

CVP+R Treatment

This handout gives general information about this cancer treatment.

You will learn:

- who to contact for help
- what the treatment is
- how it is given
- what to expect while on treatment



This handout was created by Ontario Health (Cancer Care Ontario) together with patients and their caregivers who have also gone through cancer treatment. It is meant to help support you through your cancer treatment and answer some of your questions.

This information does not replace the advice of your health care team. Always talk to your health care team about your treatment.

Who do I contact if I have questions or need help?

My cancer health care provider is: _____

During the day I should contact: _____

Evenings, weekends and holidays: _____

What is this treatment?

CVP+R is the code name of your lymphoma treatment regimen.

A regimen is a combination of medications to treat cancer.

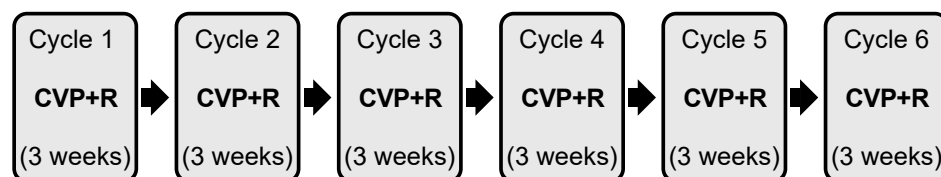
This regimen name is made up of one or more letters from the names of the 4 medications in your treatment.

Here are the names of the medications in this regimen:

C = Cyclophosphamide
V = Vincristine
P = Prednisone
 +
R = Rituximab

For most people, treatment lasts **18 weeks**. The treatment is divided into **6 cycles**. Each cycle is **3 weeks** long.




Here is a picture of the schedule for CVP+R treatment:



For some people, treatment may last 24 weeks. The treatment is divided into 8 cycles. Each cycle is 3 weeks long. Your health care team will tell you how many cycles you need.

During each 3 week cycle you will have CVP+R treatment on day 1 at the hospital. You will continue to take P (prednisone) tablets on days 2-5 at home.

Each cycle looks like this:

Day 1	2	3	4	5	6	7
Treatment Day: Go to the hospital for CVP+R treatment	Take your prednisone	Take your prednisone	Take your prednisone	Take your prednisone	No CVP+R Treatment	
8	9	10	11	12	13	14
						
15	16	17	18	19	20	21
						



Remember To:

- ✓ Tell your health care team about all of the other medications you are taking.
- ✓ Keep taking other medications that have been prescribed for you, unless you have been told not to by your health care team.

You will have a blood test to check for hepatitis B before starting treatment. See the [Hepatitis B and Cancer Medications](#) pamphlet for more information.

How is this treatment given?

Cycle 1: For the first cycle in your treatment these medications will be given through an IV (injected into a vein) at the hospital:

C = Cyclophosphamide

V = Vincristine

R = Rituximab

You will also take your Prednisone (**P**) tablets by mouth.

Other Cycles: If your first cycle of rituximab goes well you may get this medication under your skin (subcutaneously or Subcut) for the rest of your cycles. This will happen on day 1 at the hospital. Getting the rituximab under your skin instead of through an IV will make your treatment visit at the hospital go faster.

You will have a blood test before each treatment cycle to make sure it is safe for you to get treatment.

P (Prednisone) tablets in your treatment are taken by mouth.

- Swallow tablets whole with a glass of water, with a meal.
- If possible, take prednisone tablets in the morning right after eating breakfast.

What other medications are given with this treatment?

To Prevent Nausea and Vomiting

You will be given medications to help prevent nausea (feeling like throwing up) and vomiting (throwing up) before they start.

- These are called anti-nausea medications and include medications such as ondansetron (Zofran®), granisetron (Kytril®), or others.

To Prevent Allergic Reaction

You will be given medications before your treatment to help prevent allergic reactions before they start.

- There are different types of medications to stop allergic reactions. They are called:
 - antihistamines (such as diphenhydramine or Benadryl®)
 - analgesics/antipyretics (such as acetaminophen or Tylenol®)
 - H2 blockers (such as ranitidine or famotidine)

- corticosteroids (such as prednisone)
- Prednisone is part of the CVP+R regimen. You will take your prednisone by mouth on day 1 of your cycle before your IV treatment.

To Prevent Tumor Lysis Syndrome (TLS)

TLS can happen when a large number of cancer cells die quickly and your body cannot get rid of them fast enough. TLS can make you very sick. Ask your health care team if you are at risk for TLS.

If you are at risk for TLS, you may be given medications before your CVP+R treatment to help prevent it.

- These are called anti-uricemics (such as allopurinol), or others.

To Prevent Hepatitis B Flare Ups

If you have ever been infected with hepatitis B, there is a risk that this treatment can cause it to flare up (come back). Tell your health care team if you have had hepatitis B. You may need to take medication to prevent a hepatitis B flare-up.

DO this while on treatment

- ✓ DO tell your health care team about any other medical conditions that you have such as heart, liver, lung, kidney, and nerve problems, or any allergies.
- ✓ DO check with your health care team before getting any vaccinations, surgery, dental work or other medical procedures.
- ✓ DO drink plenty of fluids (unless told otherwise) and pee often for 2 or 3 days after your CVP+R treatment to prevent bladder irritation.
- ✓ DO tell your health care team if you have any new pain, numbness or tingling of your hands or feet. This is especially important if you are having trouble doing tasks (like doing up buttons, writing, walking) or if you have severe pain or numbness.
- ✓ DO talk to your health care team about your risk of getting other cancers and heart problems after this treatment.
- ✓ DO consider asking someone to drive you to and from the hospital on your treatment days. You may feel drowsy or dizzy after your treatment.

DO NOT do this while on treatment



- ✗ DO NOT take any other medications, such as vitamins, over-the-counter (non-prescription) drugs, or natural health products without checking with your health care team.
- ✗ DO NOT start any complementary or alternative therapies, such as acupuncture or homeopathic medications, without checking with your health care team.
- ✗ DO NOT eat or drink grapefruit, starfruit, Seville oranges or their juices (or products that contain these) while on this treatment. They may increase side effects.
- ✗ DO NOT smoke or drink alcohol while on treatment without talking to your health care team first. Smoking and drinking can make side effects worse and make your treatment not work as well.

Will this treatment interact with other medications or natural health products?

Yes, the medications in this regimen can interact with other medications, vitamins, foods and natural health products. Interactions can make the treatment not work as well or cause severe side effects.

Tell your health care team about all of your:

- prescription and over-the-counter (non-prescription) medications
- natural health products such as vitamins, herbal teas, homeopathic medicines, and other supplements

Check with your health care team before starting or stopping any of them.

If you take medications to help with your blood pressure, your health care team may ask you to stop these medications 12 hours before and during your treatment.

If you take seizure medications (such as phenytoin), your health care team may monitor your blood levels closely and may change your dose.



Talk to your health care team **BEFORE** taking or using these :

- Anti-inflammatory medications such as ibuprofen (Advil[®] or Motrin[®]), naproxen (Aleve[®]) or Aspirin[®].
- Over-the-counter products such as dimenhydrinate (Gravol[®])
- Natural health products such as St. John's Wort
- Supplements such as vitamin C
- Alcoholic drinks
- Tobacco
- All other drugs, such as marijuana or cannabis (medical or recreational)

What should I do if I feel unwell, have pain, a headache or a fever?

- ✓ **Always** check your temperature to see if you have a fever **before** taking any medications for fever or pain (such as acetaminophen (Tylenol®) or ibuprofen (Advil®)).
 - Fever can be a sign of infection that may need treatment right away.
 - If you take these medications before you check for fever, they may lower your temperature and you may not know you have an infection.

How to check for fever:

Keep a digital (electronic) thermometer at home and take your temperature if you feel hot or unwell (for example, chills, headache, mild pain).

- You have a fever if your temperature taken **in your mouth (oral temperature)** is:
 - 38.3°C (100.9°F) or higher at any time
- OR
- 38.0°C (100.4°F) or higher for at least one hour.



If you do have a fever:

- ✓ **Try to contact your health care team. If you are not able to talk to them for advice, you MUST get emergency medical help right away.**
- ✓ Ask your health care team for the [Fever](#) pamphlet for more information.

If you do not have a fever but have mild symptoms such as headache or mild pain:

- ✓ Ask your health care team about the right medication for you. **Acetaminophen (Tylenol®)** is a safe choice for most people.



Talk to your health care team before you start taking ibuprofen (Advil®, Motrin®), naproxen (Aleve®) or ASA (Aspirin®), as they may increase your chance of bleeding or interact with your cancer treatment.



Talk to your health care team if you already take **low dose aspirin** for a medical condition (such as a heart problem). It may still be safe to take.

How will this treatment affect sex, pregnancy and breast feeding?

Talk to your health care team about:

- How this treatment may affect your sexual health.
- Changes to your menstrual cycle (periods), if this applies to you.
- Symptoms of menopause such as hot flashes, vaginal dryness or changes in your mood, if this applies to you.
- How this treatment may affect your fertility (ability to have a baby), if this applies to you.

This treatment may harm an unborn baby. Tell your health care team if you or your partner are pregnant, become pregnant during treatment, or are breastfeeding.

- If there is **any** chance of pregnancy happening, you and your partner together must use **2 effective forms of birth control** at the same time while you are on treatment. Talk to your health care team about which birth control options are best for you, and how long you should use them after your last treatment dose.
- Do not breastfeed while on this treatment. Talk to your health care team about how long to wait before you start breastfeeding after your last treatment dose, if this applies to you.

How should I safely store and handle the medications in this treatment?

Cyclophosphamide, vincristine and rituximab are given and stored at the hospital.

Prednisone:

- Keep tablets in the original packaging at room temperature in a dry place, away from heat and light.
- Keep out of sight and reach of children and pets.
- Do not throw out any unused tablets at home. Bring them to your pharmacy to be thrown away safely.

What are the side effects of this treatment?

The following table lists side effects that you may have when getting CVP+R treatment. The table is set up to list the most common side effects first and the least common last. It is unlikely that you will have all of the side effects listed and you may have some that are not listed.

Read over the side effect table so that you know what to look for and when to get help. Refer to this table if you experience any side effects while on CVP+R treatment.

Very Common Side Effects (50 or more out of 100 people)	
Side effect and what to do	When to contact health care team
<p>Allergic reaction</p> <p>(May be severe with IV rituximab)</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Fever, itchiness, rash, swollen lips, face or tongue, chest and throat tightness. • It may happen during or shortly after your treatment is given to you and may be severe. <p>What to do?</p> <ul style="list-style-type: none"> • Tell your nurse right away if you feel any signs of allergic reaction during or just after your treatment. • Talk to your health care team for advice if you have a mild skin reaction. 	<p>Get emergency medical help right away for severe symptoms</p>

Common Side Effects (25 to 49 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>Constipation</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Having bowel movements (going poo) less often than normal. • Small hard stools (poo) that look like pellets. • The need to push hard and strain to have any stool (poo) come out. • Stomach ache or cramps. • A bloated belly, feeling of fullness, or discomfort. • Leaking of watery stools (poo). • Lots of gas or burping. • Nausea or vomiting. <p>What to do?</p> <p>To help prevent constipation:</p> <ul style="list-style-type: none"> • Try to eat more fiber rich foods like fruits with skin, leafy greens and whole grains. • Drink at least 6 to 8 cups of liquids each day unless your health care team has told you to drink more or less. • Be Active. Exercise can help to keep you regular. • If you take opioid pain medication, ask your health care team if eating more fibre is right for you. <p>To help treat constipation:</p> <ul style="list-style-type: none"> • If you have not had a bowel movement in 2 to 3 days you may need to take a laxative (medication to help you poo) to help you have regular bowel movements. Ask your health care team what to do. <p>See the Constipation Pamphlet for more information.</p>	<p>Talk to your health care team if it does not improve or if it is severe.</p>
<p>Reactions at the injection site</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Your skin may become red, itchy, bruised, and/or swollen where the injection was given. • Site reactions are usually mild and go away within one to three days. 	<p>Talk to your health care team if this bothers you.</p>

Common Side Effects (25 to 49 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>What to do?</p> <ul style="list-style-type: none"> You may need to apply hot compresses or ice/cold compresses if you have mild redness or discomfort. This depends on which medication caused the reaction. Talk to your health care team to find out which treatment is right for you. 	

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>Fatigue</p> <p>What to look for?</p> <ul style="list-style-type: none"> Feeling of tiredness or low energy that lasts a long time and does not go away with rest or sleep. <p>What to do?</p> <ul style="list-style-type: none"> Be active. Aim to get 30 minutes of moderate exercise (you are able to talk comfortably while exercising) on most days. Check with your health care team before starting any new exercise. Pace yourself, do not rush. Put off less important activities. Rest when you need to. Ask family or friends to help you with things like housework, shopping, and child or pet care. Eat well and drink at least 6 to 8 glasses of water or other liquids every day (unless your health care team has told you to drink more or less). Avoid driving or using machinery if you are feeling tired. <p>Ask your health care team for the Fatigue pamphlet for more information.</p>	<p>Talk to your health care team if it does not improve or if it is severe.</p>
<p>Nausea and vomiting</p> <p>What to look for?</p> <ul style="list-style-type: none"> Nausea is feeling like you need to throw up. You may also feel light-headed. You may feel nausea within hours to days after your treatment. 	<p>Talk to your health care team if nausea lasts more than 48 hours or vomiting lasts more than 24 hours or if it is severe.</p>

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>What to do?</p> <p>To help prevent nausea:</p> <ul style="list-style-type: none"> • It is easier to prevent nausea than to treat it once it happens. • If you were given anti-nausea medication(s), take them as prescribed, even if you do not feel like throwing up. • Drink clear liquids and have small meals. Get fresh air and rest. • Do not eat spicy, fried foods or foods with a strong smell. • Limit caffeine (like coffee, tea) and avoid alcohol. <p>If you have nausea or vomiting:</p> <ul style="list-style-type: none"> • Take your rescue (as-needed) anti-nausea medication(s) as prescribed. • Ask your health care team for the Nausea & Vomiting pamphlet for more information. • Talk to your health care team if: <ul style="list-style-type: none"> ◦ nausea lasts more than 48 hours. ◦ vomiting lasts more than 24 hours or if it is severe. 	
<p>Neuropathy (Tingling, numb toes or fingers)</p> <p>(May be severe)</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Numbness or tingling of your fingers and toes may happen after starting your treatment. • Sometimes it can be painful and feel like burning sensation, which may be severe. <p>What to do?</p> <ul style="list-style-type: none"> • Talk to your health care team if you have symptoms of neuropathy. • Numbness may slowly get better after your treatment ends. <p>In rare cases, it may continue long after treatment ends. If you continue to have bothersome symptoms, talk to your health care team for advice.</p>	<p>Talk to your health care team, especially if you have trouble doing tasks like doing up buttons, writing, moving, or if you have severe pain or numbness.</p>
<p>Headache, Flu-like symptoms</p> <p>You may feel like you have the flu for around 2 days after your IV treatment. These flu-like symptoms may not be signs of an infection.</p>	<p>Talk to your health care team if it does not improve or if it is severe</p>

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>What to look for?</p> <ul style="list-style-type: none"> You may have chills, headache and muscle pain. You may feel tired and have a poor appetite. Symptoms may happen at any time after you receive your treatment and usually go away as your body gets used to the medication. <p>What to do?</p> <ul style="list-style-type: none"> Check your temperature to see if you have a fever. Read the above section “What should I do if I feel unwell, have pain, a headache or a fever?”. If you do have a fever, try to speak to your health care team. If you are unable to talk to them for advice, you MUST get emergency medical help right away 	
<p>Low neutrophils (white blood cells) in the blood (neutropenia), infections</p> <p>(May be severe)</p> <p>When neutrophils are low, you are at risk of getting an infection more easily. Ask your health care team for the Neutropenia (Low white blood cell count) pamphlet for more information.</p> <p>When your immune system is weakened, bacteria, viruses, or fungi that would not normally be harmful may cause an infection. Some people may get some infections again (such as hepatitis) when the immune system is weakened. This happens rarely.</p> <p>What to look for?</p> <ul style="list-style-type: none"> If you feel hot or unwell (for example if you have chills or a new cough), you must check your temperature to see if you have a fever. Do not take medications that treat a fever before you take your temperature (for example, Tylenol® (acetaminophen), Advil® (ibuprofen)). Do not eat or drink anything hot or cold right before taking your temperature. <p>You have a fever if your temperature taken in your mouth (oral temperature) is:</p>	<p>If you have a fever, try to contact your health care team. If you are unable to talk to the team for advice, you MUST get emergency medical help right away.</p>

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<ul style="list-style-type: none"> • 38.3°C (100.9°F) or higher at any time <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • 38.0°C (100.4°F) or higher for at least one hour. <p>What to do?</p> <p>If your health care team has told you that you have low neutrophils:</p> <ul style="list-style-type: none"> • Wash your hands often to prevent infection. • Check with your doctor before getting any vaccines, surgeries, medical procedures or visiting your dentist. • Keep a digital thermometer at home so you can easily check for a fever. <p>If you have a fever:</p> <p>If you have a fever, try to contact your health care team. If you are unable to talk to the team for advice, you must get emergency medical help right away.</p>	
<p>Low platelets in the blood</p> <p>(May be severe)</p> <p>When your platelets are low you are at risk for bleeding and bruising. Ask your health care team for the Low Platelet Count pamphlet for more information.</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Watch for signs of bleeding: <ul style="list-style-type: none"> ◦ bleeding from your gums ◦ unusual or heavy nosebleeds ◦ bruising easily or more than normal ◦ black coloured stools (poo) or blood in your stools (poo) ◦ coughing up red or brown coloured mucus 	<p>Talk to your health care team if you have any signs of bleeding. If you have bleeding that doesn't stop or is severe (very heavy), you MUST get emergency medical help right away.</p>

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<ul style="list-style-type: none"> ◦ dizziness, constant headache or changes in your vision ◦ heavy vaginal bleeding ◦ red or pink coloured urine (pee) <p>What to do?</p> <p>If your health care team has told you that you have low platelets:</p> <ul style="list-style-type: none"> • Tell your pharmacist that your platelet count may be low before taking any prescriptions or over-the-counter medication. • Check with your health care team before you go to the dentist. • Take care of your mouth and use a soft toothbrush. • Try to prevent cuts and bruises. • Ask your health care team what activities are safe for you. • Your treatment may have to be delayed if you have low platelets. Your health care team may recommend a blood transfusion. <p>If you have signs of bleeding:</p> <ul style="list-style-type: none"> • If you have a small bleed, clean the area with soap and water or a saline (saltwater) rinse. Apply pressure for at least 10 minutes. <p>If you have bleeding that does not stop or is severe (very heavy), you must get emergency medical help right away.</p>	
<p>Hair thinning or loss</p> <p>What to look for?</p> <ul style="list-style-type: none"> • Your hair may become thin or fall out during or after treatment. • In most cases, your hair will grow back after treatment. The texture or colour may change. • In very rare cases, hair loss may be permanent. <p>What to do?</p> <ul style="list-style-type: none"> • Use a gentle soft brush. • Do not use hair sprays, bleaches, dyes and perms. 	Talk to your health care team if this bothers you
<p>Rash; dry, itchy skin</p> <p>(May be severe)</p>	Talk to your health care team if it does not improve or if it is severe.

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>What to look for?</p> <ul style="list-style-type: none"> You may have cracked, rough, flaking or peeling areas of the skin. Your skin may look red and feel warm, like a sunburn. Your skin may itch, burn, sting or feel very tender when touched. The rash may be seen in areas where you have had radiation before <p>What to do?</p> <p>To prevent and treat dry skin:</p> <ul style="list-style-type: none"> Use fragrance-free skin moisturizer. Protect your skin from the sun and the cold. Use sunscreen with UVA and UVB protection and a SPF of at least 30. Avoid perfumed products and lotions that contain alcohol. Drink 6 to 8 cups of non-alcoholic, non-caffeinated liquids each day, unless your health care team has told you to drink more or less. <p>Rash may be severe in some rare cases and cause your skin to blister or peel. If this happens, get emergency medical help right away.</p>	
<p>Diarrhea</p> <p>What to look for?</p> <ul style="list-style-type: none"> Loose, watery, unformed stool (poo) that may happen days to weeks after you get your treatment. <p>What to do?</p> <p>If you have diarrhea</p> <ul style="list-style-type: none"> Take anti-diarrhea medication if your health care team prescribed it or told you to take it. Do not eat foods or drinks with artificial sweetener (like chewing gum or 'diet' drinks), coffee and alcohol. Eat many small meals and snacks instead of 2 or 3 large meals. Drink at least 6 to 8 cups of liquids each day, unless your health care team has told you to drink more or less. Talk to your health care team if you can't drink 6 to 8 cups of liquids each day when you have diarrhea. You may need to drink special 	<p>Talk to your health care team if no improvement after 24 hours of taking diarrhea medication or if severe (more than 7 times in one day).</p>

Less Common Side Effects (10 to 24 out of 100 people)	
Side effect and what to do	When to contact health care team
<p>liquids with salt and sugar, called Oral Rehydration Therapy.</p> <ul style="list-style-type: none"> • Talk to your health care team if your diarrhea does not improve after 24 hours of taking diarrhea medication or if you have diarrhea more than 7 times in one day. <p>Ask your health care team for the diarrhea pamphlet for more information</p>	
<p>Side effects of taking steroids</p> <p>(With prednisone)</p> <p>What to look for?</p> <ul style="list-style-type: none"> • You may have: <ul style="list-style-type: none"> ◦ Weight gain (that sometimes may be seen in places such as the cheeks or the back of the neck) ◦ Weak muscles ◦ High blood sugar ◦ Upset stomach ◦ Problems with sleeping ◦ Changes in your mood • If you take steroids (such as prednisone) for many months or years, you may develop cataracts (clouding in your eyes) or osteoporosis (weak bones). <p>What to do?</p> <ul style="list-style-type: none"> • Take your prednisone tablets in the morning with breakfast. • Eat a healthy, balanced diet and exercise regularly (talk to your health care team first to know what exercise is safe for you). • Do not have close contact (such as hugs and kisses) with people who are sick. 	<p>Talk to your health care team if it does not improve or if it is severe</p>

Other rare but serious side effects are possible with this treatment.

If you have **any** of the following, talk to your cancer health care team or get emergency medical help right away:

- Pain and swelling or hardening of a vein in your arm or leg
- New coughing or breathing problems
- Any chest pain

- Sudden confusion, trouble speaking, or difficulty moving your arms or legs
- Any changes in your vision
- Difficulty swallowing
- Drooling, drooping eyelids or face
- Irregular heartbeat or passing out (fainting)
- Seizures
- Any severe bloating
- Yellowish skin and eyes and red-brown coloured pee
- Unexpected changes in your weight
- Swelling of your body and not going pee as much as usual or, pain when peeing
- New problems with balance, memory or personality changes
- Severe muscle pain or weakness
- Wounds that do not heal

For more information on how to manage your symptoms ask your health care provider, or visit: <https://www.cancercareontario.ca/symptoms>.

Notes

October 2023 Updated "How will this treatment affect sex, pregnancy and breast feeding" section

For more links on how to manage your symptoms go to www.cancercareontario.ca/symptoms.

The information set out in the medication information sheets, regimen information sheets, and symptom management information (for patients) contained in the Drug Formulary (the "Formulary") is intended to be used by health professionals and patients for informational purposes only. The information is not intended to cover all possible uses, directions, precautions, drug interactions or side effects of a certain drug, nor should it be used to indicate that use of a particular drug is safe, appropriate or effective for a given condition.

A patient should always consult a healthcare provider if he/she has any questions regarding the information set out in the Formulary. The information in the Formulary is not intended to act as or replace medical advice and should not be relied upon in any such regard. All uses of the Formulary are subject to clinical judgment and actual prescribing patterns may not follow the information provided in the Formulary.