Managing Traditional and Contemporary Antithrombotic Therapy Principles and Practice: Practice Based Program

31.5 Contact Hours including 3.0 Hours in Antithrombotic Medication Safety

October 18-19, 2013
St. John’s University, Bartilucci Center, Fresh Meadows, NY

Practice Based Certificate Program with medication safety program developed by the New York State Council of Health-system Pharmacists, is supported by independent educational grants from Greater NY Hospital Association Services, Inc.

Faculty
Lisa Phillips, BS, PharmD, CACP, BAAP
Associate Professor of Pharmacy, St. John Fisher College, Rochester, NY
Assistant Professor of Medicine and Clinical Pharmacist, Upstate Medical University, Syracuse, NY

Kimberly Zammit, BS, PharmD, BCPS, FASHP
Clinical Pharmacy Coordinator, Kaleida Health Buffalo General, Buffalo, NY

Karen Whalen, BS, BCPS
Drug Information Pharmacist, St. Joseph’s Hospital, Syracuse, NY

Debra B. Feinberg, JD, BS, FASHP
Executive Director, NYSCHP
Assistant Adjunct Professor, ACPHS, Albany, NY
Intended Audience
This educational activity provides information suitable for pharmacists who desire to improve and update their knowledge of anticoagulant and anti-platelet drug therapy and those providing antithrombotic medication management.

The key components involve: Patient assessment; an understanding of hemostasis and the mechanisms of action of anticoagulant and anti-platelet drugs; a detailed focus on factors which influence therapy and knowledge and application of current guidelines. 3 credits of strategies to reduce medication errors and promote medication safety.

Statement of Need: Patients’ receiving antithrombotic therapy continues to increase dramatically. This certificate program is a comprehensive program designed to provide pharmacists with the basic knowledge and skills necessary to care for patients receiving antithrombotic therapies. Certification in antithrombosis is intended to optimize the provision of care provided by a pharmacist clinician with the outcome being improved patient care, minimization of adverse outcomes and improved patient satisfaction.

Learner's Gap
This activity will assist pharmacists in their understanding of antithrombotic therapy by providing them with basic and advanced knowledge in antithrombosis by: differentiating the pharmacology, pharmacokinetics and pharmacodynamics of UFH, LMWH, fondaparinux, argatroban, bivalirudin, warfarin, new oral anticoagulants (NOAC)(dabigatran, apixaban, rivaroxaban); differentiating the pharmacology, pharmacokinetics and pharmacodynamics of anti-platelet drugs; identifying appropriate dosing and monitoring of antithrombotic agents; treating arterial and venous thrombosis; using patient characteristics to discriminate optimal therapeutic strategies; managing bleeding complications.

Activity Goals: The goals of this educational activity are to:
Compare and contrast the pharmacokinetic and pharmacodynamic properties of antithrombotic agents and determine their current place in therapy.
Provide a comprehensive understanding of the anticoagulation process.
Provide an understanding of the pharmacology of all anticoagulants and antiplatelets discussed in the program.
Control and manage adverse drug reactions during the anticoagulation process.
Discuss and review both typical and challenging antithrombotic management in a case format.
Strategies to reduce anticoagulant medication errors and promote medication and patient safety.

Learning Objectives of the Self Study Course - Comprehension of these objectives is necessary to maximize learning during the live session. The self study component is meant to ensure that all participants have a basic understanding and comprehension of the pharmacology, pharmacokinetics, and pharmacodynamics of antithrombotic agents; including a working knowledge of drug dosing and drug-drug interactions so that advanced principles can be applied during the live program.
At the conclusion of the self study, participants should be better able to:
• Describe and explain the basic aspects of the coagulation cascade
• Define thrombogenesis and hemostasis.
• Describe hemostatic mechanisms and apply this knowledge to patient management
• Compare and contrast the pharmacology, pharmacokinetics and pharmacodynamics of anticoagulant agents:
  VKA
  DTI's
  Heparin and heparin like agents
  Anti-Xa agents
• Compare and contrast the pharmacology, pharmacokinetics and pharmacodynamics of the antiplatelet agents:
  Aspirin,
  P2Y12 inhibitors
  Cilostazol
  Dipyridamole/ASA
  IIB/IIIa inhibitors
• Compare and contrast the pharmacology, pharmacokinetics and pharmacodynamics of the thrombolytic agents.
  Alteplase
  Tenecteplase
• Describe the basics of warfarin dosing and monitoring.
• Define the current recommendations for indication-specific intensity and duration of warfarin therapy.
• Identify risk factors for thromboembolism.
• Discuss therapeutic treatment strategies for the prevention and treatment of venous thromboembolism.
• Identify the anticoagulation needs of atrial fibrillation patients.
• List the drug therapies needed in different stroke stages; acute stroke, peri-stroke period and secondary prophylaxis.
• Describe the pathophysiology of atherosclerosis and acute coronary syndromes and relate this back to the antithrombin and antiplatelet agents used to manage this disorder.
• Identify the onset of heparin induced thrombocytopenia and develop treatment strategies.
• Interpret strategies used to manage hemorrhagic complications associated with anticoagulants.
Learning Objectives of the Live Seminar
At the conclusion of the live seminar, participants should be better able to:

1. OVERVIEW OF ACCP GUIDELINES / INDICATIONS FOR ANTITHROMBOTIC THERAPY
   • Describe guidelines directed at improving the safety and efficacy of antithrombotic therapy.
   • List the indications for antithrombotic therapy based on the recommendations of the:
     American College of Chest Physicians (ACCP)
     American College of Cardiology/American Heart Association (ACC/AHA)

2. MANAGEMENT OF ARTERIAL THROMBOSIS
   **Atrial Fibrillation**
   • Discuss dabigatran, rivaroxaban and apixaban compared to warfarin; including understanding information from the pivotal clinical trials, ACCP CHEST Guidelines (2012) and AHA/ACC Atrial Fibrillation Guidelines.
   • Develop anticoagulation or antiplatelet treatment plans for atrial fibrillation patients based upon the patient’s risk factors (CHADS2 score), need for elective cardioversion or following cardiac surgery.

   **Stroke**
   • Discuss the role of thrombolysis, UFH/LMWH, antiplatelet and oral anticoagulants in acute ischemic stroke patients and for secondary stroke prevention.
   • Apply current literature and guidelines to develop treatment plans for ischemic stroke patients (cardio- and noncardioembolic).

   **Coronary Artery Disease**
   • Compare and contrast the pharmacologic characteristics and therapeutic role of the various anti-platelet, anti-thrombin and fibrinolytic agents used to prevent and treat acute and chronic arterial thrombotic events.
   • Develop anticoagulation and anti-platelet treatment plans for the management of patients with acute coronary syndromes with and without percutaneous coronary intervention.
   • Develop chronic anticoagulation and anti-platelet treatment plans for the management of patients with coronary artery disease.

3. MANAGEMENT AND PREVENTION OF VENOUS THROMBOEMBOLISM (VTE)
   **Prevention**
   • Discuss current approaches to identifying candidates for deep vein thrombosis prophylaxis strategies.
   • Identify and discuss the changes put forth in the 2012 Chest anticoagulation guidelines that address VTE prevention in both orthopedic and medical patients.

   **Treatment**
   • Review the evidence addressing agent selection, intensity and duration of therapy.
   • Analyze the ACCP 2012 evidence based recommendations for management of heparin and warfarin therapy as it relates to treatment of VTE.
   • Describe the role of thrombolysis in the management of VTE

4. PERIPROCEDURAL MANAGEMENT
   • Determine and identify risk stratification of patient into low, moderate, or high thrombotic risk.
   • Define ACCP guidelines for peri-procedural management of warfarin therapy.
   • Discuss “bridging” therapy with UFH, LMWH and dosing regimens of each.

5. IMPROVING THE SAFETY OF ANTITHROMBOTIC THERAPY (MEDICATION SAFETY)
   **Bleeding complications**
   • Develop treatment plan for patient on Warfarin needing reversal (based on patient circumstances and INR).
   • Develop a treatment plan for patients needing reversal of other agents (e.g. heparin, fondaparinux, DTI’s, etc).

   **Heparin-induced thrombocytopenia (HIT)**
   • Review the pathophysiology of HIT development.
   • Discuss the clinical-pathologic diagnosis of HIT.
   • Develop anticoagulation treatment plans for management of HIT in various patient settings (e.g. acute renal failure, hepatic disease, etc).
# Live Seminar Agenda

## Day 1

<table>
<thead>
<tr>
<th>TIME</th>
<th>Duration</th>
<th>TOPIC</th>
<th>SPEAKERS</th>
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<tbody>
<tr>
<td>7:30AM – 8AM</td>
<td>30 min</td>
<td>REGISTRATION &amp; BREAKFAST</td>
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<tr>
<td>8:00AM-8:10AM</td>
<td>10 min</td>
<td>WELCOME</td>
<td>Deb Feinberg, JD, BS Executive Director, NYSCHP</td>
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<td>ARTERIAL THROMBOSIS</td>
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<tr>
<td>8:10AM-10:10 AM</td>
<td>2 hrs</td>
<td>ATRIAL FIBRILLATION</td>
<td>Karen Whalen, BS, BCPS</td>
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<td>10:10AM – 10:20AM</td>
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<tr>
<td>10:20AM-12:00PM</td>
<td>1 hr 50 min</td>
<td>STROKE</td>
<td>Karen Whalen, BS, BCPS</td>
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<tr>
<td>12:00PM-1:30PM</td>
<td>1 hr 30 min</td>
<td>LUNCH</td>
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<td></td>
<td>IDENTIFYING &amp; MANAGING ADVERSE DRUG EVENTS</td>
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<tr>
<td>1:30PM–3:00PM</td>
<td>1 hr 30 min</td>
<td>REVERSAL OF AGENTS/MANAGEMENT OF BLEEDING)</td>
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<tr>
<td>3:00PM-4:30PM</td>
<td>1 hr 30 min</td>
<td>HEPARIN INDUCED THROMOCYTOPENIA (HIT)</td>
<td>Lisa Phillips, PharmD, BS, CACP</td>
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<td>4:30PM-4:45PM</td>
<td>15 min</td>
<td>BREAK</td>
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<td>CORONARY ARTERY DISEASE (CAD)</td>
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<td>4:45PM–6:00PM</td>
<td>1 hr 15 min</td>
<td>CHRONIC CAD I</td>
<td>Kim Zammit</td>
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<td>6:00PM</td>
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<td>CLOSING REMARKS</td>
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## Day 2

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<tr>
<td>7:30AM – 8AM</td>
<td>30 min</td>
<td>BREAKFAST</td>
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<tr>
<td></td>
<td></td>
<td>VENOUS THROMBOSIS</td>
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<tr>
<td>8:00AM-9:15AM</td>
<td>1 hr 15 min</td>
<td>PROPHYLAXIS OF VTE</td>
<td>Lisa Phillips, PharmD, BS, CACP</td>
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<td>9:15AM—10:30AM</td>
<td>1 hr 15 min</td>
<td>TREATMENT OF VTE</td>
<td>Lisa Phillips, PharmD, BS, CACP</td>
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<td>CORONARY ARTERY DISEASE (CAD)</td>
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<tr>
<td>10:45 AM-11:00AM</td>
<td>15 min</td>
<td>BREAK</td>
<td>Lisa Phillips</td>
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<tr>
<td>11:00AM – 12:15PM</td>
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<td>ACUTE CAD</td>
<td>Kim Zammit, PharmD, BS, BCPS, FSHP</td>
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<td>BRIDGING AND SURGERY</td>
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<tr>
<td>12:15 PM-1:30PM</td>
<td>1 hr 15 min</td>
<td>BRIDGING</td>
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<tr>
<td>1:30PM</td>
<td></td>
<td>LUNCH and EXAM DISSEMINATION</td>
<td>All Faculty</td>
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INSTRUCTIONS

The Anticoagulation Practice Based Program is conducted in two parts: the self study awarding 15 hours (1.5 CEUs) and the live training seminar awarding 16.5 hours (1.65 CEUs) which includes 3.0 hours in strategies to reduce medication errors.

To earn a Certificate of Achievement, participants must successfully meet the following requirements:

1. Read the Self Study Materials in their entirety and successfully complete the Self Study Assessment/Examination. A score of 70% or better is required. A copy of the participant’s completed self-study guide must be submitted on the 1st day of the live programming. Participants should keep a copy for themselves to use as a study guide for the open book examination.

2. Attend Seminar, participate in practice-based case learning and successfully complete the 2-hour open book final exam. A score of 70% or better is required. Open book exam means any reference (i.e., electronic, program notes or any book) can be used to answer the final exam questions. The final exam is not a collaborative exam and must be completed independently. Examination answer sheet must be either emailed to jbleyl@nyschp.org or fax to NYSCHP at 518-456-9319 no later than Sunday, October 27, 2013.

A Certificate of Achievement is awarded to participants who successfully complete all program requirements. Certificate will be mailed within 6 weeks of the date of the program.

Credit Designation:

The New York State Council of Health-system Pharmacists is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

The home study learning portion of this Practice Based Program is approved for 15 hours (1.5 CEUs) of continuing education credit. ACPE Universal Activity Number: 0134-0000-12-123-H01-P (Initial release date: 11/2/2012; expiration 11/2/2015)

Live training seminar is approved for 16.5 hours (1.65 CEUs) of continuing education credit. ACPE Universal Activity Number is 0134-0000-12-124-L01-P (Initial release date: 11/2/2012; expiration date 11/2/2015). This total of 16.5 contact hours includes 3.0 hours in Medication safety: Improving the Safety of Antithrombotic Therapy

ACPE Universal Activity Number: 0134-0000-12-127-L05-P

Practice Bases Program: Universal Activity Number: 0134-0011

Managing Traditional and Contemporary Antithrombotic Therapy: Principles and Practice: Practice Based Certificate Program was developed by the New York State Council of Health-system Pharmacists and supported in part by independent education grants from Greater NY Hospital Association Services, Inc.

Conflict of Interest Statement:
The “Conflict of Interest Disclosure Policy” of New York State Council of Health-system Pharmacists requires that faculty participating in any CE activity disclose to the audience any relationship(s) with a pharmaceutical or equipment company. Any presenter who has disclosed relationships may create a conflict of interest with regard to their contribution to the activity and will not be permitted to present. New York State Council of Health-system Pharmacists also requires that faculty participating in any CE activity disclose to the audience when discussing any unlabeled or investigational use of any commercial product, or device, not yet approved for use in the United States.

FEES: $550 NYSCHP Members; $800 Nonmembers; $500 Residents/Students

Register at www.nyschp.org

After September 18, 2013 a $50 late fee will be added to the registration. Deadline to register: October 11, 2013. We reserve the right to cancel the program if minimum enrollment is not attained. ***Program subject to change and cancellation if the minimum enrollment does not exceed 40 registrants*** Due to the proprietary nature of the materials no refunds will be allowed after September 18, 2013.

Home Study Materials. You will receive the home study materials upon registration for the program. You must complete the home study reading, study guide and exam by October 11, 2013. Fax your home study answer sheet to 518-456-9319 or email to jbleyl@nyschp.org no later than October 11, 2013 and bring a copy of your self study guide to the program to hand in at the beginning of the program.

The home study portion must be completed in order to participate in the live program. All components of the program must be completed to receive a certificate of achievement.
Biographies and Disclosures

Lisa Phillips, PharmD
Dr Phillips is an Associate Professor of Pharmacy Practice at St John Fisher College and an Assistant Professor of Medicine and Clinical Pharmacist at Upstate Medical University. Her primary responsibilities include didactic and clinical teaching for pharmacy students at St John Fisher College. At her clinical practice site, at Upstate Medical University Internal Medicine Clinics, she provides Clinical Pharmacology consultation for Internal Medicine patients and serves as educator on pharmacology related issues to the medical residents and attending staff in the ambulatory care clinics. She works collaboratively with the medical staff education office to develop innovative teaching opportunities for the medical residents. Her research interests focus on antithrombosis pharmacology and monitoring as well as how pharmacy involvement in ambulatory care clinics can assist with optimizing medication management.  

Lisa Phillips has disclosed that she has had no financial arrangement or affiliation with commercial interests during the 12 months directly preceding this CME activity.

Debra B. Feinberg, BS, JD
Debra B. Feinberg is a New York Registered Pharmacist who received her Bachelor of Science degree in Pharmacy from Albany College of Pharmacy and her Juris Doctor from Albany Law School. Debra is the Executive Director of the New York State Council of Health-system Pharmacists, an association for hospital and health-system pharmacists. She is also an Assistant Adjunct Professor at Albany College of Pharmacy and Health Sciences teaching Jurisprudence. Debra was named a Fellow of the American Society of Health System Pharmacists in 2010.

Debra Feinberg has disclosed that she has had no financial arrangement or affiliation with commercial interests during the 12 months directly preceding this CME activity.

Kimberly Zammit, PharmD, BCPS
Kimberly Zammit earned her B.S. in Pharmacy, University at Buffalo. She completed an ASHP-accredited Hospital Pharmacy Residency at Buffalo General Hospital and earned her Doctor of Pharmacy from the University at Buffalo. Kim is the Clinical Coordinator, Critical Care and Cardiology at Buffalo General Hospital. Her clinical expertise encompasses the areas of nutrition support, anticoagulation, cardiology and critical care. As a clinical coordinator she has overseen the development of numerous treatment protocols, educational programs and pharmacist-driven therapeutic intervention programs. She is the program director for Kaleida’s PGY-2 Critical Care Pharmacy residency as well as a preceptor for its PGY-1 program. In addition to her role as preceptor for the University at Buffalo School of Pharmacy she provides lectures and has participated in curriculum and experiential program development. She served as president and on the board of directors of the New York State Council of Health-system Pharmacists (NYSCHP). Her professional accomplishments have gained her peer recognition as the recipient of the NYSHCP Pharmacy Achievement Award, the Western New York Society of Health-system Pharmacist Robert M. Cooper Memorial Award and as an honorary member of Phi Lambda Sigma Leadership Society. In 2009 she was named fellow of the American Society of Health-system Pharmacists.

Kimberly Zammit has disclosed that she has had no financial arrangement or affiliation with commercial interests during the 12 months directly preceding this CME activity.

Karen Whalen, BS, BCPS
Karen Whalen earned a Bachelor of Science Pharmacy degree from SUNY at Buffalo School of Pharmacy and has been a Board Certified Pharmacotherapy Specialist since 1997. Karen is presently the Drug Information Pharmacist at St. Joseph’s Hospital in Syracuse, NY. She holds the secretary position on the P & T Committee and is a Preceptor to PGY-1 Pharmacy Practice Residents. Karen has worked with the Preventing Negative Outcomes from Anticoagulation Therapy Program instituted in September 2009 as a result of an $189,000 grant from the New York State Attorney General’s settlement with Cardinal Health, Inc. Karen Whalen is a member of the Editorial Board for the American Journal of Health-System Pharmacy and is a reviewer for the Pharmacotherapy Self-Assessment Program (PSAP IV – VII) and the journal Pharmacotherapy. Karen Whalen has had posters presented at ACCP, ASHP, NYSCHP and IDSA meetings.

Karen Whalen has disclosed that she has had no financial arrangement or affiliation with commercial interests during the 12 months directly preceding this CME activity.

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