

# Alaska Pharmacy Newsletter

Winter Quarter 2011



*First Snow on the Matanuska Glacier  
Photo by: Eric Reimer*

Alaska Pharmacists Association  
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# Alaska Pharmacy Newsletter

*The Mission of the Alaska Pharmacists Association is to preserve, promote and lead the profession of pharmacy in Alaska.*

## Board Members

<b>Amber Briggs</b>	<i>President</i>
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<b>Kara King</b>	<i>Secretary</i>
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<b>Nancy Davis</b>	<i>Executive Director</i>
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<b>Sara Doran-Atchison</b>	
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<b>Sheila Fullbright</b>	
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<b>Jerry Brown</b>	
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<a href="mailto:gkwbrown@alaska.com">gkwbrown@alaska.com</a>	

- **Treasurer's Report**
- **President's Message**
- **Committee Reports**
- **Home Study CPE**
- **Featured Articles**

## Calendar of Events

<b>March</b>		
25-28	APhA Annual	Seattle

<b>April</b>		
27-30	AMPC Annual	Minneapolis

<b>May</b>		
2-7	NCPDP Annual	Phoenix

<b>Oct.</b>		
8-12	NCPA Annual	Nashville
16-19	ACCP Annual	Pittsburgh

<b>Nov.</b>		
16-19	ASCP Annual	Phoenix

### Providence Alaska Medical Center (PAMC)

#### Oncology Lecture Series

Cancer Therapy Conference Room 2<sup>nd</sup> floor  
Providence Infusion Center  
3851 Piper St., Anchorage  
(12:00 – 1:00pm)

#### 2011

Feb. 8	Acute Leukemias
Feb. 22	Anthracyclines/ Anthracenediones
March 8	Pediatric Malignancies
March 22	Targeted Therapies
April 12	Male Reproductive Cancer
April 26	Antimetabolites
May 10	Colorectal Cancer
May 24	Epipodophyllotoxins/ Camptothecins
June 7	Sarcomas/Melanomas
June 21	Alkylating Agents

*Cosponsored by AkPhA and PALI*

AkPhA is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.



## Treasurer's Report

*Lara Nichols, AkPhA Treasurer*

Balances as of 1/26/11:

Checking	\$86,431.81
Jumbo Money Market	\$94,826.37
<b>TOTAL</b>	<b>\$181,258.18</b>

## 2011-2012 AkPhA Committee Chairs

### *Legislative:* Co-Chairs

Barry Christensen Ph 225-6186

[Island.pharm@juno.com](mailto:Island.pharm@juno.com)

Dirk White Ph 738-6337

[dirk@whitesalaska.ncom](mailto:dirk@whitesalaska.ncom)

### *Membership:* Cate Kowalski

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### *Continuing Education:*

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[sedoran@anthc.org](mailto:sedoran@anthc.org)

### *Pharmacy Education:* Brian Schilling

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### *Community Affairs:* Renee Robinson

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### *Scholarship:* Wendy Barton

[Jaune98@aol.com](mailto:Jaune98@aol.com) Ph 562-2138

### *Nominations & Awards:* Melanie Gibson

[Melanie\\_gibson@ykhc.org](mailto:Melanie_gibson@ykhc.org) Ph 543-6992

### *Technician Advocacy:* Katheryn Crowther

[kwcrowther@anthc.org](mailto:kwcrowther@anthc.org) Ph 729-2130

### *Newsletter:* Eric Reimer

[ehazbreim@yahoo.com](mailto:ehazbreim@yahoo.com) Ph 562-2138 X4

## WELCOME NEW MEMBERS *Since October*

### **CORPORATE**

Fred Meyer  
Safeway/Carrs  
Walgreen Co.

### **BUSINESS**

Island Pharmacy  
Mt. Pacific Quality Health  
Petersburg Rexall  
Professional Home IV  
Ron's Apothecary Shoppe  
Soldotna Professional Pharmacy  
Stikine Drug  
Susitna Professional Pharmacy  
Village Pharmacy  
Whale Tail Pharmacy  
White's Inc.

### **PHARMACIST**

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Cindy Audet  
Wendy Barton  
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Margaret Brophy  
Gerald Brown  
Nancy Brown  
Teresa Bruce  
Cindy Bueler  
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Kristina Cohen  
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Robin Cooke  
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Lori DeVito  
Daniel Dobson  
Sara Doran-Atchison

Christina Eldridge  
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Carrie Farnsworth  
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Lyle Fibranz  
Vivian Foote  
Sarah Freeman  
Sheila Fullbright  
Jeffrey Gaarder  
Ukoshovbera Gbenedio  
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Lisa Gore  
Elaine Grant  
Robert Gruszynski  
Tammi Hackley  
Sharon Hamrick  
Vicky Hanson  
Adam Harris  
Charles Heincy  
James Henderson  
Brant Herman  
Robert Hill  
Thomas Hodel  
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Elizabeth Holmgren  
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Kay Houghton  
Robin Hull  
Esther Jarvis  
Vicki Keefer  
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Kara King  
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Cate Kowalski  
Martie Lamont  
A.J. Lorenzen  
Denzel Mann  
Karen Marcey  
Michell Mathews  
John McGilvray  
Julia McDaniel  
Julie Lynch McDonald

**PHARMACIST cont'd**

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Ron Miller  
Edward Missler  
Chantele Muffoletto  
Erin Narus  
Daniel Nelson  
Jo Ann Nelson  
Caroline Newhouse  
Lara Nichols  
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David O'Brien  
Napoleon Onyechi  
Michael Pagano  
Roger Penrod  
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Renee Robinson  
Tara Ruffner  
Justin Ruffridge  
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Glenn Schiff  
Elise Shepard  
Dawn Shill  
Clinton Smith  
Margaret Soden  
Kurt Soeder  
Douglas Sopp  
Jeff Sperry  
Cynthia Stragier  
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Judy Thompson  
Melissa Thompson  
Adrienne Tveit  
Jerry Ulmer  
John Wanek  
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Scott Watts  
Wanda Weatherby  
Jasper Wethington  
Susan Wheeler  
Amy Whisler

Dirk White  
Marilee White  
Trish White  
Sally Wilhelm  
Joshua Wireman  
Erica Worhatch  
Charla Young

**ASSOCIATE**

Lis Houchen

**1<sup>st</sup> YEAR RPh**

Lisa Babiak  
Nicholas Lazipone  
Ryan Stevens  
Lynette Wasson  
David Webb  
Derek Weber

**TECHNICIAN**

Emily Barron  
Jill Baxter-McIntosh  
Karleen Bishop  
Tonya Blades  
Stephen Blair  
Bre' Ann Blanks  
Jane Burkhead  
Kate4 Calvin  
Valerie Card-King  
Julia Carter  
Jolene Chikigak  
Katheryn Crowther  
Rebecca DeMelfi  
Nancy Edlund  
Rose Evan  
Kamarra Fauese  
Mary Fortin  
Robin Grewe  
Angie Gustafson  
Ronald Hamman  
Kimberly Hansen  
Rebecca Harris  
Lela Jaramillo  
Lori Keller  
Mary Krueger  
Grace Labio

**TECHNICIAN cont'd**

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Stacey Lucason  
Kevin McDonald  
Kaity McKee  
Sarah Maurer  
Matthew McAdams  
Amanda Moore  
Arlene Mueller  
LaDonna Murphy  
Elizabeth Nelson  
Kristen Nelson  
Keith Nosbisch  
Rita Patsy  
Bridgette Powlas  
Debra Prayer  
Janet Roberts  
Rachel Runyan  
Gibran Sandine  
Lucy Schurosky  
Meena Singh  
Tahsha Smith  
Maria Terch  
Suzana Terzioski

Debra Tobuk  
Genelle Tobuk  
Carol Vance  
Sharon Verdin  
Austin Weeks  
Donna Williamson

**STUDENT**

David Blossom  
Brittany Karns  
Justine Kirsch  
Julia Marie  
Christine Munn  
Matthew Neukirch  
Stephanie Schroeder  
Stephen Tarbell

**Save the Dates!**

**February 18-20, 2011**  
**2011 Annual Convention**

Mark your calendar for the  
**45<sup>th</sup> Annual AkPhA Convention**  
**Anchorage Downtown Marriot**

## PRESIDENT'S MESSAGE

*AMBER BRIGGS, PharmD*

It has been a pleasure and an honor to serve as the President of the Alaska Pharmacists Association for two years. I am honored and humbled to have worked with an amazing board and strong, active committees. Without the volunteers for the association, the association could not move pharmacy forward in Alaska. Also, we cannot forget how vital our executive director, Nancy Davis, is to the success of our organization. My hat is off to all of you! Thank you for the honor of serving as your President. Margaret Soden will take the helm at the annual convention. Margaret's vast experience and long time to commitment to Alaska pharmacy will move Alaska Pharmacy forward.

Our Alaska State Legislative session has just begun. Thanks go to Caren Robinson, our lobbyist and voice for Alaska Pharmacy in Juneau. There potentially could be a few bills that are pertinent to pharmacy this session. If interested, information on the bills can be found at the Alaska State Legislature website. Also, look soon for weekly legislative updates from Caren. Contribute to the AkPhA-PAC and AkPhA Legislative fund to assist in our ability to advocate on issues of vital concern to the profession. Be informed and contact your federal and elective officials. Invite your legislative officials to your practice. Show them what you do everyday. Your representatives need to associate pharmacy with visions of pharmacy services beyond the counting tray. Educate, communicate, and be visible! BE HEARD. Be the Voice of Pharmacy. Watch for the date for our legislative fly in...coming soon.

It is now time for the 45<sup>TH</sup> Alaska Pharmacists Annual Convention, held again at the Anchorage Downtown Marriott, February 18-20. The agenda is jammed full of continuing educational sessions for both pharmacists and pharmacy technicians. A huge thank you goes to Sara Doran-Atchison and the CE/Convention/Vendor

Committee for working diligently to make this a VERY successful convention.

The Board of Pharmacy Meeting is on Friday morning. A Seawolves hockey game is planned for Friday night. The 2011 Legislative & Govt Affairs Update is Saturday. Look for the Poster presentations on Saturday and visit with the exhibitors throughout the convention. Do not forget to stop by the silent auction tables Saturday to bid on spectacular items to raise money for the scholarship fund. Saturday night is the awards and reception program to honor pharmacists and pharmacy technicians across the state. See this newsletter for a complete detail of the convention schedule. Be sure to attend the Lunch/Business meeting on Sunday. Thank you to all the sponsors of this year's AkPhA Convention!!

If not already registered, go online to [www.alaskapharmacy.org](http://www.alaskapharmacy.org) and register today!

**I will see you at the convention!!**

### Miscellaneous updates:

**DME Accreditation Exemption: Do not forget to apply if you qualify:** Starting January 1, 2011 all community pharmacies must either be accredited to provide Medicare Durable Medical Equipment or be exempted from accreditation. To qualify for the exemption, the pharmacy must have been enrolled in Medicare as a DME supplier for at least 5 years; the pharmacy may not have had an unrescinded final adverse action during the past five years; and the pharmacy's Medicare billings for DME, other than drugs and pharmaceuticals which are not subject to accreditation, are less than 5 percent of pharmacy sales for the previous 3 calendar or fiscal years. Pharmacies meeting these criteria for exemption can complete an attestation form and should return it to the National Supplier Clearinghouse as soon as possible. Pharmacies that are not accredited or exempted stand to lose their DME billing privileges.

## PRESIDENT'S MESSAGE CONT'D

### **CMS Final Rule Withdraws Medicaid Reimbursement Provisions under the AMP Model:**

In a final rule published November 15, the Centers for Medicare & Medicaid Services (CMS) withdrew two provisions from the Average Manufacturer Price (AMP) Rule published July 17, 2007. The original AMP rule established the Medicaid pharmacy reimbursement formula for generic drugs under the AMP model. The November final rule revising the original AMP rule removes provisions that define AMP as well as determine the calculation of federal upper limits (FULs) and define a multiple-source drug. The withdrawal of the provisions follows a legal challenge filed in 2007 by the National Association of Chain Drug Stores (NACDS) and the National Community Pharmacists Association (NCPA), which resulted in an injunction that blocked the implementation of the AMP rule.

NACDS and NCPA estimate that the implementation of the AMP rule would have resulted in an estimated \$5.5 billion in Medicaid reimbursement cuts to pharmacies. With these rate cuts, many pharmacies could have been forced to operate while selling generic drugs at a loss or could have been precluded from providing needed drugs to Medicaid beneficiaries. The end result would have been a widespread and substantial barrier to patient access to pharmacies.

**CMS Short Cycle Dispensing Rule Now Published in Federal Register:** The Centers for Medicare and Medicaid Services (CMS) published in the November 22 Federal Register the long-anticipated notice of proposed rulemaking for the seven-days-or-less uniform

medication dispensing requirements for Medicare Part D prescription drug beneficiaries residing in long-term care facilities, as mandated by the Affordable Care Act of 2010. The proposed regulations apply to all pharmacies that dispense medications to long-term care facilities, including mail order pharmacies. The draft regulations cover brand-name medications only; however it is anticipated that CMS will extend this requirement to generic drugs in a separate rulemaking once the industry has sufficiently transitioned brand-name medications.

Some of the highlights in the proposed rule include:

- The period for public comments ends January 11, 2011; effective date of the requirement is January 1, 2012
- Proposed rule will identify the following dispensing options: 7-day supply; 2-2-3; 4-3; daily; automated dose
- Dispensing fees may take into account restocking fees; definition includes costs associated with acquisition and maintenance of technology to maintain reasonable pharmacy costs
- Requires prescription drug plans (PDPs) to contract with LTCFs for the return of unused drugs back to the pharmacy for disposal in accordance with local and federal laws
- Pharmacies must report to PDPs which drugs are returned to the pharmacy for disposal
- ICF-MRs and assisted living facilities are not required to implement these regulations
- Certain small pharmacies (less than 80 beds) many apply for an exemption allowing 14-day supply cycle for one year; then must implement 7-day or less by January 1, 2013

## PRESIDENT'S MESSAGE CONT'D

**Pharmacy Education:** The Pharmacy Education Committee under direction of Chair Brian Schilling, has accomplished quite a lot in the last year. For summary of achievements, see below:

The University's Statewide Academic Council (SAC) reviewed information from the consultant's report and subsequent discussions and recommendations from the internal Pharmacy Education Committee, in consultation with leaders from the Alaska Pharmacists Association. Their decision (reached on October 28, 2010 and recently finalized) is as follows:

Based on available data regarding employer and student demand, consideration of the growth of pharmacy education in the Lower 48, and the economic climate in Alaska, the Pharmacy Education Committee recommended adoption of two consultant options at this time:

(1) As an interim measure, completion of an MOA with Creighton University to provide limited support to their existing distance program in Alaska. This support would be

primarily in the form of an Alaska liaison to work with Creighton students in accessing resources and coordinating clinical rotations. Creighton will make available five Alaska seats in their distance cohort each year. UA students and other Alaskans may compete for the five seats, which are expected to have a favorable applicant/admission ratio, as well as for the regular distance pathway seats.

(2) As a mid-term solution, the University of Alaska will solicit proposals for a robust partnership with an accredited school of pharmacy to offer their program in Alaska. After initial solicitation of likely schools, the Pharmacy Education Committee will review the proposals and prepare and present to SAC a plan to bring this option to implementation. SAC approved the Committee's recommendations and requested that these two options be pursued. SAC determined that it was not feasible to pursue an independent pharmacy school at this time.

*Amber L Briggs, PharmD, BC-ADM, CGP  
Alaska Pharmacists Association President 2009-2011*

### ATTENTION PHARMACY TECHNICIANS

National Voluntary Certification for Pharmacy Technicians

PTCE Continuous Testing- Monday - Friday

PTCB's Certification Program launched continuous testing April 1, 2009. Applications will be accepted and test appointments will be offered year-round at over 200 Pearson VUE test centers throughout the U.S. Once authorized, a candidate may view available appointments and preferred test centers on line at [www.pearsonvue.com/ptcb](http://www.pearsonvue.com/ptcb) or by calling 866-902-0593.

Locate a test center at [www.ptcb.org](http://www.ptcb.org). Call your test center to check on Saturday availability.

As of 2009, at the completion of the PTCB Examination, candidates are notified of their pass/fail status and provided the date they can expect to receive their official score and certificate.

Please visit [www.ptcb.org](http://www.ptcb.org) for more information on the PTCB examination and recertification programs.

Eligibility Requirement: High School Diploma or GED

Exam Cost: \$129 Apply online at [www.ptcb.org](http://www.ptcb.org)

***For Study Materials***

Contact the AkPhA office at (907) 563-8880

Training Manual 11<sup>th</sup> Edition \$50.00 (plus \$10.00 shipping/Handling)

**Congratulations to the following CPhTs for passing the PTCE:  
10/1/10 – 12/31/10**

Marcia Tefft, Eagle River	Helen Styer-Hannigan, Sitka	Rhonda Jensen, Anchorage
Kyle Bailey, Eagle River	Peter Geraty, Anchorage	Megan Lehr, Anchorage
Ma Bautista, Anchorage	Kelseyann Sternhagen, Palmer	Sabina Kuk, Anchorage
Talitha Snedigar, Glennallen		

**Board of Pharmacy**

***Board of Pharmacy Members***

Mary Mundell, Pharmacist (Chugiak)  
Richard Holm, Pharmacist Chair (North Pole)  
Dirk White, Pharmacist Vice Chair (Sitka)  
Anne Gruening, Public Member (Juneau)  
Christopher Kim, Pharmacist Secretary (Anchorage)  
Leah Handley, Public Member (Homer)

***Alaska Board of Pharmacy***

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[www.commerce.state.ak.us/occ](http://www.commerce.state.ak.us/occ)

***Got Something to Say?***

AkPhA Wants your letters! If you would like to respond to an article or editorial printed in “The Alaska Pharmacist Newsletter” or voice your opinion on pharmacy or AkPhA related issues, please send us your letters. We would like to share your letters with AkPhA members in our “Letters to the Editor” section. Let your voice be heard!

Send your letters to Letter to the Editor:

203 W. 15<sup>th</sup> Ave. #100

Anchorage, AK 99501

FAX (907) 563-7880 Email: [akphrmcy@alaska.net](mailto:akphrmcy@alaska.net)

## **Legislative Update**

*Barry Christensen, Co-Chair Legislative Committee*

The First Session of the 27<sup>th</sup> Alaska State Legislature began January 18 and is scheduled to run thru April 17. Any bill introduced during this first session that is not passed returns to the second session which begins in January 2012. AkPhA together with our Lobbyist Caren Robinson will be monitoring legislation again this session. Additionally, the association is seeking a sponsor for **Pharmacy PBM Audit** legislation again this year.

Current bills being monitored:

### **HB 122 An act relating to Naturopaths**

This is similar legislation that AkPhA testified and worked with the bills sponsor last session regarding Naturopath prescribing. We are currently dialoguing again with Representative Munoz on this legislation.

### **HB 43,44,45,46 and 47 RE: Prescription Drug Programs, Task Force and Clinical Trials**

All these bills have been previously introduced by the bills sponsor Representative Guttenberg. We have contacted the Representative about these pieces of legislation but currently the likelihood of their passage is minimal.

### **HB 78 Incentives for Certain Medical Providers**

This legislation is similar to legislation introduced regarding loan repayment programs as incentives to promote medical providers coming/returning to Alaska. AkPhA supported this legislation last session.

### **HB 28 Temporary Licenses for Professionals**

This legislation would set up a new board to establish a temporary licensure program for professionals under the Department of Commerce, Community and Economic Development. AkPhA will monitor this bills progress in communication with the Board of Pharmacy.

AkPhA is currently working to set up the Annual Juneau Legislative Fly-in for sometime in late March. An CE legislative update will be given on Saturday February 19<sup>th</sup> at the AkPhA convention. Please make plans to attend. If you are interested in joining the legislative committee please contact Barry Christensen, RPh at [island.pharm@juno.com](mailto:island.pharm@juno.com)

## Scholarship Report

The Scholarship Committee is in the midst of their busiest time of year. The recipients of this year's scholarship have been chosen, and have already received their checks. We had a very high applicant pool this year for the Francis C. Bowden Memorial Scholarship with 7 applicants. We did not receive any applications for the pre-pharmacy scholarship, and had 1 application for the technician scholarship. The winners are as follows:

**Francis C. Bowden Memorial Scholarship** (\$2,000) – Brittany Karns of Fairbanks, attending the University of Minnesota  
**Technician Scholarship** (\$500) – Dawn Jackson of Anchorage, attending the University of Alaska, Anchorage

With the annual convention right around the corner, we are also busy planning the Silent Auction to benefit the Scholarship Fund. If you have items you would like to contribute to the auction, please e-mail Wendy Barton at [jaune98@aol.com](mailto:jaune98@aol.com). The silent auction will be held on Saturday, February 19 from 11:15am to 3:15pm at the convention. We hope to see you there bidding on some items!

*Wendy Barton, Chair  
Scholarship Committee*

## Community Affairs Report

Spring Initiative for Community Outreach Committee - Women in Science for Girl Scouts

We will be setting up 3 interactive stations for girls in 4<sup>th</sup> through 8<sup>th</sup> grade to expose them to science and successful female role models. We decided on 3 basic themes for the stations: Vitamin D deficiency, Poison Prevention, and dental care (to be completed by dental hygienist).

*Women of Science & Technology Day* – less than one month away! February 5, 2011 is the date, on the UAA campus.

- ✓ Afternoon Workshops (1:00 – 3:45 PM):
  - ▶ Girls will be in grades 4 – 8 (ages nine to 14).
  - ▶ Each workshop will be 45 minutes in length, starting at 1:00, 2:00, and 3:00.
  - ▶ 20-22 girls per group.

*Renee Robinson, Chair  
Community Affairs Committee*

## Intro to UAA Pharmacy Club

**G**reetings pharmacists, pharmacy technicians, and other health care workers. I am honored to introduce to the pharmacy community the UAA Pre-Pharmacy club. The Pre-Pharmacy club was formed within the past year to assist Alaskan students interested in pursuing a career in the field of pharmacy, which as you all know is very exciting and challenging.

Presently, Alaska is the only state in the country without its own pharmacy school, so UAA does not have a specific pre-pharmacy course. This made it imperative to create an organization to help direct, educate, and guide pre-pharmacy students at UAA to ensure the best chance of acceptance into a pharmacy school.

As an official UAA club our goals are to prepare students for applying to pharmacy school, such as taking the proper course prerequisites, supplying PCAT information (such as testing dates or deadlines), and helping with the admission process, all while making a positive difference in our community. Our UAA advisor is a liaison between college and the “real world,” serving both as an advisor at UAA and working as a pharmacist in a retail pharmacy.

We expect to achieve our goals by working together and listening to mentors that have gone through this process before us. We plan on having guest speakers from all variations of the field of pharmacy to inspire future career ideas. We also want to make a difference in the community via volunteering time, as well as donating to a charity with funds raised by the club.

As students, we are eager to learn as much as we can! We are always looking for advice or ideas from those who have gone through pharmacy school, and looking for more students in which to share our experiences with. As pharmacy

workers in our great state of Alaska, we encourage you to share anything and everything you are willing or able to in order to assist us. This can be as simple as trying to persuade us to go to your alma matter!

The club meets once weekly, Tuesdays at 7pm on the UAA campus inside the Conoco Phillips Science Building. Also, our group is registered online through the university, and we encourage all of you to go and check out our (developing) website, leave feedback for us, or just say hi. Our website is <http://uaa.collegiatelink.net/organization/Pre-Pharmacy>, or you can email us directly at [uaaprepharmacy@yahoo.com](mailto:uaaprepharmacy@yahoo.com). Our plan is to keep the community updated as our group continues to grow and thrive!

We hope to see you all in the Exhibit Hall at the Convention in February where we will be hosting a booth.

*Submitted by:*

*Andrew Haines, UAA Pre-Pharmacy  
Vice President*

# continuing education for pharmacists

Volume XXVI, No. 12

## Hemorrhagic Stroke: Prevention and Treatment

Thomas A. Gossel, R.Ph., Ph.D., Professor Emeritus, Ohio Northern University, Ada, Ohio and  
J. Richard Wuest, R.Ph., PharmD, Professor Emeritus, University of Cincinnati, Cincinnati, Ohio

**Goal.** The goal of this lesson is to discuss hemorrhagic stroke with focus on its clinical characteristics and treatment.

**Objectives.** At the conclusion of this lesson, successful participants should be able to:

1. recognize epidemiologic information and clinical characteristics relevant to hemorrhagic stroke;
2. identify symptomatology that characterizes hemorrhagic stroke and the principles that govern clinical confirmation and management; and
3. select from a list specific therapeutic measures that are reported to modify signs and symptoms of hemorrhagic stroke.

### Background

Every year in the United States, 700,000 persons suffer from stroke, and 200,000 of these events are recurrent. Approximately 270,000 persons die each year in the United States because of stroke, ranking it third in mortality behind heart disease and cancer. Hemorrhagic stroke (intracranial hemorrhage) accounts for approximately 13 percent of all strokes. Hemorrhagic stroke not only has a high case fatality, but also limited treatment options and a poor, most often disabling, outcome. Stroke leads to more long-term disability than any other disease process, and burdens the U.S. healthcare system by a reported \$57.9 billion each year.



Gossel



Wuest

### Subarachnoid Hemorrhage

**Epidemiology.** Subarachnoid hemorrhage (SAH) accounts for 21,000 to 22,000 strokes each year in the United States, affecting young adults predominantly. The risk for women is 1.6 times that of men, and the risk for African-Americans is 2.1 times that of whites. The average mortality rate is 51 percent. Approximately one-third of survivors require lifelong care. Most deaths occur within two weeks after the event, with 10 percent occurring before the patient reaches a medical facility and 25 percent within 24 hours after the stroke. Overall, SAH accounts for 5 percent of deaths from stroke, but for 27 percent of all stroke-related years of potential life lost before age 65. One-half to two-thirds of survivors report a decrease in their quality of life.

A number of risk factors for SAH have been identified. Hypertension, a well established risk factor for ischemic stroke, is less well characterized as a risk factor in SAH.

**Pathogenesis.** Nontraumatic SAH is a neurologic emergency characterized by bleeding into

spaces surrounding the brain that are normally filled with cerebrospinal fluid (CSF). Recall that the brain and spinal cord are covered by three layers of connective tissue, termed the meninges, and encased in bone. The outer layer of the meninges is the *dura mater*, the middle layer the *arachnoid*, and the inner layer the *pia mater*. The arachnoid is a thin, delicate membrane. Separating the arachnoid from the pia mater is the subarachnoid space that contains CSF, which serves to cushion the brain and spinal cord. Bleeding into the subarachnoid space initiates a series of events that lead to spasms of the cerebral blood vessels. Spasm can significantly constrict these vessels, resulting in diminished cerebral blood flow. Blood flow is inversely proportional to the fourth power of the radius, so small changes in the vessel size can produce deleterious effects. If blood flow is reduced below the critical level needed to maintain membrane integrity, cerebral ischemia with edema formation and infarction may follow. Regional cerebral edema further compromises local blood flow causing further ischemia despite an overall normal intracranial pressure.

The principal causes of SAH are rupture of aneurysms and arteriovenous malformations (AV anomalies). Trauma can also cause subarachnoid bleeding. Ruptured aneurysms are the cause in 85 percent of patients.

**Saccular Aneurysms.** Saccular ("berry") aneurysms are thin-

walled outpouchings that protrude from arteries. They gradually enlarge and can ultimately rupture. Multiple aneurysms are found in about 15 percent of affected persons. Since the incidence of aneurysmal SAH is approximately one in 10,000, it is clear that most saccular aneurysms do not rupture. Surgical morbidity far exceeds these percentages. Following rupture, rebleeding is an early and devastating complication. Intracranial aneurysms, unless giant (greater than 1.5 cm in diameter), are usually asymptomatic. An estimated 5 to 15 percent of cases of stroke are related to ruptured intracranial aneurysms.

**Clinical Characteristics and Confirmation.** SAH should be suspected in persons complaining of a sudden onset of severe headache along with nausea and vomiting, neck pain or stiffness, photophobia and loss of consciousness. The classic symptom is a rapidly developing, severe headache. Patients typically describe it as the “worst headache of my life” or “like a hammer blow.” In three out of four patients, onset occurs within a few seconds. It is the only symptom in about a third of patients. Headache from SAH is usually diffuse. Prodromal (warning) headaches may precede the actual SAH by several weeks in over 40 percent of cases. It is however, not the severity, but the suddenness of onset, which is the characteristic feature of SAH, a feature that patients may fail to mention because it is the severity of pain for which they seek medical attention. SAH is believed to be misdiagnosed in up to half of persons being evaluated for the first time. The most common incorrect diagnoses are migraine and tension-type headache.

Arterial pressure is often elevated and body temperature increased, especially during the first few days after bleeding since subarachnoid blood products produce chemical meningitis. Nearly half of all victims experience transient changes in mental status.

A number of neurologic com-

plications can occur if a patient does not die immediately after a SAH. Some result from blood in the subarachnoid space. Other complications include rebleeding from the same aneurysm, cerebral vasospasm and its resulting ischemia leading to reduced blood supply, hydrocephalus (excessive accumulation of fluid in the cerebral area) from blockage of CSF outflow, and seizures. Non-neurologic complications include cardiac and electrolyte abnormalities.

Survivors of SAH may experience chronically disabling problems. More than half report problems with memory, mood or neuropsychological function. These deficits result in impairment of social roles, even in an absence of apparent physical disability. Up to two-thirds of survivors return to work by one year after a SAH.

**Treatment.** Patients with SAH should be evaluated and treated on an emergency basis. Following stabilization, they should ideally be transferred to a center with a dedicated neurologic critical care unit to optimize care. The primary goals of treatment are prevention of rebleeding, prevention and management of vasospasm, and treatment of accompanying medical and neurologic complications.

Medical management of a ruptured aneurysm is intended to reduce the risk of rebleeding and cerebral vasospasm and to prevent other medical complications before and after surgical intervention. The patient is provided general support including bed rest, gentle sedation as needed, analgesics for headache and stool softeners to minimize straining. Glucocorticoids may help reduce the headache and neck stiffness and/or pain caused by blood in the subarachnoid space. There is no solid evidence that they reduce cerebral edema, are neuroprotective or reduce vascular injury in SAH; their routine use is therefore not recommended. Hypertension, if present, should be treated but not aggressively since elevated blood pressure may be a normal compen-

satory mechanism, especially in a chronically hypertensive patient. At present, there is no conclusive evidence whether modifying blood pressure in acute SAH benefits the patient.

The calcium channel antagonist nimodipine (Nimotop) has an established role in decreasing vasospasm in all grades of SAH. A review concluded that calcium channel antagonists decrease the proportion of patients with poor outcome and ischemic neurological deficits after aneurysmal SAH. The results relating to poor outcome depend on one large trial, but against the background of the potentially devastating consequences of vasospasm, the use of nimodipine is indicated in all patients with non-traumatic SAH and should be started as soon as the diagnosis is made. A dose of 60 mg should be given every four hours orally or via a nasogastric tube. Nimotop carries a boxed warning to not administer the drug intravenously or by other parenteral routes because deaths and serious life threatening adverse events have occurred when the contents of the capsules have been injected parenterally. Blood pressure should be kept in the “high-normal” range in attempt to maintain cerebral perfusion pressure. If hypotension occurs, the dosage regimen may be changed to 30 mg every two hours.

### Primary Intracerebral Hemorrhage

Nontraumatic intracerebral hemorrhage (ICH; within the brain substance) occurs mainly as a result of chronic, poorly controlled hypertension; spontaneous ICH refers to those cases that occur in the absence of trauma. A ruptured vascular malformation is responsible less often. Despite evidence that ICH is more than twice as deadly as SAH, clinical and laboratory research continues to focus primarily on SAH. Unlike the declining mortality with SAH due to improvements in surgical and critical care techniques, morbidity and mortality with ICH have remained

relatively unchanged over the past several decades.

**Epidemiology.** Primary ICH is one of the most devastating forms of stroke, and is responsible for about 80 percent of all intracranial hemorrhages in the United States, affecting approximately 67,000 Americans each year. ICH has the distinction of having the highest mortality rate of all types of stroke. Morbidity and mortality associated with ICH are dismal, with 30-day mortality ranging between 30 and 40 percent in hospital-based studies to as high as 52 percent in community-based studies. The annual mortality rate following 30-day survival was 8 percent per year for five years in one community-based study with almost half of all later deaths attributed to complications of the original hemorrhage. Only 21 to 28 percent of patients with ICH could live independently after six months.

The risk for primary ICH is estimated to be about twice as high in African-American, Hispanic and Japanese populations than in Caucasians. The reason for the large discrepancy among populations is unclear. Alcohol consumption and low serum cholesterol levels have been theorized to account for some differences in the Japanese population. There is a slight predominance of men with ICH versus women.

**Pathogenesis.** ICH is bleeding that occurs directly into the brain parenchyma (the functional tissue, as opposed to connective tissue). It is differentiated from intraventricular hemorrhage and SAH, which involve bleeding into the brain's ventricular system and subarachnoid space, respectively. ICH is classified as primary (unrelated to congenital or acquired lesions), secondary (directly related to congenital or acquired conditions), and/or spontaneous (not secondary to trauma or surgery). ICH typically consists of a large area of hemorrhaged blood that clots. Most hemorrhages occur at or near bifurcations of arteries (the

point at which a vessel divides into two branches). The blood is slowly removed over the next several weeks by phagocytosis, and after several months, only a small collapsed cavity may remain. Large hemorrhages typically rupture into the ventricles with bleeding into the subarachnoid space.

It is believed that the initial hemorrhage encircles intact neural tissue, which causes neurologic deterioration attributed to the development of cerebral edema. This appears within hours secondary to the clot releasing plasma proteins into the underlying white matter. Later, delayed thrombin formation may contribute to neural toxicity directly or through damage to the blood-brain-barrier indirectly with subsequent worsening of edema. Peak edema occurs three to seven days following the hemorrhage along with lysis of erythrocytes. Both hemoglobin and its degradation products have been implicated in neural toxicity. The importance of cerebral edema in ICH has been supported by evidence suggesting that patients with a larger amount of cerebral edema relative to the initial hemorrhage volume have a very poor prognosis. Evidence from serial contrast computed tomography (CT) scans show that hematomas can continue to expand over many hours and is the natural course of disease progression. Bleeding may cease when the lesion gets to a size sufficient to produce increased tissue compression (tamponade).

Hypertension is the most important risk factor for ICH especially in persons younger than 55 years of age. It is estimated that approximately 25 percent of ICH events would be prevented if all hypertensive patients received adequate antihypertensive therapy to maintain normal pressure. Smoking, excessive chronic alcohol consumption (more than two drinks/day), and cocaine use (especially in persons older than 45 years) also increases the risk. It is unknown why cholesterol levels less than 160 mg/dL increase the risk.

Warfarin anticoagulation remains a highly effective therapy for prevention of thromboembolic stroke in persons with atrial fibrillation. Anticoagulation to an International Normalized Ratio (INR) of 2.5 to 4.5 has been associated with risk of ICH of approximately 1 percent per year for stroke-prone patients. On the other hand, this rate is nearly 10 times greater than the risk of hemorrhage in a matched group of persons who have not undergone anticoagulation. When such hemorrhages occur, the fatality rate averages 60 percent. Predictors are advanced age, prior ischemic stroke, hypertension, and intensity of anticoagulation therapy.

ICH is the most feared complication of thrombolytic therapy used in acute myocardial infarction or stroke. When a recombinant tissue plasminogen activator (rt-PA) (e.g., alteplase/Activase) is administered within three hours after onset of ischemic stroke symptoms, the ICH rate is 6.5 percent, compared with 0.5 percent in placebo patients. Half of the individuals who sustain these hemorrhages die. The overall benefit of rt-PA therapy in appropriate patients with ischemic stroke is more than counterbalanced by the risk of hemorrhage.

**Clinical Manifestations and Confirmation.** Although not associated with exertion, ICH usually occurs when the patient is awake and sometimes when stressed. The classic presentation is sudden onset of a focal neurologic deficit that progresses over minutes to hours with accompanying headache, nausea and vomiting, elevated blood pressure and decreased consciousness. The neurologic abnormalities are similar to those caused by ischemic stroke since destruction of neural tissue is the root cause of the dysfunction that results from either entity. Specific signs and symptoms are determined by the location of the lesion. Since the site of ICH often differs from ischemic stroke, characteristic patterns of neurologic loss may be more frequently associated with ICH

**Table 1**  
**Clinical features of intracerebral hemorrhage**

Symptom	Site of Hemorrhage			
	Putamen	Thalamus	Pons	Cerebellum
Unconsciousness	Later	Later	Early	Late
Sensory change	Yes	Yes	Yes	Late
Pupils				
Size	Normal	Small	Small	Normal
Reaction	Yes	Yes or No	Yes or No	Yes
Response to nutrition	Yes	Yes	No	Yes or No
Ocular bobbing	No	No	Sometimes	Sometimes
Gait lost	No	No	Yes	Yes
Vomiting	Occasional	Occasional	Often	Severe

Adapted from Zivin JA. *Textbook of Medicine*, 22 ed. Philadelphia:Saunders;2004:2298-2305.

than with ischemic stroke. Hemorrhages may continue to enlarge over several hours as bleeding continues. Ischemic lesions, on the other hand, usually do not change in size following vascular occlusion. As a result, hemorrhages characteristically cause increasing loss of neurologic function with time until a plateau is reached, whereas ischemic strokes may remain static or fluctuate after the early phases of the stroke. About one-fourth of patients who initially are alert may show subsequent deterioration in their level of consciousness after an ICH. ICH in each of the four typical locations within the brain produces characteristic findings (Table 1).

ICH often cannot be confirmed based on clinical findings alone. The test of choice for assessing the type of stroke is CT. Head CT provides substantial information including the size and location of the hemorrhage, and the presence of intraventricular, subarachnoid or subdural blood. It differentiates ICH from nonhemorrhagic cerebral infarctions and may reveal underlying structural abnormality. Magnetic resonance imaging (MRI) is sensitive for ICH; it is useful for dating hemorrhages and identifying small vascular lesions that may be missed with conventional CT. MRI is limited in early detection of ICH, time required to obtain imaging and by the limited ability to monitor patients while in the scanner.

**Treatment.** No surgical or

medical treatment has proved effective, although an estimated 7,000 surgeries to remove hemorrhaged blood are performed in the United States each year. Supportive treatment is the usual means to manage acute ICH, with early care given to maintenance of airway, oxygenation and nutrition, and treatment of secondary complications. Clinical trials of corticosteroids, glycerol and hemodilution (increasing plasma volume in relation to erythrocytes), have not demonstrated benefit. Corticosteroids, in fact, may increase the risk of infectious complications. There is no accepted means for management of increased intracranial pressure. Hyperventilation, neuromuscular paralysis and osmotherapy (treatment by the intravenous injection of hypertonic solutions to produce dehydration) are without significant benefit. Fluid management should maintain a normal volume (euvolemia). Seizures should be treated despite a lack of data from randomized trials, since they can be particularly harmful for critically ill patients. Maintenance of normal body temperature is desirable and fever should be aggressively treated with acetaminophen or cooling blankets since fever may accelerate tissue destruction.

**Prognosis.** Most early deaths result from the direct neurologic consequences of the hemorrhage. The severity of bleeding (e.g., size, extension into ventricles) and level of neurologic function are the best

predictors of poor outcomes. Long-term prognosis for various degrees of recovery is similar or better than that of cerebral infarctions of comparable severity. The risk of recurrent ICH has not been well studied, but the risk of at least one rebleed may be as high as 25 percent over the next several years. The risk of ICH can be reduced by appropriate treatment although there is no specific therapy. Control of mild to moderate hypertension decreases the risk of hemorrhagic stroke by one-third to one-half.

## Summary and Conclusions

All patients with suspected stroke require rapid assessment and intervention. Assessment aims to establish the diagnosis of stroke and its etiological subtypes, and to estimate the prognosis for complications, recurrent events, survival and handicap. Intervention strives to reverse any ongoing brain hemorrhage or ischemia, lessen the risk of complications and recurrent stroke, and optimize physiological homeostasis and rehabilitation.

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# continuing education quiz

## Hemorrhagic Stroke: Prevention and Treatment

- Most deaths from subarachnoid hemorrhage (SAH) occur within:
  - two minutes.
  - two hours.
  - two days.
  - two weeks.
- The arachnoid is the thin, delicate membrane that constitutes which of the following layers of the meninges?
  - Inner
  - Middle
  - Outer
- The principal causes of SAH are arteriovenous malformations and rupture of:
  - aneurysms.
  - plaque.
  - arterioles.
  - granulomas.
- The classic symptom of SAH is severe:
  - cramping.
  - depression.
  - headache.
  - syncope.
- General support for patients experiencing an SAH include all of the following EXCEPT:
  - antiemetics.
  - analgesics.
  - sedatives.
  - stool softeners.
- Spontaneous intracerebral hemorrhage (ICH) refers to those cases that occur in the absence of:
  - syncope.
  - symptoms.
  - thromboembolism.
  - trauma.

- The bleeding associated with ICH occurs directly into the brain parenchyma which is:
  - connective tissue.
  - functional tissue.
  - interstitial tissue.
  - mesenteric tissue.
- The most important risk factor for ICH, especially in persons younger than 55 years of age, is:
  - hyperkalemia.
  - hyperlipidemia.
  - hypertension.
  - hyperthrombosis.
- The root cause of the dysfunction that results from either ICH or ischemic stroke is:
  - destruction of neural tissue.
  - initiation of arterial fibrillation.
  - precipitation of ventricular tachycardia.
  - rupture of atherosclerotic plaque.
- Which of the following has been proven to be effective in treating ICH?
  - Medical treatment only
  - Surgical treatment only
  - Both medical and surgical treatment
  - Neither medical nor surgical treatment



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**LESSON EVALUATION**

	Disagree	Agree		Disagree	Agree
1) Activity met learning objectives	1	2 3 4 5	4) Activity learning assessment appropriate	1	2 3 4 5
2) Amount of time was appropriate	1	2 3 4 5	5) Author was knowledgeable in topic	1	2 3 4 5
3) Increased my knowledge of topic	1	2 3 4 5	6) Overall, I was satisfied with the activity	1	2 3 4 5

To obtain CPE credit for this lesson you must answer the questions on the quiz (70% correct required). Should you score less than 70%, you will be asked to repeat the quiz. In May and November of each year we will mail a statement of credit, unless otherwise arranged with the AkPhA office. This knowledge-based activity is accredited for 1.5 hours of continuing pharmacy education (0.15 CEU). Pharmacists and technicians may receive credit for completing this lesson if returned by 12/15/11. ACPE #0139-9999-10-002-H01-P AkPhA#0139-9999-10-002-H01-T  
 (Mail to: AkPhA, 203 W. 15<sup>th</sup> Ave. #100 Anchorage AK 99501) Circle one: Pharmacist Technician

## Access to Good Quality Dietary Supplements

This continuing education monograph is adapted from the United States Pharmacopeial Convention (USP) series of white papers prepared by the Council of the Convention (CoC) titled "Focus On: Future Directions for USP." The learning objectives and assessment questions were developed by National Alliance of State Pharmacy Association's (NASPA) Continuing Education Advisory Panel. No financial support was received for this activity. This activity may appear in other state pharmacy association journals.

Council of the Convention Section on the Quality of Food Ingredients and Dietary Supplements  
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### Goals:

The goals of this lesson are to provide background information on dietary supplements and to review proposals for consideration to further improve the quality of dietary supplements.

### Objectives:

At the conclusion of this lesson, successful participants should be able to:

1. Describe the regulatory framework of dietary supplements
2. Give examples of the proposals that could be considered to further improve the quality of dietary supplements

## INTRODUCTION

The 1994 Dietary Supplement Health and Education Act (DSHEA) amendments to the Federal Food, Drug, and Cosmetic Act (FDCA) provided a regulatory framework to allow marketing of vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, glandulars, and metabolites. Now, more than 15 years later, a vast array of dietary supplements in different combinations and amounts are available to United States patients/consumers. Sales of dietary supplements are approaching \$25 billion/year, with about \$4 billion of this amount representing sales of botanicals. While DSHEA was instrumental in providing consumers with easy access to dietary supplements, a recent U.S. Government Accountability Office (GAO) report stated that consumers of dietary supplements are not adequately protected under current U.S. law and regulations.<sup>1</sup> Pre-market oversight and registration of products are recommended in the GAO report.<sup>2</sup> Outside the United States, dietary supplements are frequently considered as traditional medicines with few standards and conformity assessments to these standards. In this white paper, USP's Council of the Convention Section on the Quality of Food Ingredients and Dietary Supplements provides background information on the topic and advances proposals for consideration by the Convention membership to further improve the quality of dietary supplements.

## NATIONAL APPROACHES

<sup>1</sup> Government Accountability Office report. 2009 Dietary supplements. FDA Should Take Further Actions to Improve Oversight and Consumer Understanding <http://www.gao.gov/new.items/d09250.pdf>.

<sup>2</sup> Ibid.

## 1. CONGRESS: PROVISIONS OF DSHEA

Through DSHEA, Congress defined dietary supplements as “foods.” As with all foods, DSHEA provisions in the FDCA do not require pre-market review of a dietary supplement by the Food and Drug Administration (FDA) if the ingredients have a safe history of use in food or supplements prior to 1994. Instead, Congress put in place a notification process for a new dietary ingredient to ensure that ingredients that do not have a safe history of use are reviewed by the FDA prior to entry into the U.S. market. In addition, DSHEA essentially places the burden of proof on the FDA to demonstrate that a dietary supplement presents “significant or unreasonable risk of illness or injury” before it can be removed from the market.

With regard to the *United States Pharmacopeia (USP)*, Section 403(s)(2)(D) of the FDCA states that if a dietary supplement is 1) covered by the specifications (tests, procedures, and acceptance criteria of a monograph) of an official compendium of the United States (*USP, National Formulary [NF], or the Homeopathic Pharmacopoeia*), 2) is represented as conforming to the specifications of an official compendium, and 3) fails to so conform, then the supplement is considered to be misbranded. Accordingly, unlike the provisions relating to prescription drugs (where conformance with USP standards is mandatory, whether labeled as such or not), Section 403(s)(2)(D) of the FDCA makes compliance with the specifications of an official compendium strictly voluntary for dietary supplement manufacturers (unless the manufacturer chooses to represent the product as conforming to *USP*). As a consequence, this statutory reference to official compendia provides legal recognition to *USP*, but effectively creates a disincentive for its use, because it exposes only those manufacturers who so label (and not others who make no reference to USP standards at all) to a potential misbranding violation if found not to conform to *USP*.<sup>3</sup>

## 2. THE FOOD AND DRUG ADMINISTRATION

In 2007, the FDA finalized Current Good Manufacturing Practices (cGMPs) for dietary supplements. These regulations allow manufacturers to establish product specifications and to use “appropriate and scientifically valid” methods to determine whether those specifications are met. The cGMPs do not define the words “scientifically valid” nor is validation of analytical procedures required. The FDA has indicated that “a scientifically valid method is one that is accurate, precise, and specific for its intended purpose—in other words, a scientifically valid test is one that consistently does what it is intended to do. As a result, dietary supplement manufacturers develop private procedures, tests, and assays, which may or may not receive regulatory scrutiny. Standards for a dietary supplement under a specified name may not have comparable requirements and thus may be dissimilar in quality, benefit, and safety to consumers. The cGMPs do not require dissolution and disintegration testing, and manufacturers set their own limits for contaminants such as heavy metals, microbial limits, fungal toxins, or pesticides. USP has published an article describing the current regulatory scheme as one that creates “standards without standardization.”<sup>4</sup>

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<sup>3</sup> It should be noted that the FDA has indicated that DSHEA will not apply to dietary supplement products intended for use in animals. As such, animal dietary supplements currently are regulated generally as “food” without the additional protection afforded human dietary supplement products under DSHEA. It is generally felt in the veterinary community that the need for evidence of quality, safety, and efficacy are similar for veterinary and human patients alike. For more information, see *Safety of Dietary Supplements for Horses, Dogs and Cats*, Committee on Examining the Safety of Dietary Supplements for Horses, Dogs and Cats, National Research Council, National Academic Press, 2008.

<sup>4</sup> Miller RK, Celestino C, Giancaspro GI, Williams RL. 2008. FDA’s dietary supplement CGMPs: Standards without standardization. *Food and Drug Law Journal* 63 (4), 929-942+iv.

### 3. UNITED STATES PHARMACOPEIAL CONVENTION

Following enactment of DSHEA in 1994, the 1995 USP Convention adopted Resolution 12 that encouraged the USP to explore the feasibility and advisability of establishing standards and developing information concerning dietary supplements. This resolution was taken up and implemented by USP's Board of Trustees and Council of Experts, resulting in a well-evolved section of *USP* for dietary supplement monographs, with allied USP Reference Standards offered in USP's catalogue.<sup>5</sup> *USP32-NF27* now contains approximately 430 dietary supplement and ingredient monographs and general chapters, which cover a large percentage ( $\pm 90\%$ ) of the dietary supplements commonly marketed in the United States. USP's Council of Experts Dietary Supplement Information Expert Committee applies admission criteria together with a safety review guideline to allow exclusion of some dietary supplements from *USP*, even though they may be legally marketed in the United States. This approach mirrors the work of the Scope Committee of the Committee of Revision (the predecessor of the Council of Experts) that ended in the 1990s. *USP* also includes a General Chapter on *Manufacturing Practices for Dietary Supplements* <2750>, which was developed prior to finalization of FDA's cGMPs and is generally more stringent and specific than those regulations. In June 2009, USP introduced a separate *USP Dietary Supplements Compendium* that includes official text from *USP* (monographs and general chapters relating to dietary supplements) as well as authorized explanatory text and graphics intended to provide useful information to dietary supplement manufacturers.

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## INTERNATIONAL APPROACHES

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While vitamins, minerals, amino acids, botanicals, and other plant and animal substances are available in the U.S. as dietary supplements, they are variably regulated as health products, traditional medicines, or drugs in other countries. This varied international approach on the regulation of dietary supplements provides different paradigms for consideration and exploring options for domestic regulatory oversight. Quality standards also are quite variable around the globe. Issues of quality are present in the international commerce of dietary supplements, which is evident in cases such as protein adulteration with melamine or dietary supplements containing toxic metals, high levels of pesticides or unapproved drugs. Information from the World Health Organization (WHO) details the widespread consumer misconception that "natural" always means "safe," and a common belief that remedies from natural origin are harmless and carry no risk.<sup>6</sup> Also of concern is that healthcare providers are frequently unaware of the dietary supplements their patients are taking; either because they do not ask, or patients do not offer the information.<sup>7</sup> Under the current law and regulations, there is no way of knowing the quality standards to which each product is held, and thus, there is no way to determine whether two products with the same dietary supplement ingredients are the same or different.

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## PROPOSALS

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The Council of the Convention Section on Food Ingredients and Dietary Supplements suggests for consideration the following opportunities for possible USP Convention action and improvement in the regulation of dietary supplements.

<sup>5</sup> More information on USP dietary supplements Expert Committees is available through <http://www.usp.org/support/products/uspNewslettersRequest.html>

<sup>6</sup> WHO. 2004. Guidelines on Safety Monitoring of Herbal Medicines in Pharmacovigilance systems. WHO Department of Essential Drugs and Medicines Policy: Geneva. <http://apps.who.int/medicinedocs/index/assoc/s7148e/s7148e.pdf>

<sup>7</sup> Gardiner P, Sarma DN, Low Dog T, Barrett ML, Chavez ML, Ko R, Mahady GB, Marles RJ, Pellicore LS, and Giancaspro GI. 2008. The state of dietary supplement adverse event reporting in the United States. *Pharmacoepidemiology and Drug Safety*. 17: 962–970.

## 1. PUBLIC MONOGRAPHS AND REFERENCE MATERIALS

The universe of products in the market is constantly expanding, creating gaps where monographs and reference materials are missing. To the extent feasible, documentary standards and reference materials offered by USP should expand to cover all the products in the dietary supplements market.

## 2. ADHERENCE TO PUBLIC STANDARDS

Public quality standards arising from the open and participatory process conducted by USP conserve both regulatory and manufacturer resources. They work to achieve consistency in the quality of a dietary supplement both within and between manufacturers, and allow updating. This consistency is more likely to be achieved if manufacturers are required to comply with public standards. Thus, USP might consider informing and engaging in discussions with Congress about the desirability of strengthening section 403(s)(2)(D) of the FDCA to require dietary supplements and dietary supplement ingredients to conform to the standards established in *USP-NF*, where such standards exist. USP also might consider making Congress aware of the benefits of strengthening the adulteration provisions of the FDCA to ensure that all dietary supplements conform to the relevant standards promulgated in *USP-NF*. However, it is not clear, at this time, that industry supports such mandatory standards.

## 3. INTERNATIONAL HARMONIZATION

Amidst the increasingly complex global supply of dietary supplement ingredients and products, ensuring quality and harmonization of standards is important, irrespective of how dietary supplement products are labeled and regulated—whether as traditional medicines, drugs, or supplements. Global harmonization of public standards would ensure quality, identity, and label uniformity in international commerce, and could facilitate international commerce of good quality dietary supplements. To start its work in this area, USP standards and analytical methods could complement the descriptions of quality, dosage, safety, and pharmacological activity of botanical monographs offered by other standards setting bodies of the world.<sup>8</sup> For these reasons, USP should cooperate with international health organizations to promote standards for traditional medicines that are also dietary supplements in the United States. Examples of such organizations include the WHO, the Canadian Natural Health Products Directorate in Health Canada, the European Directorate for the Quality of Medicines and HealthCare (EDQM), and the Indian and Chinese Pharmacopoeia Commissions.

## 4. EDUCATION

There is a dearth of unbiased dietary supplement information for consumers and practitioners. Gaps in practitioner training and consumer education are clear impediments to the safe use of dietary supplements. Practitioners should receive training on proper counseling of consumers on the use of dietary supplements and consumers should be educated about the importance of disclosing such usage to healthcare providers. In this way, practitioners and consumers can monitor and prevent possible adverse effects that may occur from the combined use of certain dietary supplements and drugs.

USP could expand its educational programs to meet the needs of practitioners and patients/consumers with respect to dietary supplements. The USP Dietary Supplements Information Expert Committee earlier recommended education of practitioners regarding suitable practices for safe use and prevention of interactions with other therapeutic agents.<sup>9</sup> USP should consider developing Pharmacopoeial Education courses for practitioners and consumers in this regard, and additional courses on compendial approaches to quality standards for dietary supplements to help manufacturers, testing labs, and regulators understand the value of USP public standards and reference materials.

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<sup>8</sup> Ko RJ. 2004. A U.S. perspective on the adverse reactions from traditional Chinese medicines. *J Chin Med Assoc.* 67(3):109-116.

<sup>9</sup> Gardiner et al, 2008 (see reference 5 above).

## 5. VERIFICATION

USP Verification Programs could also be used to increase confidence that ingredients and products moving in the international market comply with the quality specifications to help ensure public safety, including absence of known/identified adulterants and contaminants. Although FDA has not endorsed the use of third party certifications of dietary supplements, it has recognized the value of third-party certifications in its recent guidance on foods.<sup>10</sup> Broad implementation of USP's Verification Programs for dietary supplements and dietary supplement ingredients could assist in raising supplement quality, help patients make informed decisions, restore consumer confidence, and allow healthcare practitioners to recommend verified dietary supplements with some level of confidence. The various elements of USP's Verification Programs (audits, testing, document review, and market surveillance) would act synergistically with the cGMPs already in place, thus helping conserve FDA resources. Because cGMPs provide minimum requirements, implementation of USP Verification Programs would add value for greater assurance of the quality of supplements.

The concern about the quality and purity of ingredients moving in the international market also could be addressed through a system of USP Verification Programs' inspecting companies and testing products overseas. With sites in China, India, and Brazil, USP is very well positioned to contribute worldwide to raising the quality of dietary supplements. It is also possible that the challenges faced by regulatory differences with other countries could be addressed through credible USP Verification Programs.

## 6. REGULATORY OVERSIGHT

Dietary supplement product registration or pre-market notification might be considered as a means of monitoring the number and type of dietary supplements moving in commerce in the U.S. and helping to assure the safety of dietary supplements prior to sale to the consumer. To accomplish this, the FDA would need sufficient resources to adequately assess and address the safety of dietary supplement products, and the FDCA would need to be amended to provide the FDA with authority in this area.

The Council of the Convention Section on Food Ingredients and Dietary Supplements welcomes input on these proposals from the Convention, as well as additional comments on how USP might build upon its past efforts and expand its work to help assure the quality and appropriate use of dietary supplements worldwide.

### ***ABOUT USP and NASPA***

*The United States Pharmacopeia (USP) is an official public standards-setting authority for all prescription and over-the-counter medicines and other health care products manufactured or sold in the United States. USP also sets widely recognized standards for food ingredients and dietary supplements. USP sets standards for the quality, purity, strength, and consistency of these products—critical to the public health. USP's standards are recognized and used in more than 130 countries around the globe. These standards have helped to ensure public health throughout the world for close to 200 years. More information can be found at [www.USP.org](http://www.USP.org)*

*The National Alliance of State Pharmacy Associations (NASPA) promotes leadership, sharing, learning, and policy exchange among state pharmacy associations and pharmacy leaders nationwide, and provides education and advocacy to support pharmacists, patients, and communities working together to improve public health. NASPA was founded in 1927 as the National Council of State Pharmacy Association Executives (NCSPA). More information can be found at [www.naspa.us](http://www.naspa.us)*

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<sup>10</sup> Third-party verification – The FDA is endorsing third party verification of foods through its Guidance for Industry on Voluntary Third-Party Certification Programs for Foods and Feeds. 2009. <http://www.fda.gov/RegulatoryInformation/Guidances/ucm125431.htm>

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### **Continuing Education Quiz:**

1. The Dietary Supplement Health and Education Act was introduced in what year?
  - a. 1993
  - b. 1994
  - c. 1995
  - d. 1996
2. Sales of botanicals are approximately \_\_\_\_ of an almost \$25 billion/year business.
  - a. 1 billion
  - b. 2 billion
  - c. 3 billion
  - d. 4 billion
3. Through the Dietary Supplement Health and Education Act (DSHEA) Congress defined dietary supplements as which of the following?
  - a. Drugs
  - b. Vitamins
  - c. Foods
  - d. Botanicals
4. Which of the following is considered an official compendium of the United States
  - a. Unites States Pharmacopeia
  - b. National Formulary
  - c. Homeopathic Pharmacopeia
  - d. All of the above
5. In which year was the Current Good Manufacturing Practices (cGMPs) for dietary supplements finalized by the FDA?
  - a. 2000
  - b. 2003
  - c. 2007
  - d. 2009
6. Which of the following is false regarding cGMPs?
  - a. They were finalized by the FDA
  - b. They do not define the words “scientifically valid”
  - c. They allow manufacturers to establish product specifications
  - d. They require dissolution and disintegration testing
7. In what year did the USP Convention adopt a resolution that encouraged the USP to explore the feasibility and advisability of establishing standards and developing information concerning dietary supplements?
  - a. 2005
  - b. 1965
  - c. 1995
  - d. 1985
8. Which of the following includes official text from USP as well as authorized explanatory text and graphics intended to provide useful information to dietary supplement manufacturers?
  - a. USP Dietary Supplements Compendium
  - b. Manufacturing Practices for Dietary Supplements
  - c. Homeopathic Pharmacopeia
  - d. None of the above

9. Which of the following is available in the U.S. as a dietary supplement?
  - a. Vitamins
  - b. Minerals
  - c. Amino acids
  - d. All of the above
10. Which of the following is true regarding public quality standards?
  - a. They conserve only regulatory resources
  - b. They work with only certain manufacturers
  - c. They do not allow updating
  - d. They arise from the open and participatory process conducted by USP
11. Global Harmonization would ensure
  - a. Quality
  - b. Identity
  - c. A+B
  - d. None of the above
12. USP does NOT have a site in which of the following countries?
  - a. France
  - b. China
  - c. India
  - d. Brazil



The Alaska Pharmacists Association is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

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**LESSON EVALUATION**

	Disagree					Agree					
1) Activity met learning objectives	1	2	3	4	5	4) Activity learning assessment appropriate	1	2	3	4	5
2) Amount of time was appropriate	1	2	3	4	5	5) Author was knowledgeable in topic	1	2	3	4	5
3) Increased my knowledge of topic	1	2	3	4	5	6) Overall, I was satisfied with the activity	1	2	3	4	5

To obtain CPE credit for this lesson you must answer the questions on the quiz (70% correct required). Should you score less than 70%, you will be asked to repeat the quiz. In May and November of each year we will mail a statement of credit, unless otherwise arranged with the AkPhA office.

This knowledge-based activity is accredited for 1.5 hours of continuing pharmacy education (0.15 CEU).

Pharmacists and technicians may receive credit for completing this lesson if returned by 9/23/12.

ACPE #0139-0000-10-011-H04-P AkPhA#0139-0000-10-011-H04-T *Knowledge based Activity*

(Mail to: AkPhA, 203 W. 15<sup>th</sup> Ave. #100 Anchorage, AK 99501)

Circle one: Pharmacist      Technician

## PHARMACY MARKETING GROUP, INC

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# AND THE LAW

By Don. R. McGuire Jr., R.Ph., J.D.

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This series, **Pharmacy and the Law**, is presented by Pharmacists Mutual Insurance Company and your State Pharmacy Association through Pharmacy Marketing Group, Inc., a company dedicated to providing quality products and services to the pharmacy community.

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## CAN YOU FILL IN ON SATURDAY?

Joe, the owner of Town Drugs, called and asked his friend Sandy to fill in next Saturday so Joe could attend a wedding. Joe and Sandy's friendship goes back many years, so Sandy agreed. Sandy has filled in for Joe maybe two to three times per year and Joe sends Sandy an IRS form 1099 at the end of the year. Unfortunately, Sandy misfilled a prescription on that Saturday and the patient was injured. Joe and Sandy had not contemplated what they would do in the event that an error occurred. What are the ramifications for this lack of planning?

**From the owner's perspective:** Joe has had a regular patient injured and he feels terrible about it. The patient may or may not want to transfer their prescriptions. Does Joe's store insurance policy cover this claim? It depends on Sandy's status. Joe's store policy covers his employees, but clearly Sandy is not an employee here. Joe isn't making any withholdings and isn't giving Sandy a W-2 at the end of the year. Other types of workers may be covered under the store's policy. They include temporary workers, leased workers and volunteer workers. Sandy is most likely an independent contractor, but Joe didn't check his liability policy before the loss to see if his store's policy covers independent contractors. If not, the store's policy won't cover this claim.

**From the relief pharmacist's perspective:**

Sandy filled in at Joe's assuming that Joe's store policy would cover her while working there. More than likely, the policy covering Sandy's regular employer will not cover Sandy while she is working at Joe's. So, very easily Sandy could wind up with neither policy covering her. Sandy could have purchased her own policy, but didn't think it was necessary since she was only filling in two or three times per year.

One possible result is that neither pharmacist has insurance coverage for this incident. Joe's pharmacy will be held liable for this error because it was the pharmacy that dispensed the errant medication. Sandy is liable because she is the pharmacist who misfilled the prescription. Joe and Sandy could end up fighting about who is going to take care of the injured patient and their long friendship could dissolve. Now, what should Joe and Sandy have done?

Planning for the unexpected takes a little time, but it is crucial in the event that something bad happens. Joe and Sandy should have been working under a written contract. The contract should clearly state Sandy's status with Joe's store (i.e., independent contractor, temporary worker, employee, volunteer, etc.). Depending on the agreed upon status, Joe should review

his policy to verify coverage for Sandy's activities. Joe should also make sure that Sandy has her own insurance policy as a fail-safe measure, regardless of whether he believes that his policy will cover her. Sandy would want to do this for her own peace of mind also. Joe and Sandy can also allocate risk in their contract and decide ahead of time who will be responsible should an error occur. This might have saved their friendship. Many times, such an allocation of risk could be covered under Joe's policy if it meets the definition of a covered contract.

This is more likely to be true when the contract deals with the conduct of Joe's business. Which it does in this case.

Many pharmacists view requests to fill in as minor, friendly exchanges. No one expects bad things to happen. Unfortunately, lack of planning could result in them being a stressful, life-changing event. Take some time and plan ahead.

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© Don R. McGuire Jr., R.Ph., J.D., is General Counsel at Pharmacists Mutual Insurance Company.

*This article discusses general principles of law and risk management. It is not intended as legal advice. Pharmacists should consult their own attorneys and insurance companies for specific advice. Pharmacists should be familiar with policies and procedures of their employers and insurance companies, and act accordingly.*

# Alaska Health Workforce Coalition: *Progress Report to the Health Community*

<https://sites.google.com/site/alaskahealthworkforcecoalition/>



**Date:** December 20, 2010

## **Introduction:**

You are receiving this email briefing because you have previously expressed interest in the work of the Alaska Health Workforce Coalition. This report contains information about the progress and projects of the Coalition over the past six months. If this report was emailed to you by someone, please send a note to [Ellen@ashnha.com](mailto:Ellen@ashnha.com) to be added to the regular distribution list.

## **Significant Benchmarks for the Coalition:**

- The **Alaska Workforce Investment Board adopted the Alaska Health Workforce Plan** on May 4<sup>th</sup>, 2010.
- **The Alaska State Department of Labor received a Health Resources and Services Administration (HRSA) grant** to advance the work of the Coalition. This grant provides for staffing and consultation to build the organizational effectiveness of the Coalition and generate momentum toward addressing the Occupational Priorities cited in the Plan. Ellen Maling of the Alaska State Hospital and Nursing Home Association (ASHNHA) is retained as a project coordinator with support from Kitty Farnham of Catalyst Consulting. The remaining funds will be used to support Department of Labor and Department of Health and Social Services activities relating to Health Workforce development. This planning grant paves the way for an implementation proposal that will be prepared for a May deadline.
- **The Coalition has a new website** (address located above on our letterhead) that is a central repository for information relating to the activities of the Steering Committee, various workgroups and committees, and the work of the Coalition. Please take a look at the recent meeting minutes and current projects.
- **The Steering Team for the Coalition has reinvigorated a regular monthly meeting schedule** to coordinate the work ahead on developing a work plan for Occupational Priorities cited in the Plan, identifying Legislative Priorities, and gathering additional Data. The next meeting will be held on February 8 between 8:30-12:00 at the UAA Diplomacy Building, suite 402A. Meetings are open to all who would like to attend—please contact [Ellen@ashnha.com](mailto:Ellen@ashnha.com) to be kept in the loop on the agenda and teleconference details. We will also conduct periodic teleconferences to complement these newsletters.
- **Developing the Work plan for Occupational Priorities** is a current initiative of the Coalition. The Steering Group is seeking perspectives and input on what is already occurring and what needs to be done to engage, train, recruit and retain Alaska's health workforce. Please review the materials posted in the "Occupational Priorities Project" section of the Coalition website to learn more. The Steering Team is looking for feedback and would prefer that individuals and organizations submit their ideas before January 7<sup>th</sup>. However, information would be welcomed anytime.

## PHARMACIST

Description: Pharmacists dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. Pharmacists may advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

Overview: The demand for pharmacists in Alaska has diminished somewhat in the past two years, probably helped by the recession and the recent increase in the number of pharmacy schools in the rest of the country. With anticipated retirements and potential expanded functions for pharmacists, it is expected that attention will need to be paid to ensuring that the number and distribution of this profession are adequate to meet state needs. Recruitment and retention will be important, as well as expanding viable options for educating pharmacists in state.

Workforce Data: There were an estimated 37 vacancies (8.6% vacancy rate) in 2009 and 471 licensees, up 12% from 2007. Of the current workforce, 26% is non-resident and 34% over age 50.

Education and Training: Currently there is no program in Alaska. Several options for pharmacy education recommended by a consultant are being discussed. An average of fewer than 10 Alaskans enroll in pharmacy schools in other states each year. The Creighton University distance delivered pharmacy program is available for those who want to stay in state for school.

	Strategy	Timescale	Current Activities (Party)	Still Needs To Be Done (Party)	Coalition Role	Priority (1-5)
ENGAGE	Inform the public about pharmacy as a career; include in K-12 career awareness activities.	Short				
	Target college majors in chemistry, biology and biochemistry for information about opportunities in pharmacy.	Short				
	Consider pharmacy technology program at the high school level.	Medium	In progress in some schools;	Discover and share best practices underway in Alaska and L48; Continue to liaise between UA and Pharmacists Association	Monitor	2
TRAIN	Develop a strategy for pharmacy education for Alaska.	Short	UA and Pharmacists have MOA with Creighton University for fully distance delivered program	Find an additional institution to Alaska to develop in-state capacity	Monitor	2
	Explore partnership options through an RFP process.	Medium		See above		
	Develop a clear pre-pharmacy track at all three UA Major Administrative Units (MAUs).	Short	Underway at UA			

	Work with Creighton University to set aside slots and provide tuition discount for Alaska students.	Short	5 slots set aside to start in Fall 2011; did not get discount; UA students and other Alaskans be eligible for Creighton scholarships	Develop marketing	Promote enrollment	2
RECRUIT	Continue successful recruitment efforts; target new schools for information about Alaska.	Medium				
	Include pharmacists in loan repayment and employment incentives programs.	Short	Currently excluded from available loan repayment programs	Promote inclusion of Pharmacists in new legislation	Support new legislation	5
RETAIN	Create attractive workplaces and exercise other retention strategies.	Long				
	Assure continuing education opportunities for pharmacists, especially in rural areas.	Medium				

**AKPha Members-** Please provide feedback to the Pharmacy Education Committee re: the Alaska Health Workforce Coalition Progress Report.

You can contact: Brian Schilling, AKPha Pharmacy Education Chair email: [silbrt@me.com](mailto:silbrt@me.com) or phone (907) 729-8885.

## Meeting Pharmacy Students: A Great Reason for a Road Trip

This past October I was privileged to be invited to present to pharmacy students at two national pharmacy meetings. I was asked to speak at the *Student Leadership Retreat* in San Antonio and members of the student chapters of the Christian Pharmacists Fellowship International (CPFI). I was also asked to speak to student chapter members of the National Community Pharmacists Association (NCPA) at the *NCPA Convention* in Philadelphia. What a great opportunity to talk about pharmacy in Alaska!

Fortunately, I had my motorcycle stashed in a garage in Arkansas. This is the same bike I rode from our home on Prince of Wales Island to the southern tip of South America 3 years ago. I rode the bike to both of these national meetings. I also spoke to students at 4 different colleges of pharmacy along the way. October is one of the better biking months, I discovered. It was also National Pharmacy Month. The weather was great and the fall foliage was AWESOME - all the way from Texas to Pennsylvania.

I arrived at the CPFI Student Retreat at the University of the Incarnate Word (UIW) in San Antonio just in time for the UIW's "White Coat Ceremony" for freshman students and their families. I visited with some of the proud parents while I was with them on a tour of the pharmacy school. The retreat had students from several campuses around the country. It was a great opportunity to network with pharmacy student leaders from all across the nation. We had dinner as a group on the River Walk in downtown San Antonio and it was a Mexican restaurant of course. Many of the students from the host university were of second generation Hispanic descent. I envied their bilingual abilities. The keynote speaker for the CPFI meeting was a missionary pharmacist who had worked for many years in Tanzania. I was able to share about running a pharmacy business on an Island in rural Alaska, as well as our time living and working in Zaire (now Congo) and Haiti. I also talked about participating on short term medical

mission trips to China and Brazil. There was a "service activity" scheduled as part of the retreat. We spent an afternoon as a group working at the San Antonio Food Bank. Our job was to sort a huge pallet of potatoes and put the tators in bags to be distributed with other food. A great time was had by all along with great fellowship. The food bank was meeting a great need in the area.

I visited with faculty at UIW and was given a tour of Ft. Sam Houston by Dr. Jeff Copely, the CPFI Student Chapter advisor. Ft. Sam was where I spent 5 months in the early 70's at the Army's pharm tech class. Dr. Jeff had been an instructor for this same class many years after I was there. I was able to see the same classroom where I spent hours almost 4 decades ago learning about the job of pharm tech before being shipped out to Germany. It brought back a lot of memories. After the tour, I spoke to the UIW's NCPA Student Chapter, talking mostly about starting and running an independent pharmacy business in rural Alaska. There was a pot-luck dinner before my talk. The main dish was Korean BBQ which was prepared by two Korean students born in Korea. Good stuff! I was amazed at the many ethnic groups represented at the meeting. There were many questions posed by the students about pharmacy ownership, living and working in Alaska, pharmacy in missions and practicing in a rural area.

I headed north from S.A. to my next stop: Austin, TX and the College of Pharmacy at the University of Texas. Along the way I stopped at a small town pharmacy on the town square in Hamilton, TX. The owner of the store gave me a grand tour of her business once she knew that I was the owner of a pharmacy in rural Alaska. This store had a soda fountain and I was given a "Dublin Dr. Pepper" to sample. This is a special recipe D.P. which is only available in a hundred mile radius from a plant up the road from this pharmacy. The owner was very proud of her compounding room. The building was used as a feed & seed store about 100 years ago.

I arrived at the University of TX campus about an hour before my scheduled talk to their NCPA student chapter. What a huge campus- definitely a football town, especially in October. I let the NCPA chapter president know that my next stop was to the University of Oklahoma. Before my talk, I was presented with a "Texas Pharmacy" shirt, but was told that I could not have it unless I agreed to wear the shirt during my talk with the students at OU. It appeared that there was some sort of rivalry between the two campuses: UT vs. OU. That also just happened to be the week that their two respective football teams played each other. So I agreed to do it and they gave me the shirt. There must have been over 100 students at my talk. There were many questions again about Alaska and working overseas in pharmacy. I then visited with students from the UT CPFI Chapter afterwards.

My next destination was the University of OK College of Pharmacy in OK City- a beautiful new health careers campus. They put me up in a fancy hotel downtown. The staff at the hotel allowed me to park my bike on the patio next to the pool in the back. I guess there was not a lot of use for the pool in October. I was invited to dinner with the assistant dean and 7 student leaders the first evening. There were students from India, Korea and Pakistan. I particularly hit it off with the student who grew up in India. He had on his "bucket list" to ride a motorcycle from one end of Africa to the other- My kind of guy. The next day at the college, I visited with faculty who taught the "leadership track" for students. I was very impressed with this program. Then an NCPA student chapter officer gave me a tour of the college. The nuclear pharmacy dept was interesting. I then gave a "distance presentation" to students at the OU pharmacy school satellite campus in Tulsa, OK using a camera monitor and microphone. It was interesting talking to pharmacy students in another location using technology. Next up was my talk to a large group of students and faculty. When I took off my jacket and revealed that I was wearing a Texas Pharmacy shirt, I feared for my life for just an instant. I can't remember the exact epithets delivered to me, but I think it helped that OK did beat TX in the football game just the day or two before. Again, there were

many questions about Alaska and pharmacy in missions. It was a great group with wonderful hospitality. After my talk I rode to the site of the "Rescue Mission" in downtown OK City where a health fair was being put on by students from the OU health campus. There must have been 30 or 40 pharmacy students there helping along with students from the nursing, medical and dental hygienist schools. The targeted audience looked like it included folks living on the street. I was impressed by seeing students involved in this kind of outreach.

My next stop was the Southwest Oklahoma State University College of Pharmacy in Weatherford, OK. Along the way I spent a couple of nights with my uncle in the small ranch town of Leedey, OK. My uncle got me some speaking gigs at the local school where I spoke to three different classes of high school students about pharmacy. There were a few students who were considering pharmacy as a career. I visited the pharmacy owner at his store. I asked him what he thought I should say to students at the NCPA Convention. This particular pharmacy owner was not too optimistic about the future of the profession. But most of the pharmacy owners I visited along my route across the country were enthusiastic about the opportunities in pharmacy. At SWOSU, I had dinner with three faculty members the night before my talk to the students. It was great visiting with them. One of the professors grew up in Bangladesh. The pharmacy students at this much smaller school were very interested in both ownership and practicing in rural areas. Many came from rural small-town backgrounds. In fact, Weatherford, OK is in a very rural area of a rural state. There were many questions about starting a pharmacy from the ground up. Also, there were many questions about owning and operating a pharmacy business in Alaska.

On my way east toward the NCPA Convention in Philadelphia, I stopped at many small town independent pharmacies. Once the owners found out we owned a store in Alaska, it was then a great opportunity to compare notes with them. At one store in West Virginia, I met a pharmacy owner who I had met previously years ago at CPFI Annual Meeting in Colorado. At another

store in Kentucky, I met a newly graduated staff pharmacist who said she had read my travel blog for my motorcycle trip to South America. I always asked the same question to the staff at the pharmacies I visited: “what did they think I should tell pharmacy students at the NCPA Convention.” I received many different responses. As I said, most of the owners, staff pharmacists and techs were optimistic about the future of the profession. Also, along my route I stopped at country churches to worship and fellowship with locals. I hit the jackpot in rural Eastern Kentucky when I passed a church where ladies were carrying covered food dishes into the church. POTLUCK!!! The pastor during the dinner told me that most of the congregation was made up of families of coal miners. I got lost once in rural West Virginia when the highway I was on stopped in the middle of nowhere. I continued on via the dirt roads and had no idea where I was for a couple of hours. It was full of beautiful country and friendly people.

**PHILADELPHIA.** I was given 30 minutes at the NCPA Convention to talk to over 200 pharmacy students from NCPA Student Chapters all across the country. I saw some of my buddies from the schools I had already visited in TX and OK. I shared a PowerPoint presentation with images of Whale Tail Pharmacy in Craig, Alaska as the theme. I also had photos from other places I'd worked around rural Alaska. Again, the students seemed very receptive and there were lots of questions about ownership, Alaska and pharmacy in missions - especially questions about working overseas. I also received several inquiries about doing community pharmacy internship rotations in the Last Frontier. We have decided to take on three interns at the Whale Tail this next year and I hope other pharmacists will consider being preceptors as well.

There was a lot of great energy, ideas and commitment displayed by the pharmacy students I met. Also, I was impressed with the adventurous spirit of the students I met at the meetings. I have confidence that the profession will be in good hands for years to come. I hope that mentors will come forward to impart their wisdom gained from their experiences to this

new crop of pharmacists. If you get a chance, go share your story to students at a college of pharmacy, be it your alma mater or at a location you might be visiting. I did try to get an invite to the College of Pharmacy at Hilo on the Big Island of Hawaii, but classes were not in session the week I was there a year ago August. If you do get the chance to talk to a group of pharmacy students, I am sure that it will be a mutually beneficial experience.

*Bill Altland, R.Ph.*  
*Whale Tail Pharmacy*

## 2011 ANNUAL AkPhA CONVENTION

Marriott Downtown Anchorage, February 18 - 20

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<b>Friday Feb. 18 RPh/Tech CPE</b>		<b>Saturday Feb. 19 RPh/Tech CPE</b>		<b>Sunday Feb. 20 RPh/Tech CPE</b>	
Convention CPE: 15.5 hours DRAFT revised 2/1/11					
7:30am-6:00pm Skagway	<b>Delivering MTM Services in the Community</b> Amber Briggs, PharmD Tammi Hackley, PharmD	7:00 - 8:00am Fbks/Kenai/Denali	Registration - Ballroom Lobby Continental Breakfast w/Exhibitors <i>Sponsor: Anchorage Medset Pharmacy</i>	7:30 - 9:00am Skagway/Valdez	Registration - Lobby Prayer Gathering
8:00 - 12:00am Valdez	CPR/BLS Certification Beacon Occupational Health & Safety	8:00 - 9:00am Anchorage	<b>Challenging Lipid Issues and Medications</b> Ross Tanner, DO, FACP <i>Supported by an educational grant from ScripPro</i>	7:30-8:15am Kodiak	AKPhA Leadership Training New Board Orientation
9:00 - 1:00pm Juneau/Haines	Board of Pharmacy Meeting	(or)		8:15-9:00am Fbks/Kenai/Denali	Breakout Practice Settings Continental Breakfast
12:00 - 1:00pm	Registration - Ballroom Lobby	8:00 - 9:00am Juneau/Haines	<b>Medicaid DUR &amp; QA Update</b> Chad Hope, PharmD Law CPE	9:00 - 11:00am Anch/Jun/Haines	<b>Motivational Interviewing: Improving Adherence</b> Susan Cornell, PharmD, CDE
1:00-2:00pm Anchorage	<b>The Morbidity of Allergy; How Our Lives are Impacted</b> Jeff Demain, MD, Director Allergy, Asthma & Immunology Center	9:00-9:15am	Break/Process Evaluations <i>Sponsor: Central Peninsula Hospital</i>	9:30-11:00am Skagway/Valdez	<b>Dealing w/Difficult Co-workers Tech CPE</b> Deb Cieplak, RPh Break/Process Evaluations
(or)		9:15-1:15am Anchorage/Juneau/Haines	<b>"2011 Legislative &amp; Govt Affairs"</b> Law CPE	11:00-11:15	Break/Process Evaluations
1:00 - 2:00pm Juneau/Haines	<b>Medication Errors: Risks &amp; What I Can Do</b> Jodi Alt <i>Sponsor: Pharmacists Mutual</i>	11:15-1:15pm Fbks/Kenai/Denali	Lunch w/ Exhibitors Beginning of Scholarship Silent Auction <i>Sponsor:</i>	11:15-12:15pm Anch/Jun/Haines	<b>Should HDL-C be a Target of Therapy?</b> Chris Bradberry, RPh, Creighton University
2:00 - 2:15pm	Break/Process Evaluations	12:15-1:15pm Skagway/Valdez	Technician Advocacy Meeting	12:15-1:15pm Fbks/Kenai/Denali	Lunch/ AKPhA Business Meeting <i>Sponsor: Wildlife Trail Pharmacy</i>
2:15-3:15pm Anchorage	<b>ASHP Policy</b> Amanda Hays, PharmD, BCPS (or)	12:30 - 1:00pm Anchorage	Poster Presentations	1:15-2:45pm Anchorage	<b>Anticoagulation Update</b> Brian Schilling, PharmD
2:15-3:15pm	<b>2011 HIV Update</b> William McCormick, PharmD Walgreens	1:15 - 3:15pm Haines	Exhibit Teardown	1:15-2:45pm Juneau/Haines	<b>Medication Safety</b> Amanda Hays, PharmD, BCPS
3:00-4:30pm	Exhibit Set Up	1:15-2:45pm Anchorage/Juneau	DEA Update Ruth Carter, DEA	1:15-2:45pm Skagway/Valdez	<b>Calculations Review for PTCE Tech CPE</b> Deb Cieplak, RPh
3:15-3:30pm	Break/Process Evaluations	2:45-3:15pm Lobby	<i>Ice Cream Social/Closing of Silent Auction</i> <i>Sponsor: Soldotna Professional Pharmacy</i>	2:45-3:00pm	Break/Process Evaluations
3:30 -4:30pm Juneau/Haines	<b>Effective Grassroots Involvement in the Policymaking Process</b> Law CPE Heidi Ecker, NACDS <i>Sponsor: NACDS</i>	3:15-5:15pm Anchorage/Juneau	<b>Type 2 DM Children &amp; Adolescents</b> Susan Cornell, PharmD, CDE <i>Supported by an educational grant from Novo Nordisk</i>	3:00-4:30pm Anchorage	<b>Pediatric Pharmacotherapy</b> Renee Robinson, PharmD
3:30-4:30pm Anchorage	<b>Alaska Immunization Update</b> Laurel Wood, MPA, State of Alaska	Haines		3:00-4:30pm (or)	<b>Training for the Future: Preceptor Development</b> Maryann Skrabal, PharmD & Robin Cooke, PharmD <i>Sponsor: Creighton University</i>
4:30 - 6:30pm Fbks/Kenai/Denali	Appetizers w/Exhibitors <i>Sponsor: Amertsonrcb.org</i>	3:15-4:45pm Skagway/Valdez	<b>Sterile Compounding Tech CPE</b> Kathryn Crowther, CPHT <i>Reception w/ AkPhA Awards</i> <i>Sponsor: McKesson</i>	4:30 -5:30pm	AKPhA Board Meeting Kodiak
6:30pm	Bus Departs for Seawolves Hockey Game <i>Sponsor: Fred Meyer</i>	5:15-7:15pm Fbks/Kenai/Denali			



Alaska Pharmacists Association  
 203 W. 15<sup>th</sup> Ave #100  
 Anchorage, AK 99501



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***The Alaska Pharmacist Newsletter***

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

*Quarterly newsletter and website of the Alaska Pharmacists Association*

The Alaska Pharmacists Association (AkPhA) members include pharmacy owners, employee pharmacists and pharmacy technicians in all areas of practice as well as drug wholesalers and manufacturers.

Executive Director: Nancy Davis  
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**Closing Dates:** Materials are due for space on the 5<sup>th</sup> of the month of publication. (January, April, July & October)

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*Revised 6/21/10*



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