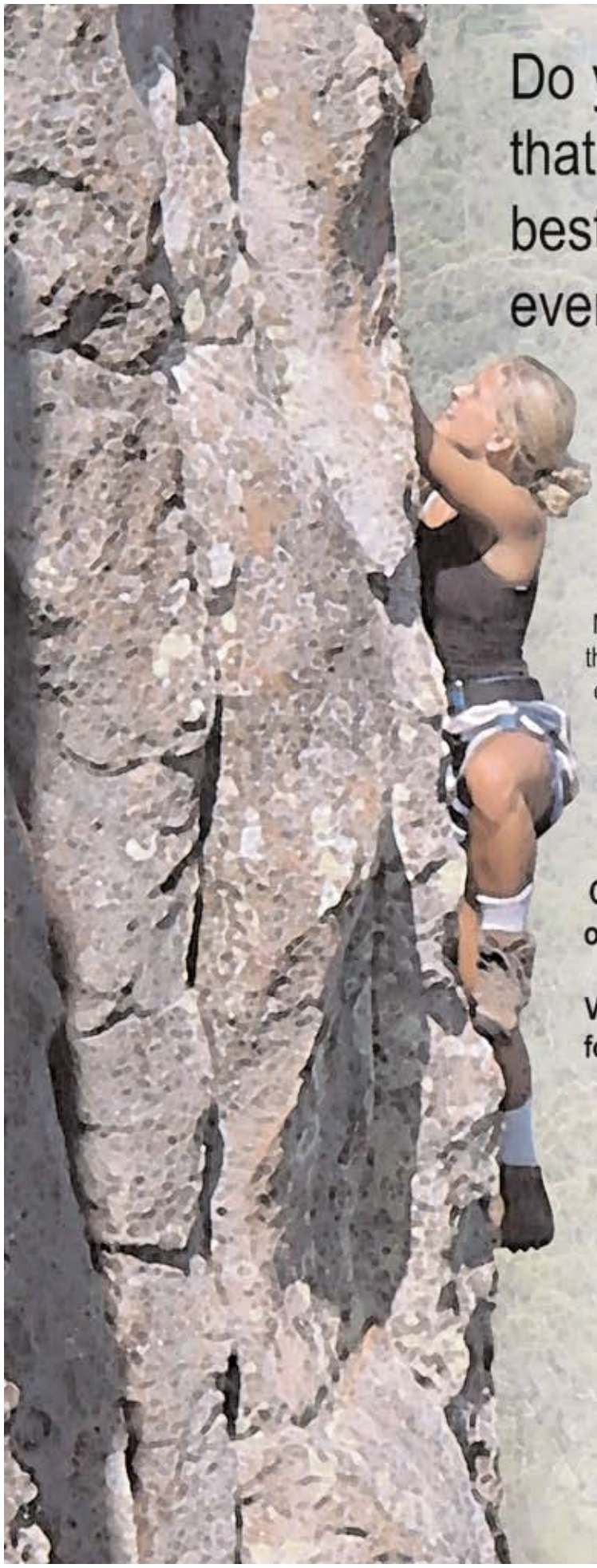
NoDak Pharmacy

Volume 22, No. 1, February 2009

NDSU Students participate in Rally Day at the Legislature



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Mark Your Calendar

April Calendar

April 2-3, 2009
NASPA Spring Meeting
San Antonio, TX

April 3-5, 2009
NDPhA Annual Convention
Minot, ND

May Calendar

May 11-13, 2009
NCPA National Legislation and
Government Affairs Conference
Hyatt Regency Washington on Capitol Hill

May 15, 2009
North Dakota State University Graduation

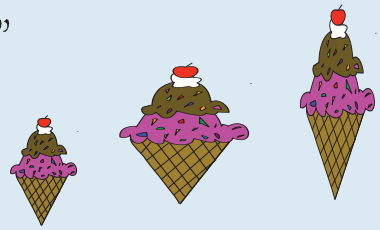
The journal is supported by contributions from the Independent Pharmacy Cooperative (IPC) Community Pharmacy Commitment Program, Dakota Drug, Inc., McKesson Pharmaceutical and by the North Dakota State University College of Pharmacy, Nursing & Allied Sciences.

Ice Cream Social

"It's fun to meet different legislators and hear their opinions."

"Hearing different opinions makes me take their views into consideration."

"Everyone is very nice and excited to hear your opinion."



NDSU pharmacy & nursing students gathered in their white coats to meet and speak with legislators about the Legislative Session.

2009

2009 Legislative Update

By: Mike Schwab – EVP NDPhA

Ladies and gentleman, the legislative session is in full swing and there is a lot going on this year. Below you will find information on a number of legislative bills the ND Pharmacists Association is tracking, monitoring and/or providing testimony on. Cross-over day is February 20, 2009. This is when all the House bills and all the Senate bills need to be completed and voted on. They will then cross-over to the other side. House bills will go to the Senate and vice versa. Legislators are on recess February 23 and 24, 2009 and will reconvene Feb. 25, 2009. The last day of the legislative session is April 29, 2009. The session is limited to only 80days so everything needs to be completed by then!

Please remember to make your voice heard!!!

House Bills:

HB 1091

House Bill 1091 deals with the continuing pharmaceutical education. Each pharmacist shall complete at least fifteen hours of approved continuing pharmaceutical education every year as a condition of renewal of a certificate of licensure as a pharmacist in the state. An annual renewal of a license may NOT be issued to a pharmacist until the pharmacist has satisfactorily completed an accredited program of continuing professional education, all of which may be home self-study during the previous year, to help assure the pharmacist continued competence to engage in the practice of pharmacy. PASSED 93-0

HB 1105

House Bill 1105 addresses issues relating to controlled substances and the listing of such. This bill was heard by the Judiciary Committee and was passed by the house with a vote of 93-0.

HB 1385

House Bill 1385 deals with the Drug Utilization and Review Board changes related, "carve outs" which are not initiated by the DUR board. It is basically the Restriction of Generic Substitution. This bill has already been heard by the House Human Services Committee and PASSED out of Committee 13-0. It had not been called for a floor vote at the time of this update.

HB 1440

House Bill 1440 is related to the repeal of the 51% pharmacy ownership law. This bill would completely repeal current legislation and would open pharmacy ownership up to anyone and would do away with the 51% majority requirement. The bill was heard on February 3, 2009.

HB 1523

House Bill 1523 is related to an exemption for hospitals under the current 51% ownership law. This bill was heard February 3,2009.

Senate Bills:

SB 2039

Senate Bill 2039 discusses the membership of the ND pharmaceutical association. This bill looks to increase the ND State Board of Pharmacy's board size and make-up. It would add a consumer and pharmacy technician to the State Board of Pharmacy. This piece of legislation will also do away with the integrated membership within the ND Pharmacists Association. First hearing on the bill was scheduled on January 20, 2009. This bill passed out of the Senate IBL Committee with a do pass 7 - 0.

SB 2164

Senate Bill 2164 is relates to the Optometrist dispensing therapeutic pharmaceutical agents. A piece of legislation has been introduced to allow an Optometrist to dispense contacts with medication delivery systems included in them. We will not oppose this effort, but will follow it closely for amendments coming from the Medical Association. First hearing on the bill was scheduled for January 21, 2009.

SB 2218

Senate Bill 2218 has been introduced to further regulate Internet pharmacy operations in ND. The intention of this bill is to provide a penalty for uncertain drugs and unlawful distribution of dispensing of controlled substances and counterfeit controlled substances by means of the Internet. The ND Attorney General's office is behind the effort, as well as the Medical Association, Board of Nursing, ND State Board of Pharmacy, and NDPhA. The purpose of implementing this Law is to protect the public and to provide a penalty.

SB 2332

Senate Bill 2332 would create a Health, Information, and Technology Department within the ND Department of Health and calls for an appropriation. This will be an interesting bill to watch. With the creation, they are hoping to help stream-line e-prescribing, electronic health records, etc…and to also form an Advisory Committee. First hearing on the bill was scheduled for January 27, 2009.

We will continue to track, monitor and provide testimony on the various bills listed above. We also encourage you to sign up to receive legislative updates through our legislative list serve. Instructions for signing up can be found below. The fun has begun!

Thanks to the NDPhA Governmental Affairs Committee Chair (Mark Hardy) and other members for their hard work.
~Mike

If you would like to learn more about the Legislative session and the bills please go to www.legis.nd.gov

The NDPhA Rotation

By Kirby Mohl, Pharm. D. Student

When I was signing up for my rotations last year, the NDPhA rotation never really crossed my mind. I was just looking for rotations where I could live for free: with my brother, with my parents, with my cousins. Just when I thought I had it all planned, one of my elective rotations turned into a community advanced, which I already had too many of. It was at that point that I noticed the rotation at the Pharmacists' Association and decided to give it a go.

The next question to consider was when to do the rotation. My options were in the summer when the DSM program would be getting started, in the fall preparing for the Legislative session, or during the session in the spring. The spring rotations were most flexible for me, and so I decided number 7 would be the best. I was right.

The rotation started January 20th, NDSU College of Pharmacy and NDPhA's Legislative Day at the Capitol. This day included two hearings, meeting several people whose names I would soon forget, meeting with the Governor, an ice cream social, learning my way around the Capitol building, and trying to keep up with my preceptor for the rotation and Executive Vice President of NDPhA, Mike Schwab, as he was going 100 miles per hour. Since then, the pace has slowed a little, but not much.

The next two weeks were geared towards getting ready for the big hearing, House Bill 1440 – "The Ownership Law." These two weeks were occupied by lunch and dinner meetings, projects, and reviewing testimony for the hearing. Throw in a press conference, a hearing or two on some different bills, and trying to settle into my temporary apartment, and the time passed before I even had time to think about it. The day of the hearing was already here.

The hearing for HB 1440 was to take place in the auditorium of the Heritage Center, and I had a front row seat for the show, literally. I have to say it was an event unlike anything I had been to before. My task for the event was to hand out testimony to the Representatives, but I was also able to notice the shaking legs of the speakers as they nervously provided testimony and watch a blind woman's dog rest its head on the lap of Joe, the guy sitting next to me, during her testimony. I was even close enough to see the look on the face of the Wal-Mart representative as he struggled to avoid a question he did not want to answer. Even with all of this going on, the most interesting part of the hearing to me was the process and conduct of the committees and the strategy involved on both sides.

That hearing has passed, but the work here is not finished. During my remaining time here I will be drafting and providing testimony for Senate Bill 2218. This bill, similar to "Justin's Law" recently passed in Minnesota, provides requirements for prescribing and dispensing controlled substances and specified drugs through the internet and penalties for unlawful distribution or dispensing of controlled substances and counterfeit controlled substances through the internet. The NDPhA, ND Board of Pharmacy, ND Attorney General Wayne Stenehjem, and the ND Medical Association are just a few of the parties supporting this bill.

At the end of the day, I have to say I am glad that I "had" to do this rotation. Even though it is only half way through the rotation, I have already learned how the legislative process works and the importance of being involved. I would encourage students to strongly consider this rotation, learn the legislative process, and pay attention to what is happening because it will affect your future as a pharmacist.

Creation of NDPhA Legislative Listserv

With the beginning of another Legislative Session, the NDPhA wants to provide members with the opportunity to stay informed. If you are interested in receiving legislative updates from the NDPhA, please read the following:

1. To subscribe, simply send a message to imailsrv@nodakpharmacy.net with the following text in the message body (be sure to include the quotation marks around your name) **subscribe legnote "first name last name"** **You will receive a confirmatory message that you MUST reply to prior to being added.**

2. You may post messages to the group by sending emails to: **LegNote@nodakpharmacy.net**

3. To unsubscribe at anytime, send a message to imailsrv@nodakpharmacy.net with the following text in the message body: **unsubscribe LegNote**

It's that simple!

Contact Lorri at the NDPhA Office (701) 258-4968 or email lgiddings@nodakpharmacy.net if you have trouble getting added to the listserv.

Pharmacy Practice Reminders

By Howard C. Anderson, Jr., R.Ph-Executive Director ND Board of Pharmacy

POSITIVE IDENTIFICATION REQUIRED OF THOSE PICKING UP PRESCRIPTIONS

With the Prescription Drug Monitoring Program [PDMP] and the work of Law Enforcement, we continually see patients using multiple names when they are visiting multiple physicians and multiple pharmacies. This could almost all be avoided if pharmacists asked for positive identification. Positive Identification of patients, at least the first time, could also clean up your pharmacy files considerably so you had the patient's accurate name, spelling and address, at least to start. We are not interested in you asking your regular customers, whom you know very well for identification each time they come regularly to your pharmacy. However, those you do not know, even if they are picking up medication for someone else should have identification, or else they better have walked all the way to your pharmacy.

TAMPER EVIDENT PRESCRIPTIONS

Do not fill any prescription that has been faxed to you or is brought into your pharmacy by a patient that has the void or tamper evident on it, indicating that it has been copied or faxed illegitimately. The whole purpose of the tamper evident prescription is so that you *do not* fill a prescription that appears copied. So, if you get into the habit of filling them because you *think* they are legitimate, that violates the rule and subjects you to loosing the money should the insurance company audit those prescriptions. When you get a prescription printed out by the doctor's records management or electronic prescribing system and it has the name of a different pharmacy, which has been chosen by the patient – please verify that this prescription has not already been filled by that other pharmacy. What we are finding is that patients are photo copying or even scanning them and taking these prescriptions to multiple pharmacies and the pharmacies are simply filling them without checking with each other. Again, if there are ever any questions, it is your responsibility to verify that the prescription is legitimate before you fill it.

PRESCRIBER'S NAME PRINTED OR STAMPED

We continue to have problems with prescriptions that do not provide a clear recognition as to who the prescriber was. This provides risk to the patient in that the pharmacy has difficulty in verifying any questionable data. Those of you who have a mechanism to talk to your clinics or hospitals that provide prescription blanks to practitioners, please be sure that the prescriptions blanks are executed properly, and that they have an address and phone number where the prescriber can actually be reached. Refer to NDAC 61-04-06-02 on page 40 of your law book.

PATIENT COUNSELING

I would be remiss in any reminder if I did not say that "North Dakota Law requires counseling on all prescriptions" new and refill, unless the patient specifically declines the offer of counseling. An offer to counsel should be made by the pharmacist, along with questions about how you are doing today? A question by the technicians – "Do you want to talk to the pharmacist?" is not an adequate offer to counsel in North Dakota. It is our intention to step up the auditing of these practices, so please – "TAKE CARE OF THE PATIENT".

Thank you.
Happy New Year from the Board of Pharmacy.

Expedited Partner Therapy

Board of Nursing NDAC 54-05-03.1-10(8)
Board of Medical Examiners
Board of Pharmacy NDAC 61-04-04-01(21)

Not withstanding any other provision, a practitioner who diagnoses a sexually transmitted disease, such as Chlamydia, Gonorrhea, or any other sexually transmitted infection in an individual patient may prescribe, or dispense, and a pharmacist may dispense, prescription antibiotic drugs to that patient's sexual partner or partners, without there having been an examination of that patient's sexual partner or partners.

Diabetes DSM Program Update

Document, Document, Document

We've all heard it a million times – if you didn't document it, it didn't happen. Just as with all other aspects of our profession, this adage holds true for MTM/DSM services. As we work to develop our program and show its value, we need to have documentation to demonstrate its impact. Just as we need documentation to dispense a prescription, when we bill for our MTM/DSM services, we need to have documentation to support our claim. The following are some helpful tips to assist you in your MTM/DSM documentation.

Document your encounter as soon as possible. It has been our experience at Frontier Pharmacy Services that the sooner the documentation is done, the more complete and thorough it is. A physician does not wait for weeks to prepare dictations on visits with their patients, neither should a pharmacist. Setting the documentation aside can result in it getting misplaced or just forgotten about. REMEMBER – you can use support staff to assist in the documentation in the Assurance software.

Enter as much pertinent lab and medication information as possible. Again, the more complete of a picture that is painted allows us to look deeper into the resulting outcomes. Work with your patients to collect their lab results and follow up with them if they do not provide it to you.

Document drug therapy problems that you identify. This is where we can have some of our greatest impact. If you advise someone on a problem and recommend a change, it should be recorded. Also, remember to document any referrals made to other health professionals in the evaluation section under the "Referrals" tab.

USE TEMPLATES! Some helpful templates have been developed to assist you in making comments to the patient and/or their physician. These templates can help you organize your thoughts and include all pertinent information. Templates are available in Assurance in the Evaluation section. While completing your evaluation, right click in the Patient Comment Text or Physician Comment Text boxes. Then click on "Insert Dot Key Text at Cursor Position." Select "Patient Note Template" for a patient note or select "Evaluation Template" for a physician note. You can modify the templates to meet your needs.

Collect all other documentation needed and forward, if necessary, to Frontier Pharmacy Services. This includes informed consent, HIPAA signature, and surveys. This information is needed to improve our program and to have permission to use data for our findings.

Provide copies to your patient and their physician. Send the results of your visits to your patient and to their physician. This will complete the circle or care so all involved are informed and can act upon your recommendations.

The documentation can be confusing and frustrating at times. It is, however, just as important to document as it is to see the patient. Please contact Frontier Pharmacy Services or Medication Management Systems for assistance if needed. We are here to help. Working together we can show our value and improve the health of our patients. After all, it's about the patient.

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 complications 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 compensatory 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

	Site of Hemorrhage			
Symptom	**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.

The content of this lesson was developed by the Ohio Pharmacists Foundation, UPN: 129-000-08-012-H01-P. Participants should not seek credit for duplicate content.

Continuing Education Quiz

Hemorrhagic Stroke: Prevention and Treatment

1. Most deaths from subarachnoid hemorrhage (SAH) occur within:
   a. two minutes c. two days
   b. two hours d. two weeks

2. The arachnoid is the thin, delicate membrane that constitutes which of the following layers of the meninges?
   a. Inner c. Outer
   b. Middle

3. The principal causes of SAH are arteriovenous malformations and rupture of:
   a. aneurysms c. arterioles
   b. plaque d. granulomas

4. The classic symptom of SAH is severe:
   a. cramping c. headache
   b.depression d. syncope

5. General support for patients experiencing an SAH include all of the following EXCEPT:
   a. antiemetics c. sedatives
   b.analgesics d. stool softeners

6. Spontaneous intracerebral hemorrhage (ICH) refers to those cases that occur in the absence of:
   a. syncope c. thromboembolism
   b.symptoms d. trauma

7. The bleeding associated with ICH occurs directly into the brain parenchyma which is:
   a. connective tissue
   b. functional tissue
   c. interstitial tissue
   d. mesenteric tissue

8. The most important risk factor for ICH, especially in persons younger than 55 years of age, is:
   a. hyperkalemia
   b.hyperlipidemia
   c. hypertension
   d. hyperthrombosis

9. The root cause of the dysfunction that results from either ICH or ischemic stroke is:
   a. destruction of neural tissue
   b. initiation of arterial fibrillation
   c. precipitation of ventricular tachycardia.
   d. rupture of atherosclerotic plaque

10. Which of the following has been proven to be effective in treating ICH?
    a. Medical treatment only
    b. Surgical treatment only
    c. Both medical and surgical treatment
    d. Neither medical nor surgical treatment

Hemorrhagic Stroke: Prevention and Treatment

February 2009 ACPE **#047-999-08-012-H01-P**
Expiration Date: 12-15-11

The Ohio Pharmacists Foundation Inc and NDSU College of Pharmacy are approved by ACPE as providers of continuing pharmaceutical education. To receive 1 1⁄2 hours (0.15 CEUs) of continuing education credit, complete the following and mail with $10.00 to:

Continuing Pharmacy Education Office
Pharmacy Practice - NDSU Dept 2660
PO Box 6050
Fargo ND 58108-6050

Note: Answer sheet may be copied as needed but original answers are required on each.

Name _____

Social Security Number (SSN) XXX-XX- __ __ __ __

Address _____

City_____State _____

Zip_____

Your SSN will be used to maintain a permanent record of the courses you have taken. Your SSN will be kept confidential and will be used ONLY to identify you at NDSU.

COURSE EVALUATION

Evaluation Must Be Completed To Obtain Credit

How much time did this lesson require? _____

Today's Date_____

EXPIRATION DATE: 12-15-11

Learning objectives on first page were addressed.

	1 Disagree - 5 Agree
Objective 1	1 2 3 4 5
Objective 2	1 2 3 4 5
Objective 3	1 2 3 4 5
Material was well organized and clear.	1 2 3 4 5
Content sufficiently covered the topic.	1 2 3 4 5
Material was non-commercial in nature.	1 2 3 4 5

Answer Sheet:

1. a b c d	6. a b c d
2. a b c d	7. a b c d
3. a b c d	8. a b c d
4. a b	9. a b c d
5. a b	10. a b

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Empowering Healthcare

Expanding the Hospital Pharmacy Technician's Role Technician Initiated Medication Reconciliation

By Kristi Schmidt, PharmD

Medication reconciliation is one of the Joint Commission patient safety goals. It is the process of identifying the most accurate list of medications a patient is taking and how they are taking them at home. The list is then used to provide correct medications for patients anywhere within the health care system.

This reconciliation is done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten. Transitions in care include changes in setting, service, practitioner or level of care.

The potential impact of medication reconciliation is significant. The Institute of Safe Medication Practice estimates that 50% of medication errors and 20% of adverse medical events could be eliminated with proper medication reconciliation. As pharmacists and technicians we have seen outdated lists that patients keep and give to health care providers and can appreciate the importance of an accurate medication list to ensure patient safety.

At many medical facilities, medication reconciliation is a process that is normally initiated by a nurse gathering a patient's home medication list on admission. At Innovis Health, medication reconciliation has been monitored by pharmacy. Pharmacists have initiated the process when possible; however, our certified pharmacy technicians have the knowledge of drug forms and doses required to work with the patient and document an accurate list of the patient's home medication and doses.

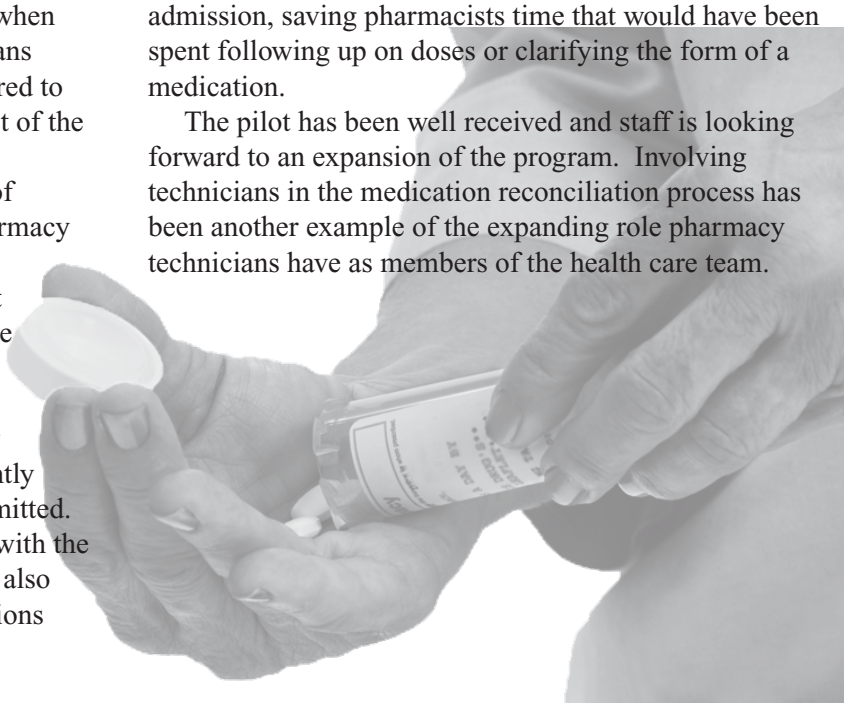
After discussion with the North Dakota Board of Pharmacy, we started a pilot program with our pharmacy technicians. The program involved technicians interviewing the patients at admission to document their home medications. Our goal was to determine effectiveness and acceptance of other health care professionals.

We initiated the pilot program in the emergency department. The technician communicates frequently with the nursing staff to determine who will be admitted. Prior to admission the technician has a discussion with the patient to obtain an accurate medication list. They also contact the patient's pharmacy and review medications from clinic visits as necessary to ensure they have an accurate list of medications, dosages and instructions. This list is placed in the chart for the admitting physician to review and order as indicated.

The program has been a success. The medication reconciliation process provides an ongoing verification of the quality of work. This occurs with the physician's review of the patient's home medication list prior to ordering, the pharmacist's review upon order entry, and the nurse's review when checking the medication list against the medication administration record. We also complete regular audits to ensure accuracy and adherence to the medication reconciliation policy and procedures by all members of the health care team.

Involving pharmacy technicians in medication reconciliation is positive for all members of the healthcare team. It provides the technician with the opportunity to have patient contact, which is often missing in the hospital technician's role. This interaction also makes pharmacy technicians more visible members of the healthcare team and allows for positive interactions with nursing staff. Utilizing technicians rather than nurses allows nursing staff to focus more on patient care. It also ensures that practitioners receive an accurate medication list prior to admission, saving pharmacists time that would have been spent following up on doses or clarifying the form of a medication.

The pilot has been well received and staff is looking forward to an expansion of the program. Involving technicians in the medication reconciliation process has been another example of the expanding role pharmacy technicians have as members of the health care team.



Call for Nominations: *2009 Award Nominations*

All nominations must be emailed to Angela Buchanan at abuchanan@csmondemand.com no later than February 28th, 2009 or mailed to 4626 San Juan Dr S, Fargo, ND 58103. All awards will be presented at the NDPhA 124th Annual Convention in Minot, ND on April 5th, 2009.

Awards Nominations Criteria

Distinguishing Young Pharmacy technician of the year award

* Practicing pharmacy technician less than 10 years
* Registered in ND
* Demonstrates outstanding work experience in the Profession of Pharmacy
* Nominations accepted from any member of NAPT, NDPhA, or NDSHP
* Sponsored by Pharmacists Mutual

Nominee:_____ Submitted by: _____

Pharmacy Technician of the Year Award

* Registered in ND
* May not be a member of the Selection Committee or past recipient of the award
* Actively practicing as a Pharmacy Technician in ND
* Nominations accepted from any member of NAPT, NDPhA, or NDSHP
* Sponsored by Dakota Drug

Nominee:_____ Submitted by: _____

Diamond Award

* Current or past registration as a ND Pharmacy Technician
* Must be living and cannot be a past recipient of the award
* May not be serving as a an officer of the NAPT Association
* Demonstrates an outstanding record of community service and a service to the Profession of Pharmacy
* Nominations accepted from any member of NAPT, NDPhA or NDSHP
* Sponsored by Thrifty White Drug

Nominee:_____ Submitted by: _____

Friend of NAPT Award

* Nominee may include but are not limited to: Registered Pharmacy Technician, Registered Pharmacist,or any related Pharmacy Business. Recipient is not limited to a specific person; a company may be a recipient.
* May not be a past recipient of the award
* Must be an advocate of NAPT and the Profession of Pharmacy Technicians
* Nominations are accepted from any ND Pharmacy Technician
* Sponsored by NAPT

Nominee:_____ Submitted by: _____

61-02-07.1 Pharmacy Technicians

61-02-07.1-12 Technicians Checking Technicians

Activities allowed by law to be performed within a licensed pharmacy by a registered pharmacy technician in the preparation of a prescription or order for dispensing or administration, may be performed by one registered pharmacy technician and verified by another registered pharmacy technician working in the same licensed pharmacy, under the following conditions:

1. The licensed pharmacy where the work is being conducted has policies and procedures specifically describing the scope of the activities to be verified through this practice.

    a. Training for the specific activity is reflected in a written policy.

    b. A record of the individuals trained is maintained in the pharmacy for two years.

2. The pharmacy has a continuous quality improvement system in place to periodically verify the accuracy of the final product, including:

    a. Recording any quality related events leading up to the final dispensing or administration of the drug prepared, and

    b. Recording any errors, which actually reach the patient as a result of these activities.

    c. Specific limits of acceptable quality related event levels before reassessment is required.

    d. Consideration must be made for high-risk medications on the Institute for Safe Medication Practices (ISMP) list and specific monitoring; review and quality assurance parameters must be instituted if any of these products are included in the Pharmacy's Technician-Checking-Technicians Program.

3. Any error must trigger pharmacist review of the process. This review and subsequent recommendations must be documented.

4. The pharmacy has a system in place to review all quality related events and errors recorded and takes corrective action based on the information to reduce quality related events and eliminate errors reaching the patient.

5. As always, the pharmacist-in-charge and the permit holder are jointly responsible for the final product dispensed or released for administration from the pharmacy.

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Please contact:
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701.371.3849
lynn.swedberg@mckesson.com

MISC0142-03-07

Pharmacy Time Capsules

2009 (First Quarter)

By: Dennis B. Worthen Lloyd Scholar, Lloyd Library and Museum, Cincinnati, OH

1984—Twenty-five years ago:

Drug Price Competition and Patent Term Restoration passed. The major provisions of the law:

- expedited the availability of less costly generic drugs by permitting FDA to approve applications to market generic versions of brand-name drugs without repeating the research done to prove them safe and effective.

- provided brand-name companies up to five years additional patent protection for new medicines to make up for time in FDA's approval process.

Schering Corporation budgeted $4 million for first "Ask Your Pharmacist" campaign to encourage the public to ask their pharmacists about their medicines

1959—Fifty years ago

American Hospital Formulary Service launched by American Society of Hospital (now Health-Systems) Pharmacists

1934—Seventy-five year ago

The American Pharmaceutical (now Pharmacists) Association headquarters building, the American Institute of Pharmacy, on the National Mall in Washington, DC. was dedicated

1909—One hundred years ago

Opium Exclusion Act of 1909 prohibited the importation of opium to the United States.

One of a series contributed by the American Institute of the History of Pharmacy, a unique non-profit society dedicated to assuring that the contributions of your profession endure as a part of America's history. Membership offers the satisfaction of helping continue this work on behalf of pharmacy, and brings five or more historical publications to your door each year. To learn more, check out: www.aihp.org

Exploring options for Business Continuation?

Using insurance in your succession planning can help assure financial peace of mind.

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Pharmacists Mutual is endorsed by the North Dakota Pharmacists Association (compensated endorsement).

124th Annual Convention

Moving Forward

Where & When

April 3-5, 2009

Grand International *www.internationalinn.com*
1505 North Broadway, Minot, ND 58703-0777

Registration

Registration forms are available at www.nodakpharmacy.net

Events

Friday, Saturday and Sunday

- Continuing Education
- Exhibit Hall
- Ice Cream Social
- Phun Run/Walk
- President's Banquet & Scholarship Auction

Hotel

Grand International
1505 North Broadway
Minot, ND 58703-0777
www.internationalinn.com

Rooms **$65/night + tax**

A block of rooms and suites has been reserved under North Dakota Pharmacists Association. These rooms will be held until **March 20, 2009**.

Call **(701) 852-3161** or **(800) 735-4493** to reserve a room. The best times to call are 9-5 Monday-Friday.

NDPhA 124th Annual Convention

April 3-5, 2009

Grand International, Minot ND

Name: _____

Mailing Address: _____

Street City State Zip

Phone: _____

Work Home

Email: _____

Spouse/Guest_____

Postmarked Registration Fees:	**BEFORE March 23, 2009**	**AFTER March 23, 2009**
Member Pharmacist	$150	$200
Member Technician	$90	$125
Non-Member Pharmacist	$300	$350
Non-Member Technician	$150	$200
Pharmacy or Technician Student	$50	$75
Student Sponsor (pharmacy or technician)		$50

Registration Total _____

Extra Meal Tickets (for spouses and other guests)

Lunch # of Tickets _____ x $10 = _____

Dinner # of Tickets _____ x $20 = _____

Brunch # of Tickets _____ x $10 = _____

Total Enclosed = _____

Your Registration includes your meals for the day(s) you are attending. Please check the meals and functions you plan to attend.

Friday	**Saturday**	**Sunday**
_____Lunch	____NDPhA Lunch **OR**	____Brunch
_____Dinner	____NDSHP Lunch **OR**	
	____NAPT Lunch	
	____Phun Run/Walk	
	____Dinner	

Make Checks Payable to: *NDPhA 2008 Annual Convention*

Mail Completed Forms and Payment to:

NDPhA
1641 Capitol Way
Bismarck, ND 58501

Or fax to 701-258-9312
Type of Payment (circle one): Check Visa MasterCard
Credit Card #: _____
Expiration Date: _____
Signature: _____

Pharmacy Advancement Corporation Scholarship Auction

Student Auction Donation Form

PLEASE PRINT THE INFORMATION REQUESTED BELOW AND RETURN TO:

AUCTION, NDPhA
1641 Capitol Way
Bismarck, ND 58501

OR Fax: 701-258-9312 **OR** Email: ndpha@nodakpharmacy.net

Donor **Enail Address**

Address **Phone**

Item **Quantity** **Dollar Value**

Item **Quantity** **Dollar Value**

DELIVERY IS THE RESPONSIBILITY OF THE DONOR
Items are appreciated by Noon Saturday, April 4th.

The auction will be held on Saturday, April 4, 2009 at the Minot Grand International following the President's Banquet.

OFFICE INFORMATION

Solicitor: _____

Date Received_____ **By**_____

The annual Pharmacy Advancement Corporation Scholarship Auction will be held Saturday, April 4, 2009, after the President's Banquet. The auction committee would like to invite you to participate by donating items. Woodcrafters, quilters, and other artisans are always appreciated. As in years past, several items will be placed on a silent auction with the highlight of the evening being the "live" auction.

Please forward questions to Lorri at ndpha@nodakpharmacy.net or call 701-258-4968. Thank you for your participation in the past. We are looking forward to another outstanding auction.

NDPhA 124th Annual Convention

Moving Forward

Goals:

The goal of this program is to provide the participants with continuing pharmacy education relating to the practice of pharmacy.

Target Audience:

The programs are intended for community, hospital, clinical, consultant, and research pharmacists, as well as pharmacy technicians. It is also appropriate for any health care professional/practitioner with an interest in topics presented.

Objectives:

Business meetings:

- Explain the importance of Positive Identification for you patients
- Discuss Patient Counseling and Compliance with the Law
- Describe Electronic Prescriptions, Tamper Evidence and the DEA
- Explain the Prescription Drug Monitoring Program

USP 797:

- Summarize current USP 797 standards for sterile compounded drugs and hazardous drugs
- Explain safe hazardous drug practice
- Describe applications of the Resource Conservation and Recovery Act to the disposal of pharmaceutical and hazardous waste
- Identify effective "Green" practices for management of pharmaceutical waste that you can apply in your institution.

Oncology:

- apply pharmacokinetic, pharmacodynamic and pharmacoeconomic principles in the selection and management of a patient's opioid therapy
- appropriately assess the efficacy of a patient's response to opioid therapy
- calculate equianalgesic doses of frequently used opioids
- calculate appropriate "breakthrough doses" of opioids
- counsel patients on the effective management of opioid-induced adverse effects.

Diabetes:

- Explain current treatment modalities used in diabetes

Preceptor:

- Collaborate with other pharmacist preceptors across the state to share ideas on student rotation activities for Introductory and Advanced Pharmacy Practice Experiences
- Identify experiential education best practices and incorporate these into your site's rotation experience
- Develop strategies for defining rotation objectives and motivating students to achieve these objectives while at the practice site
- Identify resources available for preceptor, rotation, and student development

LMWH:

- Explain the pharmacokinetics, pharmacodynamics, clinical outcomes data, and dosing of LMWHs in special patient populations (e.g., obese, renal impairment)
- Discuss information on the monitoring of LMWHs

Law:

- Explain how to get ready for a Hospital Pharmacy Inspection
- Explain how to get ready for a retail Pharmacy Inspection
- List what the new laws and rules will let pharmacists do

Stroke Management:

- Discuss therapies used in stroke management

Hospital Telepharmacy:

- Explain the importance and function of the hospital telepharmacy project and it's impact on improving patient care and safety
- Discuss techniques used in implementation of the project.

Habits:

- Identify the 4 quadrants of the time management matrix and the quadrant that will make them the most effective
- List 7 habits as identified by Steven Covey of highly effective people
- Distinguish leadership from management, namely 4 characteristics of each

Metabolic Syndrome:

- Describe the dysmetabolic functions in Metabolic Syndrome
- Explain how to manage individual risks for cardiovascular diseases in Metabolic Syndrome

Antifungal:

- Discuss the current fungal pathogens encountered in the era of advanced medical practice, such as Candida.
- Highlight appropriate treatment options for various fungal pathogens, such as Candida.

Library:

- List current technology medical references available from the library

Immunization:

- Describe the North Dakota Immunization Information System (NDIIS) and explain how to request access
- Describe changes/updates to the adult immunization schedule
- Explain how to provide an update on various vaccine supplies in the United States

Diabetes

- Explain the data collected through the program, current program status, future development
- Discuss case studies presented, discuss treatment options, share your own experience

Call for Nominations

2008 Award Nominations

Fax to: (701) 258-9312 or **email to**: ndpha@nodakpharmacy.net **by February 16, 2009**
Nominations should be submitted **along with biographical information**.
The following awards will be presented:

Awards Nominations Criteria

Al Doerr Service Award

The recipient must: be a pharmacist licensed to practice in North Dakota, be living (not presented posthumously); not have been a previous recipient of the award; has compiled an outstanding record for community and pharmacy service.

Nominee:_____ Submitted by: _____

Elan Innovative Pharmacy Practice

The recipient should be a practicing pharmacist within North Dakota and a member of NDPhA who has demonstrated Innovative Pharmacy Practice resulting in improved patient care.

Nominee:_____ Submitted by: _____

Pharmacists Mutual Distinguished Young Pharmacist

The goal of this award is to encourage the newer pharmacists to participate in association and community activities. The award is presented annually to recognize one such person for involvement and dedication to the practice of pharmacy. The recipient must: have received his/her entry degree in pharmacy less than nine years ago; be a pharmacist licensed to practice in North Dakota; have practiced community, institutional, managed care or consulting pharmacy and who has actively participated in national pharmacy associations, professional programs, state association activities and/or community service.

Nominee:_____ Submitted by: _____

Wyeth-Ayerst Bowl of Hygeia

The recipient must: be a pharmacist licensed to practice in North Dakota; be living (not presented posthumously); not have been a previous recipient of the award; is not currently serving, nor has he/she served within the immediate past two years as an officer of the association in other than an ex-officio capacity or its awards committee; have compiled outstanding record of community service, which apart from his/her specific identification as a pharmacist, reflects well on the profession.

Nominee:_____ Submitted by: _____

Conference Schedule

Friday, April 3, 2009

7am-6pm Registration

7-8am Breakfast

8-9:30am **Current Concepts in Managing Pharmaceuticals: From 797 to NIOSH to RCRA**
Fred Massoomi- PharmD, FASH, Nebraska Methodist Hospital, Omaha
UPN: 047-999-09-108-L04-P (0.15CEU)

9:30-10:30am **Chronic Pain: Nuts and Bolts of Opioid Therapy**
Robert Sylvester, Pharm.D., Meritcare Oncology/NDSU College of PNAS, Fargo, ND
UPN: 047-999-09-110-L01-P (0.1 CEU)

AND

10:30-11:30am **Diabetes Update**
Michelle Hoppman, RD, CDE, Trinity Health, Minot, ND
UPN: 047-999-09-111-L01-P (0.1 CEU)

OR

Preceptor Pearls (9:30-11:30am)
Wanda Roden, Director APPE, College of Pharmacy Rebecca Focken, Director IPPE, College of Pharmacy
UPN: 047-999-09-121-L04-P (0.2CEU)

10am-1pm Exhibitor Theatre

12-1pm Lunch

1pm-2:00pm **Management of LMWHs in Special Patient Populations**
Lori Frank, Pharm.D., Sr. Regional Medical Liason, Sanofai Aventis
UPN: 047-999-09-113-L01-P (0.1 CEU)

OR

What does the inspector want now?
Howard Anderson, Executive Director, ND Board of Pharmacy
Judith Swisher, Compliance Office, ND Board of Pharmacy
UPN: 047-000-09-112-L03-P (0.1 CEU)

2:00-3:00pm **Stroke Management**
Dr. Levine, Senior Stroke Neurologist, University of Wisconsin Stroke Center
UPN: 047-999-09-109-L01-P (0.1 CEU)

OR

Update on Hospital Telepharmacy Project
Shelley Johnsen, Director Hospital Telepharmacy Project, Fargo
UPN: 047-999-09-116-L04-P (0.1 CEU)

3:00-4:00pm Town Hall Meeting

4:00-4:30pm Ice Cream Social

4:30-6:30pm First NDPhA Business Meeting
UPN: 047-999-09-122-L04-P (0.05 CEU)

6:30-7pm Social

7pm President Elect's Banquet Entertainment

conference schedule continued on pg. 30

Saturday, April 4, 2009

7am-6pm Registration

7-8am Breakfast

8:30-10:30am **7 Habits of Highly Effective Pharmacists**
Ernest Anderson, Director of Pharmacy, Lahey Hospital, Burlington, MA
UPN: 047-999-09-114-L04-P (0.2 CEU)

10:30-11:30am Second NDPhA Business Meeting
UPN: 047-999-09-122-L04-P (0.025 CEU)

11:30-1pm NAPT Lunch and Meeting • NDPhA Lunch and Meeting • NDSHP Lunch and Meeting

1-2pm **What's in the Belly-Fat? The Metabolic Middle Syndrome**
Janet Maxon, NP, Bismarck/Minot Health
UPN: 047-999-09-115-L01-P (0.1 CEU) Lunch

2-3pm **The Fungus Among Us: Current Trends in Fungal Infections and Therapy**
Robert Nelson, PharmD, Meritcare Health Systems, Fargo ND
UPN: 047-999-09-117-L01-P (0.1 CEU)

OR

Medical Technologies available at the Library
Karen Anderson, UND Clinical Campus Librarian, Minot, ND
UPN: 047-999-09-118-L04-P (0.1 CEU)

3-4pm **Immunization Update**
Molly Sander, Immunization Director, ND Department of Health, Bismarck, ND
UPN: 047-999-09-119-L01-P (0.1 CEU)

4-5pm Third NDPhA Business Meeting
UPN: 047-999-09-122-L04-P (0.025 CEU)

5-6pm Phun Run/Walk

6-7pm NDPhA Past President's Social (by invitation)

6:30pm Social

7pm President's Banquet • Awards Ceremony • NDSU College of Pharmacy Scholarship Auction

Sunday, April 5, 2009

7:30-8am Breakfast

8-8:45am Memorial Service

9-11am **About the Patient Diabetes Program Update and Diabetes Management Roundtable**
Jayme Steig, PharmD, RPh, Coordinator Diabetes Diesease State Management Project
UPN: 047-999-09-120-L01-P (0.2 CEU)

Further CE: **TBD**

Adjourn

Program designation of "P" signifies that this program was specifically developed for pharmacists. ACPE Continuing Education credit is applicable for pharmacy technician and nursing also.

"The College of Pharmacy, Nursing, and Allied Sciences, North Dakota State University, is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education."

Continuing Education Credit:
A statement of credit will be mailed to those participating in the program within 4-6 weeks. Satisfactory completion will be assessed by completion of an attendance roster and an evaluation of learning.

Charles Peterson, Dean
NDSU College of Pharmacy

A Message from the Dean

New Annual Giving Program "Sudro Society" Replaces Dakota 100 Club

In the summer of 2007, the College hired an outside consultant (Bernard Consulting, Group, Inc. (BCG), Kansas City, Missouri) to assist the College in the development of a new strategic plan. This document will pave the way for the future success of our College over the next 5-10 years. As we begin further developing and implementing our strategic plan including all the exciting new ideas that we want to be pursuing to keep NDSU students on the cutting edge nationally for pharmacy education, financial resources will be of critical importance to help us realize our goals and priorities for the future. This past fall, the College launched a new annual giving program called "Sudro Society." This new annual giving program replaces the previous Dakota 100 Club. Sudro Society recognizes individuals who make annual, unrestricted contributions to the NDSU pharmacy program of $1,000 or more. The annual investment helps provide a critical base of funding which allows the College to respond to new initiatives, urgent program needs, and special projects that would not otherwise be funded through the College's annual budget. Funding from annual alumni giving supports many areas of the college including: College Student Ambassadors Program; travel expenses for students to attend regional and national pharmacy conventions; support and upgrades for the Concept Pharmacy; instructional technology; classroom innovations and renovations; faculty and staff development opportunities; recruitment of new faculty and staff; alumni relations including events and our alumni newsletter; annual career fair and scholarship program; computer and software upgrades; visiting scientist research lecture series; and many other areas.

Matching gifts from a donor's company will also be credited toward an individual's membership. Gifts can be made to honor a retirement or to memorialize a friend or loved one. Sudro Society gifts also qualify toward membership in the NDSU Development Foundation Clubs and Societies including President's Circle and Medallion Societies. Annual gifts of less than $1,000 will be recognized as "Friends of Sudro Society". All Sudro Society gifts are tax deductible.

The financial support received from Sudro Society will help us sustain our tradition of excellence and it will also allow us to pursue new areas in need of funding. We would greatly appreciate it if you would consider partnering with us by becoming a full Sudro Society member. Your support will have a great impact on our pharmacy students and will help us fulfill our dreams for the future.

For more information about Sudro Society, including becoming a member, contact Sara Tanke, via email at Sara.Tanke@ndsu.edu or call Sara at (701) 231-6461.

Classifieds

PHARMACY FOR SALE

Excellent Opportunity
Drug Store for sale in Southeastern Montana.
Serious inquiries invited to call 1-406-978-2419 ask for Gerry.

PHARMACIST WANTED

Clinical Staff Pharmacist
Catholic Health Initiatives, one of the nation's largest Catholic Healthcare Systems, is Seeking candidates for full-time as well as part-time positions.
We are currently developing this innovative new service to provide coverage for hospital pharmacies from a remote centralized site utilizing advanced technology. We will initially provide 10-hour evening/night shift coverage, with a goal of expanding to 24/7 coverage.
Education & Experience:
- B.S. in Pharmacy or equivalent required
- Must be a registered Pharmacist in ND and must be willing to be licensed in additional states
- 3 Years of hospital pharmacy experience preferred
- ASHP Residency preferred
- Candidates should be self-motivated, possess a creative mind

We hold in high regard our core values of Reverence, Integrity, Compassion and Excellence.
Qualified candidates should apply online at:
www.catholichealthinitiatives.org

You may contact Shelley Johnsen, Director of the pharmacy service, directly at 701-412-5668 or shelleyjohnsen@catholichealth.net for specific questions you may have.

Walls Medicine Center, Grand Forks.
Contact Dennis Johnson, RPh, Wall's Medicine Center Inc., 708 S Washington Street, Grand Forks, ND 58201 or call (701) 746-0497.

Registered Pharmacist wanted at Foss Drug, Valley City
Full-time with benefits. *Contact Terri Berg-Crooks at 701-845-2652 or Terry Kistensen at 701-530-6050*

Full-Time Pharmacist Needed To Join Corner Drug's Team!
Corner Drug, 522 Dakota Avenue, Wahpeton, ND 58075
Hourly Rate: $40-50. Hours Worked Per Week: 40. Flexible Schedule and Time Off. *Benefits Include:* Full health, dental and vision. Employee has access to an "open network" of providers to choice from. Life Insurance and Accidental Life Insurance Policy as well! Retirement - 3% employer contribution. Continuing education courses. Wage increases and bonuses are based on job performance. Potential for additional benefits upon hire. Potential head pharmacist position and/or potential ownership down the road. *Contact: Paul Folden, 701-642-6223 or 701-642-3563 folden@702com.net*

ND Pharmacy, Williston
Full-time Pharmacist wanted for progressive pharmacy.
Competitive Salary, Benefits, 401K, Vacation
Call Bob at 1-800-767-3632 or mail resume to:
ND Pharmacy, 446 18th St W #2, Dickinson, ND 58601

PHARMACY TECHNICIAN WANTED

Part or full time Pharmacy Technician needed for Telephoarmacy location in western North Dakota. ?????
Call Jody at 701-764-5093 or e-mail jody@ndsupernet.com.

The Medicine Shoppe, Minot
Opening for a full-time Pharmacy Technician. Health/dental insurance available. Starting wage negotiable depending on experience. *Contact Jodee or Pat at 701-852-1524.*

FACULTY WANTED

Pharmacist/Faculty at NDSU
North Dakota State University is seeking a full-time, non-tenure track pharmacist/faculty position in the Department of Pharmacy Practice. The individual will assist with teaching in the Concept Pharmacy instructional laboratory. Screening of applications will continue until position is filled. *For a complete description of this job and other openings go to: https://jobs.ndsu.edu*
NDSU is an equal opportunity institution.

NDPhA NORTH DAKOTA PHARMACISTS ASSOCIATION

NDSU COLLEGE OF PHARMACY, NURSING, AND ALLIED SCIENCES

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