Adult Medicine Practice and Research Network Newsletter

YOUR "SPRING"BOARD FOR PRN INFORMATION!

Volume 5 Issue 1 **April 2010**

Message from the Chair

Author: Joel C. Marrs, PharmD, BCPS, CLS

As I reflect back on my time as chair of the Adult Medicine Practice and Research Network (AM PRN) I can't believe it is almost time for the Spring Practice and Research Forum again. This year as chair has given me the opportunity to work with many individuals in our PRN doing exceptional work on PRN committees, American College of Clinical Pharmacy (ACCP) committees, and through a variety of adult medicine clinical practice settings. I appreciate this opportunity to pause and reflect on the accomplishments of the AM PRN.

Our membership remains strong and is just over 800 members currently. One of the key charges over the last year has been to develop AM PRN awards to recognize individuals in our PRN. I would like to thank Darcie Keller, our past chair, for leading this charge along with the PRN nominations committee. Many of the notable accomplishments of our PRN members are highlighted in the newsletter. These accomplishments are just a few examples that demonstrate the hard work and dedication of our members to the profession of pharmacy and to the AM PRN.

As we move forward, our PRN remains dedicated to the core values of ACCP - Education, Service and Research. This past year we funded one AM PRN member to attend the ACCP Focus Investigator Training (FIT) program. We have continued to support this opportunity and will award one AM PRN member with 50% tuition support again this year. In addition, we look forward to the upcoming 2010 ACCP Spring Practice and Research Forum in Charlotte, North Carolina April 23rd -27th. The AM PRN will be presenting a focus session entitled, "Reviewing the Evidence for Antithrombotic Controversies in Medicine."

With the Healthcare Reform bill recently passed I am optimistic for the increased opportunities we have moving forward in the care of our patients across a multitude of settings. I am excited for the continued expansion of our diverse membership consisting of clinical pharmacists practicing inpatient and outpatient adult medicine across the nation.

In closing, I would like to personally thank the PRN officers (past and current) for their guidance and support, and all the members of the AM PRN for their dedication and service. I look forward to seeing many of you in Charlotte!

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Inside this issue:

Upcoming Events and Reminders

April 23-27, 2010 -

Spring Practice and Research Forum and Updates in Therapeutics: The Pharmacotherapy Preparatory Course, Charlotte, NC.

If you will be attending the Spring Forum, join us for the Adult Medicine focus session titled, "Reviewing the Evidence for Antithrombotic Controversies in Medicine" taking place on Sunday April 25th, 4:45pm.

The PRN business and networking meeting will take place on Saturday April 24th at 12:30pm during the Spring Practice and Research Forum in Charlotte, NC.

April 1, 2010—

Deadline for FIT (Focused Investigator Training) Program. http://www.accpri.org/fit

May 20– 22, 2010

ACCP and ASHP Oncology Pharmacy Preparatory Review course, San Diego, CA

October 2010 -

American Pharmacists Month

October 17-20, 2010

ACCP Annual Meeting, Austin, TX.

There will be "a lot" to see and do in Charlotte! Join us at the Spring Practice and Research Meeting!

CONTINUE TO SEND NOMINATIONS TO SUPPORT OUR MEMBERS!

Adult Medicine Business Meeting and Networking Forum October 20, 2009

Approximately 35 members joined us for this evening full of lively discussion and updates. If you were unable to attend the meeting, here are some key highlights…

- This annual meeting programming included a focus session for the Adult Medicine PRN titled "The Great Medicine Debates of 2009." Thanks to William Dager, Robert MacLaren, Sarah Shrader, and Sarah Ford for speaking at this very well attended session!

- Report by the Secretary/ Treasurer Ann Canales included year-to-date and 2009 projected revenues and expenses. Decisions were made regarding spending for the Frontier's Fund, Travel Award, and FIT Program. The amount to be donated to the Frontier's Fund will be 25% of the ending balance in December and the amount for the Travel Award will be maintained at $1,000 per award.

An AMED PRN member was funded in 2009 for attendance of the FIT program.

- Julie Wright Banderas gave the group an update from the Board of Reagents. This included definition of the structure and objectives of the PBRN (Practice Based Research Network) and encouragement for participation. Additionally, Dr. Banderas elicited feedback regarding the commercial support policy proposed by ACCP. Other topics discussed included the Political Action Committee and its legislative impact as well as the FIT (Focused Investigator Training) program.

- Individual committee chairs reported on their recent activities, with notable activities below:

The Poster Session committee viewed 36 Adult Medicine Posters at the Annual Meeting. Congrats to all Adult Medicine Poster Presenters!

The Programming Committee has put together the Spring 2010 focus session, which should be a huge success!

The Nominations Committee has nominated many members for awards and positions within ACCP…continue to send nominations to support our members!

The PRN History paper and poster was finalized, thanks to this Ad Hoc committee. The poster presented at this Annual Meeting.

- New business included designation of an Awards and Recognition Committee with an award for Clinical Practice and one for Mentoring. We hope to hear of award recipients soon!

- Concluding the meeting was a presentation by the Research/ Travel Award recipient, Sarah Anderson. Please see pg (4) for a summary of her presentation.

Notable Accomplishments and Publications

Congratulations to the following PRN Members who became Board Certified! In 2009!

Pharmacotherapy::

Sarah Anderson, Lori Arnold, Russell Attridge, Melanie Bates, Christine Bercume, Matthew Bird, Christina Brizendine, Rodney Brumbelow, , Christy Burrows, Laura Butkievich, Stefanie Chick, Andrew Crannage, Amy Dill, Rebecca Dunn, Julie Eckert, Y. Michelle Fagan, T. Michael Farley, Christopher Finch, James Forgione, Piyamas Gaston, Elaine Greene, Michael Gulseth, Susan Hamblin, Meri Hix, Shannon Holt, Jenna Huggins, Jolie Jantz, Lamis Karaoui, Lela King, Matthew Korobey, Jeffrey Kyle, Tyrone Lin, Jenna Lovely, Joseph Lovely, Christopher Malabanan, Soonali Maniar, Robert Menak, Andrew Miesner, Benjamin Miles, Michael Monaghan, Marilynn Novell, Nathan Pinner, Dane Shiltz, Harleen Singh, Grant Sklar, Thomas Thompson, Tara Vlasimsky, Karen Wall, Diane Yu, Mary Zelazny, and Danielle Zola.

Oncology:

Leila Mohassel

Nutrition Support Pharmacy:

Yaman Kaakeh

Publications:

Barna MM, Kapoian T, O'Mara NB. Sevalamer carbonate. Ann Pharmother 2010; 44(1): 127-134.

Lundquist LM, Moye PM. Resident physicians' acceptance of pharmacy students' pharmacotherapy recommendations during an ambulatory care advanced pharmacy practice experience. Am J Pharm Educ. 2009; 73(8): Article 145

Monach PA, Arnold LM, Merkel PA. Incidence and prevention of bladder toxicity from cyclophosphamide in the treatment of rheumatic diseases: data-drive review. Arthritis and Rheumatism 2010; 62:9-21.

Presentations:

A. Thomas Taylor presented "Managing Heart Failure in the Mental Health Patient" at the 2010 Mental Health Pharmacotherapy Symposium at the College of Pharmacy, The University of Georgia.

A. Thomas Taylor presented "Adverse Drug Events" at the 2010 Mental Health Pharmacotherapy Symposium at the College of Pharmacy, the University of Georgia.

Olga Hilas presented a poster titled "Piperacillin-tazobactam associated acute interstitial nephritis" at the ASHP Clinical Midyear Meeting in December 2009.

Olga Hilas presented a poster titled "Utilization of technology to prevent and minimize inappropriate use of sedative hynotic agents in elderly inpatients."

Other accomplishments:

Lamis R. Karaoui, Pharm.D., BCPS was appointed as Acting Director of Experiential Education for the School of Pharmacy, Lebanese American University

Stephanie Seyse became Certified as an Anticoagulation Provider (CACP) and was awarded Fellowship with the American Society of Health System Pharmacists.

Zachary A. Stacy, Pharm.D., BCPS won the Emerson Excellence in Teaching Award for outstanding classroom education in the St. Louis Metro Area.

Suzanne Wortman, BS, Pharm.D., BCPS, Beth H. Resman-Targoff, BS, Pharm.D., FCCP, and Rolee Pathak, Pharm.D., BCPS received Volunteer Recognition by ACCP and the Adult Medicine PRN for significant contributions within the last two years.

Spotlight on a New Member! Dante Gravino

Dante Gravino is a student pharmacist at the Jefferson School of Pharmacy in Philadelphia, Pennsylvania and is a member of the Class of 2013. He became interested in a career in pharmacy when he was in high school where he found strong interests in science and medicine. He also gained exposure to community pharmacy practice through work. Over the years he has had the opportunity to meet numerous pharmacists, several of whom have become mentors and have helped foster his desire and interest to become a pharmacist. Dante became involved in the profession prior to pharmacy school by becoming a Certified Pharmacy Technician and would like to actively participate in ACCP via the AMED PRN and student activities. Through ACCP Dante is seeking new opportunities and future mentors via the AMED PRN. He joined the AMED PRN through a recommendation from one of his professors who is also a member of ACCP. Because of his constant desire to learn and to become an expert in his field, he feels that this group will expose him to a wide variety of clinical pharmacy topics. After graduating from pharmacy school Dante hopes to complete a Pharmacy Practice Residency and become Board Certified. At this point, his areas of interest are in critical care and infectious disease. He also discovered an interest in teaching while tutoring students in undergraduate studies.

Adult Medicine PRN New Investigator Award - Determining Predictors of Response to Exenatide in Type 2 Diabetes

Sarah L. Anderson, Pharm.D, Jennifer Trujillo, Pharm.D, Joseph Saseen, Pharm.D. and Michael T. McDermott, MD

Study Objective: The primary objective of this retrospective observational cohort study was to determine predictors of a clinically meaningful glycemic response to exenatide. Secondary objectives were to assess change in glycosylated hemoglobin A1C (A1C) with exenatide use and to assess whether weight loss with exenatide use correlated with glycemic response.

Design: Adult patients with type 2 diabetes who were prescribed exenatide between June 2005 and March 2008 were identified through ICD-9 codes and then electronic health record review. Patients were categorized into either a responder cohort or a non-responder cohort based on change in A1C. Responders were defined as having an A1C reduction of $\geq 0.5\%$ and non-responders as having an A1C reduction of $< 0.5\%$ from baseline to post-initiation (12 to 30 weeks) of exenatide. Gender, age, duration of diabetes, weight, serum creatinine, diabetes education and concurrent diabetes medications were collected for each patient as potential predictors of response.

Results: 100 patients met inclusion criteria; 61 were responders and 39 non-responders. Responders had a mean A1C decrease of 1.57% while non-responders had a mean A1C increase of 0.23% ($p < 0.001$). Post-hoc linear regression analysis revealed baseline A1C was a predictor of response to exenatide ($p < 0.001$). Binary logistic regression analysis demonstrated that no other variables were predictors of response to exenatide (all p values > 0.05). Patients with a baseline A1C $< 7.3 \pm 0.15\%$ did not respond to exenatide. There was no correlation between weight loss with exenatide and glycemic response ($p = 0.99$).

Conclusions: Baseline A1C was the only predictor of response to exenatide in our population. This is consistent with what is seen with oral antihyperglycemic agents. Our data indicate that patients with a higher baseline A1C are more likely to have a glycemic response to exenatide than patients with a lower baseline A1C.

Sarah L. Anderson, Pharm.D, BCPS is an Assistant Professor at the University of Colorado School of Pharmacy. She received the AMED PRN New Investigator Award at the ACCP Annual Meeting in Anaheim, California in October 2009.

Drug Information Station:

Is Boswellia serrata effective in treating Crohn's Disease?

Priti Patel, Pharm.D., BCPS

Boswellia serrata, also known as frankincense, is the resin from the Boswellia tree that is native to India and Arabia. It has a long history of use in perfume production or as a component of incense and also has been used during religious ceremonies. Also, it is a traditional Ayurvedic remedy and its medicinal properties have been appreciated for centuries.[1]

The pharmacologic activities of Boswellia serrata have been attributed to alpha and beta boswellic acids and their derivatives, have been shown to inhibit pro-inflammatory processes by affecting the activity of 5-lipooxygenase, cyclo-oxygenase and the complement system.[1]

The first study, published in 1997, compared 6 weeks of treatment with boswellic gum resin 300mg capsules three times daily to sulfasalazine 1g three times daily. In the boswellic gum resin group, 82% achieved remission, as compared to 75% of those who received sulfasalazine.[2] The second study, published in 2001, was an open, non-randomized single center clinical trial involving 30 patients who had chronic colitis presented by pain in lower abdomen and diarrhea with or without blood and mucus. Twenty subjects were given boswellic gum resin 300mg in capsules three times daily and 10 subjects were given sulfasalazine 1g three times daily for 6 weeks. The primary outcome measured was remission of the disease after 6 weeks. In the Boswellia gum resin group, 18 of 20 patients showed improvement, and 14 achieved remission. In the sulfasalazine group, 6 of 10 subjects showed improvement and 4 went into remission. The only adverse event noted was heartburn, which was experienced by 2 of the subjects receiving Boswellia gum resin.[3]

The results from these studies show some encouraging evidence for the use of Boswellia serrata in the treatment of Crohn's disease. These studies involved small sample sizes and used specific Boswellia preparations. Therefore, more evidence from large randomized clinical trials must be provided to confidently recommend the use of Boswellia serrata in the treatment of Crohn's disease.

1. A, Mechoulam R. Boswellia resin: from religious ceremonies to medical uses; a review of in-vitro, in-vivo and clinical trials. J Pharm Pharmacol 2009;61:1281-1293.
2. Gupta I, et al. "Effects of Boswellia serrata gum resin in patients with ulcerative colitis." European Journal of Medical Research 1997 Jan;2(1): 37-43. [Abstract]
3. Gupta I, et al. "Effects of Gum Resin of Boswellia serrata in Patients with Chronic Colitis." Planta Medica 67(2001): 391-395.

Thanks to the following people for their contributions to the development of the Spring 2010 Newsletter:
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Medication Errors: A Just Culture Approach

Angela O. Shogbon, Pharm.D, BCPS

Medication error is one of the most common forms of medical errors and can result in significant harm to patients.[1] The National Coordinating Council for Medication Error Reporting and Prevention defines a medication error as "any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer."[2] It may occur in any of the following medication related processes: prescribing, order communication, product labeling, packaging, and nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use.[2]

Customarily, individuals have been held accountable for medication errors that occur under their care, regardless of the cause[3] and a culture of blame based on the outcome has occurred. This discourages reporting of medication errors because a punitive reaction is anticipated, leading to decreased awareness of actual rates of medication errors and measures to prevent such errors.[4]

The Just Culture promotes a "values-supportive model of shared accountability." [5] In this culture, institutions are held accountable for the systems they design and the fairness of their response to staff behaviors.[5] Staff are also equally responsible for the choices they make and for reporting both their errors and system vulnerabilities.[5]

A Just Culture promotes an open and fair medication error reporting system and encourages physicians, pharmacists, nurses and other practitioners to voluntarily report errors and to identify and report error-prone systems.[5] It is a culture that is proactive in preventing medication errors and not just reactive to adverse outcomes. [5] An institution with a Just Culture continuously assesses risks in its daily operations and makes efforts towards promoting a safe system design and a learning environment, and effectively manages behavioral choices leading to medication errors.[5] A just culture is not based on taking action depending on the severity of the consequence, i.e. a "no harm, no foul" approach. [5] On the other hand, it does not promote a "blame-free" approach.[5] It instead assesses each error based on the differentiation between a human error, at-risk behavior, and reckless behavior and takes just action based on the quality of the individual's choice.[5] A just culture acknowledges that individuals are prone to human error, while at-risk and reckless behaviors are conscious acts.[5]

With the value of the Just Culture approach to improving medication error reporting and management, it is a useful model for institutions to incorporate and model to staff members. Pharmacists should be encouraged to take a proactive approach to reporting medication errors and error-prone systems identified in their daily operations, and should contribute to suggestions on how potential or actual medication errors can be avoided in the future. Institutions should promote an open and fair medication error reporting process and identify what system and behavioral changes needs to be made to address identified errors.[5] Institutions should also consider sending out notifications on reported medication errors and measures taken to prevent recurrence of such errors to all healthcare professionals within the institution in order to provide educational tools for practitioners on medication error prevention.

There are also educational resources that pharmacists can utilize including the Institute for Safe Medication Practices (ISMP), which provides information on medication safety tools and resources, provides an overview of different types of medication errors reported, the systems issues and steps to prevent such errors that may be applicable to their practice.[6] The Agency for Healthcare Research and Quality also provides tools and resources on medical errors and patient safety.[3] To err is human, but we can all work towards reducing the risks for error by having safer systems in place and appropriate education about medication safety.[7]

References:
1. Garfield S, Barber N, Walley P, Willson A, Eliasson L. Quality of medication use in primary care – mapping the problem, working to a solution: a systemic review of the literature. BMC Medicine. 2009;7:50-57
2. National Coordinating Council for Medication Error Reporting and Prevention. Available from www.nccmerp.org/aboutMedErrors.html. Accessed March 14, 2010
3. Agency for Healthcare Research and Quality. Available from www.psnet.ahrq.gov/glossary.aspx. Accessed March 14, 2010
4. Marx D. Patient Safety and the "Just Culture": A Primer for Health Care Executives. New York: Columbia University; 2001.
5. Griffith SK. The growth of a just culture. The Joint Commission Perspectives on Patient Safety. 2009;9 (12):8-9
6. Institute for Safe Medication Practices. Available from www.ismp.org. Accessed March 13, 2010
7. To Err is Human: Building a Safer Health System. Available from www.nap.edu/openbook.php?record_id=9728&page=1. Assessed March 12, 2010