

# ANTICOAGULATION FORUM

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## 10th National Conference May 7-9 in San Diego

The Anticoagulation Forum's 10th National Conference on Anticoagulation Therapy is just three months away on May 7-9 at the Manchester Grand Hyatt San Diego, CA. The conference provides unique opportunities to meet with colleagues from around the world with wide-ranging anticoagulation research interests and expertise in the diagnosis and treatment of thrombotic disorders. If you haven't already done so, please register today! Registration information can be found at our website [www.acforum.org](http://www.acforum.org).

We have an outstanding roster of speakers presenting at the conference, including:

David A. Garcia, MD • Jack Ansell, MD • Dale Bratzler, DO  
Henry Bussey, PharmD • James Douketis, MD  
Elaine Hylek, MD • Alan Jacobson, MD • Amir Jaffer, MD  
Scott Kaatz, DO • Edward Libby, MD Wendy Lim, MD  
Michael Makris, MD • Greg Maynard, MD  
Edith Nutescu, PharmD • Lynn Oertel, RN, CACP  
Kate Phillips, PharmD, CACP • Darryl Rich, PharmD  
Alex Spyropoulos, MD • Jeffrey Tice, MD Jeffrey Weitz, MD  
Ann Wittkowsky, PharmD, CACP

In addition to the general sessions, there will be a patient safety goals symposium, Meet the Expert small group sessions, poster presentations of original research, and exhibitors. We have also added a Saturday morning Meet the Expert Breakfast that provides an informal opportunity for attendees to ask questions and share ideas with speakers and colleagues over breakfast. The session is open to all attendees, but seating capacity is limited and is on a first-come, first served basis. Please be sure to take advantage of this wonderful networking opportunity by registering now.

We look forward to seeing everyone in San Diego! If you have any questions regarding the conference, please contact Liz Goldstein in the Anticoagulation Forum office at 617-454-1004 or [egoldstein@acforum.org](mailto:egoldstein@acforum.org). ■

## Consensus Guideline Developed for Patient Self-Testing

*Geno Merli, MD  
Chief Medical Officer and Senior Vice President*

*Thomas Jefferson University Hospital  
Philadelphia, PA*

In February of 2008 a group of 24 of the nation's leading experts in oral anticoagulation management and reimbursement, gathered to develop a guideline for healthcare professionals to provide a practical, seamless process for the implementation of patient self-testing (PST). The group was comprised of cardiologists, internist, family physicians, hematologist, RNs, Advanced Practice Nurses, PharmDs, health plan administrators and reimbursement consultants.

The goal was to produce a consensus guideline that addressed the practical aspects of implementing patient self-testing for warfarin management into routine medical practices. The consensus recommendations were published as a supplement to the peer-reviewed journal, **Managed Care**, entitled, "Oral Anticoagulation Patient Self-Testing: Consensus Guidelines for Practical Implementation" The guidelines were published in the October 2008 issue.

The consensus guideline provides a comprehensive overview of the current challenges facing health care professionals that manage patients on chronic warfarin therapy and delve into the issues involved with prescribing PST to properly selected and suitably trained patients.

The specific topics include:

- **Current Challenges in Managing Patients on Warfarin**  
The need for oral anticoagulation therapy is expected to increase
- **Rationale for Wider Implementation of PST**  
Summary of Medicare's review of clinical trails
- **PST Related Cost and Reimbursement**  
Cost-savings and reduction in prescription costs, Practitioner options, Cost-effectiveness, Recent expanded coverage by CMS

*continued on page 3*

# NATT Update

*Alan P. Brownstein, MPH - NATT Executive Director*

## **NATT LAUNCHES CHAPTER DEVELOPMENT STRATEGY**

- NATT's Board approved a Chapter Development Plan ([http://stoptheclot.org/documents/Chapter\\_Development\\_Plan.pdf](http://stoptheclot.org/documents/Chapter_Development_Plan.pdf) ) and we already have 2 chapters (North Carolina and Minnesota) in the works and others in the queue. It is essential that NATT develops a nationwide infrastructure of chapters, starting first in key markets in all regions of the U.S. These chapters will be able to work closely with AC clinics to provide educational programs, support groups, public awareness, advocacy and fund raising events. You can play a vital role in helping NATT establish chapters in your state - identify patient leaders or speakers for educational events, distribute NATT educational materials, participate on fundraisers, serve on chapter board or chapter medical advisory board. To learn more about NATT chapters go to [www.stoptheclot.org](http://www.stoptheclot.org) and click chapters on the navigation bar.

**FIRST NATT WASHINGTON DAY EVER** -By the time you read this NATT will have held its first ever Washington Day (February 25-26) joining forces with the National Hemophilia Foundation (NHF) to advocate on behalf of all Americans affected by clotting and bleeding disorders. We will walk the Halls of Congress, meet with elected officials and put a face on issues that affect people with clotting disorders. We are delighted that Liz Goldstein will be joining us. Through high quality effective grassroots advocacy we will seek congressional support for public , patient and healthcare provider awareness and education and DVT/PE screening initiatives and support for the Surgeon General's Call to Action to Prevent DVT/PE. If by chance you receive this before February 25 and wish to participate call the NATT office at (877) 4 NO CLOT (466 2568), even though it is past the formal registration period.

**NATT-NC STOP THE CLOT™ FORUM** had 80 participants on November 22, 2008 at the Victorious Praise Church in Durham, NC. This program was supported by the UNC Thrombophilia program, in collaboration with two Radio One stations (Foxy FM and The Light). NATT benefited from Radio One airtime, primarily targeted to the African American community to shine light on blood clot risk to heighten awareness, as well as promote the Durham Stop the Clot™ Forum.

A moving presentation was given by Le Keisha Ruffin, who described the frustrating experience she had with the healthcare system shortly after giving birth to her daughter. Medical professionals dismissed her symptoms and complaints as insignificant for weeks, as an insidious and life-threatening blood clot was forming. Her "clot" story is not uncommon, which is the reason NATT continues to sound an alarm about the dangers of blood clots and clotting risk,

## **Anticoagulation Forum Board of Directors**

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Seattle, WA

without spreading undue alarm. Le Keisha represents NATT's patient constituency, and had also presented her compelling story on September 15, 2008, as part of the launch of the Surgeon General's Call to Action.

**NATT-MN INAUGURATES FIRST STOP THE CLOT™ SUPPORT GROUP** November 6, 2008 marked the first meeting of the Stop the Clot™ support group facilitated by Pat Koppa and Bunnie Jones. A second meeting that addressed the "What Ifs of Warfarin" took place on January 13, 2009. The December meeting was preempted by Minnesota wintry conditions. Joni Osip, RN, MS is the liaison from the University of Minnesota Medical Center for this support group. NATT has produced the first draft of a Facilitator's Manual for conducting support groups.

The Stop the Clot Forums, the support group, and the Support Group Facilitator's Guide are all done in collaboration with the Centers for Disease Control (CDC) as part of its cooperative agreement with NATT.

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## Case Vignette

### BRIDGE THERAPY:

#### Full Intensity vs Prophylaxis for VTE

Lynn Oertel, RN, CACP  
Ann Wittkowsky, PharmD, CACP, FASHP, FCCP

#### The Call

The Pre-op Surgical Services nurse calls the anticoagulation clinic for recommendations around management of oral anti-coagulation in a patient undergoing tracheotomy with anticipated post-operative hospital admission.

#### The Case

ML is a 49 year old female with advanced amyotrophic lateral sclerosis (ALS; Lou Gehrig's Disease). She has a history of left lower extremity deep vein thrombosis two years ago, likely associated with immobility, and since then, has been anticoagulated with warfarin for VTE prevention. She is wheelchair-bound, has a permanent feeding tube, and communicates through eye movement. Her family has decided to place a permanent tracheostomy to support long-term mechanical ventilation.

#### The Problem

Oral anticoagulation must be discontinued prior to the procedure to avoid bleeding complications. Although her DVT history is relatively remote, this history, her immobility, and the surgical procedure itself all increase the risk of recurrent VTE. VTE prophylaxis is certainly indicated, but whether warfarin needs to be replaced with full intensity bridge therapy is debatable.

#### The Solution

VTE prophylaxis with once-daily low molecular weight heparin (enoxaparin 40mg SQ or dalteparin 2500 units SQ) is a very reasonable choice in this case, rather than full-intensity bridge therapy (enoxaparin 1mg/kg SQ q12h or dalteparin 200 U/kg SQ qd). Warfarin should be discontinued five days prior to the procedure, and the LMWH can be initiated within 24 hours. There is no need to hold doses around the time of the procedure, as the bleeding risk associated with prophylactic LMWH is negligible. Long-term, this therapy might be a reasonable replacement for warfarin if the family is willing to continue daily injections, if insurance coverage is available, and if INR monitoring and warfarin dosing adjustments have become difficult to manage for this patient due to her progressive disease process.

continued from page 1

## Consensus Guideline

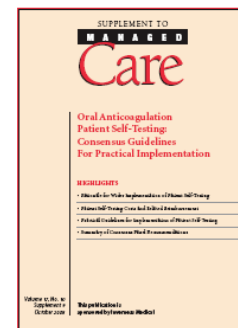
- **Practical Guidelines of Implementation of PST**  
Patient selection and training, Communication between practitioners and patients, On going follow-up, Accuracy of INR Monitors
- **Summary of Consensus Panel Recommendations**
- **A Call to Action**  
Meeting Joint Commission's National Patient Safety Goal, Defined anticoagulation program, Dosing protocols, Provision of patient education to patients and families

In a meta-analysis published in the Lancet in 2006 by Heneghan, et al, concluded patient self-testing was shown to significantly reduce bleeding and stroke risk while providing a survival benefit over traditional care.<sup>1</sup> The management of warfarin (Coumadin®) has consisted of monthly testing for much of the 54-years of the drug's commercial availability. The FDA imposed a black box warning for bleeding risk for all warfarin products in 2006. In March, 2008, Medicare expanded their national coverage for patient self-testing based on 10 unchallenged, independent random controlled trials supporting patient self-testing. Covered indications now include: atrial fibrillation, mechanical heart valves, venous thrombosis (DVT, PE). Most private insurance now match Medicare's policy.

It is expected that the supplement will help to support a rapidly growing PST demand in the market. "The wider implementation of PST may be a critical component of the U.S. health care system's response to ensure high-quality care for the growing population of patients who will require oral anticoagulant therapy."<sup>2</sup> In response to the increased use of warfarin, particularly for patients with atrial fibrillation, the Joint Commission has added oral anticoagulation to its National Patient Safety Goals.<sup>3</sup>

There are plans to develop a Saturday afternoon seminar at the conclusion of the Anticoagulation Forum Meeting in May to review selected specifics of the consensus recommendations and the outcomes data from the THINRS clinical trial that was concluded in October of 2008 and presented at the American Heart Association meeting in November, 2008 in New Orleans. Please watch for more details to come on this.

To obtain your complimentary copy of Oral Anticoagulation Patient Self-Testing Guidelines For Practical Implementation, please visit:  
[www.PSTINR.com](http://www.PSTINR.com)



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## Successful Anticoagulation Clinics

*Below is another clinic story in our Successful Anticoagulation Clinics series. In this series, clinics will describe their model of care to help our members understand reimbursement issues, staffing models, and various ways to set up an anticoagulation clinic.*

*We will highlight a different clinic in each of the next few newsletters and we would love to highlight the wonderful things you are doing at your clinic! If you would like to submit a short write-up describing your clinic's successes, please email it to [egoldstein@acforum.org](mailto:egoldstein@acforum.org).*

### Emory Healthcare Anticoagulation Management Service (AMS)

*Diane Wirth, ANP, CACP  
Atlanta, GA*

Faced with the reality of increased adverse outcomes for patients prescribed anticoagulation medications by the 1100 Emory Healthcare (EHC) providers, EHC entered into the field of organized anticoagulation management in 1999. The original program was developed through a grant from DuPont© and was a hospital based outpatient program run by pharmacists. The method of tracking was done through Coumacare ©software which was a stand alone system allowing only one user at a time to access the data base. The AMS program was successful in decreasing adverse outcomes, but was a non-revenue generating design because pharmacists' could not bill for their visit with the patient. In 2002 the grant was not renewed and EHC began exploring alternatives to expand and maintain the program.

The decision was made and business plan developed to provide AMS based on an advance practice provider (APP) model; the model would generate revenue to help offset the cost of the program. The first nurse practitioner (NP) started in August of 2002 with one full time assistant. The program moved into the suite that the Medical Director (MD) has his Internal Medicine practice; alternate supervising physicians were established to cover in the absence of the MD. At the start of the program a search began for a software tool to purchase for the tracking and management of the AMS patients'. The Standing Stone software program was chose; we began electronic management in August 2003 using the Standing Stone system.

The AMS program in 2002, began with 200 patients and grew quickly; within 5 months the program had over 400 patients'; we began recruiting additional help. A second provider, a physician assistant was added in May of 2003. The program was set up for only face to face visits and the patients were charged for the visit in addition to the INR (performed on point of care device). The billing was done using the 99211-99213 codes for the services rendered either billing

incident to or billing using the providers own number. Patients were charged co-pays for the visit if insurance required.

Additional staff was added by the end of the first year and a second site established at our Crawford Long Campus. The new site brought our second MD for supervision. During our third year we set up sites at three additional offices, one at our Perimeter site in Internal Medicine, one at Wesley Wood Geriatric Center (this was staffed independently by NP's within center) and one at our Heart Center in Villa Rica( staffed by NP/RN in cardiology). A RN was hired in mid 2006 to triage patients on the phone, call in prescriptions, cover for vacations, contact the overdue patients and enter new patients referred to the service into the software system. In May of 2007 the Wesley Woods practice merged into the main office location to eliminate duplicate service on the same campus. In late 2007 and additional site was opened in the cardiology office in Smyrna (staffed with NP/RN).

Late 2007 we were given approval to begin management of "virtual patients" by leadership. This included the patients that were still being managed in the traditional sense and not seen for face to face visits. New codes were approved allowing telephone management in 2007, 99363 and 99364 if criteria are met. Medicare still bundles for these services, but the managed care plans began reimbursement in July 2007. The revenue generated does not offset the labor cost of this management but it helps.

During the month of March EHC acquired a cardiology practice that had a large population of patients on warfarin. This created four additional sites.

*continued on page 8*

### CALL FOR ABSTRACTS

The Anticoagulation Forum offers the opportunity for posters to be presented at the 10th National Conference on Anticoagulant Therapy in San Diego, CA. The organization seeks abstracts that demonstrate best practices with measurable results, evidence-based policies, and the latest findings in research. Works-in-progress may be submitted. If final results are not yet available, preliminary results must be outlined. We are also interested in lessons learned from programs and projects that worked as well as those that did not work out quite as anticipated.

Abstracts must be submitted online at [www.acforum.org](http://www.acforum.org). The due date for abstracts is March 10, 2009. Abstracts will be presented on Friday, May 8 from 3:15-6:00 at the conference. Please visit the website for complete details.

# NCBAP Update

The National Certification Board for Anticoagulation Providers has been working hard to update the CACP exam domains and test items. Besides making changes to account for new literature such as the 2008 ACCP Guidelines, the new domains and items also reflect a broader scope that is more inclusive of inpatient treatment issues. The revised domains are now available for download from the NCBAP website ([www.ncbap.org](http://www.ncbap.org)) along with the 2009 CACP Candidate Handbook and Application. Those individuals planning to sit for the CACP exam in 2009 should download the new handbook and refer to the new domains when preparing for the exam. Applicants also should note the domain distribution changes. Effective immediately, the domain breakdown is as follows:

Domain I	Applied Pathophysiology of Thromboembolic Disease	20%
Domain II	Patient Assessment and Management	30%
Domain III	Patient Education	20%
Domain IV	Applied Pharmacology of Antithrombotic A	20%
Domain V	Operational (Administrative) Procedures	10%

Scheduled 2009 exam dates include May 7th in San Diego, CA in conjunction with the Anticoagulation Forum meeting and August 22nd in Seattle, WA. The NCBAP also is working to schedule an exam in December in Las Vegas, NV in conjunction with the ASHP Mid-Year Meeting. An additional exam date may be added sometime during the fourth quarter of 2009. Additional details will be made available via the NCBAP website as they become available.

Applications for the May exam should be mailed to the NCBAP at 4974 N. Fresno St., Ste. 202, Fresno, CA 93726 and should be post-marked no later than February 28, 2009. Late applications will NOT be accepted.

Finally, the NCBAP would like to congratulate a number of new Certified Anticoagulation Care Providers. ■

[www.acforum.org](http://www.acforum.org)

**The Anticoagulation Forum is pleased to announce the launch of our updated website in March 2009. The completely redesigned site offers many new features including webcasts of expert speakers, guidelines, toolkits, CME listings, and information on clinical trials. Please visit the website next month to view the new resources. We'd love to know what you think so please email [egoldstein@acforum.org](mailto:egoldstein@acforum.org) with your feedback/comments.**

## The following individuals earned the CACP credential in 2008:

Vivien Jean Ang, APN -- New York, NY  
 Joy Anyan, RPh -- Mead, WA  
 Richard Benson, PA -- Allen, TX  
 Melissa Bourque, PharmD -- Augusta, ME  
 Janet Campbell, RN -- Springfield, MO  
 Linh Chan, PharmD -- Diamond Bar, CA  
 Agnes Chou, PharmD -- Brooklyn, NY  
 Heidi Cooper-Justus, Pharm.D. -- Sheridan, WY  
 Travis Cork, Pharm.D. -- Sheridan, WY  
 Hope Cox, PharmD -- Vine Grove, KY  
 George Dydek, PharmD -- Pugallup, WA  
 Todd Eddy, PharmD -- Greenville, SC  
 Kim Edmonds-Rogers, PharmD -- Apopka, FL  
 Amy Epley, RPh -- Mount Vernon, IN  
 Sandra Ferno, RN -- Loudon, NH  
 Kyle Filby, PharmD -- Henderson, NV  
 Ronald Frey, PharmD -- Fort Thomas, KY  
 Colleen Harrell, Pharm.D. -- Toledo, OH  
 Patrice Helton, RN -- New Market, AL  
 Elizabeth Hood, PharmD -- Clinton, MS  
 Gail Jones, RPh -- Shelby Township, MI  
 Jared Jones, Pharm.D. -- Chandler, AZ  
 Ronald Jones, Pharm.D. -- Fort Wayne, IN  
 Barbara Kelly, RN -- Las Cruces, NM  
 Linda Kelly, RPh -- Albuquerque, NM  
 Milena Kelly, Pharm.D. -- Vero Beach, FL  
 Katie Kim, PharmD -- APO, AP  
 Jonathan Kline, PharmD -- Charles Town, WV  
 Larry Knisley, RPh -- Hilliard, OH  
 Jennifer Larsen, PA -- El Dorado, KS  
 Julie Lennon, RPh -- Spokane, WA  
 Pam Letzkus, PharmD -- Heyworth, IL  
 Kristie Marlett, Pharm.D. -- Marysville, WA  
 Kristin Meyer, Pharm.D. -- Marshalltown, IA  
 Leah Miller, Pharm.D. -- Chandler, AZ  
 Jennifer Noel, PharmD -- Evansville, IN  
 Jan Olson-Zeringue, APN -- Huntsville, AL  
 John Pantouris, Pharm.D. -- Winston Salem, NC  
 Kristi Partington, RN -- Richfield, MN  
 Deon Pilkington, Pharm.D. -- Queen Creek, AZ  
 Teresa Plotts, RPh -- Oviedo, FL  
 Stewart Reyna, PharmD -- Baltimore, MD  
 Sheri Roberts, APN -- Huntsville, AL  
 Angelina Sagarsee, PharmD -- South Bend, IN  
 Denise Sirenne, APN -- Woodbine, MD  
 James Spicer, RPh, PharmD -- Vermilion, OH  
 Anna Stevenson, RN -- Columbus, IN  
 James Talerowski, PharmD -- Mountaintop, PA  
 Jennifer Trafton, PharmD -- Palm Harbor, FL  
 Yari Valle, PharmD -- Las Cruces, NM  
 Lloyd Warner, PharmD -- Indian Trail, NC  
 Bobbie Williamson, PharmD -- Mills Riuer, NC  
 Rose Winkel, RPh -- APO, AE  
 Shawna Wooden, PA -- Wichita, KS  
 Wisener Young, PharmD -- Winter Garden, FL



### Benefit of Oral Anticoagulant Over Antiplatelet Therapy in Atrial Fibrillation Depends on the Quality of International Normalized Ratio Control Achieved by Centers and Countries as Measured by Time in Therapeutic Range

*Connolly SJ on behalf of the ACTIVE W investigators  
Circulation. 2008;118:2029-2037*

The Atrial Fibrillation Clopidogrel Trial With Irbesartan for Prevention of Vascular Events (ACTIVE W) randomized patients with AF to either a vitamin K antagonist (VKA) or combination therapy of clopidogrel plus aspirin. The trial was conducted in 526 centers and 15 countries. Time in the therapeutic range (TTR) 2.0 to 3.0 was determined and risk quantified. The investigators report a wide range of TTR across participating sites with mean TTR by quartile: 44%, 60%, 69%, and 78%. Mean TTR varied considerably among countries from 46% to 78%. A population-average model predicted that a TTR of 58% would be the minimum threshold to ensure the effectiveness of OAC over antiplatelet therapy. ■

### Cytochrome P-450 Polymorphisms and Response to Clopidogrel

*J.L. Mega et al  
N Engl J Med 2009;360:354-62*

### Genetic Determinants of Response to Clopidogrel and Cardiovascular Events

*T. Simon et al  
N Engl J Med 2009;360:363-75*

These two studies conducted in different patient populations and using different methodologies report similar concerning findings that clopidogrel responsiveness and efficacy in reducing cardiovascular risk are affected by polymorphisms in the P450 (CYP) enzyme pathway responsible for the conversion of clopidogrel to active metabolite. The study by Simon, et al, also raises concerns regarding concomitant use of omeprazole.

These studies, in addition to other previously published reports, have prompted the FDA to issue the following recommendations while awaiting the results of the safety review:

- Healthcare providers should continue to prescribe and patients should continue to take clopidogrel as directed, because clopidogrel has demonstrated benefits in preventing blood clots that could lead to a heart attack or stroke.
- Healthcare providers should re-evaluate the need for starting or continuing treatment with a PPI, including Prilosec OTC, in patients taking clopidogrel.
- Patients taking clopidogrel should consult with their healthcare provider if they are recurrently taking or considering taking a PPI, including Prilosec OTC.

## Influence of Thrombophilia on Risk of Recurrent Venous Thromboembolism while on Warfarin: Results from a Randomized Trial

Kearon C and the ELATE investigators  
*Blood* 2008 112: 4432-4436

Studies suggest that routine testing for thrombophilic defects is unnecessary because these disorders do not reliably predict recurrence of venous thromboembolism (VTE). The risk imparted by these factors among patients taking warfarin is unknown. In this study, 661 patients with idiopathic “unprovoked” VTE were randomized in the Extended Low-intensity Anticoagulation for unprovoked Thromboembolism (ELATE) trial to low-intensity versus conventional-intensity warfarin. Patients were followed for a mean of 2.3 years for VTE recurrence. Patients underwent testing for the following thrombophilic defects at study entry: factor V Leiden, 20210G>A prothrombin gene mutation, antithrombin deficiency, elevated factor VIII, elevated factor XI, elevated homocysteine, and presence of antiphospholipid antibody. The rate of VTE recurrence was 1.5% per patient-year for patients randomized to low-intensity warfarin versus 0.4% per patient-year for patients assigned conventional-intensity ((HR, 3.7; 95% CI, 1.03-13.2).

None of the thrombophilic defects either alone or in combination predicted recurrence except a trend was noted for antiphospholipid antibodies (HR, 2.9; 95% CI, 0.8-10.5). This study provides important evidence that thrombophilic defects do not predict recurrent VTE risk among patients with therapeutic or subtherapeutic anticoagulation intensity. ■

## Cost-Effectiveness of Using Pharmacogenetic Information in Warfarin Dosing for Patients with Nonvalvular Atrial Fibrillation

Eckman MH, Rosand J, Greenberg SM, and Gage BF  
*Ann Intern Med* 2009;150:73-83

The utility of pharmacogenetic-guided warfarin dosing in routine clinical care continues to be debated and awaits the results of randomized trials using clinical endpoints. In this study, the authors assigned a cost of \$400 to genotype testing and measured cost effectiveness in terms of quality-adjusted life-years. Based on their analyses, the authors report that the marginal cost-effectiveness of testing exceeded \$170,000 per quality-adjusted life-year. The Editors concurred with the authors’ conclusions that routine warfarin genotyping, at its current cost, would not be cost effective across the spectrum of patients initiating warfarin therapy. ■

## Warfarin Dose Management Affects INR Control

Rose AJ and others  
*J Thromb Haemost.* 2009;7:94-101

There is little published data to guide warfarin dosing decisions, particularly the threshold to institute a dose change. Does incremental “tinkering” with maintenance dose for small variations from the target range induce variability in the International Normalized Ratio (INR)? In this study, patterns of warfarin dosing were analyzed from 3,961 patients enrolled in the Anticoagulation Consortium to Improve Outcomes Nationally (ACTION) study. The stated study objectives were to quantify the contribution of warfarin dose management to time in the therapeutic range (TTR) and to define an optimal dose management strategy. Patients were observed for a mean of 15.2 months. Using a model incorporating the previous INR measurement, number of days since last INR and current INR, the authors determined the probability of a warfarin dose change. The investigators found that, on average, providers instituted a warfarin dose change when the INR was 1.8 or lower/3.2 or higher (mean TTR: 68%); optimal management would have been to change the dose when the INR was 1.7 or lower/3.3 or higher (predicted TTR: 74%). This finding awaits prospective validation. ■

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## NATT Update

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### PERISCOPE OF UPCOMING NATT EVENTS

**February 11-** Kickoff of NATT DC Chapter at Clyde's of Gallery Place

**February 25-** NATT Board Meeting – Washington DC

**February 26-** Washi ngton Day (first ever!)-Washington DC

**March 5-** NATT-NC Stop the Clot™ Forum – Greensboro

**March 14-** NATT-NC/Radio One –Stop the Clot™ Forums on Women and Blood Clotting Risk (scheduled twice) at Women's Empowerment Expo 2009, Raleigh-Durham

**May 2-** NATT-NC/Radio One – Stop the Clot™ Forum, Charlotte ■

continued from page 3

## Consensus Guideline

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<sup>1</sup> Heneghan C., et al. (2006). Self-monitoring of oral anticoagulation: a systematic review and meta-analysis. *Lancet*, 367, 404-11.

<sup>2</sup> Matchar, D, et. al. (2008). Oral Anticoagulation Patient Self-Testing: Consensus Guidelines for Practical Implementation. Vol.17, *Managed Care*, 1-8.

<sup>3</sup>The Joint Commission (2007). 2008 National Patient Safety Goals, Ambulatory Care. Retrieved January 9, 2008, from the Joint Commission Web site: [http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/o8\\_amb\\_npsgs.htm](http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/o8_amb_npsgs.htm) ■

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## Successful Anticoagulation Clinics

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The average number of visits per day done by the APP is 20. The practice sees all anti-coagulated patients for the healthcare system. The average number of visits per month is 1.4. Our in percent range is 70%. Our adverse event rate is <0.4 %.

We have an excellent method for tracking our outcomes and reporting our data to leadership. We are now up to 2700 patients, and have 9 different AMS clinics, all staffed by advance practice providers and RN's with clerical assistance. We had been at a break even bottom line annually since inception until the virtual clinic model was established. We now have a small deficit in our budget. ■



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