Module 5

Prescribing in Northern Communities, Controlled Substances Policy and Directly Observed Therapy for Tuberculosis

CANADIAN HEALTH CARE AGENCY
EXPERIENCE THE NORTH

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1. Introduction to the Drug Formulary
2. Prescribing Principles
3. Case Scenario # 1 Sample
4. Dispensing & Labeling
5. Control Substances Policy and Forms
6. Directly Observed Therapy (DOT)
7. Quiz

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Objectives

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What is the Formulary?

- Standardized list of medications that should be stocked in nursing stations.
- Based on best available evidence including recent clinical practice guidelines, while considering the First Nations remote and isolated health service delivery context.
- Medications listed in this Formulary supersede any drugs listed in any previous formularies or other applicable guidelines currently in use in all FNIHB facilities using a formulary.
- The Formulary will be updated on an ongoing basis. These updates will attempt to include the most relevant medication options for practitioners.

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Drug Formulary

What is the Drug Classification System?

- The Drug Classification System (DCS) assigns a treatment code for community health nurses employed by/ contracted to Health Canada as registered nurses.
- Both the Formulary and the DCS are designed to be used in conjunction with the *FNIHB Clinical Practice Guidelines for Nurses in Primary Care* as well as *the FNIHB Pediatric Clinical Practice Guidelines for Nurses in Primary Care.*
- For the purpose of the formulary, a registered nurse does not include nurses licensed and employed by Health Canada as nurse practitioners.

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Drug Formulary

What is the Drug Classification System?

Drug Treatment code mnemonic:

Category A: **A**ll Drugs

Category B/B+: **B**y prescription only*

Category C: **C**ourse of Drug

Category D: **D**ose of Drug

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Drug Classification System

What does **Code A** indicate?

Code A ("All Drugs")

RN provides, based on an assessment of the client's health history, disease, condition, stage of life and individual circumstances. No limitation on duration of treatment.

Examples: most over-the-counter medications, including plain acetaminophen, ibuprofen, dimenhydrinate, etc.

"I'm not sure what these are, but take them for a couple of weeks and let me know how you feel."

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Drug Classification System

What does Code B or B+ indicate?

Code B or B + ("By prescription only")

- Physician or nurse practitioner prescribed, based on consultation.
- Duration and frequency specified by physician or nurse practitioner.
- Note that controlled substances meeting criteria for emergency administration are further identified by a plus sign (i.e. B+).
- Refer to emergency situations in the Prerequisites to Providing Controlled Substances included in the Formulary Using the DCS, section below, for criteria.
- Examples: Most controlled substances, some antibiotics, cardiac and other chronic medications, etc.

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Drug Classification System

What does Code B or B+ indicate?

Code B or B + ("By prescription only")

- FNIHB Nursing personnel employed in Nurse Practitioners (NP) roles and licensed as NPs need to comply with applicable jurisdictional regulations for NPs pertaining to prescribing medications.
- Dispensing of medications prescribed by NPs and obtained from nursing stocks is authorized under the DCS.

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Drug Classification System

What does Code C indicate?

Code C ("Course")

- RN may provide one course.
- A course is defined as several successive doses of medication over time.
- The time is the period that the specific drug is expected to produce therapeutic effects.
- If the client's symptoms recur, the condition does not resolve or first-line therapy fails, the nurse will consult a physician or nurse practitioner.
- If further medication is needed, a physician or nurse practitioner order is required.
- Examples: some antibiotics, PPI's, anti-inflammatories etc.

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Drug Classification System

What does Code D indicate?

Code D ("Dose")

- RN may provide one dose, reassess client and consult physician or nurse practitioner if further treatment is required.
- where nurses are not able to access a physician/dentist in a timely manner. In these situations, the CS must be provided in a manner that adheres to the FNIHB risk management approaches and professional nursing practice standards as described below.
- Examples: Single dose of Buscopan, epinephrine, Depo-Provera, or oxytocin,

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Drug Classification System

Category A: **A**LL Drugs
Category B: **B**Y prescription only
Category C: **C**OURSE
Category D: **D**OSE

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Drug Classification System Mnemonic:

Example: Cetirizine Hydrochloride (Reactine)

What treatment code is cetirizine?

What strength is it stocked in?

Open Sioux Lookout Nursing Station Formulary

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Find Cetirizine

Example: Cetirizine Hydrochloride (Reactine)

What treatment code is cetirizine?

What strength is it stocked in?

FNIHB Nursing Station Formulary and Drug Classification System

Section 1-ALLERGY AND ASTHMA THERAPY | **ANTIHISTAMINES**

A = RN provided, based on an assessment of the client's health history, disease, condition, stage of life and individual circumstances. No limitation on duration of treatment.

B = Physician or nurse practitioner prescribed, based on consultation. Duration and frequency specified by physician or nurse practitioner.

C = RN may provide one course. A course is defined as several successive doses of medication over time. The time is the period that the specific drug is expected to produce therapeutic effects. If the client's symptoms recur, the condition does not resolve or first-line therapy fails, the nurse will consult a physician or nurse practitioner. If further medication is needed, a physician or nurse practitioner order is required.

D = RN may provide one dose, reassess client and consult physician or nurse practitioner if further treatment is required.

Generic Drug Name	Form	Strength	Must Stock	Treatment Code	Common Trade Name(s)
cetirizine hydrochloride	Syrup	5 mg/5mL		A	ine, generics
cetirizine hydrochloride	Tablet	10 mg		A	Reactine, generics
diphenhydramine hydrochloride	Caplet	25 mg	✓	A	Benadryl, generics
diphenhydramine hydrochloride	Injection	50 mg/mL	✓	C	Benadryl, generics
diphenhydramine hydrochloride (children's)	Liquid	6.25 mg/5mL (Alcohol-free)	✓	A	Benadryl, generics
hydroxyzine hydrochloride	Capsule	25 mg		C	Atarax, generics

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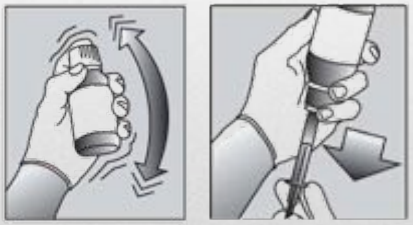
Find Cetirizine

Pediatric medications often come in powder form, and need to be reconstituted with water to form a suspension. Follow the directions on the label for appropriate reconstitution.



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Mixing Suspensions

Dx: Cystitis

<u>As per Anti-Infective Guidelines/ CPG's</u>

TMP/SMX 5-10mg/kg/day Trimethoprim divided Q12h

RX: TMP/SMX 10mg/kg/day PO Q 12 h

What is on hand?

Hint: Look in formulary

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Pediatric Calculations for BID dosing

Total mg per day=10mgx10kg=100mg/day
Total mg per dose=50mg

On Hand use the Trimethoprim 40mg/5ml concentration.

Cross Multiply: 5ml x50 mg divided 40mg = 6.25ml
Label: 6.25ml PO by mouth, twice a day.
Mitte Calculation: 6.3x2=12.6x10=126ml
Dispense: 130mls
Round to 6.3mls use pediatric syringe.

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Pediatric Calculations for BID dosing

Tylenol : 15mg/kg PO, Q4h, PRN
On Hand: 80mg/1mL
Age: 2 year old. Estimate the weight.
Weight: kg=3(age) +7 ….weight 6+7=13kg

Calculation total mls per DOSE: 13kg X 15mg=195mg
195mg per dose.
Cross Multiply: 195mgx1ml divided 80ml=2.43ml
Label: Give 2.45 ml po Q 4 hours PRN
Mitte: 1 bottle

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Pediatric Calculations for PRN – estimate weight

Children's Acetaminophen Dosing: 15mg/kg q4h

Note: - infant acetaminophen comes in concentrations of 80mg/1mL
- children's acetaminophen comes in concentrations of 160mg/5mL

always check the concentration when calculating the dose.

Children's Ibuprofen Dosing: 10mg/kg q6h

Note: Ibuprofen comes in concentrations of 100mg/5mL

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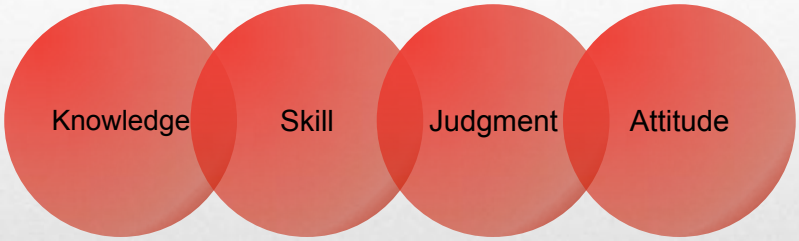
Liquid Acetaminophen and Ibuprofen for kids



Even if you can prescribe a medication based on your scope, if you do not have the knowledge, skills and judgment you should consider referring the patient or consulting with a physician or NP.

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Prescribing Principles

What treatment code is Azithromycin (Formulary Page 9)?

Both a C and B

- C for STI treatment
- B for all other indications

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Common Questions

What is renal dosing?

Table 3. Dose adjustment of antibiotics most commonly used in dental practice, in patients with chronic kidney failure, according to creatinine clearance.

Drug	Normal dose	Dose with creatinine clearance 10-50 ml/min.	Dose with creatinine clearance <10 ml/min.
Amoxicillin	500/1000 mg/8h	Every 8-12 h	Every 12-14 h
Amoxicillin-clavulanate	500-875 mg/8h	Every 8 hours	Every 12-24 hours
Clindamycin	300 mg/8h	No adjustment needed	No adjustment needed
Doxycycline	100 mg/24h	No adjustment needed	No adjustment needed
Erythromycin	250-500 mg/6h	No adjustment needed	No adjustment needed
Metronidazole	250-500 mg/8h	Every 8-12 hours	Every 12-24 hours
Penicillin G	0.3-1.2 million IU/6-12 h	50-100% of the dose every 8-12 hours	25-50% of the dose every 12 hours
Azithromycin	500 mg/24h 3 days	No adjustment needed	No adjustment needed

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Common Questions

What is the correct mitte for

- Pen V 300mg TID for 10 days? (300mg tabs)

Mitte = 30 tabs

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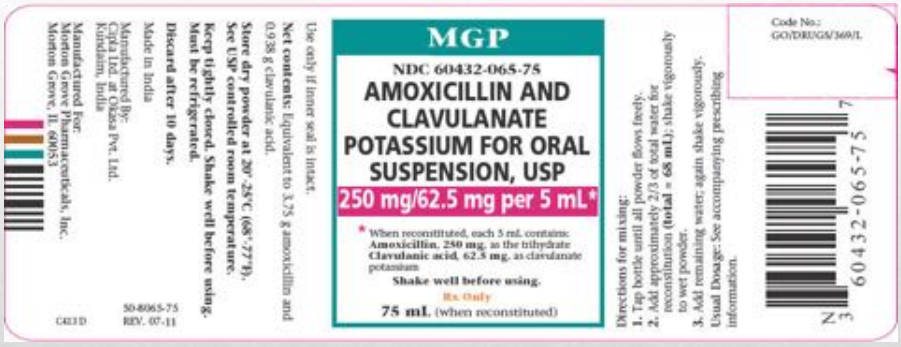
Common Questions

Tabs: Amox/Clav 875mg/125mg

Suspension: Amox/Clav 250ml & Clavulanic acid 62.5/5ml



Use the Amox concentration in divided doses

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Dual Drugs

Sally is 1 year old, her weight is 15kg

Rx: Advil 10mg/kg/dose PO Q 6-8 hours PRN.

- What is the mg per dose?
- What is mL per dose (assuming 100mg/5mL)?
- What is the total volume dispensed for 7 days?

150mg/dose
7.5 mL/ dose
210mL

Sally is 1 year old, her weight is 15kg

Rx: Amoxil 80mg/kg/day PO TID x 7 days.

- What is the mg per dose?
- What is the mL per dose (assuming 250mg/5mL)?
- What is the total volume dispensed for 7 days?

400mg/dose
8mL/ dose
168mL

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Practice Questions

Watchful waiting versus treatment

(e.g. Acute OM in children)

- An approach to a medical problem in which time is allowed to pass before medical intervention or therapy is used.
- During this time, repeated testing may be performed.
- Some experts recommend watchful waiting for 48-72 hours before initiating antibiotic therapy for children aged 2 and above presenting with no risk factors.
- This approach may be feasible in mildly unwell children over 2 years of age if good follow-up can be assured and the child does not have any of the following risk factors:
  - Recent antibiotic use
  - Daycare attendance
  - Recent episode of AOM
  - Treatment failure or early recurrence

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Common Questions

Module 5
Part two
Controlled Substances Policy

CANADIAN HEALTH CARE AGENCY
EXPERIENCE THE NORTH

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First Nations and Inuit Health Branch

POLICY AND PROCEDURES ON
CONTROLLED SUBSTANCES
FOR FIRST NATIONS HEALTH FACILITIES

Effective Date: July 2015

Cancels and Supersedes : August 2013

Office of Primary Interest : Office of Primary Health Care within the Population Health and Primary Care Directorate

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Controlled Substances

- Read section 3.2 to 3.2.7
- Read section 3.6 prescribing
- Read section 3.7 on waste

Narcotic Policy Highlights

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Procedure for the Control of Controlled Substances
In First Nations and Inuit Health Branch managed health facilities

ANNEX 1
CONTROLLED SUBSTANCES SIGNATURE AND ACKNOWLEDGEMENT FORM

Name of Health Facility _____ **Page #** _____

It is mandatory to complete Annex 1 for ALL employees who have been granted access to Controlled Substances by the nurse in charge and who will make entries in the Control Substances Register Forms. Your signature is required for identification purposes and to indicate you have read and understood the FNIHB Policy and Procedures on the Control of Controlled Substances. This form must be signed before making any entries in other Controlled Substances Register Forms.

Date (YY-MM-DD)	Name (Please Print)	Qualification Or Position	Signature	Initials

Keep sheet for two (2) years after last entry. Personnel must re-sign upon each assignment or return from leave. Blank forms to be reproduced locally.

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3.2.1: Signature and Acknowledgment Form

3.2.2 CS Register

- Complete the CS Register whenever a CS is received, provided, administered, wasted, lost or stolen, returned to a supplier, or destroyed.
- Complete the headings on the Register Form as follows:
  - name of health facility,
  - drug name, strength and dosage form,
  - unit of issue (e.g. tablet, ampule, mL),
  - page number.
- Complete with the name of the prescriber or provider, and theRN's signature.
- Register Form entries should be complete, legible and written in permanent non-erasable ink. To facilitate audits, the CS counts and receipts will be recorded on the CS Register Form in RED ink.
- BLACK or BLUE ink will be used for recording the quantity of controlled substances provided, wasted, lost or stolen, returned to the supplier, or destroyed, and for bringing balances forward

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3.2.2: Controlled Substances

3.2.3 CS Drug Counts

- Count must be done by two RNs. One counting, the other witnessing the count, then both will the CS Register Form
- RNs are required to count all of the CS stored at the facility at least once a week or more, and at every nursing staff change.

3.2.4 Start/Termination of Employment of the Nurse in Charge and Other Nursing Staff

- The arriving registered nurse will perform a complete drug count with the Nurse in Charge or designate, to confirm that stock and balances agree.
- At the end of her/his employment, any registered nurse departing the health facility will perform a drug count with the Nurse in Charge or designate before leaving.

3.2.5 Count Discrepancies, Loss or Theft Reports, and Occurrence Reports

- When a RN discovers a count discrepancy (over or under) he/she must immediately advise the Nurse in Charge/designate.

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3.2.3 – 3.2.5: Controlled Substances

First Nations and Inuit Health Branch – Procedure for the Control of Controlled Substances
ANNEX 2B
CONTROLLED SUBSTANCES REGISTER FORM – DRUG COUNT – COMBINED FORM

EXAMPLE

Name of Health Facility:
Little Beaver NS

Drug counts and additions (receipts) in RED ink
Issues (Dispensed, returned or destroyed) in BLACK ink
Errors – strike out and initial

Page # 14

				Units issued/received by tabs, amp or ml (for syrup only)	Codeine 30 mg tabs min 10 – max 25	Codeine syrup 5 mg/ml min 20 – max 100 mL	Meperidine (Demerol) 50 mg tabs min 10 – max 20 tabs	Meperidine (Demerol) 50 mg/mL min 5 – max 25	Morphine 10 mg/mL amps min 2 – max 10	Morphine syrup 5 mg/mL supply on demand	Phenobarbital 120 mg/mL amps min 10 – max 20				
			Forwarded Balance →	25	50 mL	10	20	8	32 mL	20				Prescriber's name	Nurse's signature
Date (yy-mm-dd)	Time	Full First & Last Name Band #, & DOB	Drug Name/Strength/ Unit of Issue	Qu anti ty											
04-06-04	4:44 pm	Barbara, Hurt, 67 LB, 25/12/51	Demerol 50 mg tabs I tab q6h PRN for pain	4			6							Dr. Dolight	J. Pond RN sign
04-06-04	4:59 pm	Drug Count			25	50	6	20	8	32	20			J. Pond RN sign	B. Hill RN sign
04-06-05	4:30 pm	Drug Count			25	50	6	20	8	32	20			J. Pond RN sign	B. Hill RN sign
04-06-06	7:30 am	Matthew, Etoo, 57 LB, 21/08/80	Meperidine 50 mg, 75mg IM	1.5				18.5						J. Pond, RN	J. Pond RN sign
04-06-06	1:00 pm	Wasted	Meperidine 50 mg, 25 mg IM	0.5				18						B. Hill, RN	J. Pond RN sign
04-06-06	1:24 pm	MHC Pharmacy	Demerol 50 mg tabs	10			16							B. Hill, RN	J. Pond RN sign
04-06-06	4:30 pm	Ella, Knowmow, 2 LB, 25/9/55	Morphine 10 mg IM stat	1					7					B. Hill RN	B. Hill RN sign
04-06-06	4:40 pm	Drug Count			25	50	16	18	7	32	20			J. Pond RN sign	B. Hill RN sign
04-06-07	10:35 am	Robert, Happy, 134 LB, 08/05/97	Codeine syrup 2 ml stat	2		48								Dr. Visiting	J. Pond RN sign

3.2.2 - Controlled Substances Register Form

First Nations and Inuit Health Branch – Procedure for the Control of Controlled Substances

ANNEX 2A
CONTROLLED SUBSTANCES REGISTER FORM – DRUG COUNT – SINGLE DRUG

Page # _____

Name of Health Facility:			Drug Name (Generic) & Strength:			Unit of issue:	
DATE	TIME	PATIENT NAME	Quantity			Practitioner Physician/	Nurse's
(YY-MM-DD)		(or Supplier's Name)	Rec'd	Issued	Bal.	Nurse	Signature

Note:
- Drug Counts and Drug Received in RED ink
- Issued (Quantity of drug dispensed, returned or destroyed) in BLACK ink
- Errors: Strike out and initial

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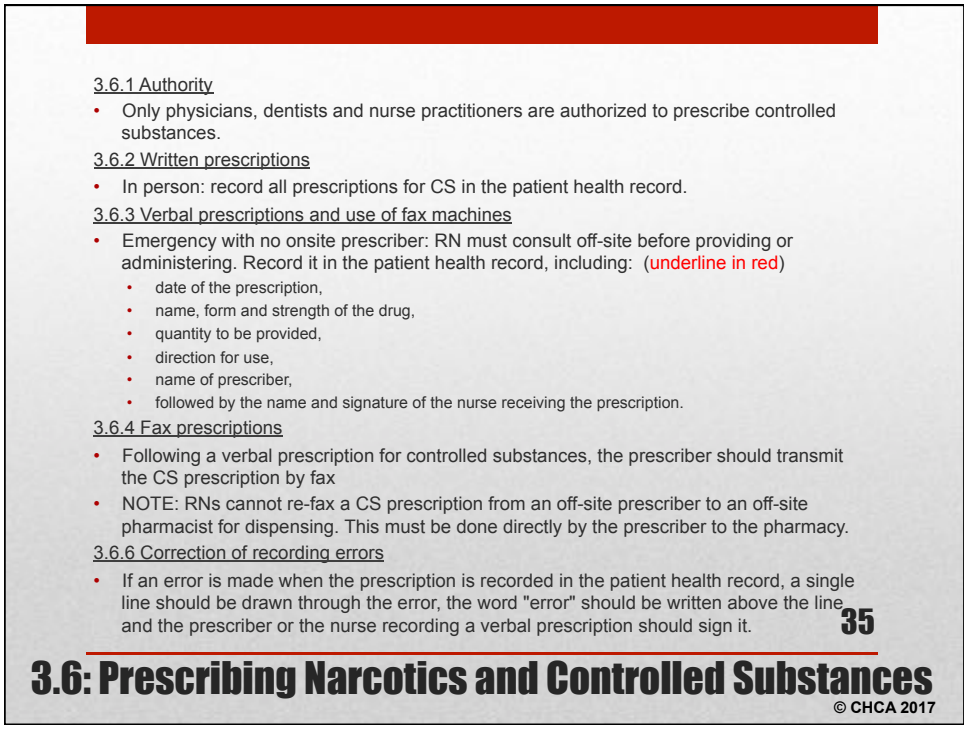
3.6.1 Authority
• Only physicians, dentists and nurse practitioners are authorized to prescribe controlled substances.
3.6.2 Written prescriptions
• In person: record all prescriptions for CS in the patient health record.
3.6.3 Verbal prescriptions and use of fax machines
• Emergency with no onsite prescriber: RN must consult off-site before providing or administering. Record it in the patient health record, including: (underline in red)
• date of the prescription,
• name, form and strength of the drug,
• quantity to be provided,
• direction for use,
• name of prescriber,
• followed by the name and signature of the nurse receiving the prescription.
3.6.4 Fax prescriptions
• Following a verbal prescription for controlled substances, the prescriber should transmit the CS prescription by fax
• NOTE: RNs cannot re-fax a CS prescription from an off-site prescriber to an off-site pharmacist for dispensing. This must be done directly by the prescriber to the pharmacy.
3.6.6 Correction of recording errors
• If an error is made when the prescription is recorded in the patient health record, a single line should be drawn through the error, the word "error" should be written above the line, and the prescriber or the nurse recording a verbal prescription should sign it.
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3.6: Prescribing Narcotics and Controlled Substances
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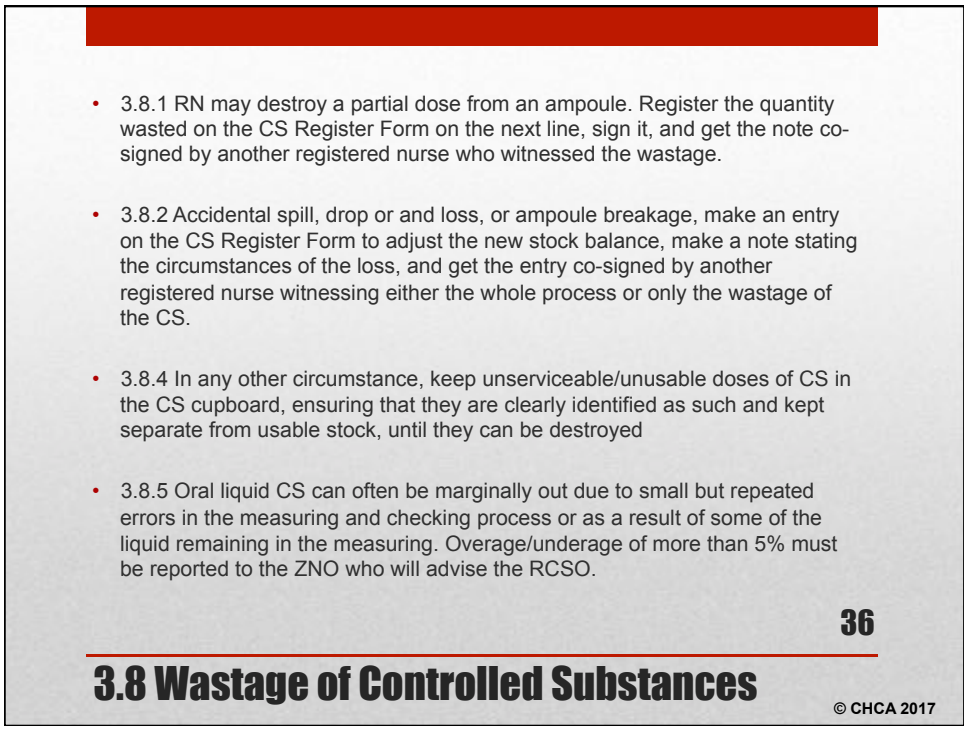
• 3.8.1 RN may destroy a partial dose from an ampoule. Register the quantity wasted on the CS Register Form on the next line, sign it, and get the note co-signed by another registered nurse who witnessed the wastage.
• 3.8.2 Accidental spill, drop or and loss, or ampoule breakage, make an entry on the CS Register Form to adjust the new stock balance, make a note stating the circumstances of the loss, and get the entry co-signed by another registered nurse witnessing either the whole process or only the wastage of the CS.
• 3.8.4 In any other circumstance, keep unserviceable/unusable doses of CS in the CS cupboard, ensuring that they are clearly identified as such and kept separate from usable stock, until they can be destroyed
• 3.8.5 Oral liquid CS can often be marginally out due to small but repeated errors in the measuring and checking process or as a result of some of the liquid remaining in the measuring. Overage/underage of more than 5% must be reported to the ZNO who will advise the RCSO.
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3.8 Wastage of Controlled Substances
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- 3.9.1 The destruction of CS must not be confused with wastage described in section 3.8.

3.9 Destruction of Controlled Substances 37

MODULE 5 – PART 3
DIRECTLY OBSERVED THERAPY FOR THE TREATMENT OF TUBERCULOSIS

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- Directly Observed Therapy (DOT) is the World Health Organization (WHO) standard for treatment of Tuberculosis disease; and has been adopted as the standard for delivery of all TB medications whether they are for treatment of active TB disease or latent TB infection (LTBI).
- A Community Health Nurse or DOT Community Health Worker meets with clients to watch clients swallow each dose of anti-TB medication, help them to understand their TB medication, and provide support and education.
- DOT has been shown to reduce the risk of drug resistance and to provide better treatment completion rates, therefore DOT is the standard for providing TB medication to all clients taking TB therapy,

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Directly Observed Therapy

- Participates in case finding and promptly reports to Public Health, all people with symptoms suggestive of active tuberculosis.
- Identifies contacts of active cases of tuberculosis disease and conducts the appropriate screening of these individuals.
- Directly supervises the treatment and provides information for all TB medications taken by client for all active cases of tuberculosis and persons on INH treatment for LTBI.
- Directly supervises **DOT** Lay Worker.
- Ensures that routine blood work is completed and symptoms monitored as recommended in the TB Manual. Reports abnormal blood work and symptoms of drug intolerance to the TB Program.
- Ensures that clients are referred for chest radiographs as required

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The Role of the Community Health Nurse

- Submits monthly medication reorder forms for individuals taking anti-tuberculosis medications to the TB Program
- Participates in tuberculosis education with individuals with active TB disease, and communicates the importance of adherence to the medication regime, including compliance with recommendations for isolation as needed.
- Coordinates and participates with the CHR and other health care providers in community-wide tuberculosis skin testing screenings.
- Annually conducts the following screening in all communities according to public health guidelines
- Promotes and provides annual TST for children less than 5 years of age in communities which have been identified as enhanced First Nations communities.
- Provides tuberculosis education to First Nations communities.

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The Role of the Community Health Nurse

- Treatment of latent TB infection (LTBI) is also called prophylaxis or preventative therapy.
- Treating TB infection with medication kills the bacteria and significantly decreases the chance that TB disease will develop in the future.
- TB infection may progress to TB disease if the immune system cannot keep the bacteria asleep.
- This process can occur anywhere in the body, but usually occurs in the lungs and cause damage to the tissues in which they are growing.
- Possible Sites of TB Disease:
  - Kidneys
  - Bone
  - Brain
  - Spinal cord
  - Lymph nodes
  - Lungs (this is the most common type in adults)
  - TB can occur anywhere

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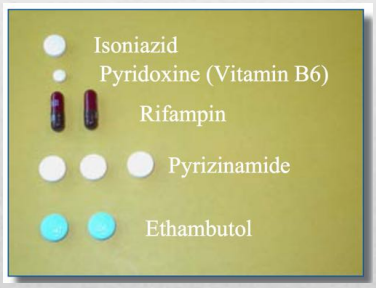
Treatment of Latent and Active TB

- Treatment is achieved with several antibiotics (i.e. Isoniazid™, Rifampin™, Pyrazinamide™ and Ethambutol™).
- Treatment usually lasts 6–9 months, but may be longer in some situations e.g. the client is not able to take one or more of the antibiotics; or if TB involves a part of the body that is diffcult to treat i.e. TB meningitis; or the TB germ is resistant to usual medications.
- Medication for TB disease is administered by DOT.
- Treatment of TB disease is mandatory under the Public Health Act. "Public Health Act; Part 4, Division 6 - Enforcement of Orders:
  - "Health officers may take enforcement measures in situations where individuals are not compliant with the Act, or pose a threat to their personal health or public health."



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TB Treatment

- The **DOT** worker watches the client swallow each dose of medication. Medication must never be left with the client.
- The **DOT** worker asks and observes the client for side effects with each dose of medication.
- The **DOT** worker documents all pertinent information of **DOT** administration in a timely fashion.
- The client is encouraged and supported to complete required check ups – blood work, chest x-rays, etc.
- A trust relationship often develops between **DOT** worker and the client. This relationship:
  - reduces fears about TB and its treatment
  - increases client's comfort level so he/she will ask questions
  - improves client's quality of health care as **DOT** workers can be an important link to other community resources for the client
  - reduces the possibility of TB germs becoming resistant to the medication

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Principles of DOT

- Most **DOT** is twice weekly. A Monday/Thursday schedule is recommended as it allows some leeway in the work week to still give both doses required should the client miss the Monday dose. There should be at least a 72 hour interval between twice weekly doses.
- Before the client starts their therapy, the CHN reviews the medication and any possible side effects or drug interactions with the client. The **DOT** worker must also be aware of possible side effects of each client's medications. The first 2 or 3 doses should be delivered and observed by the supervising nurse to allow the opportunity for teaching and observation for reactions and side effects.
- All doses of medication must be observed. It is NEVER acceptable practice to leave a dose of medication with a client to take on their own at a later time.

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Administering Medication

- The CHN is required to review each client's progress with the **DOT** Lay Worker on a weekly basis and the client should be assessed (signs & symptoms of TB, side effects of medications, general health) directly by the CHN on a monthly basis, but, possibly more often at the beginning of therapy.
- Regular communication between **DOT** team members is vital for the smooth and safe delivery of **DOT**. A plan for communication should be set in place. The CHN must be available in person or by telephone to the **DOT** Lay Worker in case of client side effects or other questions and concerns. If the CHN for any reason is not available, a designate nurse must be identified.
- The designate must agree to take on the supervising role and to be available to the **DOT** worker.
- **Should the client forget or choose NOT to take the medication, this can lead to treatment failure & the development of resistant TB.**

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Monitoring the Client