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South Dakota Pharmacist

SOUTH DAKOTA
PHARMACIST
Volume 23 Number 4

SDPhA CALENDAR

South Dakota Pharmacists Association
320 East Capitol
Pierre, SD 57501
(605)224-2338 phone
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www.sdpha.org

"The mission of the South Dakota Pharmacists Association is to promote, serve and protect the pharmacy profession."

South Dakota Board of Pharmacy
4305 South Louise Avenue
Suite 104
Sioux Falls, SD 57106
(605)362-2737
www.pharmacy.sd.gov

Please note: If you are not on our mass e-mail system check our website periodically for district meetings and other upcoming events. They will always be posted at: *http://www.sdpha.org*.

October *American Pharmacists Month*

1-31 American Pharmacists Month
1 License Renewals Due to the Board of Pharmacy
4 Mobridge District Meeting
Bob's Steakhouse Gettysburg, SD at 6:00 p.m.
10 SDAPT Fall CE & Business Meeting
Sioux Falls, SD
12 Native American Day
13 Black Hills District Meeting
Minerva's, Rapid City, SD at 6:00 p.m.
14 Sioux Falls Fall District Meeting
Falls Overlook Cafe, Sioux Falls, SD at 5:30 p.m.
17-21 National Community Pharmacists Association (NCPA)
111th Annual Convention & Trade Exposition, New Orleans, LA
18-24 National Hospital and Health-System Pharmacy Week
20 National Pharmacy Technician Day
20 Rosebud District Meeting
Homesteader in Gregory at 6:00 p.m.
22 Watertown District Meeting
Lunker's, Watertown, SD at 6:30 p.m.
25 Huron District Meeting
Ryan's Hanger, Huron, SD at 6:30 p.m.
28-30 SDSU Pharmacy Days
30- 1 Academy of Student Pharmacists Midyear Regional Meeting
Omaha, NE
31 Halloween

November

1 Daylights Savings Time Ends
11 Veterans Day
26 Thanksgiving

December

25 Christmas

* Cover photo courtesy of SDPhA

SOUTH DAKOTA PHARMACIST
The *SD PHARMACIST* is published quarterly (Jan, April, July & Oct). *Opinions expressed do not necessarily reflect the official positions or views of the South Dakota Pharmacists Association.* The Journal subscription rate for non-members is $25.00 per year. A single copy can be purchased for $8.

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PRESIDENT'S PERSPECTIVE

Chris Sonnenschein
SDPhA President

Greetings SDPhA Membership,

There has been a significant amount of activity surrounding our profession over the last few months. As you are well aware, the subject of healthcare reform is receiving a great deal of attention. The U.S. House of Representatives and Senate are currently considering health care reform legislation which seeks to improve access to, reduce costs, and improve quality of health care. Recently, Senator Baucus released the "Chairman's Mark: America's Healthy Future Act of 2009" as the Senate Committee on Finance's healthcare reform bill. There are many elements of this health care reform proposal that do in fact positively affect pharmacy and the patients that we serve. The "Chairman's Mark" aims to foster patient-centered care, improve quality, and slow the rate of Medicare cost growth. Medication therapy management is referenced as a key success metric in many sections of the proposal. Additionally, the "Chairman's Mark" proposes a legislative remedy to reimbursement cuts that center around the Average Manufacturer Price (AMP) reimbursement model. Also, just recently, the House passed the bill to place a delay on the implementation of DME accreditation. The Senate is expected to act this week. We will pass on any updates as they become available.

While the elements relevant to pharmacy throughout the "Chairman's Mark" are important, pharmacy must continue to focus its advocacy efforts on the areas that directly impact the practice of pharmacy and the patients that the profession serves. SDPhA as well as national organizations and other state associations continue to ensure our elected leaders in Washington, D.C. understand pharmacists play a pivotal role in our health care delivery system. As such, organizations are working with policymakers to include the clinical services pharmacists provide in integrated care models. I also encourage you to engage to ensure that we are successful. Reach out to our Congressional Delegates through their district offices. The interest expressed by practicing pharmacists directly impacted by such legislation often leaves a profound impression.

October is American Pharmacists Month. It presents a unique opportunity to celebrate and promote the practice of pharmacy. Please visit our website, www.sdpha.org, to identify opportunities and suggestions on how to effectively celebrate in your practice setting. Remember to also celebrate National Hospital and Health-System Pharmacy Week October 18-24 and National Pharmacy Technician Day on October 27, 2009. Additionally, Board members from the South Dakota Pharmacists Association and South Dakota Health Society of Health-System Pharmacists worked together to develop a state wide campaign to promote pharmacy across all practice settings. I am hopeful you are actively a part of the campaign by the time you read this.

I would like to invite you visit our website. New features have been constructed to provide membership with additional valuable information. Recent enhancements include the placement of the Journal for online viewing, the ability to register for convention online, ability to contribute to the Commercial & Legislative Branch, and payment of district dues online. We have also added a "Find-a-Pharmacist/Find-a-Pharmacy" section for the visiting public and pharmacy staff to utilize. A section providing up to date information regarding H1N1 and Seasonal Flu has been made available as well.

Finally, I encourage you to attend your SDPhA Fall District Meeting. District Meetings present a unique opportunity to collaborate with colleagues and positively influence the profession. The meeting dates and times can be found on our website.

Professionally,

Chris Sonnenschein, PharmD, PMP
President
South Dakota Pharmacists Association

POLITICAL CONTACT FORM

YOU CAN HELP YOUR PROFESSION BY LETTING US KNOW WHO YOU KNOW.

We are expanding our grassroots efforts through use of the Political Contact Form. We need information about your (you, spouse, employees, co-workers) contacts so we can create a grassroots network to support the advancement of our profession. This information pertains to state and national legislators, governor, other statewide office holders, political candidates, political appointees, and public policy makers. The information below will assist us greatly in coordinating our legislative efforts. Please take a few moments to answer the questions below and return the form to:

SDPhA * 320 E. Capitol Avenue * PO Box 518 * Pierre, SD 57501-0518

PLEASE COMPLETE FOR EACH ELECTED OFFICIAL WITH WHOM YOU HAVE CONTACT

Contact: ____

He/She is: ___ personal friend ___ customer where I practice ___ casual acquaintance ___ relative

I have: ___ financially contributed to his/her campaign
___ contacted him/her in the past regarding pharmacy issues

Level of support shown for pharmacists *(circle one)*: NONE LOW MED HIGH

Comments: ____

____

Contact: ____

He/She is: ___ personal friend ___ customer where I practice ___ casual acquaintance ___ relative

I have: ___ financially contributed to his/her campaign
___ contacted him/her in the past regarding pharmacy issues

Level of support shown for pharmacists *(circle one)*: NONE LOW MED HIGH

Comments: ____

____

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I have: ___ financially contributed to his/her campaign
___ contacted him/her in the past regarding pharmacy issues

Level of support shown for pharmacists *(circle one)*: NONE LOW MED HIGH

Comments: ____

____

PLEASE PRINT:
Your Name: ______________________________ Pharmacy Name: ______________________________
Mailing Address: ______________________________ City/ State/ Zip: ______________________________
Telephone Number: ______________________________ Email Address: ______________________________

South Dakota Board of Pharmacy

Ron Huether
Executive Secretary

NEWS FROM THE BOARD

The next board meeting is scheduled for December 11 in Sioux Falls.

Board meetings are open to the public. Pharmacists are encouraged to attend. The specific location and agenda for the meeting will be posted on our website approximately 30 days before the meeting. Minutes of past meetings are available on the website.

August 17, 2009, was the effective date for several changes in the Administrative Rules. Every pharmacist should review these rules to make sure that you understand and comply with them.

- 20:51:01 Registration by Examination
- 20:51:02 Internship Requirements
- 20:51:04 Registration by Reciprocity
- 20:51:29 Registered Pharmacy Technicians

The Board continues to work on changes and additions to other sections of the rules in order to maintain or enhance pharmacy practice regulations that protect the health and welfare of South Dakota consumers. Please call the Board office or speak with one of the inspectors if you have any questions or suggestions about administrative rules.

PHARMACY LICENSES

New pharmacy licenses were recently issued to: Marla Hayes, The Remedy Shoppe LLC, Presho; James Stephens, Vilas Pharmacy, Eagle Butte; and Christina Kinney, Target Pharmacy, Sioux Falls.

NEW REGISTERED PHARMACISTS

The following candidates recently met licensure requirements and were registered as pharmacists in South Dakota: Billie Jo Bartel, Jennifer Bergan, Kathryn Bremmon, Jason Caviness, Eric Christianson, Dana Culver, Ashley Dendinger, Amanda Denn, Jonathan Fliehs, William Freiberg, Ashley Hagen, Ashley Hansen, William Hayes, Laura Haynes, Kyle Hendry, Nicole Hepper, Tiffany Jastorff Gillies, Ashley Johnson, Derek Johnson, Elizabeth Kasten, Matthew Klein, Barry Krusemark, Robin Lockhorst, Ashley Mutschelknaus, Gloriz Nelson, Abby Peterson, Kathryn Precht, Leslie Reiner, Katherine Rochleau, Gregory Sarchet, Martha Schmidt, Krista Schmit, Lynnette Seyer, Elizabeth Sinclair, Susan Stich, Laura Stoebner, Devin Van Briesen, Raelle Van Maanen, Brittney Vander Pol, Melinda Vander Vorst, Laura Viereck, and Rebel Williams.

TECHNICIAN REGISTRATION RENEWALS

Renewal forms and a list of registered technicians were mailed to each South Dakota pharmacy in early September. The pharmacist-in-charge is responsible for seeing that each renewal form is properly completed and signed before sending to the Board office.

A technician who has never registered with the Board must complete the registration process within 30 days of hire. Both the initial registration form and renewal form are located at the board web site www.pharmacy.sd.gov. We encourage you to call or email our office with any questions about the initial registration or renewal process.

PHARMACY SECURITY

During the past year we have seen a significant increase in burglaries and armed robberies in pharmacies. Please take time to discuss safety and security procedures with your staff. The South Dakota Division of Criminal Investigation and your local Law Enforcement can offer good advice on how to make your pharmacy more secure. Post these

Continued next page

South Dakota Board of Pharmacy continued

phone numbers in your pharmacy:

DCI Office in Pierre – 605-773-3331
Special Agent Phil Toft – East River Division – 605-367-5342
Special Agent John Wenande – West River Division – 605-394-2258 ext 116
Special Agent Jason Piercy – Canton – 605-764-6606

PRECEPTORS

The Board appreciates the efforts of each pharmacist who accepts the responsibility of mentoring pharmacy interns and pharmacy technicians in training. The hours these students spend in the pharmacy working with you are a very important part of their education. Please make sure you assist your students with their requirements for documenting the experience and reporting the hours to the Colleges of Pharmacy, the Pharmacy Technician educational programs or to the Board of Pharmacy. Additional information (including forms) is available on our website.

CHANGE IN PHARMACIST-IN-CHARGE

(ARSD 20:51:06:06 Transfer of Pharmacy Registration)

The transfer of responsibility for active management of the pharmacy requires an application be filed with the Secretary of the Board. There is no fee for this transfer if the application is received no less than 10 days before the transfer. A fee of $200 is required when the application for a transfer is made at a later date.

SOUTH DAKOTA HEALTH PROFESSIONALS ASSISTANCE PROGRAM

The inappropriate use of alcohol and/or drugs may be a career threatening issue for individuals working in pharmacies. Please call the South Dakota Health Professionals Assistance Program (HPAP) to discuss your concerns anonymously. HPAP assists impaired pharmacists and pharmacy technicians to get the help they need without necessarily jeopardizing their license or registration. Call Char Skovlund or Maria Eining at 605-322-4048

SDPhA Legacy Scholarship

Pictured is Chris Sonnenschein, President of SDPhA and Curtis Wong.

We are proud to announce that Curtis Wong was recently awarded SDPhA's Legacy Scholarship. The Legacy Scholarship endowment was established through the sales of "A History of Pharmacy in South Dakota", by Harold H. Schuler. The South Dakota Pharmacists Association established this scholarship to enhance the vitality of pharmacy and help assure a strong future for the profession.

Congratulations Curtis!

CONTACT: Tara Modisett: Tara@naspa.us
(804) 285-4431

FOR IMMEDIATE RELEASE

PQC Users Get New Legal Protection for Required Quality Assurance Program

Richmond, VA., August 6, 2009 - As part of Medicare Part D, all plan sponsors and their contracted entities (pharmacies) must have and maintain quality assurance (QA) programs that are designed to reduce medication errors and adverse drug interactions and improve medication use. This requirement is stated in all Part D pharmacy network contracts.

Thousands of Medicare Part D pharmacy providers are meeting their QA requirements and getting legal protection of their quality assurance data with the easy to use, low cost Pharmacy Quality Commitment (PQC) program available through state pharmacy associations. PQC is one program offered by the Alliance for Patient Medication Safety (APMS), a federally certified Patient Safety Organization (PSO).

Collecting data on dispensing errors and near-misses is often viewed as a double-edged sword. Fear of discovery and subsequent damage to legal defense cases impeded patient safety data reporting in the past, but now PQC can offer federal protection to data collected and reported.

"Our goal is to make sure that pharmacists in every state can realize the full legal protections afforded to health professionals under the Patient Safety and Quality Improvement Act of 2005," said Rebecca Snead, CEO of APMS. Pharmacists should make sure they are participating in a quality assurance program that offers 100 percent protection of safety, quality and error data. PQC provides valuable insights into trends which pharmacists can use to improve their dispensing processes and decrease the likelihood of costly errors. The PQC program offers a solid continuous quality improvement program and protection for your data, something that most programs do not offer.

About APMS
APMS was established by the National Alliance of State Pharmacy Associations (NASPA) and is listed as a PSO with the Agency for Health Research and Quality (AHRQ). The mission of APMS is to foster a culture of quality within the profession of pharmacy that promotes a continuous systems analysis to develop best practices that will reduce medication errors, improve medication use and enhance patient care.

Learn more about the programs offered by APMS, visit http://www.medicationsafety.org.

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Alliance for Patient Medication Safety
2530 Professional Road Richmond, VA 23235
Phone: (804) 285-4431 Fax: (804) 612-6555 Email: tara@naspa.us

Alliance for Patient Medication Safety

a federally certified patient safety organization (PSO)

Pharmacies that report patient safety events are provided federal legal protection to patient safety information that is reported through APMS.

Quality Assurance Reporting Services

Quality Assurance Reporting to APMS provides federal legal protection to patient safety information. In addition, participating pharmacies will receive recommendations on best practices and workflow processes to help reduce medication errors, improve medication use and enhance patient safety and health outcomes.

Thousands of Medicare Part D pharmacy providers are meeting their QA requirements and getting legal protection of their quality assurance data with the easy to use, low cost **Pharmacy Quality Commitment (PQC)** program. (PQC) is a continuous quality improvement program that strives to reduce medication errors in the pharmacy by offering structures and methods for improvement and a feedback system that allows the pharmacist to elevate the quality of patient care.

Compounding Adverse Drug Events Reporting (C-ADER)

A standardized tool for compounding pharmacies to simply and effectively track and report any adverse events that are potentially associated with compounded medications.

Pharmacy and Prescriber E-prescribing Experience Reporting (PEER) Portal

A questionnaire/reporting site designed to allow practicing pharmacists and prescribers to share their experiences with e-prescribing technologies. All comments - whether suggestions for improvement or complaints about the process - are welcome. This detailed information gathered can be used to improve the quality and effectiveness of electronic prescribing technologies and overall quality and operation of the e-prescribing infrastructure.

BACKGROUND

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 (NCSPAE).

APMS, LLC was established in August 2008 by NASPA and was listed in December 2008 as a Patient Safety Organization (PSO) with the Agency for Health Research and Quality (AHRQ). The mission of APMS, LLC is to foster a culture of quality within the profession of pharmacy that promotes a continuous systems analysis to develop best practices that will reduce medication errors, improve medication use and enhance patient care.

Alliance for Patient Medication Safety
www.medicationsafety.org info@medicationsafety.org
866 365-7472

Governor Recognizes SD Pharmacists

Influenza Immunization Update

Informational Brief

Pharmacists should prepare for Seasonal & Pandemic flu season NOW

Many students are now back in school, and immunizing pharmacists should be adequately prepared for influenza season. Here are a few things you can do to make sure you are part of the solution during influenza season:

- Check your inventory to make sure you have antiviral medications Tamiflu(oseltamivir) and Relenza(zanamivir) in stock.
- Contact SDPhA to let them know you want to be included as an immunization provider for the upcoming flu season to include both novel H1N1(A) and seasonal influenza vaccines.
- Help the CDC meet their goal of having people get vaccinated against the seasonal flu as soon as vaccine becomes available to you. Start promoting your vaccination services as soon as you can.

The CDC and South Dakota Department of Health (SDDOH) recommends that the Seasonal Flu vaccine is given as soon as possible to the appropriate target groups.

Who Should Receive the H1N1(A) Vaccine?

The CDC does not expect a shortage of the novel H1N1(A) vaccine but the availability and demand can be unpredictable. There is some possibility that initially the vaccine will be available in limited quantities. In this setting, the CDC recommended that the following groups receive the vaccine before others:

- Pregnant women
- People who live with or care for infants younger than 6 months
- Children 6 months to 4 years
- Children 5-18 years with chronic health conditions
- Health care and emergency medical services workers (hospitals will coordinate distribution of vaccine/supplies to their area's health care workers; ambulance services will coordinate vaccinations for EMS personnel)

South Dakota is on target to receive 110,000 doses by mid-October and 48,000 doses weekly there after. As more vaccine is available it will be administered beyond the priority groups. The Federal government will purchase and distribute the vaccine for administering. The SDDOH is also adapting the CDC H1N1 Vaccine Provider Agreement form for South Dakota, and will notify providers of the process of enrolling for the vaccine. The H1N1 vaccination is voluntary and is free but some providers may charge of an administration fee.

CDC Recognizes the Need for Supply & Demand of the H1N1(A) Vaccine

The CDC further recommended that once the demand for vaccine for the prioritized groups has been met at the local level, programs and providers should begin vaccinating everyone from ages 25 through 64 years. Current studies indicate risk for infection among pregnant women, young children, those with chronic health conditions appear to be most at risk; elderly less affected, as they may have some immunity due to previous exposure to similar viruses. Therefore, as vaccine supply and demand for vaccine among younger age groups is being met, programs and providers should offer vaccinations to people over the age of 65.

The CDC also stresses that people over the age of 65 receive the seasonal vaccine as soon as it is available. Even if novel H1N1(A) vaccine is initially only available in limited quantities, supply and availability will continue, so the CDC stressed state programs and providers continue to vaccinate unimmunized patients.

The novel H1N1(A) vaccine is not intended to replace the seasonal flu vaccine. It is intended to be used alongside seasonal flu vaccine to protect people. Both vaccines can be administered on the same day.

CDC's Goal on H1N1(A) Transmission

CDC estimates that there have been at least one million cases of novel H1N1(A) Influenza in the US, and South Dakota has reported 121 cases to date. The CDC's goals during this public health emergency are to reduce transmission and illness severity, and to provide information to assist healthcare providers, public health officials, and the public in addressing the challenges posed by this newly identified influenza virus.

The CDC has isolated the novel H1N1(A) virus, made a candidate vaccine virus strain that can be used to create vaccine, and has provided this virus to industry so they can begin scaling up for production of the vaccine. It is expected that novel H1N1(A) influenza vaccine may be available as early as mid-October, and the CDC has issued guidance for state and local public health departments to assist them in planning for the novel H1N1(A) influenza vaccine campaign.

For additional guidance please visit the following websites:

9/4 CDC guidance for Child Care- http://www.cdc.gov/h1n1flu/childcare/guidance.htm
Fact Sheet for Pregnant Women- http://doh.sd.gov/H1N1/pdf/H1N1%20pregnant.pdf
SD H1N1 news releases- http://doh.sd.gov/News/2009.aspx
SD DOH- http://doh.sd.gov/H1N1/
CDC H1N1 Website- http://www.cdc.gov/H1N1flu/

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An Administrative Rule Refresher on the Administration of Influenza Immunizations

20:51:28:01. Authority to administer influenza immunizations. A pharmacist may administer influenza immunizations to eligible patients eighteen years of age and older if the pharmacist has met the qualifications set forth by this chapter and has been granted authorization by the board. The board may issue a certificate authorizing this function to the pharmacist who meets the qualifications established in § 20:51:28:02. The authority to administer influenza immunizations is valid only for the pharmacist meeting this requirement and may not be delegated to any other pharmacist or employee.

20:51:28:02. Qualifications for authorization to administer influenza immunizations. The board may issue a certificate authorizing the administration of influenza immunizations to a pharmacist that meets the following qualifications:

1. Active licensure to practice pharmacy in this state;
2. Successful completion of an approved training program as outlined in this chapter; and
3. Active certification in basic cardiopulmonary resuscitation.

20:51:28:03. Standards for approval of influenza immunization training programs. An institution desiring to offer a training program for administration of influenza immunizations must submit an application for approval to the board. The board may grant approval to an applicant training program upon proof that the training program meets the following requirements:

1. The training program is based on the course requirements outlined in § 20:51:28:04;
2. The training program is offered in an institution accredited by the American Council on Pharmaceutical Education;
3. A completion certificate is awarded to a pharmacist who has successfully completed the training program. The certificate must include the name and location of the institution, the date of completion, the full name of the person who completed the program, the signature of the faculty member in charge of the course, and the date the certificate was awarded; and
4. Records are maintained which include documentation of the following:
   a. Each person enrolled in the program, including documentation of performance and the date the person failed or completed the program;
   b. Each faculty member teaching the program, including qualifications;
   c. The course of study; and
   d. A list of graduates of the program who were awarded certificates and the date of the awards.

The applicant must submit an evaluation of the program standards for compliance with this section to the board every two years in order to maintain ongoing approval.

20:51:28:04. Training program requirements. The training program for administration of influenza immunizations must include the following course of study:

1. Basic immunology and the human immune response;
2. Mechanics of immunity, adverse effects, dose, and administration schedule of available vaccines;
3. Response to an emergency situation as a result of the administration of an immunization;
4. Administration of intramuscular injections; and
5. Record keeping and reporting requirements as set forth by § 20:51:28:05.

20:51:28:05. Record keeping and reporting requirements. A pharmacist granted authorization under this chapter to administer influenza immunizations shall maintain the following documentation in the pharmacy regarding each immunization administered for a minimum of five years:

1. The name, address, and date of birth of the patient;
2. The date of administration and site of injections;
3. The name, dose, manufacturer's lot number, and expiration date of the vaccine;
4. The name and address of the patient's primary health care provider, as identified by the patient;
5. The name of the pharmacist administering the immunization;
6. The date that the written report was sent to the patient's primary health care provider;
7. Consultation or other professional information provided to the patient; and
8. The name of the vaccine information sheet provided to the patient.

The pharmacist must provide a written report to the patient's primary health care provider of the above information within 14 days of the immunization. The required records as set forth in this section are open to inspection by the board and must be made available upon the board's request.

20:51:28:06. Confidentiality of records maintained. The required records identified in § 20:51:28:05 that include specific patient information are confidential records. Nothing in this section affects the requirements of SDCL 36-11-69 relating to the release of confidential patient information.

20:51:28:07. Renewal of authorization to administer influenza immunizations. The authorization to administer influenza immunizations must be renewed biennially by September 30. Any pharmacists desiring to renew the authorization shall provide the following documentation to the board:

1. Current certification in basic cardiopulmonary resuscitation; and
2. Certificate of completion of a minimum of two hours of continuing education related to immunizations.

FDA Approval of 2009 Novel H1N1 Vaccine: Summary

FDA approved four vaccines as a strain change to each manufacturer's seasonal influenza vaccine on September 15, 2009. The presentations, age, and dosage specifications listed in the chart below. For more information, as well as the package inserts, visit FDA's website at http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm181950.htm.

Manufacturer	Presentations	Age	Dosage[1]	Type	Package Insert
CSL Limited	-0.5 mL prefilled single-dose syringe (thimerosal free) -5 mL multi-dose vial containing 10 doses (with thimerosal)	Adults 18 years of age and older	-Single 0.5 mL dose	Inactivated virus; intramuscular injection	Link
GlaxoSmithKline[2]	*Awaiting FDA licensure*				
Novartis Vaccines and Diagnostics Limited	-0.5 mL prefilled single-dose syringe (trace thimerosal) -5 mL multi-dose vial (with thimerosal)	Persons 4 years of age and older	-Two 0.5 mL doses approx. 1 month apart for children 4 to 9 -Single 0.5 mL dose for children 10-17 -Single 0.5 mL dose for adults 18 and older	Inactivated virus; intramuscular injection	Link
Sanofi Pasteur Inc.	-0.25 mL prefilled single-dose syringe (thimerosal free) distinguished by pink syringe plunger rod -0.5 mL prefilled single-dose syringe (thimerosal free) -0.5 mL single-dose vial (thimerosal free) -5 mL multi-dose vial (with thimerosal)	Persons 6 months and older	-Two 0.25 mL doses approx. 1 month apart for children 6-35 months of age -Two 0.5 mL doses approx. 1 month apart for children 36 months-9 years -Single 0.5 mL dose for children 10 years and older -Single 0.5 mL dose for adults 18 and older	Inactivated virus; intramuscular injection	Link
MedImmune, LLC	-0.2 mL prefilled single-dose intranasal sprayer	Persons aged 2 to 49 years	-Two 0.2 mL doses approx. 1 month apart for children 2 to 9 -Single 0.2 mL dose for persons 10-49	**LAIV; Intranasal spray**	Link

1 Based on currently available information, which suggests children 6 months to 9 years of age have little or no evidence of protective antibodies to the novel H1N1 virus. It is expected that children 9 years of age and younger should be administered two doses of the vaccine, and that children and adults 10 years of age and older will need one dose. Clinical studies are underway and will provide additional information about the optimal dosage for children.

2 The GlaxoSmithKline H1N1 vaccine has not yet been approved. Based on their licensure for 2009-2010 seasonal influenza vaccine, their H1N1 vaccine can be expected to be an inactivated virus vaccine for adults 18 and older with presentations of 0.5 mL prefilled single-dose syringes (thimerosal free).

ASTHO
September 18, 2009

South Dakota State University
College of Pharmacy

Dennis Hedge
Dean

Greetings from the SDSU College of Pharmacy!

The 2009-10 academic year is off to a fast start for our College. As in years past, we began our new school year with an Orientation Program welcoming our incoming P1 class of 70 students into the Pharm.D. program. This incoming class has started with great excitement and enthusiasm for the journey that lies ahead. They are a group that is already mindful of the unique place they will have in our College's history, as we conclude time in our transitional home on campus, the Intramural Building, and move into the Avera Health and Science Center for classes next year.

The College also welcomed new students into the Ph.D. in Pharmaceutical Sciences program. The current enrollment in the Ph.D. program is eighteen, up from an enrollment of fifteen students in the program last year. The enrollment growth in this program is a tremendous source of pride for our College as we have only offered the Ph.D. in Pharmaceutical Sciences for a couple of years. Dr. Chandradhar Dwivedi, Head of the Department of Pharmaceutical Sciences, and the faculty in the Pharmaceutical Sciences Department are to be commended for their efforts in designing a high-quality curriculum that is attracting the interest of many prospective students and also increasing research activity to support the program.

In addition to greeting new students, we have had the great pleasure of adding two faculty and two staff members to our College. Dr. Olayinka Shiyanbola is a graduate of the University of Iowa and brings expertise in the area of Social and Administrative Pharmacy to the College. Joining Dr. Shiyanbola as a new faculty member in the Department of Pharmacy Practice is Dr. John Kappes. John is a 2007 graduate of the SDSU College of Pharmacy and has completed residencies at Aurora Healthcare in Milwaukee, Wisconsin and Avera McKennan Hospital in Sioux Falls. Dr. Kappes is an addition to our West River clinical faculty core with a practice site of Rapid City Regional Hospital where he specializes in critical care pharmacy.

New staff members recently joining the College are Ms. Pam Rieger and Ms. Sarah Vaa. Pam is filling a new position and serving as a Program Assistant in the area of programmatic and academic assessment. Sarah accepted a secretary position and serves as a member of our student services team.

A final item that I would like to share details is a diabetes care project that involves students from both SDSU and USD enrolled in several different health science programs. The project is entitled "Development, Implementation, and Evaluation of an Innovative Healthcare and Health Promotion Model for an Underserved Population with Diabetes" and is funded by a $285,000 grant from The Centers for Disease Control and Prevention. Karly Hegge, Assistant Professor of Pharmacy Practice, is the project's coordinator.

From what is described above, you can see that many positive things are happening at the College. We would enjoy your visit and a chance to share even more.

Warm regards,

Dennis Hedge
Dean, SDSU College of Pharmacy

SDSU College of Pharmacy
Pharmacy Days
October 28-30, 2009
at the SDSU Campus

Academy of Student Pharmacists

Jenna Kucera
APhA-ASP President

Greetings from South Dakota State APhA-ASP Chapter,

School has started, and APhA-ASP is hitting the ground running. The beginning of the semester is an especially busy time for our chapter, and this year is no exception. On September 9th, we kicked off the semester with a Student Pharmacy Organizations Fair followed by the APhA-ASP Welcome Back Picnic. The fair was comprised of all the student pharmacy organizations in the SDSU College of Pharmacy. Pre-pharmacy and professional program students had a chance to learn more about the opportunities to become involved with the SDSU College of Pharmacy through these organizations. Students who visited all the student pharmacy organizations were entered into a raffle to win an IPod Touch. Walker Darko, a P1 student, won the IPod Touch. This was the first year students could sign-up for APhA-ASP while attending the fair, and we had a great response with over 50 students signing up. The main membership drive will begin September 24th .

Following the Student Pharmacy Organizations Fair, the APhA-ASP Welcome Back Picnic started at Hillcrest Park. SDPhA sponsored the APhA-ASP Welcome Back Picnic, and SDPhA Else Umbreit was also able to attend the picnic. Our chapter would like to thank SDPhA for their continued support, and Else for attending our event. Overall, both events were a great success almost 200 students participating!

The next major event for our chapter is the Student Outreach Visit on September 24th. During the Student Outreach Visit, a national member visits our school. This year APhA-ASP Speaker of the House Alison Rapacz Knutson from the University of Minnesota College of Pharmacy will attend our APhA-ASP meeting. She will present the members and prospective members with the unique opportunities and benefits of being actively involved in APhA-ASP. We are anxiously looking forward to her visit.

Later this fall, the South Dakota APhA-ASP will be visiting Omaha, Nebraska for the Region V Mid-Year Regional Meeting. The event will be held on October 30th-November 1st with seven other APhA-ASP chapters who will attend and participate in the meeting. One of the major events is the hearing and passing of resolutions. To give some background information on resolutions, resolutions are stances we want APhA-ASP to take on pertinent and pressing pharmacy issues. If any pharmacists reading this article have ideas for resolutions, please email them to our chapter's account asp.sdsu@gmail.com so we can get in contact with you to hear your ideas. In closing, I would like to remind everyone October is American Pharmacists Month. Please take advantage of this golden opportunity to celebrate and promote the profession of pharmacy within your community and pharmacy practice setting.

South Dakota State APhA-ASP Chapter President

Sincerely Yours,

Jenna Kucera
APhA-ASP President
South Dakota State Chapter

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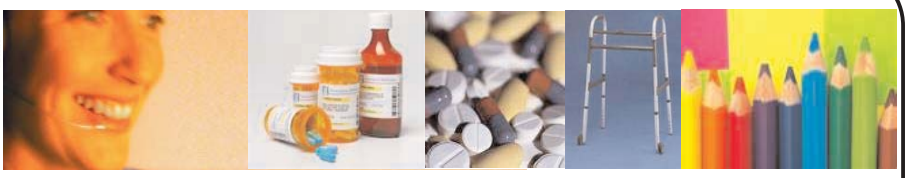

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Celebrate Your Profession!

American Pharmacists Month

October 2009

October is American Pharmacists Month! It's time to celebrate your profession, recognize your pharmacy staff, and reach out to your patients. SDPhA has compiled some creative ways for you and your colleagues to celebrate American Pharmacists Month!

In the Community Pharmacy Setting

- Use a special answering message promoting American Pharmacists Month when you answer your phone, "Thank you for calling. We are celebrating American Pharmacists Month. How can I help you?"
- Conduct an Immunization Day (flu clinic), blood pressure clinic or osteoporosis screening. Create a patient care center in your pharmacy.
- Hold a week long event of brown bag medication reviews in your pharmacy.
- Decorate your pharmacy for the month of October with banners and posters highlighting American Pharmacists Month.
- Hold an educational session with snacks at a convenient time, call it "Snacks & Facts" and invite the public.
- Hold an "open house" at your pharmacy and hand out goody bags with an informational brochure inside.
- Give an OTC tour to your patients on how to select the best OTC products for their individual condition.
- Invite local students to visit your pharmacy for a class trip and give them a tour of the pharmacy.
- Reach out to local media.
- Host a visit for your senator or representative and provide him/her with a view of the role of the pharmacist.

Hospitals, Institutions, Managed Care & Long Term Care Settings

- Place information in your facility's newsletter about American Pharmacists Month.
- Decorate the hospital or institution lobby with posters or displays. Create a lunch tray tent card explaining the goals of the pharmacy and services you offer.
- Hold an "open house" for all employees to visit the pharmacy.
- Host a visit for your senator or representative and provide him/her with a view of the role of the pharmacist.
- Reach out to local media.

Student Pharmacists/Colleges of Pharmacy

- Create a plan and be prepared to help your employer or rotation site hold activities and events for the month of October.
- Create a banner and ask your school to display the banner to promote American Pharmacists Month.
- Hold a t-shirt fundraiser at your school in honor of American Pharmacists Month.
- Talk to high school students about pharmacy careers.

Please send SDPhA information on what you are doing this year to celebrate American Pharmacists Month. Send us an email at sdpha@sdpha.org or fax at 605-224-1280 telling us your plans. Make sure to include names of those who participated and photos, if available. Visit our website at www.sdpha.org and click on the "October is American Pharmacists Month" for more ideas on how to celebrate. This is a celebration of pharmacists and pharmacy-so make sure to share your story!

American Pharmacists Month

October 2009

Make sure to recognize your pharmacy staff during American Pharmacists Month! October is the perfect time for managers and supervisors to show their appreciation for the great work the pharmacy staff does throughout the year.

Go Out into the Community

- Senior Citizen Centers are always looking for new, exciting educational events. Set up a brown bag medication review event at a local Senior Citizen Center.
- Hold a healthcare event in your community or get involved in your local health fair.
- Present information on pharmacy to people in the community. Promote the event in advance and invite the public.
- Speak with the local school nurse on educating high school teachers about pharmacy. Ask the guidance counselor if you can set up a presentation on careers in pharmacy for Career Day.
- Contact the media in your area, write a news release and talk with the media about American Pharmacists Month.

Don't forget to Celebrate!

October 18-24, 2009 is National Hospital and Health-Systems Pharmacy Week

October 20, 2009 is National Pharmacy Technician Day

Make sure to show your appreciation for your pharmacy technicians on this day by acknowledging their significant contribution in the pharmacy!

Resources

For more information visit APhA website at

http://www.pharmacist.com

APhA has a webpage full of promotional items and gifts available to you for American Pharmacists Month. For more information visit:

http://aphanet.source4.com/b2c/Category.asp?category=996

Visit our website at **www.sdpha.org** and click on the "October is American Pharmacists Month" for more ideas on how to celebrate.

Spread the word that pharmacists are the medication experts!

SD Society of Health-System Pharmacists

Jodi Wendte
SDSHP President

Greetings from SDSHP:

Fall marks the start to a busy and exciting time of year for the South Dakota Society of Health-System Pharmacists. Here is a brief update of our most recent as well as upcoming activities.

The annual Gary Van Riper Golf Classic and Scholarship dinner was held this past July. We are pleased to report that over $1500 was raised to support SDSU pharmacy student scholarships. Thank you to Tyler Turek and Tom Johnson for organizing a successful tournament and to all of the student volunteers and golf participants for supporting this event.

We will once again be hosting a Dakota Night reception for pharmacists, students, and technicians during the annual ASHP Midyear Clinical Meeting in Las Vegas. Please join us for refreshments and networking opportunities on December 7th from 5:30-7 PM at Caesar's Palace - Pompeian Ballroom. We hope to see you in Las Vegas!

In collaboration with SDPhA and the SDSU College of Pharmacy, we will be offering a series of free continuing education programs throughout the year. These programs will be presented by the pharmacy practice residents from Avera McKennan and Sanford hospitals. The first program is entitled "Comprehending Ischemic Stroke: Interpretation of the Guidelines to Provide Improved Patient Care" and is tentatively scheduled for early November. Please watch your email or check our website for further details.

The SDSU, SDSHP, and ASHP Pharmacy Student Clinical Skills Competition will be held October 20, 2009. All pharmacy students are encouraged to participate. Please visit our website for more information.

Our board is excited to offer the following membership initiative: free meeting registration to our annual convention for the pharmacist and technician member recruiting the most new members. Let the contest begin!

Thank you for your support of SDSHP. Please visit our web page for up to date information on CE opportunities and organizational events.

Jodi (Hurd) Wendte, Pharm.D.
President
South Dakota Society of Health-System Pharmacists
www.sdshp.com

SD Association of Pharmacy Technicians

Ann Oberg

SDAPT President

"A Fall Farewell"

As I sat down to write my last article for this journal page, I had to stop and reflect. There were a few things I had hoped to accomplish as president of SDAPT and I believe we did make some strides forward. We gained several new members, kept our current group and brought back some former members. We kept technicians up to date on legislation and current events through presentations, emails, and talking with them during the state pharmacy conventions. I am also proud to have been part of the SD Pharmacy Alliance and represent the technicians at numerous Board of Pharmacy meetings. Participating in state and local meetings these past years has given me the chance to meet and work with so many esteemed pharmacy colleagues. Thank you for the opportunity to learn more about the future of pharmacy. I would be remiss if I did not thank my fellow officers, Phyllis, Sue, Nadine and Judy. Through you I have learned how your job as a technician impacts your pharmacy practice site and gained greater insight. We may not have not always seen eye-to-eye on everything, but know that I truly have taken all your thoughts and words into consideration. And last, but not least, I thank all the members of SDAPT who voted me in as their president and gave me the opportunity to serve them through our organization.

It is with a wistful sigh that prepare to turn over the helm of this ship to Phyllis Sour and the new slate of SDAPT officers at our fall meeting. I am confident that Phyllis will be a great leader and can weather the storms. As for me, I am looking forward to charting a course for the new world of higher education to return to school for my masters degree. I will still be involved in technician issues on a national level as vice-president of AAPT, but my heart will remain anchored in South Dakota.

SDAPT Fall Business meeting and Continuing Education
The annual fall meeting will be Saturday, October 10th, 2009 in Sioux Falls. It is being held at the Avera Education Center in the Orthopedic Institute building located on the Avera McKennan campus. We are starting earlier this year in order to provide 5 hours of CE and make it worthwhile for those traveling a distance. Please see the attached agenda for the lineup of speakers & presentations, which will start at 8:30 a.m. SDAPT is pleased to announce we will be having a technician speaker from the 2008 ASHP Midyear meeting, Barbara Hintzen, Inpatient Pharmacy Operations and Purchasing Manager at University of Minnesota Medical Center-Fairview. Her presentation, entitled "Pharmacy Technician Roles in Process Improvement: Challenges and Opportunities", details how she implemented changes to save the pharmacy department thousands of dollars.
Please see the registration form in this issue of the journal or on our website and make plans to join us!

In closing, I would like to challenge Phyllis and the current members to bring at least two new technicians with you to a meeting this next year. If you have questions on becoming a member, please feel free to contact me or any of the officers of SDAPT through our website, www.sdapt.org or our link on the SDPhA website.

Best wishes for a great future!
Ann Oberg

"Ann, Phyllis, Sue, Nadine and Judy"
Ann Oberg, President (akoberg@sio.midco.net)
Phyllis Sour, President-Elect (pep12009@rap.midco.net)
Sue De Jong, Secretary (sdejong99@hotmail.com)
Nadine Peters, Treasurer (nadine@pie.midco.net)
Judy Rennich, Past-president (jrennich@itctel.com)

South Dakota Association of Pharmacy Technicians (SDAPT)
Membership Renewal
September 1, 2008--August 31, 2009

NAME_____

FULL ADDRESS_____

HOME PHONE_____**EMAIL ADDRESS**_____

EMPLOYER_____

EMPLOYERS ADDRESS_____

WORK PHONE_____**WORK FAX**_____

CPhT (Yes or No)_____ **CERTIFICATION NUMBER**_____

PHARMACY TECHNICIAN____**Other** _____

PAST MEMBER OF SDAPT: YES____**NO**_____**NEW MEMBER**_____

Please list any other state or national pharmacy organizations you belong to

_____

_____

Are you willing to serve on a committee?_____

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Do you prefer on site CE?_____ **Home study?**_____
Please list any continuing education topics you would be interested in.

_____

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*****ATTENTION!! This form is for membership in the South Dakota Association of Pharmacy Technicians (SDAPT) only and should not be confused with technician registration that is required by the South Dakota Board or Pharmacy. Any fees submitted are non refundable.**

Mail-Order Pharmacists Finds satisfaction in Helping People

The Question and Answer feature helps readers learn more about people in the medical community. This Q&A profiles ***Lisa Rave****, the pharmacist-in-charge and clinical pharmacy manager with Cigna Tel-Drug Home Delivery Pharmacy.*

Q: *What are your role and responsibilities?*

A: "I am the pharmacist-in-charge and clinical pharmacy manager for Cigna Tel-Drug Home Delivery Pharmacy's South Dakota operations. I am responsible for ensuring compliance with all federal and state pharmacy laws, overseeing the staff pharmacists and the inventory and dispensing of prescription medications, and am a resource for both pharmacist and non-pharmacist supervisors on pharmacy-related issues. In addition, I am responsible for ensuring that work flow is managed both effectively and efficiently."

medical Q&A

ONLINE

For more about Lisa Rave, go to **www.siouxfallsbusinessjournal.com**

Q: *How did you become interested in your field?*

A: "My younger sister had health problems as a child, so we spent a lot of time at the pharmacy. I always found it very interesting. I also loved math and chemistry and wanted to incorporate them into my career, so pharmacy seemed to be the right fit."

Q: *How many years have you been in your profession?*

A: "I have been employed in pharmacy for over 21 years. I started in college where I was fortunate enough to work as a pharmacy technician for over two years. I worked 14 years in a retail pharmacy as a staff pharmacist and pharmacy manager, joining Cigna Tel-Drug Home Delivery Pharmacy five years ago, becoming pharmacist-in-charge and a clinical pharmacy manager in 2007."

Q: *What do you enjoy most about your work?*

A: "My job provides a sense of accomplishment. At the end of the day, I know I have helped people get healthier or better manage their chronic conditions. The filling of prescriptions, counseling of the individuals we serve on how to take their medications properly, navigating insurance benefits, or determining the root cause of an issue and solving the problems such as side effects or cost barriers all have an impact on the quality of peoples' lives."

Randy Hascall | Sioux Falls Business Journal

Lisa Rave of Cigna Tel-Drug Home Delivery Pharmacy graduated with a bachelor's degree in pharmacy from South Dakota State University in 1990 and with an MBA from the University of Sioux Falls in 2008.

Q: *What type of changes or advancements are occurring in your field?*

A: "Much of the growth being experienced in pharmacy today is focused on specialty medications, which are biotech and injectable medications that are typically high cost and treat complex and chronic medical conditions. The drugs may be administered at home or require administration in a physician's office. Many require special distribution and handling, such as refrigeration, and have serious side effects, which may require monitoring through laboratory testing. They also require more comprehensive education for the individual who has to take them and for their health-care professionals. As a result of the growth in these drugs, pharmacies have to ensure their pharmacists are well-educated and regularly updated in the use of these drugs, the disease states being treated, any necessary monitoring, patient education needs, and billing."

Q: *What are South Dakota's needs in your field?*

A: "As in many other areas of health care, ensuring that the citizens of South Dakota have access to pharmacies and pharmacists will be a challenge in the coming years. The aging baby boomers will mean an added demand for pharmacy services at the same time that many pharmacists will be retiring and leaving the profession. Keeping and/or attracting pharmacists and encouraging newly graduating pharmacists to come to South Dakota will be vital. In addition, the rural nature of the state provides its own challenges. Pharmacists that are willing to practice in smaller cities and towns, utilization of new technologies to engage in telepharmacy and leveraging home-delivery pharmacy capabilities will be necessary to provide convenient access to all South Dakotans."

– Randy Hascall, Business Journal

******Courtesy of the Sioux Falls Business Journal*

AND THE LAW

By Done R McGuire Jr., R.PH., J.D

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.

Joint and Several Liability....

Previous articles in this series have dealt with the elements of negligence and the concept of comparative fault. This edition will deal with another closely-related concept, Joint and Several Liability. Joint and Several Liability may apply only when there are multiple defendants in a case. We have seen this in our cases when a pharmacy is a co-defendant with a physician and/or a hospital.

The concept of Joint and Several Liability allows a plaintiff to sue some or all of the defendants together, or to sue each one separately. If the plaintiff wins their case, the plaintiff may collect equal or unequal amounts from each defendant. While the plaintiff has a choice from whom to collect their judgment, the plaintiff cannot collect more than the total amount of the judgment.

The reason for Joint and Several Liability is to increase the chances that an injured person can collect the money they are due. It allows the plaintiff to collect from the more solvent or better insured defendant. For example, a pharmacy and a physician are co-defendants in a case. The jury renders a verdict for $100,000 and assigns 75% of the fault to the physician and 25% to the pharmacy. But if the physician is bankrupt and/or not insured, the plaintiff could then attempt to collect the entire $100,000 from the pharmacy. While this may be seen as unfair from the pharmacy's point of view, the system is set up to maximize the chances for the injured person to be compensated.

Joint and Several Liability is governed by state law and as you might expect, there is a lot of variation in how the concept is applied in each state. Generally, the majority of states do not apply the concept, but then create 2 exceptions where Joint and Several Liability does apply. The exceptions that most states allow are when the defendants act in concert (as in a conspiracy) or when 1 person acts as the agent or servant of another.

There are a number of singular exceptions where it also applies. In Illinois, general negligence cases are not Joint and Several, but medical malpractice cases are (medical malpractice usually includes cases against pharmacies). However, in West Virginia, medical malpractice is specifically not Joint and Several. Michigan medical malpractice cases allow Joint and Several Liability if the plaintiff is found to be without fault.

Other states apply Joint and Several Liability depending on the percentages of fault attributed to the parties under Comparative Fault. For example, in Iowa, Joint and Several Liability doesn't apply if a defendant is 50% or less at fault. Minnesota does apply it if a defendant is more than 50% at fault. In Missouri, it is applied if a defendant is more than 51% at fault. New Jersey raises the ante and applies Joint and Several Liability if a defendant is 60% or more at fault.

Nebraska takes a rather unique approach. It applies Joint and Several Liability to economic damages (e.g., medical expenses, lost wages, etc.), but not for non-economic damages (e.g., pain and suffering). Two other states have a different approach. Joint and Several Liability generally doesn't apply in Connecticut and Oregon, unless amounts of the judgment are uncollectible. The uncollectible amount is reallocated amongst the remaining defendants based on their percentage of fault. However, this reallocation won't occur in Oregon to a defendant who is 25% or less at fault or whose fault is equal to or less than the fault attributed to the plaintiff.

As you can see, Joint and Several Liability is intricately involved with the concepts of negligence and comparative fault. In many cases, its application is dependent on comparative fault. This basic concept can take many forms and applications depending on the law of the jurisdiction where the case is heard. It is just one factor to consider in defending and/or settling negligence claims. Failure to consider Joint and Several Liability early could lead to a significant financial impact once the judgment is entered.

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

FINANCIAL FORUM

This series, Financial Forum, is presented by Pro Advantage Services, Inc., a subsidiary of 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.

Inflation-Still A Danger for Retirement Investors

The first steps in planning for the retirement years are to survey your current financial situation and define your goals. Be sure to consider your wishes for:

- Growth of capital
- Income
- Tax savings
- Safety

Inflation: still a danger

Many people say, "My goal is not to lose my money." But even this goal can be misleading. If your assets are earning two percent in a very "safe" place while the inflation rate is three percent, your purchasing power is being eroded at about one percent per year. To add insult to injury, you have to pay tax on the earnings -- so your purchasing power is actually being eroded faster. Over the years, an expenditure like replacing a roof or going on a trip becomes a major financial undertaking.

In recent years, inflation has not been the obvious menace that it was in the late 1970s and early 1980s. According to the Bureau of Labor Statistics, the average rate of inflation from 1985 to 2005 was 3.0%. This "low-grade" inflation can lull investors into dismissing inflation as unimportant.

But at that rate, for every $10,000 of income you need today, you'd need $13,400 ten years from now and $18,000 twenty years from now. As prices continue to rise each year, your purchasing power is being eroded. And this doesn't take into account the damage that can be done by "bracket creep" -- finding yourself in a higher tax bracket because of the rising number of dollars you take in, despite their lower value.

To offset the effects of inflation on your portfolio, you must ensure that the total return (growth plus income) of your investments meets or beats the rate of inflation -- adjusted for any movement to a higher tax bracket. Your financial advisor can help you establish your investment goals and design a portfolio to balance all your investment needs.

Provided by courtesy of Pat Reding, CFP of Pro Advantage Services Inc., in Algona, Iowa. For more information, please call Pat Reding at 1-800-288-6669.

The Burden of Diabetes in South Dakota—Common, Costly, and Controllable

- In South Dakota, diabetes is the seventh leading cause of death by disease
- Depression, anxiety, and other psychological disorders are more prevalent among persons with diabetes
- People with diabetes are more likely to die at an earlier age than those without diabetes
- More than 65% of people with diabetes die from heart disease
- The per capita annual cost of diabetes related health care is $11,744 a year, and 57% of that cost is related to diabetes

From The Burden of Diabetes in South Dakota produced by the South Dakota Department of Health Diabetes Prevention & Control Program (DPCP). The full burden report , along with the Recommendations for Management of Diabetes in South Dakota guidelines and the South Dakota Diabetes State Plan 2007-2009 are available at http://diabetes.sd.gov or from the DPCP at (605) 773-7046 or colette.hesla@state.sd.us. These publications were developed as part of a statewide initiative to improve the health care of people at risk for and with diabetes.

Personalized Medicine: Pharmacogenetics as a Method for Improving Patient Outcomes

Jon E. Sprague, R.Ph., Ph.D.[*], Donald L. Sullivan, R.Ph., Ph.D.[‡], and Michael D. Kane, Ph.D.[§]

Goal. This program is intended to review the fundamentals of pharmacogenetics and genetic testing as a means to improve patient outcomes.

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

1. compare and contrast pharmacogenetics and pharmacogenomics;
2. demonstrate an understanding of basic DNA terminology and genomic variations;
3. explain "personalized medicine" from the standpoint of drug metabolism, bioactivation, and pharmacologic target screening;
4. describe the limitations to implementing pharmacogenetic screening in health care; and
5. apply knowledge of pharmacogenetics to the initiation of warfarin therapy.

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Introduction

To many pharmacists, it seems like only yesterday that monoclonal antibodies, used to treat various cancers and arthritis, were the new wonder drugs. Advances in drug therapy are changing so rapidly that most health care professionals can hardly keep up. For years, health care professionals have known that different groups of patients can react differently to the same medication. The elderly, children, and even some ethnic groups need dosage adjustments to prevent toxic drug levels or adverse effects. Now, we are beginning to realize that each and every individual may need very specific dosage adjustments based on his/her own genetic make up and DNA. This is the emerging science of *pharmacogenetics* (or *pharmacogenomics*) and pharmacists will play a major role.

Leading the rationale for deploying pharmacogenetics in pharmacy is the finding that 30 to 50 percent of patient variance in warfarin dosing can be attributed to genetic variations in the genes that encode its pharmacological target (VKORC) and its principal route of metabolism (CYP2C9 or P450-2C9)[1]. In simple terms, pharmacogenetics involves the screening of patients to identify those who harbor slight changes in their gene sequences that predispose them to adverse drug reactions (ADRs). For example, if a patient harbors a simple change in a specific gene sequence that results in a decreased ability to metabolize a drug, its clearance rate from the body will be decreased (compared to normal patients), and there will be an increased risk of inadvertent overdosing if the normal dose of that drug is administered.

The most exciting part of pharmacogenetics is the role the community pharmacist can play in its adaptation and use. After all, it is well known that the community pharmacist has the greatest amount of individual patient contact in the health care system. Dr. Alan Guttmacher, MD, member of the government's Advisory Committee on Genetics, Health, and Society, states that genetic testing for clinical interventions may be applicable to 2 percent of the population now, but that may grow to 60 percent in the future. The primary goal of this program is to introduce pharmacists to pharmacogenetics and the role it will play in patient care in community pharmacies.

The Institute of Medicine estimates that 7,000 deaths occur annually due to ADRs. Other studies have suggested that, in the hospital setting, 6.7 percent or over two million hospitalized patients experience ADRs with over 100,000 of those patients succumbing to these ADRs. ADRs are, therefore, the 4th leading cause of death in the United States and are one of the leading, preventable public health issues today.

ADRs associated with the

Table 1
Pharmacogenetic vs. Pharmacogenomic

	Pharmacogenetic	Pharmacogenomic
Principle Characteristic	Inherited variation in drug effect	Use of genomic technology to identify new drug targets
Target Population	Individual patient/small groups	Large populations
Target Genes	Single or small number of genes	Complex pathways or whole genome
Example	CYP2C9	New drug development for depression
Generalized Goal	Drug Safety	Enhanced Efficacy

therapeutic treatment of disease in many cases are coupled with elevations in plasma drug concentrations. Drug-drug interactions commonly screen for potential CYP drug interactions that can result in elevations in drug levels. However, pharmacogenetic alterations in drug metabolism enzymes can also directly influence drug concentrations in the blood. For example, CYP2D6 and CYP2C9 mutations have been associated with elevations in concentrations in paroxetine[3] and warfarin[4] levels, respectively. Therefore, increasing the accessibility and utility of genetic screening for CYP polymorphisms (drug metabolism enzymes) will reduce ADRs.

Response to drug therapy varies markedly across therapeutic areas. For example, the estimated response rate to the selective serotonin reuptake inhibitors (SSRIs) used in the treatment of depression is 60 percent[5]. The resistance to the antiplatelet drug clopidogrel has been estimated to be up to 30 percent[6]. Clopidogrel is a prodrug that requires CYP3A4 bioactivation[6], and changes in the gene that regulate CYP3A4 enzyme synthesis will result in clopidogrel not being effective in some patients. Therefore, pharmacogenetic screening can both reduce the rate of ADRs and also enhance overall therapeutic response to drug therapy by identifying patients deficient in prodrug bioactivation processes. Fundamentally, pharmacogenetics is aimed at increasing drug safety and drug efficacy assurance based on genetic screening of patients.

The patient concerns with genotyping in the clinic, which are also applicable to electronic health records (EHR) in general, are privacy and security. The benefits of incorporating genotyping (genetic information) in therapeutics and medicine are questioned when the risk of 'information abuse' is considered. For example, a patient may be unwilling to utilize the benefits of genotyping if they fear that their employer and/or insurance provider can utilize the same information to (accurately or inaccurately) predict the patient's future health status. This dilemma involves both societal and genetic components. At the genetic level, the validity of extrapolative health assessment based solely on genotypic data has not been broadly established and is limited to a few known genetic diseases. Yet, it should be noted that the risk of ADRs based on known genetic anomalies in drug metabolism enzymes has been established and represents a short-term benefit in clinical genotyping.

Pharmacogenetic vs. Pharmacogenomic

Although most pharmacists use the terms *pharmacogenetics* and *pharmacogenomics* interchangeably, the two terms actually have different meaning. Pharmacogenetics is an inherited variation in drug effects based on a single gene interaction with drugs. These single gene interactions can alter drug disposition, safety, tolerability and efficacy.

Pharmacogenomics represents the effect of a drug on gene expression OR the use of genomic technologies to identify new drug targets. In the latter case, identifying a gene that is expressed very highly in a diseased tissue, yet very low expression is seen in the normal state, could be used to identify that gene as a drug target or a biomarker of the disease state. Therefore, finding a single change in a CYP gene would represent a pharmacogenetic and not a pharmacogenomic trait (Table 1). Single gene changes will be referred to as *pharmacogenetic* from this point forward.

Human Genome Overview

Every human cell, with the exception of reproductive cells, contains 23 chromosomes. A *genome* is a patient's complete set of chromosomes. These chromosomes carry the genetic coding for all proteins in every cell. Chromosomes consist of DNA tightly wound around special protein structures called histones. DNA is comprised of a string of four nucleotide bases: adenine, guanine, thymine, cytosine (more commonly referred to as A, G, T and C, respectively). They are linked together in a double helix. A segment of DNA containing all the information needed to encode for one protein is called a gene. For example, the P450 (CYP) enzymes are proteins. Thus, a gene found on a chromosome codes for the synthesis of each specific CYP enzyme.

Single Nucleotide Polymorphisms (SNPs)

Within the nucleus of the cell, DNA is transcribed into messenger RNA (mRNA). In the cytoplasm of the cell, every three nucleotide bases on the mRNA codes for a single amino acid in the resulting protein. Within the ribosome, transfer

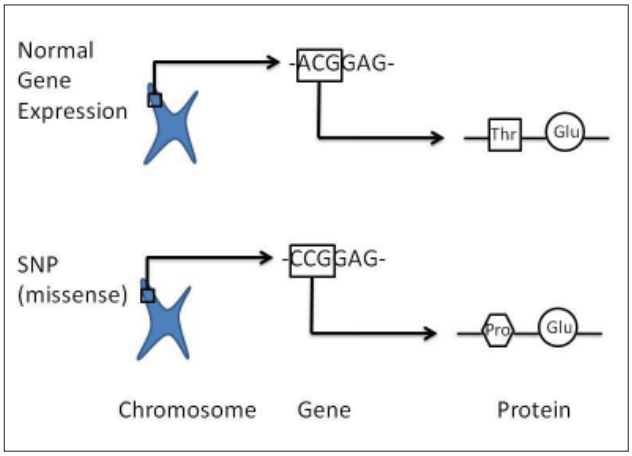

Figure 1. Normally, ACG codes for the amino acid threonine (Thr). With the SNP example above, the ACG code is switched to CCG which codes the amino acid proline (Pro). This change in amino acid results in the synthesis of a non-functional protein.

RNA (tRNA) brings the amino acid coded for by three nucleotide bases on the mRNA (see Figure 1). For example, ACG codes for the amino acid threonine. As the amino acid chain grows, the protein is formed. SNPs occur when there is a single nucleotide base change in the genome, and are of concern when the SNP occurs in the three nucleotide base sequence coding for an amino acid (i.e., codon). Thus, there is a mistake in the "coding" region of the DNA that encodes a specific protein, enzyme or receptor. Coding polymorphisms (mistakes in the DNA) are thus classified based on the effects this single nucleotide base change makes in the amino acid delivered to the ribosome (see below).

It is important to note that SNPs are very common in the human genome, and it is estimated that a SNP can occur about every 1,000 base pairs, which totals well over a possible one million SNPs per individual. Technically speaking, a genetic variation at specific base-pair must occur in at least 1 percent of the population to be termed a SNP[7]. Most of these are benign changes in the genome that have no impact on our health, yet SNPs that occur in genes involved in drug metabolism and drug-target pharmacology are of interest in pharmacogenetics. These otherwise harmless SNPs become a concern since drug dosing represents the introduction of an otherwise foreign compound or chemical to the body.

SNP Classifications.

1. *Non-synonymous (missense)* results in translation of a different amino acid. For example, ACG codes for the amino acid threonine. If a SNP occurs converting the ACG to CCG, the amino acid coded for is proline. Now the final product protein is incorrect and unable to function in a normal fashion.

2. *Synonymous (sense)* results in the translation of the same amino acid. Many amino acids are coded for by several different three nucleotide base sequences. Using the threonine example, if ACG is converted to ACA then threonine is still added during protein synthesis and the overall function of the protein is maintained.

3. *Nonsense* results in the insertion of a stop codon which terminates protein synthesis early. These SNPs are used to characterize genetic differences between individuals. Thus, patients can then be differentiated based on SNPs specific to a protein. For example, a SNP(*) in CYP2C9 may occur on the 2nd gene (or allele). Thus, this specific SNP would be presented as CYP2C9*2. Because humans inherit one copy of a gene from each parent, SNPs may also be represented as CYP2C9*2/*2. The *2/*2 is simply rendering an identity to each of the two potentially variable genes (e.g., gene from mom/gene from dad).

Many other known SNPs are under investigation within disease research groups to identify those that are genetically linked to disease risk, ultimately to identify patients who are genetically predisposed to a specific disease or disorder, thereby allowing more effective diagnostics and prophylactic treatments.

Types of ADRs based on SNPs

There are three types of ADRs that can be associated with SNPs:

1. decreased drug clearance due to decreased metabolism, which results in higher blood levels of the drug;

2. increased drug clearance due to an increase in metabolism, which results in lower blood levels of the drug; and

3. decreased prodrug bioactivation, which results in lower blood levels of active drug in the body.

These are described in Table 2. In this case, prodrug bioactivation is defined as the activation of a prodrug by a P450 enzyme to the pharmacologically-active drug in the patient's body for the drug to be effective. For example, clopidogrel is a prodrug that is bioactivated by CYP3A4. Clopidogrel resistance may result from a patient having a SNP in CYP3A4 (resulting in decreased levels of CYP3A4). Other selected drugs requiring bioactivation before drug initiation, and thus potential targets for SNP screening, are listed in Table 3.

SNP and ADRs associated with Antidepressant Therapy

One potential area of concern with SNP-mediated metabolism is the antidepressants, namely the tricyclic antidepressants (TCAs). TCAs have a narrow therapeutic window and are, therefore, more susceptible to ADRs. Because TCAs are metabolized by CYP2D6, a SNP in 2D6 can result in higher drug concentrations and subsequently toxicity. CYP2D6*4 is the most common variant gene in Caucasians with a population frequency of ~20 percent[8]. Poor metabolizers (PM), those with CYP2D6 polymorphisms, have higher concentrations of antidepressants than their extensive metabolizer (EM) comparison group[9]. Indeed, patients with CYP2D6 polymorphisms have been demonstrated to have an increased risk of ADRs[10] and to not respond

Table 2
Genetic basis for adverse drug reactions (ADRs) in drug metabolism

ADR Type	Effect of SNP on Metabolic Enzyme	Effect on Peak Drug Plasma Concentration	ADR	Remediation of ADR Risk
Decreased Clearance	(1) Decreased enzyme activity (2) Altered enzyme activity	Upon normal dosing, peak plasma concentrations will exceed normal levels due to decreased metabolic capability of the patient	Risk of drug-induced toxicity due to inadvertent overdosing of patient	Decrease the drug dose or choose an alternate drug therapy
Increased Clearance	Increased enzyme activity and/or inducibility	Upon normal dosing, peak plasma concentrations will not reach efficacious levels due to increased metabolic capability of the patient	Risk of under-medicating due to increased drug metabolism	Increase the drug dose or choose an alternate drug therapy
Decreased Bioactivation	(1) Decreased enzyme activity (2) altered enzyme activity	Drug will not be activated. Therefore, efficacious levels will not be reached.	Risk of under-medicating due to the absence of bioactivation of the prodrug	Choose an alternate drug therapy

Table 3
Selected drugs that require cytochrome P450 activation

Parent Drug	Active Metabolite
CYP2D6 Activation	
amitriptyline	nortriptyline
codeine	morphine
morphine	morphine-6-glucuronide
tramadol	o-desmethyltramadol
CYP3A4 Activation	
carbamazepine	carbamazepine-10,11-epoxide
clopidogrel	unidentified
citalopram	desmethylcitalopram
diazepam	desmethyldiazepam
fluoxetine	norfluoxetine
isosorbide dinitrate	isosorbide 5-mononitrate
primidone	phenobarbital
venlafaxine	o-desmethylvenlafaxine
verapamil	norverapamil
zidovudine	zidovudine triphosphate

to TCA therapy[11]. By comparison, SSRIs have a much broader therapeutic window than the TCAs. However, CYP2D6 polymorphisms have been associated with higher plasma drug concentrations[3,12] and potential ADRs[13] with SSRIs. Thus, the narrow therapeutic window associated with TCA therapy makes them a logical candidate for CYP2D6 SNP screening.

Warfarin and CYP2C9 Polymorphisms

In August of 2007, the U.S. Food and Drug Administration (FDA) updated the warfarin prescribing guidelines to include genetic testing[14]. Warfarin is a racemic mixture of the R- and S-warfarin forms of the drug. S-warfarin is approximately three times more potent than R-warfarin[15]. S-warfarin is predominantly metabolized by CYP2C9[4]. In order to induce its anticoagulant effects, warfarin pharmacologically inhibits vitamin K epoxide reductase complex 1 (VKORC)[16]. The FDA guidelines, therefore, recommend CYP2C9 and VKORC screening for patients upon initiation of warfarin therapy. Maintenance therapy should still be guided by the patient's International Normalized Ratio (INR) measurement of prothrombin time in coagulation. These new guidelines are the first steps made to "personalized medicine" through the use of pharmacogenetic data. Table 4 presents an example dosing regimen for warfarin based on specific SNPs in CYP2C9.

SNP Testing Methods and Privacy Concerns

There are numerous methods for genetically screening patients prior to, or coinciding with, the initiation of drug therapy. Under ideal conditions, the results from a genetic screen for a patient are available immediately upon receipt of a prescription, and the pharmacist on-site can utilize this information as part of a decision support process during drug dispensing. Historically speaking, most genetic information has been derived from straight-forward gene sequencing, which involves a basic research laboratory environment (i.e., not a clinical testing environment) and expensive instrumentation. Although the utilization of DNA se-

suggested that the physicians may not have even known the patient was on medications with the potential for drug-drug interactions. Thus, preventing ADRs associated with drug-drug interactions represents an area requiring some focused attention by pharmacists. Expanding the pharmacists' role in the area of drug-gene interaction screening is the next logical step in preventing ADRs.

Many factors have contributed to obstacles that limit the utilization of genomic data to routine use in patient care. Concerns over privacy, security and ethical issues are just a few of the issues that have limited this translation from "bench to bedside." We suggest that targeting known SNPs in P450 metabolizing enzymes will avoid these issues and will place pharmacists at the forefront in the management of genomic data in health care. With the pharmacist as the key player, patients will only be screened for metabolizing enzyme and drug target SNPs, and only these data will be stored. No other genomic anomalies will be screened or collected by the pharmacist.

In the future, patients should be able to enter any hospital or community pharmacy practice setting and obtain a buccal swab sample of DNA that will be immediately screened for clinically-relevant P450 polymorphisms. This information will then be seamlessly integrated into prescription filling systems. During the prescription filling process, the pharmacist will be "alerted" if there is a drug-genomic interaction. The pharmacist will then be provided therapeutic and genomic data that will assist the consultation with the physician to tailor the patient's drug therapy. This future will only happen if pharmacists are willing to embrace pharmacogenetics as an opportunity to prevent ADRs and improve overall health care.

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Continuing Education Quiz

"Personalized Medicine: Pharmacogenetics as a Method for Improving Patient Outcomes"

1. Where do ADRs rank as the leading cause of death in the United States?
   a. 1st b. 2nd c. 3rd d. 4th
2. Pharmacogenetics is defined as:
   a. the effects of a drug on gene expression.
   b. inherited variation in drug effects based on a single gene interaction with drugs.
   c. use of genomic technologies to identify new drug targets.
   d. drugs developed and derived from genes.
3. SNPs result in a synonymous (sense) translation if the single nucleotide mistake in the coding sequence results in the:
   a. amino acid substitution being the same as the normal protein amino acid.
   b. amino acid substitution being different from the normal protein amino acid.
   c. termination of protein synthesis.
4. A SNP in CYP2C9 resulting in decreased enzyme activity may result in:
   a. decreased drug clearance.
   b. increased risk of drug-induced toxicity.
   c. potentially choosing an alternative drug.
   d. all of the above.
5. CYP2D6 has potential for SNP screening with tri-cyclic antidepressants (TCAs) dosing because:
   a. CYP2D6 is the pharmacological target for TCAs.
   b. TCAs are rarely associated with ADRs.
   c. CYP2D6 is rarely associated with genetic polymorphisms.
   d. TCAs have a narrow therapeutic window.
6. In August 2007, FDA updated the warfarin prescribing guidelines to include genetic testing for:
   a. CYP2D6 b. CYP3A4 c. VKORC d. all CYP isoforms

*For questions 7-10, use this mini case. JS is a 70 YOM with a 7-year history of atrial fibrillation. His physician places him on warfarin 5 mg a day for stroke prevention. Genetic testing reveals a CYP2C9*1/*1 SNP which would result in an increased clearance of warfarin.*

7. Because of this SNP, JS would be predicted to have warfarin plasma concentrations that:
   a. are higher than expected for the prescribed dose.
   b. are lower than expected for the prescribed dose.
   c. would be as expected for the prescribed dose.
8. In discussing JS' pharmacogenetic results, the pharmacist should explain that the genetic information obtained:
   a. helps determine a safe and effective warfarin dosage.
   b. will determine a warfarin dosage to cure his atrial fibrillation.
   c. tells all about his susceptibility to disease.
9. Which of the following statements about the risk of ADRs pertain to the initially prescribed dose?
   a. There is risk for drug-induced toxicity due to inadvertent overdosing.
   b. There is risk of under-medicating JS due to increased drug metabolism.
   c. There is risk of under-medicating JS due to the absence of bioactivation of the prodrug.
   d. There is risk for drug-induced toxicity due to enhanced bioactivation of the prodrug.
10. Based on the genetic information obtained, what would be your suggested starting dose (rounded)?
    a. 2 mg b. 4 mg c. 5 mg d. 6 mg

This course expires on: October 1, 2012

Target audience: Pharmacists and Technicians

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To receive 1.5 Contact Hours (0.15 CEUs of continuing education credit, read the attached article and answer the 10 questions by circling the appropriate letter on the answer form below.

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Learning Objectives - Pharmacists: *1. Compare and contrast pharmacogenetics and pharmacogenomics; 2. Demonstrate an understanding of basic DNA terminology and genomic variations; 3. Explain "personalized medicine" from the standpoint of drug metabolism, bioactivation, and pharmacologic target screening; 4. Describe the limitations to implementing pharmacogenetic screening in health care; 5. Apply knowledge of pharmacogenetics to the initiation of warfarin therapy.*

Learning Objectives – *Technicians: 1. Define pharmacogenetics and pharmacogenomics; 2. Define SNPs and identify their origins; 3. Identify the goal of genetic testing for warfarin dosing.*

"Personalized Medicine: Pharmacogenetics as a Method for Improving Patient Outcomes"

(Knowledge-based CPE)

Circle the correct answer below:

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	C	D	9.	A	B	C	D
5.	A	B	C	D	10.	A	B	C	D

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1 Disagree - 7 Agree

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OBITUARIES

Duane E. Tupper

Clear Lake SD

Duane Tupper, age 86, of Brookings, SD formerly of Clear Lake, SD died on Monday, September 28, 2009 in the Brookings Hospital, Brookings, SD. Funeral services were Monady, October 5, 2009 in the United Methodist Church in Clear Lake, SD with Rev. Teri Johson and Rev. Samuel Sunandkumar officiating. Interment was in the Lakeview Cemetery, Clear Lake, SD.

Veranell Swenson

Oct. 31, 1925- Oct. 2, 2009

Veranell "Vernie" Swenson advanced to her heavenly reward Oct. 2, 2009, after a courageous battle with pneumonia at Avera McKennan Hospital in Sioux Falls. She was 83. Vernie was dearly loved by family members, relatives and friends, and was highly regarded by others who knew her. She was active in Lake Preston for decades in the operation of Swenson's Drug Store, which she and her husband Milton owned for 43 years. She served on the community's hospital, manor and library boards. She was active in the Lake Preston Lutheran Church, American Legion Auxiliary and Excelsior Club. She served as Worthy Matron in the Eastern Star and was involved in her children's activities. Her given name was Vera Nell Land. Although she often signed her name as "Veranell", she was widely known as Vernie. Vernie was born Oct. 31, 1925, in Krum, Texas and was raised in Denton and Fort Worth, Texas. She was the 9th of 10 children of Thomas Henry and Elizabeth Ann (Anderson) Land. At age 5, after her father's death, she and four siblings began attending the Masonic Home and School of Texas in Fort Worth. She graduated in 1943. She attended Texas Wesleyan University for a year and completed a secretarial program. She went to work for the Civil Aeronautics Administration at Meachem Field in Fort Worth. In 1945, she met Army airman Milton Swenson, her future husband, at a dance at the Servicemen's Center in Fort Worth. The two were married June 2, 1946, at the Chapel of Peace Lutheran Church in Inglewood, California. The ceremony was held at the home church of Milton's family, who had moved to California from Roslyn, SD. In the fall of 1946, Vernie and Milton moved to Brookings, SD. While her husband studied pharmacy at South Dakota State University and later worked at Kendall Drug, Bernie was employed as the secretary in the Economics, History and Philosophy Department at the college. Their first son Robert (Rob), was born during their time in Brookings. On July 1, 1952, Bernie and Milton bought a drugstore and moved to Lake Preston. Initially the family lived in an apartment in the back of the store. Soon after moving, they welcomed their first daughter, Sandra. As the family expanded, they moved to the first of two homes on Spring Avenue, and welcomed daughter Gail and son Mark. Bernie took great pride in her Texas heritage. She told her children they were half Texan and half Norwegian, and she decorated her home with reminders of the Lone Star State. She also loved South Dakota, except for the winters. Bernie was known for helping friends and acquaintances, for writing kind cards and letters, and for never complaining about any problem she faced. She enjoyed tending flowers, feeding birds, reading, listening to music, playing bridge, working puzzles and being with her family. She also enjoyed sports. She enthusiastically cheered for the Dallas Cowboys, Minnesota Twins, SDSU Jackrabbits and Lake Preston Divers. In her younger years, she bowled with the Rexall Rollers and played softball. She was preceded in death by her parents, Tom and Bettie Ann, and her nine siblings and their spouses: Julian Dillard (Ada Belle) Land; Marjorie (Leslie) Bryant; Curtis Allen (Hazel A.) Land; Mary Land Sugg; Lawrence Booth (Tressie Mae) Land; Minnie Ione (Stanley B.) Frost; Hibbetts Marshall (Annie Louise) Land; Tom (Sylvia) Land; and Fred Aarpm (V. Louise) Land. In addition to her husband of 63 years and their four children Sandra (Grant) Wearne; Mark (Karin) Swenson; Gail Swenson and Rob Swenson; grandchildren Katie Wearne and Kjersten, Sonja and Joel Swenson; and many beloved nieces and nephews. Funeral services were held at 10:30 a.m. Tuesday, October 6, at the Lake Preston Lutheran Church with Pastor Wanda McNeill officiating. Burial was held at the Lake Preston City Cemetery under the direction of the Johnson-Henry Funeral Home. In lieu of flowers, the family suggests that memorials be directed to the Lake Preston Public Library or the Lake Preston Lutheran Church.

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