

Adopting Best Practices in DVT/PE Prophylaxis and Fluid Resuscitation in Critical Care

http://fluidsurveys.com/s/ECG_facilitators_barriers_survey/

Informed Consent

This survey is to identify and evaluate barriers to, and facilitators of, best practices in:

1. Deep Vein Thrombosis (DVT) / Pulmonary Embolism (PE) prophylaxis for medical-surgical ICU patients, and
2. Fluid Resuscitation for medical-surgical ICU patients *without* liver disease, bacterial peritonitis, hepatorenal syndrome or therapeutic paracentesis.

This survey is not about trauma, neurosurgery or cardiac surgery patients. Survey responses will be used to develop interventions to facilitate the adoption of best practices in Alberta ICUs.

You are being asked to take part in this survey because you are a healthcare professional working in adult critical care in Alberta. Our survey can be answered in approximately **5 minutes**. There are no direct benefits and/or risks to your participation.

Survey respondents can choose to have their name entered into a draw for \$20 Starbucks gift cards (one name will be drawn per week; non-winners will remain in the draw each week).

Your participation in this survey is voluntary and you are free to stop at any time. Your responses will be kept confidential. Your de-identified data will be stored in a password-protected database, and responses will only be presented in aggregate. The survey has peer-reviewed funding and has received ethics approval from the University of Calgary. **Your decision to complete and submit this survey will indicate your consent to participate.** Should you decide to withdraw your participation before submitting the survey, your data will be deleted.

If you have questions about this survey or your participation, please contact:

Rebecca Brundin-Mather, Research Coordinator, at brundin@ucalgary.ca.

If you have questions about your rights as a participant, you may contact the University of Calgary Conjoint Research Ethics Board at (403) 220-7990. This office is not affiliated with the study team.

Thank you in advance for taking the time to complete the survey!

Kind regards,

Tom Stelfox, MD, PhD, FRCPC

Intensive Care Physician

Scientific Director, AHS, Critical Care Strategic Clinical Network

I agree to participate in this survey

I do **NOT** wish to participate in this survey (online-version)

Demographics

1. What is your professional group?

- ICU physician Nurse Clinician Pharmacist
 ICU resident Nurse Educator Other: _____
 ICU fellow Bedside Nurse

2. Approximately how many years have you worked in:

Health care Critical care

3. In which hospital(s) do you primarily work? (Select all that apply)

- Chinook Regional Hospital
 Foothills Medical Centre
 Grand Prairie QE II Hospital
 Grey Nuns Hospital
 Medicine Hat Regional Hospital
 Misericordia Hospital
 Northern Lights Regional Health Centre
 Peter Lougheed Centre
 Red Deer Regional Hospital
 Rockyview General Hospital
 Royal Alexander Hospital
 South Health Campus
 Sturgeon Community Hospital
 University of Alberta Hospital

DVT/PE Prevention

We are interested in your perceptions of the different forms of prophylaxes commonly used to prevent Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE) in medical-surgical ICU patients (not trauma, neurosurgery or cardiac surgery patients). Common prophylaxes include:

- Low molecular weight heparin (**LMWH** e.g., Enoxaparin, Dalteparin, Tinzaparin)
- Unfractionated heparin (**UFH**, regular Heparin)
- **Mechanical** prophylaxis (i.e., sequential compression devices)

We appreciate that practices vary across units and providers. For each of the following questions, please select the **best response option** OR **options**, to the best of your knowledge (more than one response option can be selected).

4. Which form(s) of prophylaxis is/are most effective at preventing:

	LMWH	UFH	Mechanical	Unsure
Deep Vein Thrombosis (DVT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary Embolism (PE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Which form(s) of prophylaxis is/are most cost-effective?

LMWH	UFH	Mechanical	Unsure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Which form(s) of *pharmacological* prophylaxis has/have the lowest risk of:

	LMWH	UFH	Unsure
Bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heparin Induced Thrombocytopenia (HIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. To what extent do you think best practices for preventing DVT/PE are followed in your ICU (i.e., the patient receives the right prophylaxis with the right dose at the right time)?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	Unsure
Never		Sometimes			Always		

Intravenous Fluid Resuscitation

We are now interested in your perceptions of the different types of intravenous fluids commonly used for fluid resuscitation (i.e., fluid boluses) in the ICU for medical-surgical patients, **excluding** patients with liver disease, bacterial peritonitis, or undergoing therapeutic paracentesis as they may have different fluid needs. Common resuscitation fluids include:

- **Human Albumin** (Albumin 5% or Albumin 25%)
- **Crystalloid solutions** (e.g., normal saline, ringers lactate, and plasma-lyte)

Again, we appreciate that clinical practices vary across units and providers. For each of the following questions, please select the **best response option** OR **options**, to the best of your knowledge (more than one response option can be selected).

8. Which form(s) of IV resuscitation fluid is/are most effective for resuscitation?

Albumin Crystalloids Unsure

9. Which form(s) of IV resuscitation fluid(s) is/are most cost-effective?

Albumin Crystalloids Unsure

10. Which form(s) of IV resuscitation fluid(s) has/have the lowest risk of:

	Albumin	Crystalloids	Unsure
Fluid overload (peripheral / pulmonary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contracting an infectious disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. To what extent do you think *best practices* for prescribing fluid boluses are followed **in your ICU** (i.e., the patient receives the right fluid with the right dose at the right time)?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7	Unsure
Never			Sometimes			Always	

Barriers to Best Practices

A number of ICU or 'systems' factors have been identified as potential barriers to best practices. We are interested in what you think are barriers **in your ICU** to prescribing:

1. LMWH over UFH for DVT/PE prophylaxis
2. Crystalloid solutions over Albumin for fluid resuscitation

12. Which of the following factors are current barriers in your ICU to prescribing...

	LMWH over UFH		Crystalloids over Albumin	
	Current Barrier	Unsure	Current Barrier	Unsure
An ICU culture with an unclear or slow process for practice change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough support from physicians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough support from nurses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough support from pharmacists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical leaders in my ICU with strong clinical preferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No clinical guidelines or orders sets in my ICU to guide the practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidelines exist in my ICU, but they do not recommend LMWH over UFH / crystalloids over albumin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient knowledge/understanding the evidence base for the practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
None of the above factors are current barriers in my ICU to prescribing....	<input type="radio"/>		<input type="radio"/>	
Please note any other factors that may be barriers to prescribing LMWH over UFH and/or crystalloids over albumin. Specify below.				

Strategies to Encourage Best Practices

A number of strategies have been identified as potential facilitators to changing clinical practice. We are interested in your perceptions of different strategies that have been used to encourage:

1. LMWH over UFH for DVT/PE prophylaxis
2. Crystalloid solutions over Albumin for fluid resuscitation

13. Which of the following strategies are currently used in your ICU to encourage...

	LMWH over UFH	Crystalloids over Albumin
1. On-site education (in-services, rounds, journal clubs, orientations)	<input type="radio"/>	<input type="radio"/>
2. Educational posters (in the unit)	<input type="radio"/>	<input type="radio"/>
3. Educational pocket cards	<input type="radio"/>	<input type="radio"/>
4. Email-based educational presentations	<input type="radio"/>	<input type="radio"/>
5. Web-based educational tools	<input type="radio"/>	<input type="radio"/>
6. Verbal reminders to physicians from pharmacists	<input type="radio"/>	<input type="radio"/>
7. Verbal reminders to physicians from bedside nurses	<input type="radio"/>	<input type="radio"/>
8. Pre-set orders	<input type="radio"/>	<input type="radio"/>
9. Computerized physician order entry & reminders	<input type="radio"/>	<input type="radio"/>
10. Web-based practice reminders	<input type="radio"/>	<input type="radio"/>
11. Daily goals checklist	<input type="radio"/>	<input type="radio"/>
12. Audit & feedback of prescription rates	<input type="radio"/>	<input type="radio"/>
13. A quality improvement team focusing on practice change	<input type="radio"/>	<input type="radio"/>
14. Participation in a quality improvement network	<input type="radio"/>	<input type="radio"/>
15. A local clinical leader championing the practice	<input type="radio"/>	<input type="radio"/>
16. Other strategy used. Please specify:	<input type="radio"/>	<input type="radio"/>
17. Other strategy used. Please specify:	<input type="radio"/>	<input type="radio"/>
NO strategies are currently being used in my ICU encourage this practice:	<input type="radio"/>	<input type="radio"/>

14. From the same list of strategies, please select the **5 best strategies** that you believe would work **in your ICU** to encourage:

(1) LMWH over UFH for DVT/PE prophylaxis

(2) Crystalloid solutions over Albumin for fluid resuscitation

(Select up to 5 strategies, regardless whether the strategy is used in your ICU or not)

Select up to 5 in each column

Strategy to change clinical practice	LMWH over UFH	Crystalloids over Albumin
1. On-site education (in-services, rounds, journal clubs, orientations)	<input type="checkbox"/>	<input type="checkbox"/>
2. Educational posters (in the unit)	<input type="checkbox"/>	<input type="checkbox"/>
3. Educational pocket cards	<input type="checkbox"/>	<input type="checkbox"/>
4. Email-based educational presentations	<input type="checkbox"/>	<input type="checkbox"/>
5. Web-based educational tools	<input type="checkbox"/>	<input type="checkbox"/>
6. Verbal reminders to physicians from pharmacists	<input type="checkbox"/>	<input type="checkbox"/>
7. Verbal reminders to physicians from bedside nurses	<input type="checkbox"/>	<input type="checkbox"/>
8. Pre-set orders	<input type="checkbox"/>	<input type="checkbox"/>
9. Computerized physician order entry & reminders	<input type="checkbox"/>	<input type="checkbox"/>
10. Web-based practice reminders	<input type="checkbox"/>	<input type="checkbox"/>
11. Daily goals checklist	<input type="checkbox"/>	<input type="checkbox"/>
12. Audit & feedback of prescription rates	<input type="checkbox"/>	<input type="checkbox"/>
13. A quality improvement team to focus on practice change	<input type="checkbox"/>	<input type="checkbox"/>
14. Participation in a quality improvement network	<input type="checkbox"/>	<input type="checkbox"/>
15. A local clinical leader to champion the practice	<input type="checkbox"/>	<input type="checkbox"/>
16. Other strategy. Please specify:	<input type="checkbox"/>	<input type="checkbox"/>
17. Other strategy. Please specify:	<input type="checkbox"/>	<input type="checkbox"/>

15. Finally, please provide any additional comments in the text box below.

Please select the check box(es) below to have your name entered in the Starbucks coffee card draws and/or to receive the study results.

- Yes, I would like my name entered in the coffee card draws.
- Yes, I would like to receive the results from this study.

My email address is:

N.B. E-mail addresses will be kept confidential and will not be used to contact you for any reason other than those noted above.

---End of Survey ---

Thank you for helping us improve care!

Please return completed surveys to:

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Foothills Medical Centre

OR

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