Anticoagulant Safety Survey – ISMP Canada

General Information:

Please answer the following questions to help describe your institution

Multi-Site:
- ❑ Yes
- ❑ No

Hospital Site Type:
- ❑ Acute
- ❑ Chronic
- ❑ Rehabilitation
- ❑ Pediatric
- ❑ Other: _____

Hospital Site Name (Please note that the hospital name will be de-identified and separated from the survey upon receipt. This information is requested only to match the receipt of follow-up surveys in order to validate response outcomes and not individual responses): _____

Hospital Site Size:
- ❑ < 100
- ❑ 100-200
- ❑ 201-500
- ❑ > 500

Province: _____

Does your hospital have a dedicated thromboembolism service (defined as at least one physician with major commitment to the provision of thromboembolism (TE) care?
- ❑ No
- ❑ Yes (please describe briefly):

  _____
  _____

Section I: Deep Vein Thrombosis (DVT) Prophylaxis

1) Does your institution have any specific programs or strategies in place that address Deep Vein Thrombosis (DVT) prophylaxis?

- ❑ NO *(skip to question 3)*
- ❑ YES

2) If YES, please describe the programs or strategies your hospital is using to address DVT prophylaxis:

3) Please describe your institution's *use* of thromboprophylaxis for each of the patient groups below. In addition, please indicate the *proportion* of patients in the group that receive thromboprophylaxis.

Patient group	Procedure is not done at our hospital	Standard Order (All patients receive prophylaxis unless specifically excluded)	Pre-printed order form that includes recommended prophylaxis or a checklist of prophylaxis options	Individual physician order (Physician must remember to order prophylaxis)	Estimate of proportion of patients in the group that receive prophylaxis			
					Routinely (>80%)	Most (50-80%)	Some (20-50%)	Few or none (<20%)
General surgery for benign disease								
General surgery for cancer								
Major gynecologic surgery								
Laparoscopic surgery								
Vascular surgery								
Total hip replacement								
Total knee replacement								
Hip fracture surgery								
Elective spine surgery								
Knee arthroscopic surgery								
Surgical repair of isolated lower extremity fractures								
Major trauma								
Cardiac bypass surgery								
Elective neurosurgery								
General internal medicine								
Medical oncology								
Critical care unit								

4) In the groups for which thromboprophylaxis is prescribed routinely or in most patients, what type of prophylaxis is used? (*Please select ALL that are used routinely or in most patients for each group).*

Patient group	GCS[1]	IPC[2]	ASA[3]	LDUH[4] BID	LDUH[4] TID	LMWH[5] (*)	Warfarin	Fondaparinux	Other (specify)
General surgery for benign disease						( )			
General surgery for cancer						( )			
Major gynecologic surgery						( )			
Laparoscopic surgery						( )			
Vascular surgery						( )			
Total hip replacement						( )			
Total knee replacement						( )			
Hip fracture surgery						( )			
Elective spine surgery						( )			
Knee arthroscopic surgery						( )			
Surgical repair of isolated lower extremity fractures						( )			
Major trauma						( )			
Cardiac bypass surgery						( )			
Elective neurosurgery						( )			
General internal medicine						( )			
Medical oncology						( )			
Critical care unit patients						( )			

1 GCS = Graduated Compression Stockings (elastic stockings)
2 IPC = Intermittent pneumatic compression devices, sequential compression devices (SCDs) or venous foot pump (VFP)
3 ASA (aspirin) = used specifically as DVT prophylaxis
4 LDUH = low-dose unfractionated heparin
5 LMWH = Low molecular weight heparin (*) Please indicate which molecular weight heparin is used as thromboprophylaxis:
D = dalteparin; E = enoxaparin; N = nadroparin; T = tinzaparin

5) Does your institution generally adhere to the American College of Chest Physicians (ACCP) guidelines (sometimes called the CHEST guidelines) for the prevention of Venous Thromboembolism (VTE)? (*Please select ONE option only*)

- ❑ YES, routinely
- ❑ Wherever possible but not routinely
- ❑ Not systematically
- ❑ NO, it's not considered
- ❑ I am not aware of the ACCP (CHEST) guidelines

6) Within the last 5 years, has your institution measured the *prescribing compliance* with the current CHEST guidelines for prevention of venous thromboembolism?

- ❑ NO *(skip to question 8)*
- ❑ YES

7) If YES, how was compliance with the ACCP guidelines measured?

8) What are the *perceived barriers to compliance* with optimal thromboprophylaxis guidelines in your hospital? (*Please select ALL that apply)*

- ❑ There are no barriers
- ❑ We do not consider thromboprophylaxis to be an important priority
- ❑ We have not had the time to do this yet
- ❑ Physicians cannot agree on a uniform policy
- ❑ Each physician prescribes thromboprophylaxis on an individual basis
- ❑ We do consider thromboprophylaxis to be important, but we have made an <u>active</u> decision to deal with other priorities first
- ❑ There are concerns regarding cost
- ❑ There are concerns regarding the risk of bleeding
- ❑ Other: _____
- ❑ Other: _____

9) Do patients undergoing hip or knee surgery *routinely* receive thromboprophylaxis <u>after</u> hospital discharge?

- ❑ NO
- ❑ YES

10) When warfarin is used as thromboprophylaxis after hospital discharge, it is monitored by: (*Please select ONE option only*):

- ❑ Warfarin is not used as thromboprophylaxis after discharge
- ❑ Family physician (who is contacted by the patient)
- ❑ Family physician (who is notified by someone from the hospital)
- ❑ Surgical team or discharging physician
- ❑ A hospital service (pharmacy, nurse practitioner)
- ❑ Thrombosis service
- ❑ Other *(please specify)*: _____

11) When low molecular weight heparin (LMWH) is used as thromboprophylaxis after hospital discharge, it is administered by: (*Please select ONE option only*)

- ❑ LMWH is not used as thromboprophylaxis after discharge
- ❑ Patients themselves
- ❑ Home care or visiting nurse
- ❑ Other *(please specify):* _____

Section II: Use of Heparin

12) How is low dose heparin, (5,000 units used subcutaneously q12h or q8h), usually prepared/supplied? (*Please select ALL that apply*)

- ❑ On the ward by nursing staff using stock vials
- ❑ On the ward by nursing staff using ward stock, commercially available pre-loaded syringes
- ❑ Supplied individually by pharmacy using commercially available pre-loaded syringes
- ❑ Supplied individually by pharmacy using syringes prepared by pharmacy from multidose vials
- ❑ Other *(please specify):* _____

13) How is low molecular weight heparin (LMWH) supplied to the clinical areas *(Please select ALL that apply):*

- ❑ On the ward by nursing staff using multidose vials
- ❑ On the ward by nursing staff using ward stock, commercially prepared pre-loaded syringes
- ❑ Supplied individually by pharmacy using commercially prepared pre-loaded syringes
- ❑ Supplied individually by pharmacy using syringes prepared by pharmacy from multidose vials
- ❑ Other *(please specify*): _____

14) Does your institution use an IV heparin dosage-adjustment nomogram? (*Please select ONE option only*)

- ❑ NO
- ❑ YES, we use a single heparin nomogram for all patients
- ❑ YES, we use a different nomogram for Acute Coronary Syndrome (ACS) than for other indications (e.g. venous thromboembolism treatment)

15) For patients on IV heparin, who is responsible for monitoring aPTT and adjusting the heparin infusion rates (*Please select ONE option only)*?

- ❑ Physicians
- ❑ Nurses
- ❑ Pharmacists
- ❑ Other *(please specify):* _____

16) For patients who are on heparin therapy, is routine platelet count monitoring done? *(Please select ONE option only)*

- ❑ YES
- ❑ NO
- ❑ Some patients (IV heparin only)

17) Where are heparin products stored in your institution and in what form? *(Please select ALL that apply for each unit and add any other units and/or forms of heparin that apply)*

	Pharmacy stock	Medicine	Surgery	Dialysis	Cardio-logy	Emerg-ency	OR	ICU	Other (specify):	Other (specify)
10 units/mL (1-mL vial)										
10 units/mL (10-mL vial)										
100 units/mL (1-mL vial										
100 units/mL (2-mL vial)										
100 units/mL (10-mL vial)										
1,000 units/mL (1-mL vial)										
1,000 units/mL (5-mL vial)										
1,000 units/mL (10-mL vial)										
1,000 units/mL (30-mL vial)										
10,000 units/mL (1-mL vial)										
10,000 units/mL (5-mL vial)										
25,000 units/mL (0.2-mL vial)										
25,000 units/mL (2-mL vial)										
2,500 unit syringe for SC use										
5,000 unit syringe for SC use										
500 units in 1000mL NS										
1,000 units in 500mL NS										
5,000 units in										

500mL NS										
20,000 units in 500mL D5W										
25,000 units in 250mL D5W										
25,000 units in 500mL D5W										
Other:										
Other:										

18) If vials of 10,000 units or more are stored on the nursing units, is there a safeguard in place to avoid a mix-up with lower doses of heparin *(Please select ONE option only):*

- ❑ Heparin vials of 10,000 units or more are <u>not</u> stored on nursing units (*skip to question 20)*
- ❑ No specific safeguard is in place *(skip to question 20)*
- ❑ Yes

19) If YES, please describe what is done (*Please select ALL that apply)*

- ❑ Auxiliary labels for high-concentration heparin products are used
- ❑ Products are physically separated
- ❑ Other *(please specify)*:_____

Section III: Management of Patients on Anticoagulants

20) Who runs your hospital's inpatient anticoagulant management service *(Please select ONE option only)*?

- ❑ We do not have an inpatient anticoagulant management service
- ❑ It is managed by algorithm used by nursing staff
- ❑ It is managed by physicians (attendings and trainees, if available)
- ❑ It is managed by dedicated thromboembolism physicians
- ❑ It is managed by pharmacists
- ❑ It is managed by specifically trained nurses
- ❑ Other (specify):_____

21) Who runs your hospital's outpatient acute DVT treatment program (described as the systematic process of managing patients with newly diagnosed VTE without admission to hospital)? *(Please select ONE option only)*

- ❑ We do not have an outpatient acute DVT treatment program (*skip to question 23)*
- ❑ It is run by physicians (internal medicine, etc.)
- ❑ It is run by dedicated thromboembolism physicians
- ❑ It is run by pharmacists (with or without physician supervision/medical directives)
- ❑ It is run by specifically trained nurses (with or without physician supervision/medical directives)
- ❑ Other *(specify):* _____

22) What is the availability of this outpatient acute DVT treatment program *(Please select ONE option only*)?

- ❑ Referral to a specialty clinic only
- ❑ 7 days per week
- ❑ 5 days per week
- ❑ Other *(specify):* _____

23) Which of the following best describes your hospital's outpatient anticoagulant management service (described as a systematic process of *ongoing* monitoring of oral anticoagulation for outpatients) (*Please select ONE option only)*?

- ❑ We do not have an outpatient anticoagulant management service *(skip to question 25)*
- ❑ It is linked to or part of an outpatient acute DVT treatment program
- ❑ It is run by a pharmacist, using medical directives
- ❑ It is run by specifically trained nurses, using medical directives
- ❑ It is operated with a pharmacist and physician present together
- ❑ It is operated with a nurse and physician present together
- ❑ Other (*specify):* _____

24) If YES, how often does the outpatient anticoagulant management service run? *(Please select ONE option only)*

- ❑ Daily (5 days per week)
- ❑ Once a week
- ❑ Other (*specify*):_____

25) Is there a specific program or protocol for managing patients on long-term oral anticoagulants in the perioperative period (as a minimum, assesses patients preoperatively and advises or supervises the preoperative management of oral anticoagulants)?

- ❑ NO
- ❑ YES *(describe):*_____

26) At the time of hospital discharge for patients on oral anticoagulants, is there a formal patient education program for warfarin? *(Please select ONE option only)*

- ❑ NO
- ❑ YES, only if requested by physician
- ❑ YES, only for patients who have recently been started on warfarin
- ❑ YES, routinely for all patients discharged on warfarin

27) When patient education for warfarin is provided, it is provided by *(Please select ONE option only)*:

- ❑ Pharmacists
- ❑ Nurses
- ❑ Other *(please specify)*: _____

28) How are the staff involved with managing patients on oral anticoagulants trained for their involvement in this aspect of care? *(Please select ALL that apply)*

- ❑ Staff are not involved in managing patient on oral anticoagulants
- ❑ In-house training
- ❑ Official anticoagulant management course (please specify the course and where it is offered): _____-_____
- ❑ Certification (*please specify by whom*) _____
- ❑ Other (*please specify*) _____

29) Among the current, full-time pharmacy staff who are involved in patient care, how many of the pharmacists have been trained to do anticoagulant management? *(Please select ONE option only)*

- ❑ None
- ❑ All
- ❑ Some – please indicate approximate percentage: _____%

Thank you so much for taking the time to complete this survey.
Please send us your results via the ISMP Canada web site: www.ismp-canda.org
Your responses are greatly appreciated!