

BRANCH OUT

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NEW ORAL ANTICOAGULANTS

CATHY ROWE

As we all know, Canada's population is ageing rapidly and the number of orthopedic surgeries is increasing with this ageing population. The Canadian Joint Replacement Registry reported in 2007 of a 1-year increase of 17% in the number of hip and knee arthroplasty procedures performed. Patients undergoing total hip replacement (THR) or total knee replacement (TKR) surgery are at high risk of developing deep vein thrombosis (DVT). Major orthopedic surgery is associated with about twice the risk of Venous Thrombo-embolism (VTE) as major general surgery. As well, patients undergoing these orthopedic surgeries usually possess multiple risk factors for VTE, which include pre-surgery risk factors, intraoperative risk factors and postoperative risk factors, all of which are generally cumulative.

Post-operative VTE is associated with increased mortality and continues to be a risk after discharge from hospital. Symptomatic VTE events have been reported in 1.3-10% of patients within 3 months of surgery with the majority of these events occurring after discharge. Primary prevention of VTE is recommended for all patients undergoing major orthopedic surgery of the lower limbs. Thromboprophylaxis is the #1 ranked patient safety practice in hospitals, however The Global Orthopedic Registry has shown that 38% of Total Hip Arthroplasty and 31% of Total Knee Arthroplasty patients are not prophylaxed in accordance with American College of Chest Physicians (ACCP) guidelines. Types of non-compliance included omission of prophylaxis, inadequate duration, and wrong agent. The major reason appeared to be inappropriate stratification of VTE risk.

Current therapies for VTE prophylaxis have several reasons for being underutilized. Fear of bleeding complications and the need for frequent blood sampling are among the reasons that oral anticoagulant therapy is underutilized. Warfarin has a narrow therapeutic index and numerous drug and dietary interactions. For Low Molecular Weight Heparins (LMWH) there are injection related issues as well as cost factors. Because of these issues, the new oral anticoagulant therapies recently approved are causing much excitement in this field.

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AWARDS

Winner of the Apotex/CSHP-NL Branch Travel Grant to PPC

Congratulations to Cathy Rowe, Central Health. She was the winner of the Apotex/CSHP-NL Branch Travel Grant to PPC in January 2009.

Cathy's report, "New Oral Anticoagulants" appears in this issue of Branch Out. See below for Cathy's account of her experience at PPC.

Winner of the Bayer/CSHP-NL Branch Travel Grant to SES

Congratulations to George Skeard, Central Health. He was the winner of the CSHP-NL Branch Travel Grant to the 2009 CSHP Summer Educational Sessions.



Apotex/CSHP-NL Branch Travel Grant to PPC

I would like to extend my gratitude to CSHP-NL and Pharmaceutical Partners of Canada (this year's sponsor of the PPC travel grant) for the opportunity to attend the conference this year. The Professional Practice Conference is always a great educational experience as well as an ideal place to network with pharmacists from across the country. Many thanks!!

At this year's Professional Practice Conference, one of the main topics for the education sessions was the new oral anticoagulants that have come to the Canadian market. For my report I would like to summarize some of the information that was presented on these new agents.

The presentations I will reference are :

1. New Oral Anticoagulant Therapies: From Research into Clinical Practice by Jennifer Pickering, B.Sc.Pharm., ACPR, Pharmacist with the Cardiac and Vascular Program of Hamilton Health Sciences
2. Efficacy and Effectiveness: How New Anticoagulants will Enhance Compliance to ACCP Guidelines by Wm. Semchuk, M Sc, Pharm.D, FCSHP, Manager, Clinical Pharmacy and Research, Regina Qu'Appelle Health Region.

"The Professional Practice Conference is always a great educational experience"

NEW ORAL ANTICOAGULANTS (CON'T)

To date, there are two new oral anticoagulants approved for use in Canada. Dabigatran, marketed as Pradax by Boehringer-Ingelheim and Rivaroxaban which is marketed as Xarelto by Bayer. They are both approved in Canada for the prevention of VTE in patients undergoing elective THR or TKR. Rivaroxaban was approved by the Common Drug Review (CDR) in Dec 08. As of Jan. 09, Dabigatran was still not approved by the CDR. There is a third agent being investigated, Apixaban, but it is not approved for use in Canada at this time.

Comparison of the Features of New Oral Anticoagulants

Features	Rivaroxaban	Dabigatran Etxilate
Target	Xa	Ila
Molecular Weight	436	628
Prodrug	No	yes
Bioavailability (%)	80	6
Time to peak (h)	3	2
Half-life (h)	9	12-17
Renal Excretion (%)	65	80
Antidote	None	None

There were three major trials comparing the use of Dabigatran with Enoxaparin in orthopedic surgery: The RE-MODEL and REMOBILIZE trials which were in the Total Knee Replacement setting and RENOVATE which was in the Total Hip Replacement setting. From these studies, it was shown that Dabigatran is a well-tolerated alternative to enoxaparin for the prevention of VTE, with a similar safety profile. Also, it was concluded that initiation of dabigatran 1 to 4 hours after surgery/hemostasis likely improves outcomes and that a once daily, oral dose offers convenience without the need for coagulation monitoring.

Rivaroxaban has been studied in the RECORD series of trials – RECORD 1,2,3 & 4. RECORD 1 & 2 studied Hip surgery while 2 & 3 studied Knee surgery. Pooled results from these studies showed that Rivaroxaban was significantly more effective than enoxaparin for prevention of VTE-related events however there seems to be an increased risk of bleeding. Rivaroxaban provides the convenience of a fixed, oral dose without the requirement for coagulation monitoring.

As the use of these new agents are implemented, there are practical issues which must be addressed. The timing of the first dose, duration of therapy, drug interactions, body weight and renal function must all be assessed. For LMWH, the ACCP guidelines recommend that the first dose be administered either before or after surgery so should it be the same for the new oral anti-coagulants? The recommendations for Rivaroxaban is 6-8 hours post-surgery and 1-4 hours post-surgery for Dabigatran. If there is post-op nausea and vomiting this may have to be delayed. Both of the new agents are indicated for 35 days for patients undergoing THR and 14 days for TKR. With regards to drug

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MEMBERSHIP COMMITTEE

NOTICE TO MEMBERS

Over the past several years we were fortunate to offer members an Annual Book Drive, made possible through a generous \$5000 grant from Apotex as part of their PACE program. Apotex is no longer able to continue this grant and at this time we wish to extend our gratitude to them for their past support. Unfortunately, this means that we no longer have sufficient funds to continue the Annual Book Drive at its past capacity. At the Semi-Annual Meeting members brainstormed potential book options that would fit within our budget and be of value to members. Accordingly, we are pleased to offer all members a complimentary online subscription to RxFiles as the book choice for the 2009-10 membership year.

We are interested in hearing any ideas you may have regarding other avenues to increase our Branch's Annual Book Drive budget. Please send along your comments and/or suggestions to Tiffany Fahey @ tiffanyannfahey@hotmail.com. We look forward to hearing from you concerning this issue.

We wish to thank all members who renewed their memberships and welcome all new members to our Branch.

Membership Committee, CSHP NL Branch

Tiffany Fahey, Chair

Lisa Bishop

2009 EARLY BIRD MEMBERSHIP DRAWS

The Membership Committee is pleased to announce the winners of the 2009 early-bird membership draws.

1 Complementary membership:

Lynn Hartery

2 draws for \$150:

Bert Warr

Amanda Ropson

2 draws for \$100:

Esther Pippy

Dorothy Ainsworth



The Membership Committee would like to congratulate all the winners. CSHP values every member of the society and we are looking forward to your continued support again next year. If you have any questions or comments, please contact us.

Membership Committee, CSHP NL Branch

Chair - Tiffany Fahey: tiffanyannfahey@hotmail.com

Lisa Bishop: ldbishop@mun.ca

NEW ORAL ANTICOAGULANTS (CON'T)

interactions, Rivaroxaban is contraindicated in patients receiving concomitant systemic treatment with strong inhibitors of both CYP 3A4 and P-glycoprotein such as ketoconazole, itraconazole, voriconazole or ritonavir. Dabigatran etexilate is not metabolized by the cytochrome P450 system however is a substrate for the efflux P-glycoprotein transporter and as such potent inducers (rifampin, Saint John's wort) or inhibitors (verapamil, clarithromycin, quinidine) of p-glycoprotein may alter serum dabigatran levels. Neither of these medications are recommended for use in patients with severe renal impairment (CrCl < 30 ml/min). In patients with moderate impairment (CrCl 30-50 ml/min), Dabigatran is to be started at a lower dose, while Rivaroxaban is to be used with caution, especially if patient is on concurrent medications which could increase the levels. Body weights outside of what is considered average affects drug exposure in both drugs. Low body weights (< 50kg) increases the drug exposure by approx. 25%, while larger weights (>120kg) has 20% less drug exposure.

As the studies show, the use of these new agents is promising in helping us improve patient outcomes in the prevention of VTE. Studies are also being conducted for their use in Atrial Fibrillation and stroke prevention. These drugs may help achieve a sort of balance: an effective anticoagulant with an acceptable bleeding profile – in an oral, fixed dose that is free of coagulation monitoring. This should result in more patients being treated appropriately and an enhanced quality of life.

UPCOMING EVENTS

- CSHP NL Branch Annual General Meeting
During the PANL 2009 Conference
Hotel Gander, Gander
October 3, 2009. 4:30-5:30 pm.
- PANL 2009 Annual Pharmacists Conference
Hotel Gander, Gander
October 2-4, 2009
- Professional Practice Conference 2010
Toronto, Ontario
January 30–February 3, 2010



CSHP'S NATIONAL PATIENT SAFETY CAMPAIGN – 2009

On June 1st, CSHP launched the latest national advocacy campaign on Patient Safety. The purpose of this campaign is to reach out to stakeholders, including policy makers, hospital and health region leaders, and pharmacy educators, with the following goals:

- To increase awareness of patient safety and the role of the hospital pharmacist in a multidisciplinary team; and
- To increase awareness of the role of hospital pharmacists as leaders in patient safety as they relate to required operational practices and medication management standards of Accreditation Canada .

Pharmacists have always been concerned about medication safety. However, in the last decade, the importance of medication safety has been elevated through multiple publications, patient advocacy organizations and recently by the development of new medication management standards by Accreditation Canada. It has been demonstrated that hospital pharmacists play an important role in medication safety. In times of scarce pharmacist resources, there is now a focus on identifying those pharmacy activities that have the greatest impact on patient safety and finding the balance of resources and skill mix to provide these services. Key messages of this campaign are as follows:

- Clinical pharmacy services have been associated with reduced medication errors or patient mortality rates in hospitals such as:
 - o Pharmacist participation on medical rounds
 - o Pharmacist-provided drug use evaluation services
 - o Pharmacist-provided in-service education
 - o Pharmacist-provided adverse reaction management
 - o Pharmacist participation on the Code Blue Team
 - o Pharmacist-provided protocol development and management
 - o Pharmacist-provided admission medication reconciliation
 - o Pharmacokinetics monitoring services
 - o Pharmaceutical care
- Hospital Pharmacists will take a leadership role in implementing and maintaining the new Accreditation Canada medication management standards.

Stakeholders of interest for this campaign include Directors of Pharmacy, provincial health ministers and bureaucrats, hospital and health authority chief executive officers, directors of risk management, and patient safety officers/committees, advocacy associations, regulatory bodies, patient safety organizations, industry associations, and pharmacy schools. A letter highlighting the

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CSHP'S NATIONAL PATIENT SAFETY CAMPAIGN – 2009 (CON'T)

evidence to support the role of hospital pharmacists in patient safety was sent along with CSHP's latest background paper entitled "*Hospital Pharmacists—Enhancing Quality and Safety in Medication Use*", the new CSHP position statement on Medication Reconciliation, and a second background paper entitled "*Hospital Pharmacists 101 – Direct Patient Care and Beyond*", which outlines what hospital pharmacists do. This was a non-media campaign.

The campaign letters and background documents are available to all members to access at any time on the CSHP website in the Members Area / Document Resource Centre / Advocacy / Patient Safety area. In addition, the Advocacy Committee has prepared a powerpoint presentation, which is available to branches who wish to hold follow up meetings with stakeholders to reinforce the campaign messages.

Members are encouraged to share the campaign messages with their colleagues, supervisors, managers, other health care professionals, and patients. The NL branch executive is pleased to meet with any group who would like to discuss the campaign and how pharmacists in this province can play the important role we are trained to do in promoting and protecting patient safety.

"the important role we are trained to do in promoting and protecting patient safety"

If you have any questions or comments about the campaign, please contact your Advocacy representative, Debbie Kelly (dvkelly@mun.ca).

NL BRANCH EXECUTIVE 2009-2010

Ashley Layden – President
Leslie Phillips – Past-president
Tiffany Fahey – Delegate
Justin Peddle – Treasurer
Amy Conway – Secretary
Lisa Bishop – Senior Advisor
Debbie Kelly – Advocacy Representative
TBA – Student Representative

MEMBER PROFILE—BERTRAM C.J. WARR JR.

Where do you work?

Labrador Health Center, Labrador-Grenfell Health

Tell us about your family – wife, children, pets etc?

My wife is Cindy she is from Brighton, NL. My children are Kayla, Nicholas and Katherine and we have 3 grand children Christopher, Jacob and Brady. We have a pet cat Riley.

Where did you go to pharmacy school & when did you graduate?

College of Trades and Technology 1980-83

Why did you decide to become a pharmacist?

My father and uncle are both pharmacists.

Why did you choose hospital pharmacy and what do you like most about being a pharmacist?

I first started working in hospital pharmacy in 1995 and I just like the hands on approach and use of your pharmacy knowledge that are entailed in this type of practice. It seems more challenging than retail and even though I still do work some retail hours I find it more satisfying than the retail environment.

What changes have you seen in pharmacy since you started your career?

When I graduated computers were just coming on the scene as the first pharmacy I worked at was still using the old electric typewriters. Now it is very uncommon to go to a pharmacy that is not computerized. The other advent of technology that plays a big role in today's pharmacy practice is the internet, and online adjudication of insurance claims.

What tips do you have in helping others develop their role as a pharmacist?

Always keep your primary goals of helping people and helping pass along pertinent information on drug use and side effects to the appropriate people.

Do you have a clinical practice site, and if so, what is your role?

I am more of an administrative person at the Labrador Health Center but in recent times I have been filling in in clinical/distributive roles due to staff shortages.

What does your daily practice involve?

We prepare chemo meds for the Lake Melville and North Coast, providing in-patient services to a 28 bed acute care teaching hospital and also providing medications to approximately 56 patients from Goose Bay to Lab City.

What are your interests outside of pharmacy?

I used to play a lot of Ice Hockey but find now that age and time constraints limit this activity, I enjoy staying home with my family, reading, going for walks, and am also involved with my hobbies of Numismatics and Philately.



**NEWSLETTER OF THE NEWFOUNDLAND AND
LABRADOR BRANCH CSHP**

c/o PANL
85 Thorburn Road
St. John's, NL
A1B 3M2



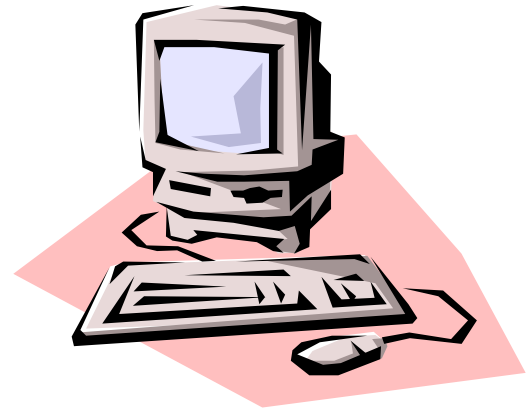
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pharmacy • Inspiring practice excellence • Fostering leadership and
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Caption describing picture or graphic.

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