



Capital Health Primary Care



While every care has been taken in compiling the information contained in this toolkit, the development team / advisors cannot guarantee its applicability in specific clinical situations or with individual patients. Physicians and others should exercise their own independent judgment concerning patient care and treatment, based on the special circumstances of each case. Anyone using this information does so at their own risk and releases and agrees to indemnify the development team / advisors and Capital Health for any and all injury or damage arising from such use.

Family Physician Toolkit

Toolkit Resources

GUI	Guidelines for Interaction Between Primary and Post-primary Care Physicians
DVT	DVT Process
CDD	Clostridium difficile Process
CEL	Cellulitis Process
APB	Antibiotic Prophylaxis of Bite Wounds
INR	INR Process
IWK	IWK Health Centre, Women's/Maternity Site Guidelines for Division of Gynaecology
RES	Physicians Resources
TRC	Travel Clinics

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Guidelines for Interaction Between Primary and Post-primary Care Physicians

1.1	Background
2.1	Guidelines for Interaction Between Primary and Post-primary Care Physicians

Development Team / Advisors

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Background

A working group set up to address issues concerning the interface between family physicians and a referral centre has, as part of its activities, tried to identify what can be done to improve the referral and communication process with Capital Health.

The group, consisting of family physicians and consultant representatives, has reviewed existing literature on the subject and drawn up the “wish list” on the following pages that it believes would improve the process. This is not a “binding agreement” but rather a starting point to help guide stakeholders in the referral process to make things clearer, easier, and ultimately better for patients.

These guidelines are offered as a work in progress, subject to review as necessary.

Guidelines for Interaction Between Primary and Post-primary Care Physicians

These guidelines are intended to achieve optimal process interaction between physicians within Capital Health. They outline ideal roles, responsibilities, and expectations of referring and consulting physicians with the intent that clarity will support their shared goal of quality patient care and improved access to the health care system. The creation of these guidelines carries the expectation that all parties will act with professionalism and is grounded in the values of Capital Health, which guide our decisions and behaviour.

Our Values

Collaboration: We work together to improve services and achieve healthier people and communities.

Accountability: We are responsible for services that are patient/client-centred and responsive to our communities, and for effective management of resources. We are open and honest in what we do.

Respect: Our decisions, services, and relationships reflect compassion, caring and understanding.

Excellence: We strive for high performance through leadership, competence, a spirit of inquiry and innovation.

This document was developed by a team of health care professionals – family physicians, consultants and health care administrators – focused on improving patient transitions and professional interactions between primary and post-primary care, in reaction to reports of poor understanding of optimal referral processes between the two arenas. The guidelines were based on consultation with both family medicine and consultant groups, on currently available literature on the topic¹, and the existing rules and regulations of medical staff in Capital Health. This initiative was funded by Health Canada's Primary Health Care Transition Fund.

The Referring Physician

A referring physician may include a family practitioner or a consulting physician (consultant) referring to another consulting physician.

1. The referring physician will ensure referrals are made solely for the patient's benefit. An appropriate patient assessment will be done prior to referral.
2. The referring physician will involve the patient in the referral decision. S/he will provide a clear explanation to the patient as to the referring physician's expected goals of the consultation, likely time period involved, and patient responsibilities.
3. The referring physician will provide a legible written communication of referral to the consultant. The written referral will include the perceived urgency of the consultation, details of the relevant history and physical findings, current and previous relevant medications, recent laboratory findings, and the purpose of the consultation.
4. The referring physician will NOT be responsible for obtaining consent for consultant services, or for gathering administrative data over and above that needed for the consultation.
5. Unless otherwise agreed upon, the referring physician will resume care of the patient after the consultation process has been completed.
6. In the case of an urgent referral, the referring physician will speak directly with the consultant on call for the appropriate service.

¹ For a complete list of references, please contact Mike MacDonald, Primary/Secondary Care Quality Initiative, at (902) 473- 7664.

Guidelines for Interaction Between Primary and Post-primary Care Physicians

7. Accountability for co-ordination of care must be clearly defined. The referring physician will co-ordinate patient care where more than one consultant is involved, unless a particular consultant agrees to assume this function.

The Consulting Physician

A consulting physician, or consultant, includes those to whom patients are referred for specialized assessment and/or care. (In some instances, a physician's staff may equally meet the responsibility outlined.)

1. The consultant will acknowledge referral letters within 14 days of receipt to the referring physician with an estimated or exact date of an appointment. At this time, additional tests required to expedite the consultation can be requested by the consultant.
2. The consultant will notify the patient and referring physician of the time and circumstances of the appointment.
3. The consultant discharging a patient from hospital will ensure that patients discharged from hospital leave with an appointment date for specialist followup, if the discharging physician* deems it necessary, or instructions on when to follow up with his/her family physician.
4. Trainees do not have the authority to refuse consults. The consultant will personally communicate refusals and suggest alternative plans to the referring physician.
5. The consultant will order any indicated tests at the time of the consultation. The physician (or on-call physician for a clinic) ordering tests will be responsible for acting on the test results. Laboratory or DI forms should specify the ordering, and thus responsible, physician.
6. The consultant will communicate clearly in writing the results of the consultation to the referring physician, including ongoing plans or suggestions, within 14 days of the consultation.
7. The consultant will communicate findings of the consultation to the patient where it is in the patient's best interests.

* "Discharging physician" refers to the physician making the discharge decision, or his delegate.

Drafted by Primary/Secondary Quality Care Working Group, September 12, 2006.

To comment or provide feedback, contact Sam Campbell or Mike MacDonald, Primary/Secondary Care Quality Initiative, at (902) 473-7664.

Deep Vein Thrombosis Process

1.1	New Primary Care Pathway Deep Vein Thrombosis (DVT) Workup
1.2	New Primary Care Pathway Deep Vein Thrombosis (DVT) Workup (Algorithm)
2.1	Scoring Guide and Referral Form (MASTER)
3.1	Information for Patients (MASTER)
4.1	ACP Responsibilities for DVT Process (Omitted from FP copy)
5.1	Radiologist Tasks for the DVT Care Plan (Omitted from FP copy)
6.1	EP Tasks for the DVT Care Plan (Omitted from FP copy)
7.1	Duplicate Copies

Development Team / Advisors

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New Primary Care Pathway Deep Vein Thrombosis (DVT) Workup

New investigation and management options for patients suspected of having deep vein thrombosis (DVT) have brought the treatment of this disease into the field of family practice. Although most family physicians within Capital Health district have adopted these options for their patients, there remains limited access to the tools necessary to manage suspected DVT, especially after hours.

This new process will facilitate the primary care management of DVT in an effort to:

- standardize approach to DVT management in Capital Health
- make the process simpler and more “user-friendly” for family physicians
- enhance convenience for patients (less waiting time, fewer steps in the process)
- ensure that patient management is safe, efficient and cost effective

The process centres on the following evidence-based assumptions:

1. The likelihood of DVT in a patient can be objectively quantified into “likely” and “unlikely” categories, according to a scoring system.
2. Patients in the “unlikely” category can have the diagnosis effectively ruled out by a negative d-dimer.
3. A negative d-dimer is not sensitive enough to rule out DVT in patients in the “likely” category. These patients will need a compression ultrasound (CUS).
4. A positive d-dimer (>200iu) is not specific enough to make a diagnosis of DVT. It can only identify patients in the “unlikely” category who need a CUS.
5. Inpatients who need a CUS but are unable to get one until the next day should receive empiric low molecular weight heparin (LMWH).
6. The majority of patients with DVT can be managed as outpatients.

Family physicians can access the Primary Care DVT Pathway by referring their patients to the Halifax Infirmiry, with the attached DVT referral form (page DVT 2.1).

Patients so identified at triage will have d-dimer drawn or CUS arranged as indicated by the patient’s risk category. During hours without CUS availability, LMWH will be given and a CUS arranged for the following day. In cases where the diagnosis of DVT is confirmed by CUS, the initial dose of LMWH will be given and referral to the anticoagulation clinic will be made, with communication back to the family physician. All patients will be called within 3 months as part of the evaluation of the process.

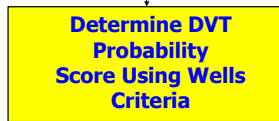
This process is not intended to proscribe family physicians from ordering d-dimer testing or CUS directly during regular office hours. Patients may be entered into the above process at any stage in the proceedings. (For example, a patient may have a positive d-dimer, yet it is too late for the family physician to arrange a CUS that day. Or a patient with a positive CUS may need LMWH given before the definitive anticoagulation process can be arranged.)

Any questions regarding the process can be directed to Sam Campbell or Mike MacDonald at: (902) 473-3871, 830-2571 or 473-7664.

New Primary Care Pathway Deep Vein Thrombosis (DVT) Workup

Family Physician DVT Process Flow

Nov 2006

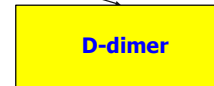


WELLS CRITERIA		
Clinical Model for Predicting the Pretest Probability of Deep-Vein Thrombosis		
Present	Clinical Characteristic	Score
	Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
	Paralysis, paresis, or recent plaster immobilization of the lower extremities	1
	Recently bedridden for 3 days or more, or major surgery within the previous 12 wk requiring general or regional anesthesia	1
	Localized tenderness along the distribution of the deep venous system	1
	Entire leg swollen	1
	Calf swelling at least 3 cm larger than that on the asymptomatic side (measured 10 cm below tibial tuberosity)	1
	Pitting edema confined to the symptomatic leg	1
	Collateral superficial veins (nonvaricose)	1
	Previously documented deep-vein thrombosis	1
	Alternative diagnosis at least as likely as deep-vein thrombosis*	-2
Total Score		

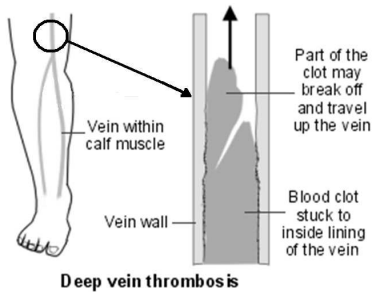
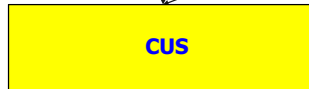
If score is less than 2, patient is in the 'unlikely' category.
If score is 2 or more, patient is in the 'likely' category.

Likely ≥ 2

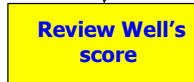
Unlikely < 2



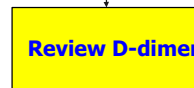
Positive



Negative



Likely

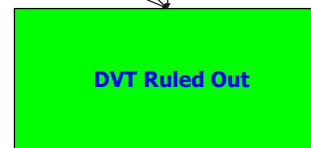
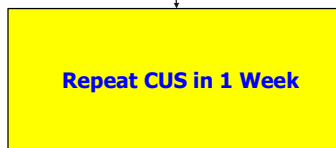
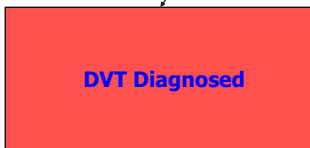


Positive

Unlikely

Negative

Negative



This algorithm can be followed by the FP or the patient may be referred to the ED DVT process at the QEII after any of these steps.

Scoring Guide and Referral Form Deep Vein Thrombosis (DVT)

<div style="background-color: #cccccc; padding: 5px; margin-bottom: 5px;">PHYSICIAN INFORMATION</div> Signature: _____ Name: _____ Phone Number: _____ Date: _____	<div style="background-color: #cccccc; padding: 5px; margin-bottom: 5px;">PATIENT INFORMATION</div> Name: _____ Health Card Number: _____ Phone Number: _____ Date of Birth: _____ YEAR / MONTH / DAY
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WELLS CRITERIA¹: Clinical Model for Predicting the Pretest Probability of Deep-Vein Thrombosis²

Present	Clinical Characteristic	Score
	Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
	Paralysis, paresis, or recent plaster immobilization of the lower extremities	1
	Recently bedridden for 3 days or more, or major surgery within the previous 12 wk requiring general or regional anesthesia	1
	Localized tenderness along the distribution of the deep venous system	1
	Entire leg swollen	1
	Calf swelling at least 3 cm larger than that on the asymptomatic side (measured 10 cm below tibial tuberosity)	1
	Pitting edema confined to the symptomatic leg	1
	Collateral superficial veins (nonvaricose)	1
	Previously documented deep-vein thrombosis	1
	Alternative diagnosis at least as likely as deep-vein thrombosis*	-2
	<i>*Please specify alternate diagnosis:</i>	
TOTAL SCORE		

If score is **less than 2**, patient is in the **'unlikely'** category.
 If score is **2 or more**, patient is in the **'likely'** category.

<div style="background-color: #cccccc; padding: 5px; margin-bottom: 5px;">DVT Score</div> Score: _____ 'Likely' (≥2) Needs CUS 'Unlikely' (<2) Needs d-dimer	<div style="background-color: #cccccc; padding: 5px; margin-bottom: 5px;">Phone Numbers</div> Ultrasound Radiologist QEII 473-1640 Emergency DVT 473-2222 *ask them to page 1170 Emergency Department 473-4444 473-4969
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For instructions, see reverse side of this sheet

¹ Wells PS, Anderson DR, et al. Evaluation of D-dimer in the diagnosis of suspected deep-vein thrombosis. N Engl J Med. 2003 Sep 25;349(13):1227-35.
² In patients with symptoms in both legs, the more symptomatic leg is used.

Scoring Guide and Referral Form

Deep Vein Thrombosis (DVT)

Instructions

1. Complete scoring system (overleaf) and order investigation as per algorithm.
2. Patients with a score of <2 are in the “unlikely” category and need a d-dimer test.
 - A **If the d-dimer is negative**, DVT has effectively been ruled out.
 - B **If the d-dimer is positive**, they will need a compression ultrasound (CUS).

The d-dimer test may be ordered by the family physician, or by referring the patient to the DVT pathway at the QE II ED by calling (902) **473-4444** or **473-2222 (ask for pager 1170)** with the patient’s particulars. Ask for the DVT process to be initiated. This call can be made by your assistant or secretary; please ask them to quote the probability score.

3. Patients whose score is ≥ 2 are in the “likely” category and will need a compression ultrasound (CUS). To arrange this:

A If between 0800-1300 hrs weekdays:

Call **473-1640** to order ultrasound directly from a radiologist.

Please quote the probability score.

B At all other times, or if CUS will be delayed until the next day:

Call **473-4444** or **473-2222 (ask for pager 1170)** with the patient’s particulars.

*Ask for the DVT process to be initiated.
This call can be made by your assistant or secretary
Please ask them to quote the probability score.*

4. **At all times, sign this form and give it, along with the patient DVT handout** (pages DVT 3.1 and 3.2), **to the patient**. Please instruct the patient to proceed – **with the form** – directly to the ultrasound department, 3rd floor Halifax Infirmary (if an ultrasound has been organized) or to the emergency department after hours or weekends.

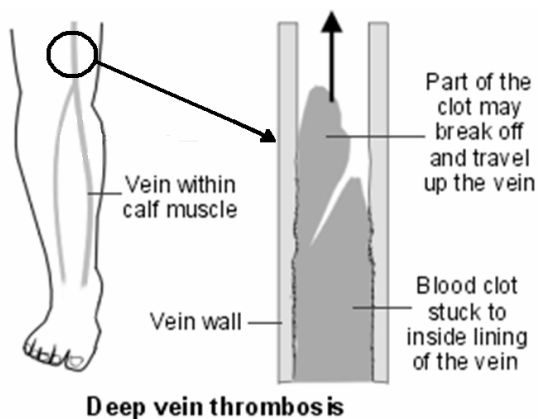
If a DVT is diagnosed, the patient will be referred directly to the hematology/anticoagulation clinic.

Patients in whom DVT is “ruled out” will be asked to return to your office for re-evaluation within 2 days (unless you have instructed them otherwise).

When your doctor is concerned that you may have a deep vein thrombosis (DVT)

What is a deep vein thrombosis?

A deep vein thrombosis (DVT) is a blood clot that forms in a deep leg vein. These leg veins are blood vessels that go through the muscles (they are not the veins that you can see just below the skin). A calf vein is the common site for a DVT. A thigh vein is less commonly affected.



Deep vein thrombosis (DVT) is a serious blood clot in a leg vein.

A complication may occur if a piece of the blood clot breaks off and travels to the lung (pulmonary embolus). This is usually prevented if you are given anticoagulation treatment.

Why do blood clots form in leg veins?

Blood normally flows quickly through veins and does not usually clot. Sometimes a DVT occurs for no apparent reason. However, the following increase the risk:

- Prolonged inactivity. This causes blood flow in the veins to be slow and more likely to clot than normal flowing blood. (For example, after a long operation, a prolonged period from illness or injury, a long journey, or immobilization in a cast.
- Faulty blood clotting is an uncommon but possible cause. If present, it is usually the result of inherited condition that causes the blood to clot more easily. It can also be caused by birth-control pills or hormone replacement therapy.
- Damage to the inside lining of the vein, from an injury or an earlier DVT.
- Older or obese people, pregnant women, and those with a serious illness such as cancer.

What are the symptoms of a deep vein thrombosis?

The usual symptoms are pain, tenderness, and swelling of the calf. Blood that would normally go through the blocked vein is diverted to outer veins. The calf may then become warm and red. Sometimes there are no symptoms, and a DVT is only diagnosed if a complication occurs.

When your doctor is concerned that you may have a deep vein thrombosis (DVT)

How do we find out if you have a deep vein thrombosis or not?

Sometimes it is difficult for a doctor to be sure of the diagnosis, as there are other causes of a painful and swollen calf, such as a muscle strain or infection. Specialists at Capital Health have developed the following strategy based on the latest medical evidence:

Your family doctor will ask you questions about your symptoms and will examine the leg. Using this information, and a scoring system, the doctor will calculate your likelihood of having a DVT.

If the **scoring system suggests that the likelihood of a DVT is low**, your doctor will order a blood test called a d-dimer. You may need to go to an emergency department to have this test done.

- If the **test is negative**, it means that the chances of you having a DVT are so low that no further investigation is needed.
- If the **test is positive**, it does not mean that you have a DVT. Many other things can cause the test to be positive. It just means that you will need a test called a compression ultrasound to confirm the diagnosis. In this test, the deep veins of your leg are compressed. If they are not seen to collapse with compression on the ultrasound, you will be diagnosed with DVT.

If the **scoring system suggests that it is likely you have a DVT**, you will be given a compression ultrasound – a d-dimer blood test will not be used.

If your ultrasound is likely to be delayed, you will receive an injection of low-molecular weight heparin. This medicine slows down the clotting of your blood. This will stop any clot from growing while you are waiting for the ultrasound. Low molecular weight heparin is very safe and is unlikely to harm you if you do not have a DVT.

Following your doctor's instructions, you may be referred to the emergency department of the Halifax Infirmity where the process will be facilitated by an advanced care paramedic.

If you are **diagnosed with a DVT**, you will be referred to the hematology clinic at the Victoria General site, 4th floor, to start your treatment.

If your tests **do not show a DVT**, it is important that you follow up with your family doctor to see whether any other conditions might still need to be considered or treated. Your family doctor may ask you to have the ultrasound repeated after one week.

ACP Responsibilities for DVT Process

1. On receiving referral from Family Physician (FP) or Emergency Physician (EP): Remind FP about the scoring system and patient handout form. (Offer to fax to him/her if necessary).
2. Instruct triage to call you at **4969** on the arrival of the patient. (Check periodically in case this has been missed).
3. Review referral form/checklist from FP. Inform EP if you have a candidate eligible for the care plan. With his consent, initiate plan as below. If not, patient to wait in triage lineup.
4. Draw blood for d-dimer, plus extra tubes for CBC, BUN, creatinine and INR.
5. **If 'unlikely':**
 - A Ask patient to wait in the waiting room for d-dimer result.
 - B **If d-dimer negative**, (DVT ruled out) discuss with patient, inform EP, and with his consent, discharge to FP follow-up.
 - C **If d-dimer positive**, inform EP, and with his consent arrange CUS for earliest appointment within 24 hours. See below for instructions to order CUS.
 - D If CUS is to be delayed until the next day, give fragmin 200 u/kg subcutaneous* (No Maximum dose) and give patient requisition for CUS at Dickson centre at 0800 (if next day is weekend, return to QEII for CUS).
 - E Review ACP checklist to ensure patient is stable for discharge.
 - F Fax emerg sheet to 6418 for the hematology nurse to follow up (phone 7985 with details).
6. **If 'likely':**
 - A Inform EP to get his signed order. Facilitate 'quick EP consultation' if necessary.
 - B Order CUS for earliest appointment within 24 hours. See below for instructions to order CUS.
 - C If CUS is to be delayed until the next day, give fragmin 200 u/kg subcutaneous* and give patient requisition for CUS at Dickson centre at 0800 (if next day is weekend, return to QEII for CUS).
 - D Review ACP checklist to ensure patient is stable for discharge.
 - E Fax emerg sheet to 6418 for the hematology nurse to follow up (phone 7985 with details).
7. **On receipt of a CUS report (Triage will inform ACP if patients return with CUS result).**
 - A **If negative:**
 - i. Patients with initial score of 'unlikely', but positive d-dimer, have had DVT ruled out. Patient may be discharged to FP follow-up with EP's consent.
 - ii. In the case of negative CUS in patients with 'likely' score AND positive d-dimer, a repeat CUS in a week is indicated. This will be organized by the hematology clinic. Fax emerg sheet, d-dimer and ultrasound wet report to 6418. Inform the patient to call 473-7985 if they have not been contacted in 5 days.
 - B **If CUS positive:**
 - i. Inform EP, and with his consent, give fragmin 200 u/kg subcutaneous, as per protocol¹. (If not already given within 24 hours).
 - ii. Call 7985 with patient name, diagnosis and HUN number.
 - iii. Prior to 1300 HRS page 1212 and discuss with the hematology nurse.
 - iv. After 1300, discharge patient with instructions to return to hematology clinic at 1000 HRS the following day.
 - v. If the next day is Saturday, call 8577 to inform MDU to expect the patient. Tell the patient to go to MDU at 1000 HRS.
 - vi. Fax ED chart, DVT form, blood results and CUS report to 6418. (any day of week)
8. On days that are not followed by a clinic day, (Saturdays or Sunday before a public holiday), the EP must page the hematologist on call to arrange outpatient follow-up at MDU the next day. Call MDU at 8577 as in 7 B(v), and fax information as in 7 B(vi).
9. **NB – Please obtain signed consent from the patient for a 3 month follow-up phone call, and obtain the charge physician's signature before the patient is discharged.**

TO ORDER A CUS: Before 1500 HRS, EP will usually call radiology for 'same-day' CUS. After 1500 HRS, give patient US requisition and ask them to go to the 3rd floor Dickson Centre at 0800 HRS the next day.

*If patient already on warfarin, check INR. Fragmin is still indicated in most cases

ACP Responsibilities for DVT Process

ACP DVT CARE PLAN CHECKLIST

Patient Name: _____	TEMP _____
HUN Number: _____	PULSE _____
Health Card Number: _____	BP _____
Brief History: _____	RR _____
_____	SaO ₂ _____

Date: _____	Time: _____

DVT form filled out prior to arrival? Yes No
 Patient sent to ED by? Family physician Emerg. physician Walk-in Other _____



Inform the charge physician if the patient has any vital sign abnormality, shortness of breath, chest pain, or if the patient looks acutely unwell.

WELLS CRITERIA¹: Clinical Model for Predicting the Pretest Probability of Deep-Vein Thrombosis²

Present	Clinical Characteristic	Score
<input type="checkbox"/>	Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
<input type="checkbox"/>	Paralysis, paresis, or recent plaster immobilization of the lower extremities	1
<input type="checkbox"/>	Recently bedridden for 3 days or more, or major surgery within the previous 12 wk requiring general or regional anesthesia	1
<input type="checkbox"/>	Localized tenderness along the distribution of the deep venous system	1
<input type="checkbox"/>	Entire leg swollen	1
<input type="checkbox"/>	Calf swelling at least 3 cm larger than that on the asymptomatic side (measured 10 cm below tibial tuberosity)	1
<input type="checkbox"/>	Pitting edema confined to the symptomatic leg	1
<input type="checkbox"/>	Collateral superficial veins (nonvaricose)	1
<input type="checkbox"/>	Previously documented deep-vein thrombosis	1
<input type="checkbox"/>	Alternative diagnosis at least as likely as deep-vein thrombosis*	-2
	<i>*Please specify alternate diagnosis:</i>	
TOTAL SCORE		

If score is **less than 2**, patient is in the 'unlikely' category.
 If score is **2 or more**, patient is in the 'likely' category.

For instructions, see reverse side of this sheet



Discharge checklist:

If any of these are present, inform EP before discharge.

Vital Signs:

Temp > 38°C	shortness of breath
HR > 100	chest pain
Syst. BP < 95	patient looks acutely unwell
RR > 20	
SaO ₂ < 95%	

ACP's signature: _____

ACP's name: _____

Charge Physician's signature: _____

Charge Physician's name: _____

! 3 month follow-up consent form signed?

¹ Wells PS, Anderson DR, et al. Evaluation of D-dimer in the diagnosis of suspected deep-vein thrombosis. N Engl J Med. 2003 Sep 25;349(13):1227-35.

² In patients with symptoms in both legs, the more symptomatic leg is used

Radiologist Tasks for the DVT Care Plan

Care plan for patients referred to the QEII Health Sciences Centre, Halifax, for investigation of DVT.

On receipt of request for CUS to investigate DVT:

A Ask for DVT likelihood category.

- ⇒ If 'unlikely' ask for d-dimer result.
- ⇒ If no d-dimer result, request it before sanctioning the test.
- ⇒ If 'likely' or 'unlikely' and d-dimer positive – CUS is indicated.

B If CUS is to be delayed until the next day, suggest family physician refers the patient to emergency department for low molecular weight heparin according to the DVT pathway. (The current pilot DVT pathway suggests to the family physician that same-day ultrasound referrals will usually not be accommodated after 1300 hrs).

CUS result

If Negative	If Positive
If direct referral from family physician (FP), discharge to FP for followup.	Call FP with result. FP may ask you to send the patient to the hematology clinic (7985, or page hematology nurse at 1212) or to refer to the ED (call 4960).
If emergency department (ED) referral, refer patient back to ED (call 4960).	If unable to contact FP or hematology nurse, refer to ED.

It is anticipated that the demand for emergency CUS will decrease by 40-60% by following this protocol.

For any concerns or questions with this process, please call Sam Campbell or Mike MacDonald at 830-2571, 473-3871, or 473-7664.

Radiologist Tasks for the DVT Care Plan

Radiologist DVT Process Flow

(Coloured blocks only)



WELLS CRITERIA		
Clinical Model for Predicting the Pretest Probability of Deep-Vein Thrombosis		
Present	Clinical Characteristic	Score
<input type="checkbox"/>	Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
<input type="checkbox"/>	Paralysis, paresis, or recent plaster immobilization of the lower extremities	1
<input type="checkbox"/>	Recently bedridden for 3 days or more, or major surgery within the previous 12 wk requiring general or regional anesthesia	1
<input type="checkbox"/>	Localized tenderness along the distribution of the deep venous system	1
<input type="checkbox"/>	Entire leg swollen	1
<input type="checkbox"/>	calf swelling at least 3 cm larger than that on the asymptomatic side (measured 10 cm below tibial tuberosity)	1
<input type="checkbox"/>	Pitting edema confined to the symptomatic leg	1
<input type="checkbox"/>	Collateral superficial veins (nonvaricose)	1
<input type="checkbox"/>	Previously documented deep-vein thrombosis	1
<input type="checkbox"/>	Alternative diagnosis at least as likely as deep-vein thrombosis*	-2
Total Score		

If score is **less than 2**, patient is in the 'unlikely' category.
If score is **2 or more**, patient is in the 'likely' category.

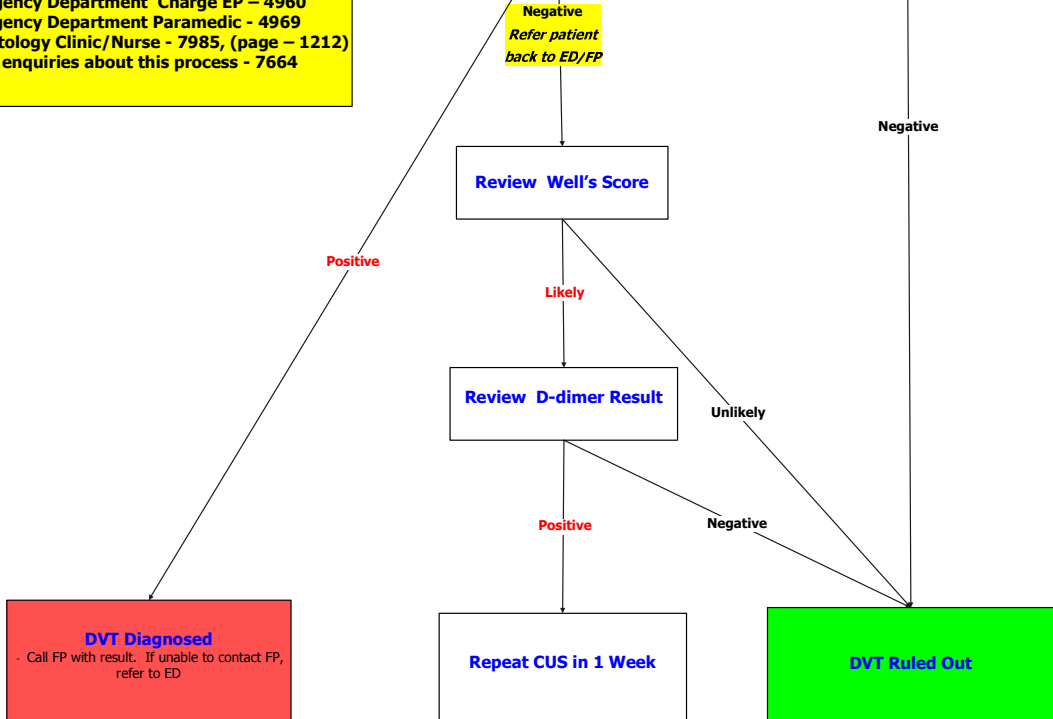
Suspected DVT
- Family Physician or Emergency Departments suspects a DVT

Determine DVT Probability Score Using Wells Criteria
- Blood is drawn for d-dimer, plus extra tubes for CBC, BUN, creatinine and INR.

D-dimer

Patient referred to you for CUS
- Ask for DVT likelihood category (plus d-dimer result if 'unlikely')
Options:
- 'same-day' CUS – tell FP/EP to send patient to US dept.
- 'Next day CUS': refer patient to ED patient for fragmin 200 u/kg s/c and referral to 3rd floor Dickson Centre at 0:800 the next day.
- Send the wet report to FP/EP

Contact Numbers
- Emergency Department Charge EP – 4960
- Emergency Department Paramedic - 4969
- Hematology Clinic/Nurse - 7985, (page – 1212)
- Other enquiries about this process - 7664



EP Tasks for the DVT Care Plan

The use of this care plan by emergency physicians is optional.

On receipt of request from a family doctor for DVT care plan

collect FP and patient's name¹

Inform ward clerk +/- ACP

Let the ACP know if you wish to see the patient before d-dimer test

Otherwise, patient will be referred to you before testing only if:

A Patient has abnormal vital signs or complains of shortness of breath, chest pain, or if the patient looks acutely unwell.

B Other concerns of the paramedic.

In all other cases the department ACP will arrange d-dimer testing and/or CUS, and referral to hematology day clinic (if DVT is diagnosed). The ACP will review the patient with you and facilitate a "quick-look" consultation as required. If patient needs a full evaluation (or if you are uncomfortable with this process), they will return to their place in the triage lineup.

On days that are not followed by a clinic day (Saturday mornings or Sunday before a public holiday), the hematologist on call should be paged to arrange outpatient followup for patients diagnosed with DVT.

Patients presenting to the emergency department with leg pain who have not been screened by the family physician will not be placed on this pathway. However, if after your initial assessment you wish to have a "DVT workup" performed on the patient, the ACP will facilitate this for you.

This care plan is essentially similar to the liaison nurse function. Patients with suspected DVTs referred by their FP will have investigation initiated while they wait to see you, as opposed to after they see you. These patients often do not need a bed and can pass through the emergency department with minimum hassle.

Any vital sign abnormality or chest symptom will result in patients being taken off this pathway at once.

The ACP will obtain informed consent from the patient for a 3-month follow-up call.

¹ Family physicians are being encouraged to perform this process themselves during office hours, and can be told this when they call in before 1330 HRS. We will develop a process whereby they can have a copy of the care plan and scoring system faxed to them on request.

Duplicate Copies

Clostridium difficile Process

-
- | | |
|-----|---|
| 1.1 | <i>Clostridium difficile</i> Associated Diarrhea |
| 1.2 | Treatment of <i>Clostridium difficile</i> Associated Diarrhea (Algorithm) |
-

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Clostridium difficile Associated Diarrhea

Antibiotic use can alter the normal bowel flora and allow *C. difficile* to become the predominant intestinal organism. Toxins produced by *C. difficile* are responsible for illness that ranges from self-limiting diarrhea to life-threatening enterocolitis.

The algorithm overleaf is designed to help family physicians decide on treatment and/or referral options for patients suspected to have *C. difficile* Associated Diarrhea (CDAD).

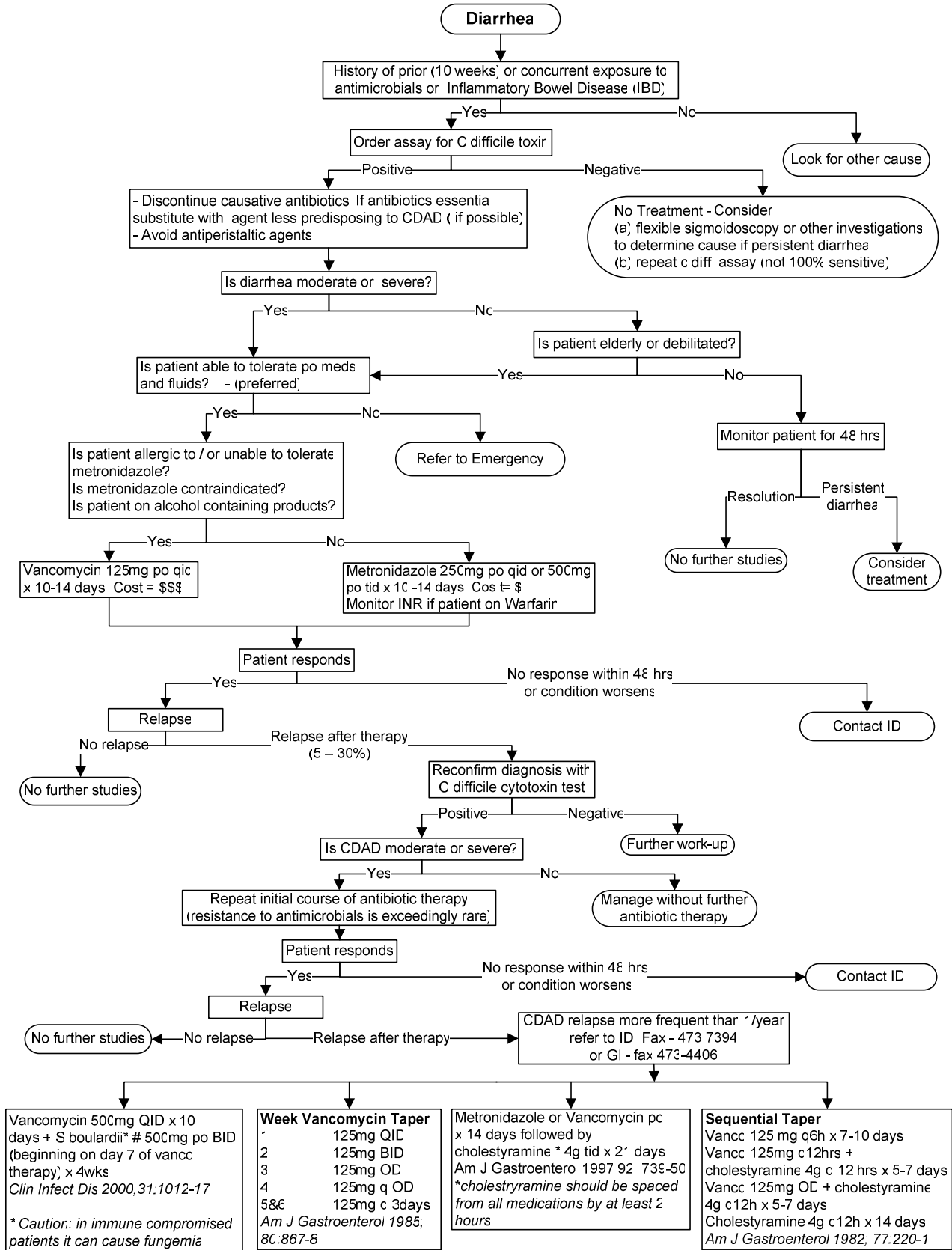
Keep in mind:

- Inflammatory bowel disease can also predispose a patient to *C. difficile*.
- Most commonly implicated antimicrobial agents are:
 1. Quinolones
 2. Clindamycin
 3. Second- and third-generation cephalosporins

However, almost every antibacterial in use has been implicated in the occurrence of CDAD, *including those used to treat it*.

- CDAD can occur 1-2 days after initiation of antibiotic therapy and for up to 10 weeks after therapy has been stopped
- Patients with mild CDAD may not require antibiotic therapy. Symptoms may resolve by stopping the offending antibiotic.
- Oral (rather than intravenous) antimicrobial therapy is optimal for CDAD.
- Cholestyramine has a role to play in patients with multiple relapses. Avoid initially – lack of evidence for use in initial presentation and may bind oral vancomycin and metronidazole.
- Return to normal bowel habit may lag behind resolution of CDAD.
- Avoid antiperistaltic agents in patients with CDAD as they cause toxin retention and are a risk factor for developing complications of CDAD.
- Treatment of asymptomatic carrier is unnecessary and will not eradicate carriage.

Treatment of *Clostridium difficile* Associated Diarrhea



The above are therapeutic choices for resistant or recurrent CDAD usually ordered by GI or ID

Cellulitis Process

1.1	Nova Scotia Adult Cellulitis Guidelines for Family Physicians (Grading Scale)
1.2	Nova Scotia Adult Cellulitis Guidelines for Family Physicians (Algorithm)
2.1	Drugs for Injuries Sustained in Natural Water or From Bites
3.1	Cellulitis Reference Notes
4.1	Information for Patients (MASTER)
5.1	Duplicate Copies

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Nova Scotia Adult Cellulitis Guidelines for Family Physicians¹ (2005)

Definition

Acute spreading inflammation involving the soft tissue, excluding muscle, characterized by recent onset soft-tissue erythema, warmth, swelling and tenderness, considered to be of infective origin and acquired in the community.

This does not include infected surgical wounds or previously treated (< 3 months) deep diabetic infections.

Grading Scale

Grade I

- Symptoms/signs restricted to superficial swelling, erythema, warmth, mild lymphadenopathy, and mild pain; absence of systemic symptoms in patients without risk factors for poor outcome.

Grade II

- Dominant systemic signs – fever, chills, lymphangitis and/or rapidly advancing edge.
- Mild cellulitis (as defined in Grade I) in high-risk², non-neutropenic, splenic patients.

Grade III

- Severe facial, perineal or extensive skin involvement (i.e., if any dimension of the area of skin involved is greater than the distance between the patient's median wrist crease and the point of the elbow).
- Failure to respond to >48 hrs of adequate oral Rx.
- A history of episodes of cellulitis requiring prolonged intravenous therapy.

Grade IV

- Deep perineal, orbital, joint, or deep hand involvement.
- Cellulitis in neutropenic or asplenic patients.
- Suspicion of necrotizing, deep-seated infection or severe sepsis³.

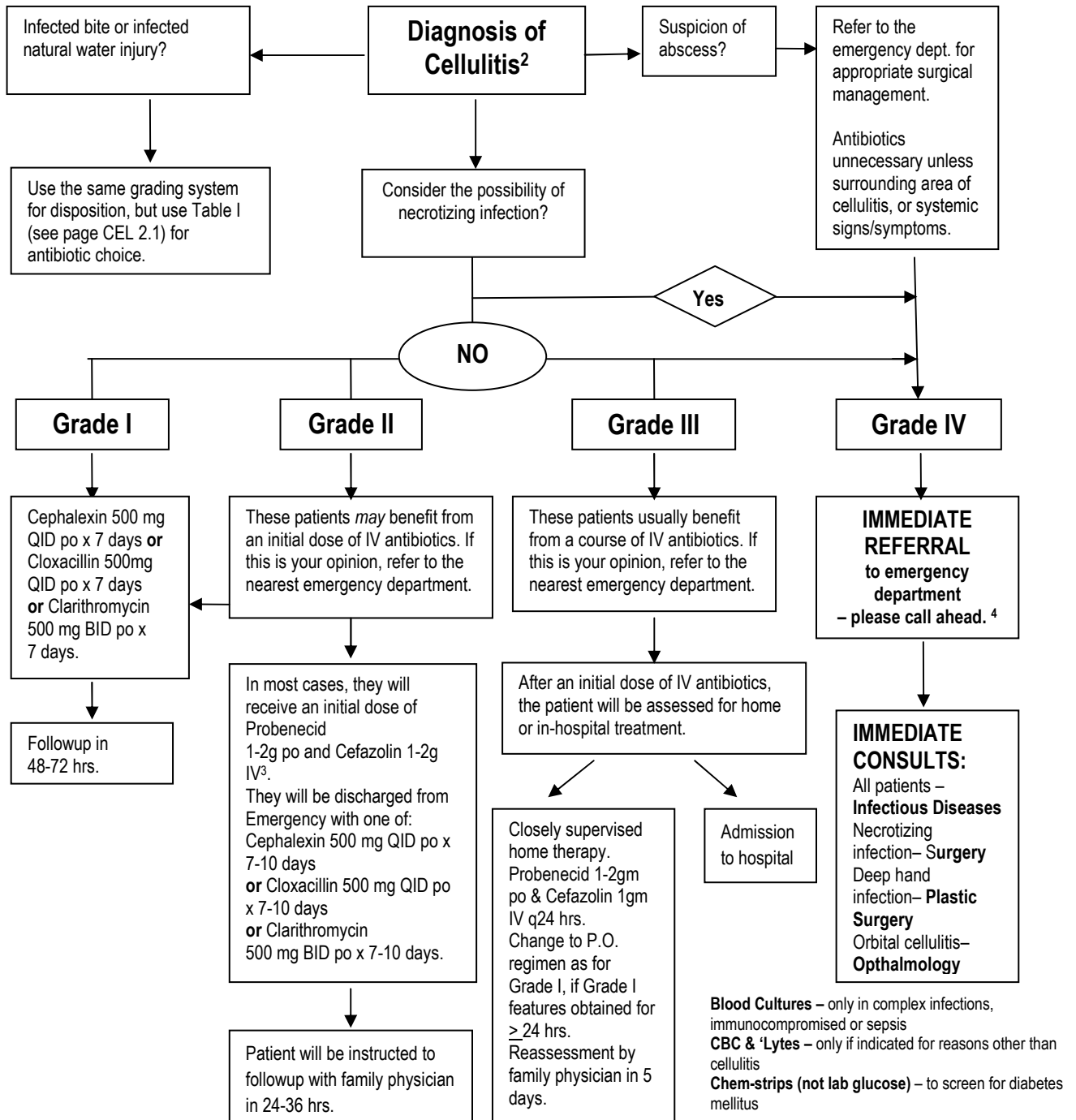
¹ Age \geq 16 years.

² High-risk patients = Neutropenia, asplenia, active cancer, SLE, transplant, prosthetic joint or valve, HIV with CD4 count < 200, or chronic venous insufficiency, chronic lymphedema, post mastectomy, axillary node dissection or radical pelvic surgery affecting the infected body part.

³ Severe sepsis = Systemic signs/symptoms with evidence of end organ dysfunction or hypoperfusion.

Nova Scotia Adult Cellulitis Guidelines for Family Physicians¹ (2005)

This algorithm can be followed by the FP or the patient may be referred to the ED DVT process at the QEII after any of these steps.



Fluoroquinolones are not considered appropriate first-line agents for treating uncomplicated cellulitis, although they may be appropriate to avoid intravenous therapy in select cases after consultation with an appropriate specialist.

¹ Age ≥ 16 years.

² See definition on page CEL 1.1.

³ Antibiotic treatment must be initiated as soon as possible upon suspicion of cellulitis of Grades II to IV. Use Probenecid with caution in chronic renal failure or acute gout.

⁴ Consults to several different disciplines may need to be made simultaneously.

TABLE 1

Infections of injuries sustained in natural water or as a result of bite wounds

CIRCUMSTANCE OF ORIGINAL INJURY ¹		
Mammal Bite	Salt Water	Fresh Water
<p>Grade I</p> <p>Amox/Clav² 875 mg po BID x 7-10 days</p> <p>If penicillin allergy: Moxifloxacin 400 mg OD or</p> <p>Ciprofloxacin 500 mg po BID plus Clindamycin 300 mg QID, x 7 days.</p>	<p>Doxycycline 200 mg po OD or</p> <p>Ciprofloxacin 500 mg po BID x 7-10 days</p>	<p>TMP-Sulpha³ DS x 1 tab po BID or</p> <p>Ciprofloxacin 500 mg po BID x 7-10 days</p>
<p>Grade II (refer to ED)</p> <p>Ceftriaxone 1g IV, then po regimen as in I, above.</p>	<p>Ciprofloxacin 400 mg IV, then po as above.</p>	
<p>Grade III⁴ (refer to ED)</p> <p>Ceftriaxone 1-2 g IV OD plus Metronidazole 500 mg po BID x 7-10 days.</p>	<p>Ciprofloxacin 400 mg mg IV BID x 7-10 days (step down to po when Grade 1 criteria for 24 hours)</p>	
<p>Grade IV Refer to hospital as per algorithm (CEL 1.2)</p>		

¹ Consult an Infectious Diseases specialist if patient is pregnant and has a penicillin allergy - 473 2222 and ask for "ID Staff"

² Amoxicillin/Clavulanate

³ Trimethoprim-sulfamethoxazole

⁴ If no signs of improvement in 48hrs, consult an Infectious Diseases specialist as above.

Necrotizing Soft Tissue Infections

Although uncommon in healthy adults, necrotizing infections should be considered in all cases.

Necrotizing soft tissue infections can involve the skin (**necrotizing cellulitis**), subcutaneous fat (**panniculitis**), fascia (**fasciitis**), or muscle (**myonecrosis**). The infections progress rapidly and are always more complicated and serious than superficial cellulitis. Tissue necrosis and lack of response to antimicrobial Rx differentiate it from cellulitis. As necrosis extends beyond the cutaneous layers, nerves are damaged and an initially painful area may become numb. Necrotizing infections are rare in healthy individuals and are more likely in diabetics, malnourished, and burn patients. **However, previous good health does not rule out this diagnosis.**

Clinical features of necrotizing soft tissue infections include:

- Patients acutely ill and toxic with painful erythema containing scattered patchy gangrenous or necrotic skin changes or anesthesia
- Severe systemic symptoms or pain, out of proportion to skin findings (skin findings may be absent initially)
- Edema or pain out of proportion to erythema
- Subcutaneous gas or skin vesicles
- No response to antibiotics
- “Dishwater pus” from vesicles or bullae
- Lymphangitis and lymphadenitis, commonly associated with non-necrotizing cellulitis, are usually absent
- Early necrotizing infections may masquerade as simple cellulitis, so a high index of suspicion and precise patient instructions are always appropriate

Orbital cellulitis

Proptosis, orbital pain and restricted eye movements – this is an ocular emergency mandating immediate initiation of treatment and referral.

Septic arthritis

Consider the diagnosis in any patient with cellulitis in proximity to a joint.

Cellulitis Reference Notes

Underlying predisposition

Always evaluate the patient for underlying predisposition to cellulitis (or recurrence) that may need to be investigated/treated:

- Removal of a saphenous vein for CABG
- Lymphatic anomalies/chronic edema
- Diabetes mellitus
- Peripheral vascular disease
- Ingrown nails
- Psoriasis
- Tinea infections
- Intravenous drug user – consider bacterial endocarditis
- Very dry, cracked skin

Failure to respond to adequate therapy

- Cellulitis may not appear to respond for the first two days of treatment and may in fact worsen somewhat in appearance. Consider consultation and/or a change in management if no evidence of improvement in systemic symptoms, or significant deterioration, at followup visit.
- Persistent signs/symptoms in spite of evidence of improvement are common at the end of the course of therapy and do not need additional antimicrobial treatment.
- Always consider an alternative diagnosis, such as deep vein thrombosis (DVT) if in the limbs, dependent rubor of an ischemic limb, or lymphatic obstruction from other causes.
- Consider an infective complication – e.g., abscess, septic arthritis, necrotizing infection.

Antibiotic Costs

Oral antimicrobial regimen	Approx. cost for 7 days in community ¹
Amoxicillin/Clavulanate 875mg po BID	\$32.22
Cephalexin 500mg po QID	\$18.74
Ciprofloxacin 500mg po BID	\$40.89
Ciprofloxacin 750mg po BID	\$68.21
Clindamycin 300mg po QID	\$44.44
Clindamycin 450mg po QID	\$61.63
Clarithromycin 500 mg po BID	\$56.91
Clarithromycin XL 1 gm po OD	\$48.67
Levofloxacin 500 mg OD	\$36.34 ²
Moxifloxacin 400 mg OD	\$54.83
Cloxacillin 500mg po QID	\$15.72
Doxycycline 100mg po BID	\$20.36
Metronidazole 500mg po BID	\$12.06
Septra DS 1 tab po BID	\$11.83

¹ Prices include \$9 dispensing fee (Shoppers Drug Mart, Dec. 2004)

² Price of generic Jan. 2005

What is cellulitis?

Cellulitis is an infection of the skin and the tissues just below the skin surface. A course of antibiotics will usually clear the infection.

What causes cellulitis?

The skin is usually a good barrier against infection. However, a break in the skin is a way in which bacteria (germs) can get into and under the skin. A cut, skin ulcer, injection, athlete's foot, badly scratched eczema are some of the ways a break in the skin can occur. A tiny cut is all that is needed to allow bacteria in. The bacteria may then multiply and spread along under the skin surface to form an infection. Although a cut or graze is found in many cases to be the main cause, sometimes the infection occurs for no apparent reason with no break in the skin found. A variety of bacteria can cause cellulitis.

Who gets cellulitis?

Cellulitis can affect anyone. You are more prone to cellulitis if you have:

- athlete's foot (a fungal infection between your toes)
- swollen legs (for various reasons) or are overweight or obese
- previously had an episode of cellulitis
- a poor immune system - for example, if you take steroids or have HIV/AIDS
- poorly controlled diabetes

What are the symptoms of cellulitis?

The affected skin feels warm, may be swollen, and looks red and inflamed. The infected area may spread and is usually tender. The nearest glands may swell and become tender. This is because they are fighting off the infection to stop it from spreading to other parts of the body. For example, the glands in the groin may swell during a cellulitis of the leg. You may feel generally unwell and have a fever. Indeed, the first symptoms are often to feel feverish and shivery for up to 24 hours before any changes to the skin appear.

Is cellulitis serious?

Cellulitis can range from mild to serious, depending on the depth and size of infection and speed at which it progresses. Treatment is usually advised as soon as cellulitis is diagnosed to make sure it does not spread and become serious. Cellulitis around the eye (periorbital cellulitis) needs urgent treatment. This mainly affects young children and at first causes redness and swelling of the eyelids.

Cellulitis

Possible complications of cellulitis are:

- septicaemia (blood poisoning), which can be life-threatening
- an abscess forming (a ball of pus in the infected area)
- muscle or bone infections, which can be serious
- a cellulitis around an eye can spread to infect the brain
- bacteria that get into the bloodstream and can cause a serious infection of the heart valves

With treatment, most people with cellulitis do not have complications and make a full recovery.

What is the treatment for cellulitis?

A course of antibiotic tablets will usually clear cellulitis. Symptoms should soon ease once you start antibiotic tablets. However, there may be an initial increase in redness when treatment is started before it starts to fade.

Tell a doctor if the area of infection continues to spread or if you become worse after you start antibiotics. People with severe cellulitis or those not improving with antibiotic tablets may need to be treated with antibiotics given straight into a vein.

Other things that may help include:

- Painkillers such as acetaminophen or ibuprofen can ease pain and reduce a fever.
- Keep the infected area raised as high as possible. This helps to prevent excess swelling, which may also ease pain. If you have a cellulitis of the leg, keep your foot higher than your hip so gravity helps to reduce the swelling; lie on a sofa with your leg up on a cushion, for instance. When in bed, put your foot on a pillow so that it is slightly higher than your hip. If the cellulitis is in the forearm or hand, a high sling can help to raise the affected area.
- Treat athlete's foot if it is present.
- Use a moisturizing cream on the affected area of skin until it heals. This prevents the skin from becoming dry and helps to prevent damage to the skin.

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Antibiotic Prophylaxis of Bite Wounds

1.1 Recommendations for Antibiotic Prophylaxis
of Bite Wounds (Algorithm)

Development Team / Advisors

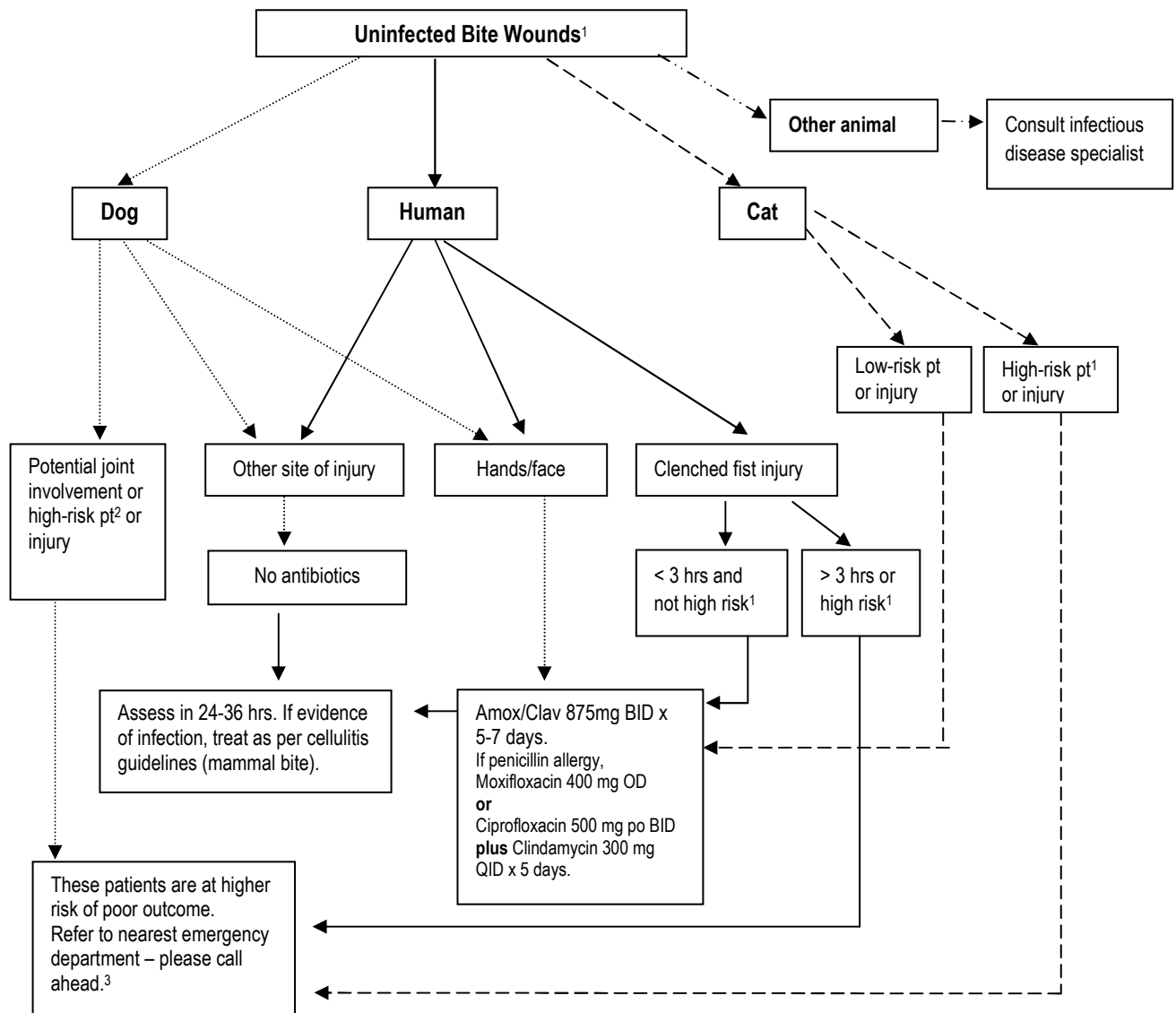
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Recommendations for Antibiotic Prophylaxis of Bite Wounds

Use of this algorithm presumes appropriate irrigation and debridement of the wound. If this cannot be achieved in your clinic, consider referral to hospital emergency department.



¹ If concerned about rabies exposure, contact Medical Officer of Health.

² High-risk patients = Frank immunocompromise (neutropenia, asplenia, chemotherapy, SLE, transplant, HIV with CD4 count < 200) or chronic venous insufficiency and/or lymphedema in the affected limb.

³ Consults to several different disciplines may need to be made simultaneously.

INR* Process

1.1	Managing Oral Anticoagulation
2.1	Managing Elevated INRs
3.1	Drug and Food Interactions
4.1	Patient Risk of Thromboembolism

* International normalized ratio

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The information on this page is based on Evidence-Based Guidelines of the Seventh American College of Chest Physicians Conference on Antithrombotic and Thrombolytic Therapy, published in *Chest* in 2004. (*Chest*. 2004;126:204S-233S.) For details, physicians are referred to the full article.



- Warfarin reaches maximal blood concentrations about 90 minutes after oral administration and has a half-life of 36 to 42 hours. An initial effect on the patient usually occurs within the first 2 or 3 days of starting treatment.
- An INR of between 2.0 and 3.0 is effective for most indications, although in certain instances higher or lower levels may be appropriate.
- Warfarin dose requirements to achieve a therapeutic INR vary considerably between people.
- Environmental factors such as drugs, diet, and various disease states can alter the pharmacokinetics of warfarin, so measure the INR more frequently than the usual 4-week interval when virtually any drug or herbal medicine is added or withdrawn from the regimen of a patient treated with warfarin. (See page INR 3.1).

Starting warfarin therapy

For most patients, start at a daily (evening) dose of 5 to 10 mg for the first 1 or 2 days, and measure the INR on the third day.

In the elderly and in other patient subgroups with an elevated bleeding risk, start at ≤ 5 mg.

Base subsequent doses after the initial 2 or 3 doses on the results of INR monitoring. Measure the INR every 2 to 4 days until stable, slowly tapering to every 4 weeks if stability continues. Elderly patients or those with an underlying condition that may impact coagulation state (malignancy, clotting disorder, use of medications that can influence warfarin effect) should be monitored more frequently.

What to do around surgery

In patients with a low risk of thromboembolism, stop warfarin therapy approximately 4 days before they undergo surgery.

For patients with a high risk of thromboembolism (See page INR 4.1), stop warfarin therapy approximately 4 days before surgery and begin therapy with full-dose unfractionated heparin or full-dose low-molecular-weight heparin as the INR falls (refer to anticoagulation clinic on the following page).

In patients undergoing dental procedures, in most cases no change in the intensity of anticoagulation therapy is needed. If there is a concern for local bleeding, tranexamic acid mouthwash or epsilon amino caproic acid mouthwash without interrupting anticoagulant therapy can be used.

What to do when the INR comes back high

Most cases where there is no active bleeding can be managed by missing a dose or two and watching carefully. In cases where bleeding may be a concern, the anticoagulant effect of warfarin can be overcome by low doses (1.0 to 2.5 mg) of vitamin K1 (phytonadione).

Note: Patients treated with large doses of vitamin K1 can become resistant to warfarin for up to 1 week or more because of vitamin K1 accumulation in the liver.

Recommendations for Managing Elevated INRs or Bleeding in Patients Receiving Warfarin

INR LEVEL	ACTION
INR above therapeutic range but < 5.0; no significant bleeding	Lower dose or omit dose, monitor more frequently, and resume at lower dose when INR therapeutic; if only minimally above therapeutic range, no dose reduction may be required
INR \geq 5.0 but < 9.0; no significant bleeding	Omit next one or two doses, monitor more frequently and resume at lower dose when INR in therapeutic range. Alternatively, omit dose and give vitamin K1* (\leq 5 mg orally), particularly if at increased risk of bleeding. If more rapid reversal is required because the patient requires urgent surgery, vitamin K1 (2 to 4 mg orally) can be given with the expectation that a reduction of the INR will occur in 24 hrs. If the INR is still high, additional vitamin K1 (1 to 2 mg orally) can be given.
INR \geq 9.0; no significant bleeding	Hold warfarin therapy and give higher dose of vitamin K1 (5–10 mg orally) with the expectation that the INR will be reduced substantially in 24–48 hrs. Monitor more frequently and use additional vitamin K1 if necessary. Resume therapy at lower dose when INR therapeutic.
Serious or life-threatening bleeding at any elevation of INR	Refer to emergency as soon as possible. Call (902) 473-4444 for the Halifax Infirmary site.

If continuing warfarin therapy is indicated after high doses of vitamin K1, then heparin or LMWH can be given until the effects of vitamin K1 have been reversed and the patient becomes responsive to warfarin therapy. It should be noted that INR values > 4.5 are less reliable than values in or near the therapeutic range. Thus, these guidelines represent an approximate guide for high INRs.

Contact Numbers:

For any queries concerning patients in whom anticoagulation is proving difficult, call the anticoagulation clinic in Halifax at (902) **473-6600**, Mondays, Tuesdays or Thursdays between 7:30 a.m. and 3:30 p.m.

For urgent queries, call (902) **472-2222** and ask to page the hematologist on call. For any patient with active, serious or life-threatening bleeding at any elevation of INR, please refer to the nearest emergency department.

For referrals to the anticoagulation clinic, fax referral to (902) **473-6812**. The patient will be contacted as soon as possible (within 2 to 3 days). Please specify “urgent” (i.e., needs to be seen within 3 days), or “routine” (patient will be seen within 7 days).

* Not all community pharmacies stock vitamin K; a telephone call to verify availability may be indicated. At the time of writing, stores in the Halifax area stocking vitamin K include the Shoppers Drug Mart outlets on Spring Garden Road and Quinpool Road and in Spryfield.

Drug and Food Interactions with Warfarin by Level of Supporting Evidence and Direction of Interaction

LEVEL OF EVIDENCE	POTENTIATION	INHIBITION	NO EFFECT
I	Alcohol (if concomitant liver disease) amiodarone anabolic steroids, cimetidine, clofibrate, cotrimoxazole erythromycin, fluconazole, isoniazid (600 mg daily), metronidazole, miconazole, omeprazole, phenylbutazone, piroxicam, propafenone, propranolol, sulfipyrazone (biphasic with later inhibition)	Barbiturates, carbamazepine, chlordiazepoxide, cholestyramine, griseofulvin, nafcillin, rifampin, sucralfate, high vitamin K content foods/enteral feeds, large amounts of avocado	Alcohol, antacids, atenolol, bumetadine, enoxacin, famotidine, fluoxetine, ketorolac, metoprolol, naproxen, nizatidine, psyllium, ranitidine
II	Acetaminophen, chloral hydrate, ciprofloxacin, dextropropoxyphene, disulfiram, itraconazole, quinidine, phenytoin (biphasic with later inhibition), tamoxifen, tetracycline, flu vaccine	Dicloxacillin	Ibuprofen, ketoconazole
III	Acetylsalicylic acid, disopyramide, fluorouracil, ifosphamide, ketoprofen, lovastatin, metozalone, moricizine, nalidixic acid, norfloxacin, ofloxacin, propoxyphene, sulindac, tolmetin, topical salicylates	Azathioprine, cyclosporine, etretinate, trazodone	
IV	Cefamandole, cefazolin, gemfibrozil, heparin, indomethacin, sulfisoxazole		Diltiazem tobacco vancomycin

Patient risk of thromboembolism

1. **Low** (annual risk <4% thromboembolic stroke without anticoagulation)

- Non-valvular atrial fibrillation without thromboembolic stroke or intermediate factors (listed below)
- DVT \geq 3 months without high-risk features (recurrent thromboembolism, malignancy, hypercoaguable states, extremity paresis)
- Cardiomyopathy without atrial fibrillation

2. **Intermediate** (annual risk 4-7% thromboembolic stroke without anticoagulation)

- Mechanical aortic valves in sinus rhythm
- Atrial fibrillation with the following risks: age >65 years old without high-risk features **or** <65 years old with DM, CAD, HTN, PVD
- DVT \leq 3 months without high-risk features
- Mitral stenosis, CAD, LV aneurysm, CHF with LV dilatation

3. **High** (annual risk >7% thromboembolic stroke without anticoagulation)

- Mechanical mitral valves
- Aortic mechanical heart valve with prior thromboembolism, atrial fibrillation, heart failure
- DVT >3 months with high-risk features
- Atrial fibrillation with the following risks: history of thromboembolic stroke/TIA, heart failure, LV dysfunction, mitral stenosis, prosthetic heart valves, thyroid disease, >75 years old with
- DM, HTN.9
- Hypercoaguable states

4. **Very high**

- Multiple heart valves, bileaflet mitral heart valve with atrial fibrillation, heart failure, or prior embolus
- DVT within 1 month with high-risk features

Note: The highest risk of recurrence for DVT is within the first 1 to 3 months after the acute episode.

Further resources:

<http://www.healthyinfo.com/clinical/cv/coag/warfarin.shtml>

http://www.chestjournal.org/cgi/content/full/126/3_suppl/204S

<http://depts.washington.edu/gim/clinical/MCSSyllabus/Anticoagulation.pdf>

Kearon C, Hirsh J. Management of anticoagulation before and after elective surgery. *N Engl J Med* 1997;336:1506-1511.

IWK Health Centre, Women's/Maternity Site Guidelines for Division of Gynaecology

1.1	Definitions of Levels of Care / Guidelines for Levels of Care
2.1	Physician Contact Information and Areas of Specialty
3.1	Clinics

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Definitions of Levels of Care

Emergency (Level 1 or 2)

- Unstable patients and those **requiring immediate care for life-threatening conditions** (e.g., heavy bleeding, shock, unresponsive).

Urgent same-day (Emergency Levels 3 and 4)

- Stable patients with potentially serious conditions **requiring same-day care** (e.g., early pregnancy complication such as bleeding, incomplete abortion, possible ectopic pregnancy, severe pelvic infection, infected abortion, Bartholin abscess, very heavy menstrual flow, ovarian cyst with severe pain, adnexal torsion, postoperative complication of gynaecologic surgery).

Urgent

- Patients with conditions **requiring care within 24 to 48 hours.**

Semi-urgent

- Patients with conditions **requiring care within the week.**

Elective

- Patients **requiring evaluation without urgency.**

Guidelines for Levels of Care

Emergency (Level 1 or 2)

- All unstable patients should be sent directly to the QEII Emergency, Halifax Infirmiry site. The Emergency Department physician should be notified. Phone (902) 473-2043.
- The Dartmouth General Hospital switchboard is (902) 465-8300 and Emergency Department (902) 465-8338.

Urgent same-day (Emergency Levels 3 and 4)

- Patients should have been seen and assessed by the referring physician. The gynaecology resident should be contacted, the case reviewed and a determination made about the best location for evaluation by gynaecology. If the resident is not available, the gynaecologist on call should be contacted. Phone (902) 470-8888.

Semi-urgent

1. Early Pregnancy Complications Clinic

- Semi-urgent pregnancy complications (not threatened abortion) should be sent to this unit by referral. Send information by fax at (902) 470-7056 (completed referral form with demographic data, contact number for patient, reason for referral, and any ultrasound results and blood work; see page IWK 3.2 for form). Contact the resident on call at (902) 470-8888 if there are questions on patient suitability for the clinic.
- Location: Gynaecology Clinic, Unit 6A, 5980 University Avenue, IWK Health Centre, Women's and Maternity Site. Hours: 8:30 a.m. – 10 a.m., Monday to Friday

Definitions of Levels of Care / Guidelines for Levels of Care

2. Post-operative Gynaecologic Problems

- Post-operative gynaecologic patients with problems should be referred to the gynaecologist who performed their surgery. If this physician is not available, the gynaecology resident or gynaecologist on call should be contacted at (902) 470-8888.
- Location: Gynaecology treatment room, Unit 6B, 5980 University Avenue, IWK Health Centre, Women's and Maternity Site.

3. Gynaecologic Problems

- Semi-urgent gynaecologic problems can be seen at the Ambulatory gynaecology clinic by referral. Contact the resident on-call at (902) 470-8888.
- Location: Ambulatory clinic, 6th floor, 5980 University Avenue, IWK Health Centre, Women's and Maternity Site.

Patient instructions for semi-urgent appointments

- Patients will be contacted with an appointment time and should report to the Admitting Department, main floor of the Women's and Maternity Site, 5980 University Avenue, before going to the 6th floor. They will be sent to 6A Gynaecology Clinic for registration. They should plan to spend several hours to allow time for investigations (e.g., blood work, US).

Elective

- Refer patient directly to a physician. See attached list of physicians and their practice information.
- Complete a referral form and fax to the number listed or call the specific physician. When completing the referral form, indicate if you would like to have the first available appointment with another physician if the wait time for the requested physician is more than four weeks. You do not have to specify a particular physician.

Physician Contact Information and Areas of Specialty

PHYSICIAN	PHONE*	FAX*	CATEGORY OF CARE
Dr. T. Baskett	470-6788	470-8640	General
Dr. A. Bent	470-6460	425-1125	Urogynecology, general
Dr. J. Bentley	473-2366	473-7765	Gynecologic oncology
Dr. R. Bouzayen	470-3491	425-1125	IVF, general, infertility
Dr. T. Corkum	457-3703	457-3707	General
Dr. C. Craig	461-2246	461-2746	General
Dr. I. Delisle	461-2246	461-2746	General
Dr. J. Dempster	470-6721	425-1125	General, sexual medicine
Dr. B. Dunphy	404-8600	404-8601	IVF, infertility, endocrine
Dr. N. Van Eyk	470-7491	425-1125	Paediatric, general
Dr. S. Farrell	470-6788	470-8640	Urogynecology
Dr. D. Gilmour	470-7098	425-1125	Urogynecology
Dr. G. Graves	470-6781	425-1125	Endocrine, infertility, general, menopause
Dr. R. Grimshaw	473-4029	473-7765	Gynecologic oncology
Dr. L. Hamilton	404-8600	404-8601	IVF, infertility, general
Dr. K. Kieser	473-4029	473-7765	Gynecologic oncology
Dr. W. Lee	435-2040	434-4837	General – Dartmouth
Dr. S. Mawdsley	463-1244	466-4585	General – Dartmouth
Dr. B. Parish	423-4901	423-2475	General
Dr. D. Rittenberg	470-6788	470-8640	General, urogynecology
Dr. J. Wenning	470-6782	425-1125	Paediatric, general
Dr. A. W. Zilbert	465-8700	465-2279	General, urogynecology, colposcopy

* Area code 902

Gynecologic Oncology

Urgent/semi-urgent

- Call QE2 switchboard 473-2222 to speak to Gyn Oncologist on call.

Non-urgent referrals

- Fax completed referral form, with appropriate history, lab and imaging reports, to (902) 473-7765.

Physicians

- Drs. R. Grimshaw, J. Bentley, P. Rittenberg, K. Kieser

Colposcopy Clinic

Physicians

- Drs. T. Baskett, J. Bentley, C. Craig, I. Delilse, J. Dempster, R. Grimshaw, K. Kieser, B. Parish
- Fax completed referral form and last two cytology results, and other reports, to (902) 473-4001.
- Referral forms and other information can be obtained by calling (902) 473-4180.

Endocrine/Infertility

Assisted Reproductive Therapies

Physicians

- Drs. B. Dunphy, R. Bouzayen, L. Hamilton – Suite 213, 1535 Dresden Row, Halifax, NS B3J 3T1
- Fax referral to (902) 404-8601.
- With questions or for phone appointments, call (902) 404-8600.

General Infertility/Reproductive Endocrine

- Fax referral to IWK Health Centre at (902) 470-7056.

Vulvar Clinic

Physicians

- Drs. I. Delilse and J. Dempster
- For patients with vulvar pain/vulvitis, dyspareunia, vestibulitis, non-neoplastic vulvar dystrophies and other vulvar problems.
- Fax referral and appropriate lab and cytology reports to (90) 473-4001.

Clinics

Early Pregnancy Complications Clinic

6th Floor Gynaecology Clinic , IWK Health Centre, Women's and Maternity Site, 5980 University Ave., Halifax
Open Monday to Friday, 8:30 –10 a.m. (except statutory and hospital holidays)

Access

- Referral required by fax; please include demographic data, reason for referral, any ultrasound results, blood type if known, whether the patient has received Rh immune globulin.
- It will not be necessary to speak to the gynaecology resident on call about the referral unless it is necessary to ascertain whether it is appropriate for the patient to be seen in this clinic.
- **If the woman's blood type is not known, please send her for this prior to her appointment.**

Patient Population

- Missed abortions that have already been diagnosed by ultrasound.
- Incomplete abortions. The patient must be completely stable and appropriate to wait up to 24-48 hours for care.
- Patients requiring followup to ascertain if complete abortion has occurred (from Emergency Department only).
- Patients requiring followup for possible ectopic pregnancy who are completely stable and appropriate to wait up to 24 to 48 hours for care, generally just requiring followup β HCG. These patients must be discussed with the resident or gynaecologist on call prior to referral.
- **Patients with viable gestations or threatened abortions are NOT appropriate for this clinic.**

Patient Instructions

Patients with missed abortions: These women can be instructed that they will receive a call by the morning after the fax is received scheduling them for a specific day to present to the clinic. Be sure their contact number is on this referral.

Patients with incomplete or possible ectopic pregnancy: Instruct the patient to report to the admitting desk on the main floor of the Women's Site, IWK Health Centre, at 8:15 a.m. She will then be sent to the 6th floor gynaecology clinic for registration. There are no scheduled appointment times; patients will be seen on a first-come, first-served basis as long as the referring fax has been received. The visit could take most of the morning, depending on what investigations are required.

A. Date: _____ **Please see:** _____ **regarding**
her pregnancy complication of

Missed Incomplete ?Complete ?Ectopic (circle one) pregnancy and advise / plan further management.

Sincerely,

Referring Physician Name _____

B. Patient Contact Number: _____ **DOB:** _____ **HCN:** _____

Ultrasound report

Blood type

Previous β HCG

This form can be used for faxing the referral. FAX (902) 470-7056.

Physicians Resources

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- | | |
|-----|--|
| 1.1 | Booking for General Surgery
(Physician Name, Phone, Fax, and Areas of Practice) |
| 2.1 | Booking for Surgery
(Physician Name, Phone, Fax, and Areas of Practice) |
-

Development Team / Advisors

Sam Campbell, Geoff Porter

Contact

Primary/Secondary Care Quality Initiative, Capital Health, Nova Scotia
Tel: (902) 473-7664; Fax (902) 473-6153; mike.macdonald@cdha.nshealth.ca

Booking for General Surgery

SURGEON	PHONE*	FAX*	TYPE OF SURGERY	PROCEDURE FOR BOOKING
Dr. Jaap Bonjer (Halifax)	473-8337	473-5152	Adrenal, Cholecystectomy Hernia, Nissen, Parathyroid, Spleen, Thyroid, Bariatric	Fax referral to office for consultations.
DR. Virginia Calverley (Dartmouth)	435-6312	434-7920	Breast, Cholecystectomy, Hernia, Gastroscopy, Colonoscopy/sigmoidoscopy	Fax referral to office for consultations.
Dr. Francis Crawley (Windsor)	798-4709	798-0530	Carpal tunnel, Hernias, tubal ligations, Cholecystectomy, Breast, Gastroscopy Colonoscopy/sigmoidoscopy	Fax/mail/phone referral to office for consultations.
Dr. Carman Giacomantonio (Halifax)	473-6177	473-6178	Breast, Melanoma, Recurrent, colorectal ca, Gastric cancers, Sarcoma	Fax referral to office for consultations.
Dr. Gayle Higgins (Halifax)	473-5133	473-3637	Breast, Head and neck	Fax referral to office for consultations.
Dr. Christopher Jamieson (Halifax)	473-5144	473-5147	Colorectal	Fax referral to office for consultations.
Dr. Paul Johnson (Halifax)	473-2851	473-1018	Colorectal	Fax referral to office for consultations.
Dr. Dennis Klassen (Halifax)	473-5574	473-2828	Splenectomy, Hernia, Nissen, Port-a-cath, Cholecystectomy Minor procedures	Fax referral to office for consultations.
Dr. Bernie McIntyre (Halifax)	473-3757	473-2939	Colorectal	Fax referral and follow up with a phone call to book with secretary.
Dr. Michele Molinari (Halifax)	473-7624	473-7639	Hepatobiliary Pancreatic (benign & malignant) Renal transplant Liver transplant Cholangiocarcinoma Access surgery	Fax referral to office for consultations.
Dr. Bjorn Nashan (Halifax)	473-6193	473-6640	Hepatobiliary Pancreatic (benign & malignant) Renal transplant Liver transplant Cholangiocarcinoma Access surgery	Fax referral to office for consultations.
Dr. Geoff Porter (Halifax)	473-6499	473-6496	Surgical oncology, Gastric, Hepatobiliary, Sarcoma Melanoma	Fax referral and follow up with a phone call to book with secretary.

* Area code 902

INFORMATION FOR FAMILY PHYSICIAN

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Booking for General Surgery

SURGEON	PHONE*	FAX*	TYPE OF SURGERY	PROCEDURE FOR BOOKING
Dr. Trevor Topp (Halifax)	473-5131	473-2299	Breast, Cholecystectomy, Port-a-cath, Minor procedures	Fax referral to office for consultations.
Dr. Brock Vair (Halifax)	473-3242	473-5939	Biliary and pancreatic, Hernia, Cholecystectomy Minor procedures	Fax referral to office for consultations.
Dr. Mark Walsh (Halifax)	473-5296	473-5297	Hepatobiliary Pancreatic (benign & malignant) Renal transplant Liver transplant Cholangiocarcinoma Access surgery Minor procedures	Fax referral to office for consultations.
Hernia Clinic (Halifax)	473-8337	473-5152		Fax referral to office for consultations.
Weight Loss program (Formerly Bariatric Clinic) Halifax	473-8337	473-5152		Fax referral to office for consultations.
Dr. Virginia Calverley (Dartmouth)	435-6312	434-7920	Breast surgery Cholecystectomy Colonoscopy Gastroscopy	Fax referral to office for consultations.
Dr. John Murdoch (Dartmouth)	435-6312	434-7920	Cholecystectomy Hernia Colorectal GI endoscopy	Fax referral to office for consultations.
Dr. Laura Nuth (Dartmouth)	435-2040	434-4837	Cholecystectomy Hernia Colorectal GI endoscopy Breast	Fax referral to office for consultations.
Dr. Warren Shih (Dartmouth)	465-4549	461-9967	Cholecystectomy Hernia Colorectal GI endoscopy Open splenectomy Port-a-cath	Phone office for referrals.
Dr. L. Wasilewski (Dartmouth)	435-6312	434-7920	Endoscopy Minor procedures Plastic surgery	Fax referral to office for consultations.

* Area code 902

Booking for Surgery

CARDIAC SURGERY	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Idris Ali	473-3808	473-4448	Coronary artery disease, valve replacement, valve repair
Dr. Imtiaz Ali	473-3808	473-4448	Coronary artery disease, valve replacement, transplantation, heart failure
Dr. Roger Baskett	473-3808	473-4448	Coronary artery disease, valve replacement, valve repair, transplantation, a-fib ablation, heart failure, ventricular assist device
Dr. Camille Hancock Friesen	473-7597	473-4448	Coronary artery disease, valve replacement, valve repair, transplantation, a-fib ablation
Dr. Gregory Hirsch	473-7890	473-7149	Coronary artery disease, valve replacement, valve repair, transplantation, heart failure
Dr. Jean Francoise Legare	473-3808	473-4448	Coronary artery disease, valve replacement, valve repair, transplantation, thoracic aortic thoroabdominal aneurysm, a-fib ablation, heart failure, ventricular assist device
Dr. Stacy O'Blenes	473-3808	473-4448	Coronary artery disease, valve replacement, valve repair
Dr. Keir Stewart	473-3808	473-4448	Coronary artery disease, valve replacement, valve repair, thoracic aortic thoroabdominal aneurysm, a-fib ablation, heart failure
Dr. John Sullivan	473-7597	473-4448	Coronary artery disease, valve replacement, valve repair, transplantation, thoracic aortic thoroabdominal aneurysm, a-fib ablation, heart failure, ventricular assist device
Dr. Jeremy Wood	473-7597	473-4448	Coronary artery disease, valve replacement, valve repair, transplantation, thoracic aortic thoroabdominal aneurysm, a-fib ablation

NEUROSURGERY	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Robert Brownstone	473-6850	473-6852	Functional neurosurgery, movement disorders, complex pain syndromes, epilepsy surgery, intrinsic brain tumors
Dr. Sean Christie	473-2096	473-8912	Minimally invasive spinal surgery, complex spinal surgery, neurotrauma, sport-related neurological injuries
Dr. David Clarke	473-7214	473-8917	Epilepsy surgery, pituitary surgery, neurotrauma and injury prevention, vascular neurosurgery
Dr. Ian Fleetwood	473-2710	473-2801	Vascular neurosurgery, radiosurgery
Dr. Renn Holness	473-2098	473-2097	Surgical education and methods of evaluation, international neurosurgical education, vascular neurosurgery
Dr. William Howes	473-8901	473-8905	Pediatric neurosurgery, epilepsy surgery, vascular and skull base surgery
Dr. Herman Hugenholtz	473-2096	473-8912	Spinal surgery, ethics
Dr. Daniel McNeely	473-6544	473-6393	Pediatric neurosurgery, pediatric epilepsy, spinal dysraphism, spasticity
Dr. Ivar Mendez	473-7046	473-3343	Functional neurosurgery, neural transplantation, pain, robotics in neurosurgery
Dr. Simon Walling	473-8453	473-8458	Neurotrauma, neurooncology, pediatric neurosurgery, injury prevention, surgical education

* Area code 902

Booking for Surgery

ORTHOPAEDICS	PHONE*	FAX*	PREFERRED PRACTICE
Dr. David Alexander	473-4092	473-2054	Spinal surgery, trauma
Dr. David Amirault	473-7105	473-4580	General practice, hip and knee arthroplasty, fractures (excluding spine and pelvis)
Dr Bill Beveridge	678-6878	678-6884	General orthopedics, shoulder arthroscopy, knees, hips. (Kentville)
Dr. Catherine Coady	473-2575	473-1582	Knee – soft tissue injuries
Dr. Chad Coles	473-5599	473-5569	Trauma – complex procedures involving the pelvis and reconstruction after trauma
Dr. Alan Connelly	678-2423	679-6401	General orthopedics (Kentville)
Dr Greg Clarke	678-7707	678-1177	General orthopedics, ACL repair (Kentville)
Dr. Michael Dunbar	473-7337	473-7370	Arthroplasty, revision arthroplasty surgery
Dr. Mark Glazebrook	473-7137	473-7201	Foot and ankle injuries, trauma
Dr. Michael Gross	473-6811	473-2042	Arthroplasty, revision arthroplasty surgery, orthopaedic tumor surgery
Dr Ed Hewins	679-3349	679-3350	General orthopedics, Upper limb, no backs. (Kentville)
Dr. Eric Howatt	678-4404	678 1177	General orthopedics, Hips & Knees. (Kentville)
Dr. David Johnston	473-2085	473-7239	Upper extremity, trauma (excluding fractures of the spine and pelvis)
Dr. Douglas LeGay	466-2555	469-4753	General orthopedics, sports medicine, shoulders.
Dr. Ross Leighton	473-4035	473-4490	Joint arthroplasty, trauma
Dr. William Oxner	473-3717	473-4364	Spinal surgery, trauma
Dr. Gerald Reardon	473-5626	473-5625	General practice, hip and knee arthroplasty, fractures (excluding spine and pelvis), disorders of the shoulder, foot and ankle
Dr. William Stanish	473-7525	429-7138	Knee – soft tissue injuries, total knee arthroplasty
Dr. James Taylor	427-0550	Stadacona	Military Orthopedics only
Dr. Vikram Venugopal	469-9667	469-4753	General orthopedics
OTOLARYNGOLOGY	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Elhamy Attia	473-2914	473-4304	Dysphagia, voice, swallowing, head and neck oncology, general otolaryngology
Dr. Manohar Bance	473-5975	473-4345	Otology, neurotology
Dr. Gerard Corsten	470-8041	470-8929	Pediatric otolaryngology, airway surgery
Dr. Charles Cron	422-9616	422-9617	General otolaryngology
Dr. Ian Dempsey	435-8585	435-1169	General otolaryngology
Dr Rob Hart	473-7002	473-5667	Head & Neck cancer, thyroid
Dr. Liane Johnson	470-8041	470-8929	General otolaryngology

* Area code 902

Booking for Surgery

Dr. David Kirkpatrick	473-2670	473-3418	Rhinology, otology, general otolaryngology
Dr. Robin Leblanc	435-8585	435-1169	General otolaryngology, sleep medicine
Dr. Emad Massoud	473-3905	473-3854	Rhinology, otology, balance disorders, general otolaryngology
Dr. David Morris	473-1986	473-1260	Otology, neurotology
Dr. Joseph Nasser	473-4323	473-3879	Otolaryngology, head and neck surgery, oral and maxiofacial surgery, cosmetic facial surgery
Dr. Mark Taylor	473-5752	473-4016	Head and neck surgery, facial, plastic and reconstructive surgery, oncology
Dr. Jonathan Trites	473-3784	473-3816	Head and neck oncology, reconstructive surgery
Dr. Mohammed Wali	473-4333		Retired – no longer practicing

PLASTICS	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Richard Bendor-Samuel	473-6626	473-6294	Cosmetic surgery
Dr. Craig Hurst	473-6626	473-6294	Cranio-maxillofacial surgery, pediatric craniofacial surgery, pediatric surgery, general plastic surgery
Dr. George Davis	465-2860	464-3520	General plastic surgery, reconstructive, cosmetic.
Dr. Steven Morris	473-8773	473-8773	Microsurgery, melanoma and skin cancers, cosmetic surgery, hand surgery, head and neck reconstructive surgery, breast surgery
Dr. Justin Paletz	473-6300	473-7369	General plastic surgery, reconstructive microsurgery, hand surgery, cosmetic surgery, craniofacial trauma, burn surgery, breast reconstruction
Dr. Winston Parkhill	473-6315		Retired – no new referrals please.
Dr. Leif Sigurdson	473-1550	473-2785	Breast reconstruction, reconstructive microsurgery, craniofacial trauma, hand trauma, burn surgery, cosmetic surgery (body only), general plastic surgery
Dr. Jason Williams	473-6315	473-6296	General plastic surgery, Breast reconstruction, hand surgery.
Dr. Ken Wilson	470-8168	470-7939	Pediatric plastic surgery, reconstructive microsurgery, burn surgery

THORACIC	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Drew Bethune	473-6692	473-6144	General thoracic and esophageal surgery
Dr. Alan Casson	473-2281	473-4426	General thoracic and esophageal surgery
Dr. Harry Henteleff	473-5686	473-5851	General thoracic and esophageal surgery

VASCULAR	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Patrick Casey	473-2829	473-2841	All vascular surgery except varicose veins.
Dr. Gerald MacKean	473-8506	473-8507	AAA, Carotid surgery, PVD and Varicose veins.
Dr. Choong You	473-8512	473-8513	AAA (abdominal aortic aneurysm) and PVD (claudication, limb ischemia, gangrene) (Does not see patients with varicose veins or carotid artery stenosis/occlusion.)

* Area code 902

Booking for Surgery

PEDIATRIC GENERAL/THORACIC	PHONE*	FAX*	PREFERRED PRACTICE
Dr. Michael Giacomantonio	470-8114	470-7360	Newborns, infants and children with lesions requiring general or thoracic surgery; i.e., surgery of the abdominal wall, chest wall, groin, gastrointestinal tract, non-cardiac thoracic surgery, as well as endocrine surgery, pediatric oncology and pediatric trauma
Dr. Guy Brisseau	470-8114	470-7360	Newborns, infants and children with lesions requiring general or thoracic surgery; i.e., surgery of the abdominal wall, chest wall, groin, gastrointestinal tract, non-cardiac thoracic surgery, as well as endocrine surgery, pediatric oncology and pediatric trauma
Dr. Natalie Yanchar	470-8114	470-7360	Newborns, infants and children with lesions requiring general or thoracic surgery; i.e., surgery of the abdominal wall, chest wall, groin, gastrointestinal tract, non-cardiac thoracic surgery, as well as endocrine surgery, pediatric oncology and pediatric trauma

* Area code 902

Travel Clinics

1.1 Travel Clinics in Nova Scotia

Development Team / Advisors

Sam Campbell, Geoff Porter

Contact

Primary/Secondary Care Quality Initiative, Capital Health, Nova Scotia
Tel (902) 473-7664; Fax (902) 473-6153; mike.macdonald@cdha.nshealth.ca

The International Travel Clinic

(Yellow Fever Vaccination Centre)

Public Health Services, Capital Health
201 Brownlow Ave., Unit 4
Dartmouth, NS B3B 1W2
Tel: (902) 481-5900
Fax: (902) 481-5802

Secretary: Clare Kerr at clare.kerr@cdha.nshealth.ca
Manager: Juanita MacPhee at (902) 481-5880

The travel clinic does not provide advice over the phone. Clients are required to attend the clinic for one-on-one consultation with experienced travel nurses. The clinic is not publicly funded. Fee for an individual is \$45, and for a family, \$60.

Other travel clinics in Nova Scotia

Public Health Services*

708 Reeves Street, Unit 3
Port Hawkesbury, NS B9A 2S1
Tel: (902) 625-1693

Public Health Services*

235 Townsend Street, 2nd Floor
Sydney, NS B1P 5E7
Tel: (902) 563-2400

Dr. Paul Doane*

6169 Quinpool Road
Halifax, NS B3L 4P8
Tel: (902) 497-8535
Fax: (902) 420-9432

Dr. Lorne Marsh*

Gladstone Professional Centre
6155 North Street
Halifax, NS B3K 5R3
Tel: (902) 453-3511
Fax: (902) 454-9010

International Travel Medical Clinic

Travel HEALTHSERV Inc.
130 Eileen Stubbs Avenue, Suite 5 South
Dartmouth, NS B3B 2C4
Tel: (902) 420-4862
Fax: (902) 425-0758

Napier Travel Health

Isobel Napier, RN B.N.6454
6454 Quinpool Road, Suite 103
Halifax, NS B3L 1A9
Tel: (902) 423-2455
Fax: (902) 444-3563

* *yellow fever designated clinic*