CTS Medication Register RED** is confidential. **CTS Medication Register RED** is to be disposed in accordance with practice of disposal of confidential documents.

14.7 False entries

BCEHS **employees** are not to make entries into **CTS Medication Register RED** which they know to be false, misleading or incomplete. False documentation within medication registers may be considered fraud, and an **employee** may be subject to disciplinary actions and/or reported to the **local law enforcement agency** in which the false, misleading or incomplete entry occurred.

14.8 Requirements for maintaining CTS Medication Registers

Stations are required to keep a controlled medication and restricted medication of dependence register (Red) to record the obtaining, issuing, receiving, transferring, administering, breakages, expired medications, checks and audits of all **CTS** medications.

All administrations and discards of these medications are to be recorded in the station **CTS Medication Register RED** and on the Patient Care Record.

15.0 Transaction error documentation

A transcription error in the **CTS Medication Register RED** is required to be rectified by ruling a single straight line through the error and annotate in the margin next to the entry or on the same line:

- 'Written in error'
- The error in documentation i.e. incorrect event number documented
- Date and time
- Initials of **employee** and witness
- **Employee** number of **employee** and witness.

On the next available line, enter the correct details for the transaction. The original entry is not to be changed, obliterated, removed or cancelled.

It is the joint responsibility of the **employee**, Unit Chief and auditors to monitor entries and ensure accuracy.

Example - transaction error documentation

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	0900					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/14	0900	B. Patient	99999	7.5mg	2.5mg	Written in error, incorrect dose entered. A Employee (12345) @ 1333hrs	/	/	/				

16.0 Single employee transactions and count verifications

When only one (1) **employee** is available or scheduled, a count verification must be completed by a second **employee** at the earliest possible convenience. A count verification is required for transactions where a balance is recorded in the **CTS Medication Register RED**

- Medication audits
- Signing medications out of **repository** and into kit or pouch
- Signing medications out of kit or pouch and into repository
- Transfers In and Out of repository
- Expired medications
- Breakages.

The count verification transaction is to confirm that the balance documented in **CTS Medication Register RED** balance column corresponds to the actual count in the safe.

A single **employee** transaction must have 'Single Officer' annotated in the **checking employee** column.

Under no circumstances shall a Unit Chief/Manager, PCD/Director, PCD conduct a routine or random medication audit without the presence and signature of a checking **employee**.

Example of single officer entry & count verification

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
									50				
2019/03/14	0900					Issued to 267P1	5	/	45	A. Employee	12345	Single Officer	
2019/03/14	1100					Count Verified	/	/	45	B. Employee	12344	C. Employee	12355

17.0 Medication purchase orders

17.1 Approved ordering employee

BCEHS approves the following **employees** to complete and authorise purchase orders for the purpose of ordering medications.

- The Unit Chief, Manager, PCD and Director, PCD

These employees must demonstrate a clear **chain of custody** for any **CTS**.

17.2 Inventory stock level

Each Unit Chief is required to identify the minimum and maximum stock levels for each medication held at a station and report this to the Manager, PCD within their region.

The minimum and maximum stock levels are to be based on:

- Trends in use
- Likely emergency supply
- Time to obtain resupply
- Frequency of ordering.

The Manager, PCD is to review these amounts and refer to them as required for the purpose of audit and ordering of medications and business continuity practices.

The quantity of each medication carried in the kit and/or pouch is to be in accordance with the approved BCEHS Medication Kit Inventory, unless otherwise stipulated in a local work practice approved by the Manager, PCD and Director of Clinical & Professional Practice.

17.3 Incorrect orders

Where a discrepancy in an order is identified, the supplier is to be notified immediately. This may include:

- Incorrect product received
- Incorrect quantity received (over or under supply)
- Product not received.

The ordering **employee** must also notify his/her immediate manager of the discrepancy.

18.0 Receiving Methoxyflurane

All **CTS** medications and **High Alert Medications**, with the exception of Methoxyflurane, are to be received from hospital **pharmacy** repositories. **Methoxyflurane** can be delivered to a station **repository** through the normal ordering of non-**CTS** medications.

On receipt of a medication order containing **Methoxyflurane**, the Receiving and Checking **employees** must:

- Confirm the quantity ordered matches the quantity supplied - count and verify the quantity of each medication listed on the invoice against the quantity received.
- Check the expiry dates on all medications received (all stock should have more than 6 months' expiry).
- Secure all medications in the appropriate repository.
- Retain a copy of the supplier's invoice for a period of 12 months for proof of delivery.
- The supplier invoices are required to be accessible in the event of an audit.

18.1 Receiving in a **Methoxyflurane** order - CTS Medication Register **RED** transaction

The appropriate **CTS Medication Register RED** must be completed when obtaining **Methoxyflurane** order.

The following must be documented in the appropriate **CTS Medication Register RED** when receiving in an order:

- Date and time the order was received
- Name of the Supplier i.e. BCEHS Pharmacy
- Invoice number
- Quantity of the medication received
- Count the balance of the stock in the **repository** (including stock received in)
- Signature and **employee** number of the person receipting in the order
- A witness signature and **employee** number.

Example – Methoxyflurane received into the **CTS Medication Register RED**.

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	0900					Balance bough forward			20	A. Employee	12345	B. Employee	12344
2019/03/15	1300					Invoice 123345 Restock, BCEHS Pharmacy	/	40	60	A. Employee	12345	B. Employee	12344

When only one (1) **employee** is available or scheduled, the medication count (Count Verification) must be checked by a second **employee** at the earliest possible convenience. In the circumstance that BCEHS station is co-located within a provincial health facility, a qualified Nurse or Medical Officer can countersign stock movement if available.

19.0 Issuing CTS medications to kit/pouch from repository.

When signing out medications, the **employee** must ensure the following is completed:

- A complete medication count:
 - Count all medications in the **repository**
- Ensure tamper evident seals on both sides of the outer box are checked and intact with no evidence of tampering.
 - Check the expiry dates.
- Complete the transaction in the appropriate **CTS Medication Register RED** including:
 - The date and time that the medications are being signed out
 - In the 'movement/comment' column enter "Issued to Shift i.e. 256A1D"
 - In 'quantity out' column enter the quantity being signed out to the **employee**.
 - In the 'quantity in' column place a forward slash (/)
 - Verify the balance with the **checking employee** (as per above)
 - Both **employee** present enter signature and **employee** number.

When only one (1) **employee** is available or single **employee**, the medication count/balance must be verified by a second **employee** at the earliest possible convenience – 'Count Verification'.

Example – issuing CTS medication to kit/pouch from repository.

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	0630					Issue to 256A1D	5	/	35	A. Employee	12345	B. Employee	12344

20.0 Returning CTS medications to repository from kit/pouch

When returning the medications to the **repository** ensure the following is completed:

- A complete medication count:
 - Count all medications in the **repository** including the medications returned.
 - Ensure tamper evident seals on both sides of the outer box are checked and there is no evidence of tampering.
 - Check the expiry dates.
- Complete the transaction in the appropriate **CTS Medication Register RED** including:
 - The date and time that the medications are being signed in
 - In the 'movement/comment' column enter "Returned from Shift i.e. 256A1D"
 - In the 'quantity in' column enter the quantity being signed into the safe by the **employee**
 - In the 'quantity out' column place a forward slash (/)
 - Verify the balance with the **checking employee** (as per above)
 - Both **employees** present enter signature and **employee** number

- If single **employee**, write 'Single Officer' in the Checking Employee Column.

When only one (1) **employee** is available or single **employee**, the medication count/balance must be verified by a second **employee** at the earliest possible convenience – 'Count Verification'.

Example – Returning **CTS** medication to **repository** from kit/pouch.

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	1830					Returned by 256A1D	/	5	45	A. Employee	12345	B. Employee	12344

21.0 Administration of medications

Employees are only to perform procedures for which they have authority and received specific training, as stated in the relevant clinical practice guidelines/treatment guidelines.

An **employee** must not administer a medication unless they are authorized under the *Health Canada Controlled Drugs & Substances Act (1996)*, including *Section 56 Class Exemptions*, and by BCEHS as defined in the relevant **Medication Therapy Protocol/Monograph**.

21.1 Medication checks prior to administration

All medications require double checking and following the 'rights' of medication administration prior to the reconstitution and administration of a medication to a patient. This must occur even in the event of a Paramedic Student/**Canadian Defence Force Health personnel** preparing and/or administering a medication under direct supervision.

The **employee** administering the medication is responsible and accountable for all actions associated with the preparation and administration of the medication even in the event of Paramedic Student/**Canadian Defence Force Health personnel** preparing and/or administering a medication under direct supervision.

Where there are two (2) **employees** available, both **employees** are required to complete the medication checks prior to the preparation and administration of the medication.

Where a second **employee** is not available to complete a medication check, the **employee** can request another person to complete the medication check, if appropriate. The witnessing person's details should be obtained. If no one is available, the **employee** is to read aloud the label of the medication prior to preparation and administration.

21.2 The rights of medication administration



21.2.1 Right medication

Prior to preparing the medication, check that the right medication has been selected and confirm:

- Is it the right medication for the indication?
- Double check medication label as there may be look-a-like medications i.e., ampoules that look similar
- Check the expiry date

21.2.2 Right route

Medications can be administered via different routes of administration.

Prior to administration double check that the route of administration is appropriate for:

- Clinical presentation/indication according to BCEHS Medication Monographs.

21.2.3 Right patient

Double check that the patient does not have:

- Medication or food allergies
- Contraindications where the medication is not suitable for the patient i.e. comorbidities
- Concurrent medications that may interact
- Age appropriate.

If there is more than one patient on scene, ensure that you double check you have the right patient prior to administration.

21.2.4 Right dose

Prior to reconstituting and administering the medication, double check that the dose:

- Is correct and according to BCEHS Medication Therapy Monograph indications
- Correct dosing intervals.

21.2.5 Right strength

Double check that the medication has been reconstituted correctly i.e. the correct volume of Normal Saline has been added to the medication to ensure correct end concentration of the medication is achieved. For medications that have more than one strength available, double check that the correct strength has been selected i.e. epinephrine

21.2.6 Right appearance

Prior to preparation and administration of a medication check for MD-VIAL:

- Marks – does the ampoule label have any water marks present?
- Discolouration – is the contents of the ampoule discoloured?
- Volume – does the ampoule contain the correct volume?
- Intact Seals – are tamper proof seals intact?
- Ampoule Integrity – is the ampoule broken, damaged or rough?
- Label – is the label attached firmly (i.e. intact)?

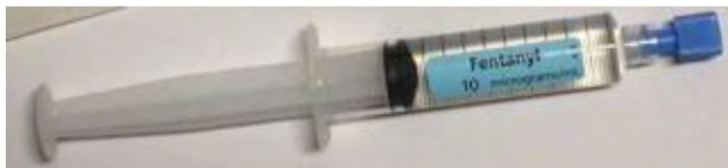
Trouble Shooting: If at any time, you feel that the appearance of a medication is not 'right' do not administer. Quarantine and notify your unit chief.

21.3 Labelling of syringes – intramuscular and intravenous administration

Medications administered in titrations to achieve the desired clinical effect have a higher associated risk for medication errors.

Once a medication has been drawn up into a syringe, the syringe must be labelled immediately with a medication label (figure below). Medication labels are the only approved technique for labelling a syringe containing a reconstituted medication.

When labelling a syringe with a medication label, ensure the medication label is placed where it does not cover the graduation lines or numbers on the syringe.



21.4 Labelling of syringes – intranasal administration

Once a medication has been drawn up into a syringe, the syringe is to be clearly labelled with the name and presentation of the medication.

The approved syringe labelling technique includes using a BCEHS approved medication label.

MEDICATION ADDED			
PATIENT	RM.	C. Patient	
DRUG		Fentanyl	
AMOUNT		40 micrograms/ 0.0.8mls	
ADDED BY	BASE SOL'N	B. Paramedic	N/S
DATE	TIME	2019/03/15	
START TIME	DATE	FLOW RATE	
EXP. DATE			
THIS LABEL MUST BE AFFIXED TO ALL INFUSION FLUIDS CONTAINING ADDITIONAL MEDICATION.			

The top edge of the label should be placed parallel to the long axis of the syringe ensuring the graduation lines remain visible. **Employees** may find “flagging” the label (folding sticker back on itself and then attaching exposed adhesive to syringe) may assist with application and ensuring that the details and the contents of the syringe remain visible.



BCEHS has identified that taping a glass ampoule to a syringe for the purpose of intranasal medication administration may pose a theoretical risk to patients.

21.5 Labelling of Vialflex plastic bags with additives - intravenous infusion

Paramedics are to ensure any Vialflex plastic bag containing an additive (e.g. 1000 mL Sodium Chloride 0.9% with 20 mmol Magnesium Sulphate) for the purpose of an infusion is to be correctly labelled. Labels are to be positioned on the front of the bag ensuring that the fluid name, batch number and expiry date remain visible.

22.0 Authorization to administer a medication

Employees are only to perform procedures for which they have received specific training and authorization by BCEHS, as stated in the relevant Medication Therapy Monograph relevant to their clinical level or under the supervision of an **employee** with that approval.

22.1 Medication Therapy Protocol/Monograph

Medication Therapy Monographs are not subject to local variation without the specific approval of the Chief Medical Officer following advice from the Medical Director's and Director, Clinical & Professional Practice.

22.2 Medical consult

Employees may only consult with BCEHS 24/7 **CliniCall** Consult Line (1833 829 4099) – Satellite Phone 0016048294099.

23.0 Administration of medication into CTS Medication Register **RED**

23.1 Administration - no discard – CTS Medication Register **RED** transaction

All administrations of **CTS** Medications require documenting in the relevant **CTS Medication Register RED**

When there are no discards i.e. a total dose of Morphine 10 mg administered:

- Enter the date and time
- In the patient name column enter the patient surname
- In the 'event column' record the corresponding event number
- Record the dose administered to the patient in the 'quantity given to patient' column
- Enter 'Nil' or forward slash (/) in the 'Quantity discarded' column
- In the 'movement/comment' column document the shift number that the medication was used from i.e. 256A1D
- Place a forward slash (/) in the 'quantity out/in/balance' column
- Sign the transaction and enter **employee** number in the 'Administering **employee** or receiving **employee** column
- The **employee** who witnessed the administration of the medication is to sign in the 'Checking **employee**' column and document their **employee** number
- If a Single **Employee**, follow procedure as previously mentioned in this document.
- The administration of the medication must also be documented in the Patient Care Record.

Example - Administration - no discard – **CTS Medication Register RED** transaction

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	1400	B. Patient	123456	10mg	Nil	256A1D	/	/	/	A. Employee	12345	B. Employee	12344

Note: Never document '0' in the quantity discarded column for no discard.

23.2 Administration – with discard – CTS Medication Register **RED** transaction

A discard is the portion of a medication that was not administered to a patient. This may include a partial dose or a full dose drawn up and not required.

Upon completion of a case, the unused portion of a **CTS** medication must be immediately disposed of in the sharps biohazard container. All discards must be witnessed by another **employee** or if a single **employee**, a Registered Nurse or Medical Officer where possible.

This procedure includes the **Methoxyflurane** inhaler device. When a **Methoxyflurane** inhaler device has been charged and not used by the patient, the inhaler device must be disposed of in an appropriate general or biohazard waste bin (according to local hospital policy).

The discarding **employee** is to complete the following in the **CTS Medication Register RED**:

- Enter the date and time
- In the patient's column enter the patient surname
- In the 'event column' record the corresponding event number
- Record the dose administered to the patient in the 'quantity given to patient' column
- Enter the quantity administered to the patient in the 'quantity given to patient' column
- Enter the quantity discarded in the 'quantity discarded' column
- In the 'movement/comment' column document the shift number that the medication was used from i.e. 256A1D
- Place a forward slash (/) in the 'quantity out/in/balance' column
- Sign the transaction with **employee** number in the 'administering **employee** column
- **Checking employee** to witness the disposal of the discard to sign in the 'checking **employee** column and medal number
- If a Single **Employee**, follow procedure as previously mentioned in this document.
- The administration of the medication must also be documented in the Patient Care Record.

Example - Administration - with discard – **CTS Medication Register RED** transaction

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	1400	B. Patient	123456	5mg	5mg	256A1D	/	/	/	A. Employee	12345	B. Employee	12344

23.3 Administering employee's responsibilities

It is the responsibility of the **employee**, who administers a medication, to complete the documentation in the Patient Care Record and **CTS Medication Register RED** as soon as

practicable after the administration, but no later than 24 hours after administration to a patient.

23.4 Administration – documentation in Patient Care Record

All medications administered must be documented in the appropriate Patient Care Record, irrespective of its schedule. The date and time of administration, medication, dose, discard quantity, discard witness (where required) and effective/not effective must be documented accurately on the Patient Care Record, at time of case.

In the instance where a **Student Paramedic or Canadian Defence Force Health personnel administers** a medication (only ever under the direct supervision of an authorised **employee**), the following procedure is to be applied:

- The medication is to be recorded as given by the supervising authorised **employee**.
- Enter in the comments field the Student Paramedics/**Canadian Defence Force Health personnel** details i.e. administered by (Student Paramedics/**Canadian Defence Force Health personnel** details) under direct supervision.

The supervising authorised **employee** is responsible and accountable for all **Student Paramedic** and **Canadian Defence Force Health personnel** actions on the shift regarding medication administration.

23.5 Discard – documentation in Patient Care Record

All medication administrations of **CTS** medication discards require documenting in the eARF.

23.6 Transfer of unused medication volume or ampoules between employees

Any unused volume of medication, or ampoule/vial, held by a primary attending paramedic crew is not to be transferred to a secondary attending crew taking over care of a patient. Any further volume of medication to be administered must be taken from the secondary crew's own medication stock. The primary crew must remain in possession of the unused medication volume, or ampoule, to discard and document in their Patient Care Record and **CTS Medication Register RED**.

24.0 Medication Audits

All medication repositories within a station/hospital are to be made accessible to the Director, PCD, Manager, PCD and Unit Chief (including anyone acting in these roles) on request. In cases where they do not have the authority to obtain, possess or administer those medications, an **employee** with that authority must be present.

The **employee** who conducts the medication audit (Auditing **Employee**) is to:

- Complete the audit using a **blue** pen

- Enter the date and time that the audit is being conducted
- In the 'movement/comment' column write "weekly/monthly/quarterly"
- Place a forward slash (/) in the quantity 'out and in' column
- Enter the balance of the medication in the **repository** in the Balance column (i.e. complete a medication count)
- Auditing **employee** and **checking employee** (if present) enter name (signature) and **employee** number
- Should a discrepancy be found, have a **checking employee** re-count to confirm the discrepancy and then follow the procedure in the Section - Discrepancy Identified.

Important: It is a BCEHS requirement when auditing **CTS Medication Register RED** that the auditing **employee** ensures they not only complete a count and verification of the **CTS Medication Register RED** balance, but must ensure that where a medication or quantity of medications are signed out, that there are corresponding entries to account for the medications. If any medications have been transferred out to other stations it is the responsibility of the Unit Chief to contact the receiving stations and ensure the medications have been signed in.

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	1400					Weekly Audit	/	/	40	A. Employee	12345	B. Employee	12344

24.1 Weekly medication audits – CTS Medication Register RED – Unit Chief

The Unit Chief and a **checking employee** are to conduct a weekly audit of all CTS medications. This audit not only includes the physical count of the medications present within a repository, it also includes the verification of transactions to ensure that all CTS medications are accounted for i.e. signed in and out of kits/pouches.

At least one (1) routine audit on each **repository** must be completed each calendar week. Routine audits may span time frames greater than seven (7) days between audits however all data must be reviewed to the previous audit date. Failure to meet audit obligations will result in a **performance review meeting** with the Director, PCD.

The Unit Chief must verify the following to complete an audit:

- Transfers are recorded in the **CTS Medication Register RED**
- Breakages are recorded in the **CTS Medication Register RED**
- Lost medications are recorded in the **CTS Medication Register RED**
- Expired medications are recorded in the **CTS Medication Register RED**
- Discarded medications are recorded in the **CTS Medication Register RED**
- Medication administrations are recorded in the **CTS Medication Register RED**
- All medications signed out to kits/pouches have been returned to the repository
- Count verifications are conducted after Single Officer entries

- CTS medication count is reconciled to ensure medication counts are correct.

During the weekly medication count, please ensure the following is completed:

- Sight and count every ampoule/vial in the repository
- Check the expiry dates and ensure the shortest expiry is placed to the front for use first.

Any discrepancies identified during the audits must be reported as outlined in the Section - Discrepancy Identified and the appropriate Director, PCD/Manager, PCD notified immediately.

In instances where a station does not have a Unit Chief, the Manager, PCD may assign a delegate to conduct the medication audit.

24.2 Monthly medication audits – CTS Medication Register RED – Manager, PCD

The Manager, PCD and a **checking employee** are to conduct a monthly audit of CTS medications stored in a repository. This audit not only includes the physical count of the medications present within a repository, it also includes the verification of transactions to ensure that all controlled medications and restricted medication of dependence are accounted for i.e. signed in and out of kits/pouches.

The Manager, PCD is also to conduct monthly repository audits at hospitals containing BCEHS safes.

At least one (1) routine audit on each safe must be completed each calendar month. Failure to meet audit obligations will result in a Conduct Improvement Meeting (CIM) with the Director, PCD.

The Manager, PCD must verify the following to complete an audit:

- Transfers are recorded in the **CTS Medication Register RED**
- Breakages are recorded in the **CTS Medication Register RED**
- Lost medications are recorded in the **CTS Medication Register RED**
- Expired medications are recorded in the **CTS Medication Register RED**
- Discarded medications are recorded in the **CTS Medication Register RED**
- Medication administrations are recorded in the **CTS Medication Register RED**
- All medications signed out to kits/pouches have been returned to the repository
- Count verifications are conducted after Single Officer entries
- CTS medication count is reconciled to ensure medication counts are correct.

During the monthly medication audit, please ensure the following is completed:

- Sight and count every ampoule/vial in the repository
- Check the expiry dates and ensure the shortest expiry is placed to the front for use first.

Any discrepancies identified during the audits must be reported as outlined in the Section - Discrepancy Identified and the appropriate Director, PCD notified immediately.

In instances where a region does not have a Manager, PCD, the Director, PCD may assign a delegate to conduct the monthly medication audit.

The Manager, PCD may delegate the monthly audit task to another Manager of equal rank (i.e. Paramedic Practice Leader) however the responsibility to organise the audit remains with the Manager, PCD.

24.3 Random quarterly audits – CTS Medication Register RED – Manager, PCD

This is an audit the routine auditor function. The Manager, PCD will undertake a random audit of all BCEHS locations within their region containing a **CTS repository** including hospitals, for the purpose of confirming compliance to the Medication Management Code of Practice. It is recommended that the Unit Chief is present for this audit.

One (1) full month of medication management within the quarter is to be audited. If the random audit coincides with the stations routine audit and the Unit Chief is present for the medication count, it is not necessary to complete an additional routine audit for that week. Ensure that this is clearly documented in the **CTS Medication Register RED** i.e. in the movement/comment section document, random quarterly and weekly/monthly audit.

If the Manager, PCD advises the Unit Chief or **Checking Employee** present at station that an audit is to be conducted, the access to all **CTS** medication repositories and information is to be provided on request, for which the persons have the authority to obtain, possess or administer.

The auditor will ensure that all:

- Transfers are recorded in the **CTS Medication Register RED**
- Breakages are recorded in the **CTS Medication Register RED**
- Lost medications are recorded in the **CTS Medication Register RED**
- Expired medications are recorded in the **CTS Medication Register RED**
- Discarded medications are recorded in the **CTS Medication Register RED** (Minimum review by Random Auditor of one full month duration of discard entries)
- CTS medication count is reconciled to ensure medication counts are correct.

If nil breach is identified, no further action is required. If breaches are identified the Unit Chief will have a period of seven (7) days to implement strategies and notify the Manager, PCD of the outcome. Refer to **Appendix 5 –Audit Breach Matrix**.

Recommendation: It is highly recommended that the Unit Chief is present for the random medication and station audit.

The Manager, PCD may delegate the random quarterly audit task to another Manager of equal rank (i.e. Paramedic Practice Leader) however the responsibility to organise the audit remains with the Manager, PCD.

25.0 Suspected medication misappropriation or medication tampering

All **employees** have the responsibility and obligation to report any reasonable suspicion of medication misappropriation or medication tampering.

The employee, who reasonably suspects tampering or misappropriation must:

- Immediately notify the Unit Chief & Manager, PCD,
- Submit a CTS Exception Form for a Manager, PCD and Designated Administrator.

Potential signs of medication tampering, without reasonable explanation, may include:

- Marks or damaged labels i.e. water marks
- Discolouration of content
- Incorrect volume in vials or ampoules
- Broken tamper evident/proof seals
- Ampoule integrity – fractures in ampoules, presence of glue, rough surface
- Labels not adhered appropriately.

Preserving evidence may include:

- Taking photographs i.e. of the suspected tampered ampoule
- Photocopy relevant pages of the **CTS Medication Register RED**
- Quarantine stock by removing from circulation.

All reasonable suspicions of medication misappropriation or medication tampering will be reported to the **local law enforcement agency** in which the offence occurred. An investigation will be conducted to determine the facts.

Important: It is important to maintain confidentiality at all times throughout this process.

26.0 Suspected loss or theft

All **employees** are obliged and responsible for reporting any reasonable suspicion of theft immediately. An employee who suspects theft must:

- Immediately notify the Unit Chief & Manager, PCD,
- Submit a CTS Exception Form for a Manager, PCD and Designated Administrator.
- Notify the **local law enforcement agency** upon discovering loss or theft

The **Designated Administrator** must submit a *Loss or Theft Report Form for Controlled Substances, Precursors and Cannabis* to Health Canada within ten (10) days of discovery.

Employees who are involved in the theft of medications may be subject to disciplinary action and will be reported to the local law enforcement agency.

27.0 Unaccounted for medications

All **employees** are obligated and responsible for reporting any unaccounted-for medications.

Actions taken may include:

- Recalculation in the **CTS Medication Register RED** to ensure correct count
- Check to ensure stock is not placed in the wrong safe or wrong area of safe
- Check to ensure that all medications have been signed in and out correctly

If the discrepancy has been identified or rectified, notify the Unit Chief or Manager, PCD of the findings and outcome, both verbally and in writing.

If there is a reasonable suspicion that medication theft, misuse or misappropriation has occurred, notify Unit Chief or Manager, PCD immediately.

The Manager, PCD is then to commence an investigation.

For medications that are unaccounted for, the employee is required to complete a CTS Exception Form and submit it to the relevant Manager, PCD.

27.1 CTS Medication Register **RED** transaction – discrepancy identified

The employee who identified the discrepancy (transacting employee) and the **checking employee** are to:

- Verify other entries to determine if it is a mathematical error or the count is physically out;
- Record discrepancy in black pen on the next available line;
- Use a highlighter to differentiate the discrepancy transaction from other transactions;
- Ensure that the Date and Time columns are completed;
- In the 'movement/comment' column write "discrepancy" and the name of the employee who found the discrepancy;
- Have the **checking employee** verify the medication count then record their name (signature) and employee number in the appropriate columns; and
- Where **CTS** medications are involved immediately report the discrepancy to the Unit Chief and/or Manager, PCD and submit a **CTS** Exception Form.

Example – CTS Medication Register **RED transaction – discrepancy identified.**

Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	1400					Discrepancy – notified UC/ Manager PCD	/	/	39	A. Employee	12345	B. Employee	12344

28.0 Substance misuse

BCEHS does not tolerate the theft and/or misuse of medications. BCEHS **employees** hold a position of significant trust with the general public. Any substantiated theft or misuse of medications may result in disciplinary action up to and including termination of employment.

An employee is responsible for immediately notifying their Unit Chief or Manager, PCD if there is a reasonable suspicion that another BCEHS employee is misusing medications.

Should an employee have a medication dependency issue; they should seek assistance. The following

- **Critical Incident Stress Management (CISM) 1-855-969-4321**
A dedicated peer group that supports wellness by providing education, resources and CISM interventions. Confidential and referral service to mental health professionals. 24/7.
- **Homewood Health Solutions (EFAP) 1-800-663-1142**
Your employee and family assistance program. A supportive, confidential and caring environment where you can receive counselling for any challenge, 24/7.
- **Crisis Line 1-800-784-2433**
All British Columbians can call to talk to someone and/or be connected to multiple resources offered in your community. Support groups, counselling, walking clubs, bereavement etc. 24/7

29.0 Suspected manufacturing fault/Unserviceable CTS

Manufacturing faults and unserviceable damaged medication vessels may include, but are not limited to, empty intact vials, discoloration or consistency of medications, brittle ampoules, damaged ampoule packaging etc.

Employees identifying a suspected manufacturing fault are required to complete the following steps:

- Notify the Unit Chief and/or Manager, PCD at the earliest most appropriate opportunity

- Submit a CTS Exception Form
- Remove the affected medication from circulation, ensuring no administration to patient occurs. **Employees** should also check remaining stock to identify if any other items are affected.
- Document the suspected manufacturing fault/breakage in the **CTS Medication Register RED**:
 - enter the date and time
 - in the 'movement/comment' column, enter 'Manufacturing Fault' or 'Medication Recall'
 - in the 'quantity out' column, enter the quantity of faulty vials/ampoule/tablet
 - place a forward slash (/) in the 'In' column
 - verify and enter the balance i.e. complete a medication count if the faulty medication is removed from the safe/cupboard
 - enter the name (signature) and employee number of the identifying and checking **employees**
 - Submit a **CTS** Exception Form noting:
 - medication name and brand
 - batch and expiry
 - description of the fault
 - photo of the manufacturing fault
 - Quantity affected.
- Ensure any packaging, ampoules, vials or other relevant materials are retained and submitted via reporting channels for analysis. Photograph records are also to be taken as part of this process.

30.0 Adverse medication reactions

An adverse medication reaction is considered to be serious when It Is suspected of causing death, danger to life, admission to hospital, prolongation of hospitalization, absence from productive activity, increased investigational or treatment costs or birth defects.

Employees are to report all confirmed or suspected cases of adverse medication reactions via the PSLS reporting system. This will ensure the clinical incident is reported to the appropriate Paramedic Practice Leader for investigation

The Paramedic Practice Leader will consult with the Chief Medical Officer and Director, Clinical & Professional Practice and report the adverse reaction to the relevant authorities as required.

31.0 Expired CTS medications

Expired CTS medications must be separated from unexpired CTS in the stations safe.

The Unit Chief, as a Delegate, shall return the CTS to a designated pharmacy in a timely manner.

The Unit Chief as a Delegate must reconcile the CTS Registry.

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Appendix 1 – CTS & High Alert Medication Inventory List

CTS Inventory List

Item Description	Quantity per kit/pouch			
	PCP	ACP	ITT	CCP
Lorazepam 1mg Tablet				5
DiazePAM				
FentaNYL 100mcg/2ml Ampoule		3		5
FentaNYL 250mcg/5ml Ampoule				4
HYDROmorphine				
Morphine 10mg/1ml Ampoule		3		5
Morphine 50mg/1ml Ampoule				4
Midazolam 5mg/2ml Vial		6		
Midazolam 10mg/2ml Vial				6
Midazolam 50mg/ 10ml Vial				4
Methoxyflurane 3ml Vial High Alert Medication	2			
Ketamine 100mg/ 2ml Vial				5
Ketamine 500mg/ 10ml Vial				2
Propofol 500mg/50ml Vial High Alert Medication				2

BCEHS

BC Emergency
Health Services

British Columbia Emergency Health Services

Medication Register

Controlled Targeted Substances

Station

Register Number

Balance forward transferred
to new Station register
number _____

Date of first entry _____
Date of last entry _____
Date to dispose of register _____



Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty In	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
2019/03/15	0630					Issue to 256A1D	5	/	35	A. Employee	12345	B. Employee	12344
2019/03/15	1400	B. Patient	123456	5mg	5mg	256A1D	/	/	/	A. Employee	12345	B. Employee	12344
2019/03/15	1830					Returned by 256A1D	/	5	40	A. Employee	12345	B. Employee	12344

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Appendix 4 – CTS Medication Register **RED** Transactions

	Date	Time Administered/ Transaction	Patient Name	Event Number	Quantity Given to Patient	Quantity Discarded (mg)	Movement/ Comment	Qty Out	Qty in	Balance	Administering Employee or Receiving Employee	Employee Number	Checking Employee	Employee Number
	2019/03/14	2100					Balance bough forward			40	A. Employee	12345	B. Employee	12344
Receiving Drugs in	2019/03/15	0600					Invoice 123345 Restock, BCEHS Pharmacy	/	20	60	A. Employee	12345	B. Employee	12344
Signing out drugs	2019/03/15	0630					Issue to 256A1D	5	/	55	A. Employee	12345	B. Employee	12344
Drug discards	2019/03/15	0640	B. Patient	123456	5mg	5mg	256A1D	/	/	/	A. Employee	12345	B. Employee	12344
Written in error	2019/03/15	0700	B. Patient	0198725	7.5 mg	2.5 mg	256A1D	/	/	/	A. Employee	12345	B. Employee	12344
Patient administration	2019/03/15	0730	B. Patient	123456	10mg	Nil	256A1D	/	/	/	A. Employee	12345	B. Employee	12344
Signing in drugs	2019/03/15	0800					Returned by 256A1D	/	5	60	A. Employee	12345	B. Employee	12344
Transfer in	2019/03/15	1000					Received from Station 248	/	10	70	A. Employee	12345	B. Employee	12344
Transfer out	2019/03/15	1030					Transfer to Station 240	10	/	60	A. Employee	12345	B. Employee	12344
Audit	2019/03/15	1400					Weekly Audit	/	/	60	A. Employee	12345	B. Employee	12344
Expired drugs	2019/03/15	1500					Expired drugs – sent to pharmacy for destruction	/	/	60	A. Employee	12345	B. Employee	12344
Breakage	2019/03/15	1600					Breakage – in field (256A1D) B. Paramedic 12345	/	/	60	A. Employee	12345	B. Employee	12344

Appendix 5 –Audit Breach Matrix

HIGH LEVEL BREACH

- Failing to notify of potential/actual medication misappropriation
- Failing to follow up on Medium Level breach identified in a previous audit
- Unauthorised public access (including cleaners/contractors) to CTS repository
- External station doors not locked or secured, including plantroom doors
- Operational or non-operational vehicles on station unlocked
- Repository room door left open with no authorized employee inside
- Evidence of safe access codes accessible or visible to unauthorised personnel or public
- Falsification of audit records or medication register
- Storing medications inappropriately/not supported by DMCoP
- Medications not stored in a locked repository
- Failing to sign for any transaction for a CTS medication
- Lack of supervisory oversight leading to misappropriation
- Illegible entries, no employee numbers recorded and single signatures (when not a single officer entry)
- Weekly or monthly medication audits not completed
- CTS medications found stored in vehicles
- Excessive breaches of Medication Management Code of Practice by station staff without follow-up
- Non-segregated medication storage (i.e., ACP and PCP medications stored together)
- Expired medications (except for normal saline and water for injection) stored in training kits

MEDIUM LEVEL BREACH

- Internal station doors not locked or secured
- Incorrect medication count without reasonable follow-up/ investigation or notification
- Station employee non-compliant with Medication Management Code of Practice education
- Compounding medication miscount secondary to error in medication register demonstrating no count verification conducted
- Old medication registers not secured in locked cupboard - away from general staff access

LOW LEVEL BREACH

- Minor record management errors
- Correct colour pen not used (i.e., blue for audits, black for general entries)

COMPLIANT

- Congratulations

Glossary

Authorized employee	An employee who is authorized by BCEHS to obtain, possess, supply and/or administer a particular medication for which they have training and authorization.
BCEHS Employee/Employee	A person who is licensed as an emergency medical assistant under the <i>British Columbia Emergency Health Services Act</i> and the <i>Emergency Medical Assistants Regulation</i> in the category of Advanced Care Paramedic, Critical Care Paramedic, Primary Care Paramedic or Infant Transport Team, and who is authorized under that legislation to administer controlled substances in the course of practising as an emergency medical assistant in the province of British Columbia;
Canadian Defence Force Health Personnel	Any currently serving Canadian Defence Force member fulfilling a clinical placement in support of their current clinical role within the Canadian Defence Force.
Chain of Custody	The Delegates ability to demonstrate a clear administrative record of all medication interactions on the CTS Medication Registry.
Checking Employee	The person who is responsible for checking the order, receipt, administration, discarding or destruction of medications or conducting an audit of medications.
Controlled and Targeted Substances (CTS)	Any substance listed as CTS in the Controlled Medication and Substances Act, 1996.
CTS Medication Register RED	A book used to record transactions involving controlled and targeted substances and high alert medications.
Designated Administrator	A BCEHS Medical Director who is ultimately responsible for ordering, transporting, storing and providing controlled substances for a BCEHS region, or a physician designated in writing by such a Medical Director to act on his or her behalf for the purposes of this exemption.
Medication Therapy Protocol/ Monograph	A document which states the circumstances and conditions under which an employee may use a medication.
Dual Access Controls	Means locked in a repository approved by BCEHS in a

	locked room or vehicle, except when carried on person.
Patient Care Record	Refers to the patient care record utilised by BCEHS. Includes electronic patient records, e.g., SIREN.
Local Law Enforcement Agency	The local police unit with legal jurisdiction in which the loss or theft occurred.
Pharmacy	Means a pharmacy that is authorized to operate in the province of British Columbia by a pharmacy license issued under the <i>British Columbia Pharmacy Operations and Medication Scheduling Act</i> , and whose owner has a contractual agreement with the BC Emergency Health Services for the supply of controlled substances to paramedics in the province of British Columbia.
Repository	A BCEHS approved locked receptacle where CTS medications are stored. This may include, but is noted limited to, a safe, equipment kit, cupboard and/or container.
Student Paramedic	A person currently enrolled in an approved paramedic and is a student of a recognised paramedic tertiary education program whom is undertaking a course or period of training to become a paramedic.