

# Pharmacy Quarterly

Newsletter of the IHS National Pharmacy Council

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## IHS Pharmacy: Diverse Roles and Progressive Practice

October was American Pharmacists Month. It is dedicated to celebrating and showcasing the valuable contributions pharmacists, pharmacy students, and pharmacy technicians make to public health. "Know Your Medicine. Know Your Pharmacist" was this year's theme.

The Indian Health Service (IHS) pharmacy program has always been progressively clinical. In addition to the traditional roles of preparation and dispensing, IHS pharmacists' clinical knowledge is relied upon and plays an integral role in providing patient care. The counseling technique used by IHS pharmacists perfectly illustrates the theme of "Know your medicine, know your pharmacist." IHS pharmacy is often used as a benchmark for clinical pharmacy in American pharmacy schools.

IHS pharmacy managed clinics monitor complex medication therapies that require close monitoring and dosage adjustments. Many of the IHS sites offer pharmacy run clinics. These clinics reinforce compliance and attempt to maximize the therapeutic effects of complex medication regimes. IHS currently offers anticoagulation, tobacco cessation, cardiovascular risk reduction, renal, HIV compliance, and other clinics that utilize the clinical skills and knowledge of IHS pharmacists.

IHS pharmacists take pride in providing pharmaceutical care to American Indians and Alaskan Natives. They come from various regions with diverse backgrounds and experience to provide care in some of the most rural areas. An IHS pharmacist has an opportunity to be a resident, researcher, mentor, administrator, clinical expert, or primary care provider. The IHS healthcare system encourages every healthcare professional to pursue excellence, which benefits the IHS, and the patients we serve, and promotes officership in the Commissioned Corps. The mentoring provided by the current pharmacists will ensure the continuation of this great IHS pharmacy tradition.

— Jefferson Fredy



# USP CHAPTER <797> STANDARDS: COMPOUNDING STERILE PREPARATIONS (CSP's)

**S**terility of compounded preparations and competency of personnel preparing these items is extremely important to safe patient care. Many of the elements of the new USP <797> Standards are now in effect and need to be addressed. The purpose of this article is to describe the steps to take and resources that can help.

How to get started? There are two broad considerations: 1) assess the structure of your current IV preparation area, and 2) fill out the online ASHP Self-Assessment Tool for Compounding Sterile Preparations (CSP's) (a.k.a. Gap Analysis). This tool can show clearly what your facility is already doing and what needs to be done. After determining what changes are needed, it will be easier to update your policies and procedures. You can find the Gap Analysis and other helpful information at the ASHP website <http://www.ashp.org/SterileCpd/>

The environmental design of the drug preparation area is the most difficult and expensive component of USP 797 to meet. Some sites may opt to use a barrier isolator (glove-box style hood), which can solve many USP issues; however, these units are expensive and may be unwieldy for heavy workloads. If you decide to upgrade your existing IV room, you should already have a plan in place. The deadline completion date for the whole process is January 2008.

The revised structure must consist of a buffer zone (area or room where actual preparation occurs) and an ante area or room that is adjacent to the buffer zone. The two areas can be separate rooms, however in an existing IV room, a line of demarcation on the floor or a plastic barrier may be used to separate them. A simplified diagram is shown at right.

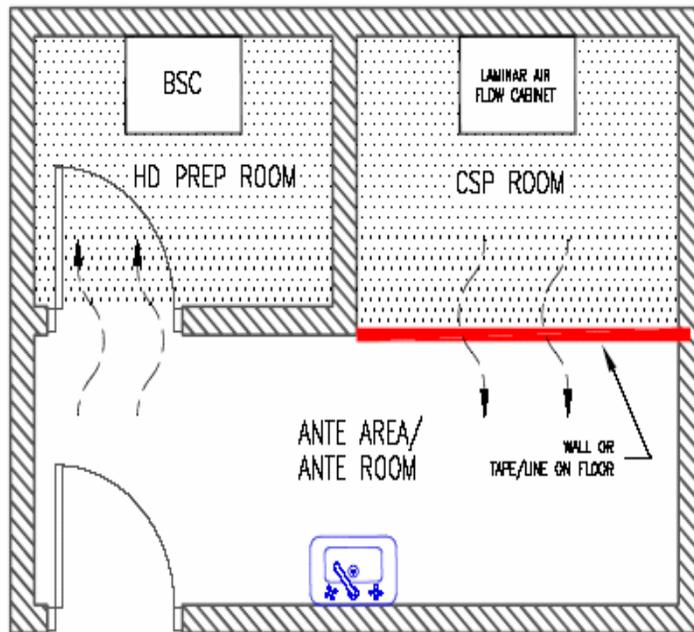
The ante area may contain the sink and protective garments personnel must don prior to entering the prep room(s). The buffer zone contains IV preparation hoods and only those supplies and furniture needed for daily compounding. Work surfaces and shelving must be stainless steel and can be acquired fairly cheaply through companies with Government contracts such as Metro <http://www.metro.com>. Walls, ceilings, and floors must be smooth (no cracks or crevices) and non-shedding. Daily cleaning of the work areas should be set up with your housekeeping department. Your facilities safety and engineering departments will need to be involved to ensure that the buffer zone meets ISO Class 8 requirements, and that air flow direction is appropriate for the type of products being prepared. IV preparation hoods can be tested for contamination monthly (for low/medium -risk levels) with a product such as Enviro-Test from Davis Enterprises (602) 271-4188. Environmental monitoring of the areas and the preparation hoods must be performed every 6 months. This can be arranged with a clean-room specialty company – find one in your area by searching <http://www.nsf.org/Certified/Biosafety-Certifier>

The next step is demonstrating and documenting competency of pharmacy personnel in compounding sterile preparations and hazardous drugs. This includes written and media-fill validation testing and must be done annually for low- and medium-risk levels. Two good references for training and testing are the “Compounding Sterile Preparations” workbook and video training guide and the “ChemoChek” training and certification program for hazardous drugs, both of which are available from ASHP. Media-fill validation testing can be accomplished using a product such as GroMed from Davis Enterprises. Keep a log of tested personnel and file paperwork in individual personnel folders for documentation. Policies and procedures should reflect this practice as well.

USP <797> is only part of a JCAHO survey. But if the tracer method brings a surveyor into your IV preparation area, will you be in compliance? If you have a long-term plan in place, and make changes now to address deficiencies that are easy to fix you will be able to demonstrate progress and be that much closer to meeting these new standards.

— Susan Dunn

**Basic Layout: Compounding Area  
for Low- or Medium-Risk CSP Preparation**



LEGEND		ABBREVIATIONS	
	BUFFER AREA	HD	HAZARDOUS DRUG
	AIR FLOW DIRECTION	BSC	BIOLOGICAL SAFETY CABINET
	SINK	CSP	COMPOUNDING STERILE PREPARATION

# Recreationally Speaking...

## Just Tri It

### What is a triathlon? How would I even begin to train for such an event?

**A** triathlon is a three-sport event, generally composed of swimming, biking, and running. The events are completed in the aforementioned order. An individual does not have to be genetically gifted nor only complete the Hawaii Ironman version to enjoy the sport. Many triathletes became interested in this sport as an activity to avoid over-use injuries. Others may be novice athletes completing a physical fitness goal. A "sprint" distance triathlon typically involves a 500-



800 yard/meter swim, a 12-18 mile bike and a 5-8k run. The Olympic or international distance triathlons have a 1.5k swim, 40k bike and 10k run. Remember 1 kilometer equals 0.6 mile.

If you're still reading, and have some basic equipment to complete each of the triathlon legs, the next step is to set a goal and find an event. Check out [www.active.com](http://www.active.com), search "triathlon" as the event, enter your state (or surrounding states if you're willing to drive), and pick your fun.

Training for a triathlon can either occur individually or as a group for more motivation. As with any exercise program, consult your physician prior to initiation. Many find swimming to be the most difficult with which to become comfortable, but don't get discouraged. Start slow, find a nice rhythm and pace, and increase time spent in the water to about 30 minutes, and you'll be fine. Many city pools have instructional personnel and masters swim programs to assist beginners with technique. Leave the flip turns to the experts and opt for the basic goggles to start. Most sprint distance events take place in a pool, though the number that involves open-water lake swims is increasing. Open-water swims can create some anxiety at first; so initially familiarize yourself with not being able to see the bottom (or your hand in front of your face depending upon the water clarity) at a local lake or pond.

A road bike is ideal for the bicycling portion of a triathlon, but many people complete their first triathlons on a mountain bike with slicks. You can go to a local bike shop and ask for these. Slicks are mountain bike tires without the "knobbies", thus cutting down on resistance and noise. Find a nice, bike-friendly road, preferably with bike lanes, though a wide shoulder will work well, and gradually increase your mileage up to your target ride. Don't forget your helmet!

Running is the most common activity within the triathlon. All you need is a pair of shoes and comfortable clothing. Depending upon fitness level, start with a brisk walk, slow jog, or steady run, and then increase mileage and minutes based upon comfort level. Hydration is key. Take a water bottle with you for walks or runs that exceed 30 minutes, especially in hot and/or humid climates. Be sure to change your running shoes every 6 months to avoid overuse injuries.

Between each leg of the triathlon is the transition. Typically the transition area is one designated location where the equipment, clothing and extra food/water are kept for the subsequent leg.

Find 5k/10k Fun Run events, bike tours, or masters swim programs in your area to keep you on pace to reach your triathlon goal. Once training becomes more comfortable, try adding a brick workout. A brick workout involves combining two training sessions back-to-back. For example, go for a 10 mile bike ride followed immediately by a 2 mile run. This will also help with determining the logistics of your transitions from one leg to another.

The most important thing is to keep it fun and safe, in both races and training.

— Clint Hinman



# Commissioned Corps Notes

## PHARMACY CATEGORY

### TEMPORARY PROMOTIONS 2005.....the bottom line

RANK	I.H.S.			ALL AGENCIES		
	PROMOTED	ELIGIBLE	SUCCESS RATE	PROMOTED	ELIGIBLE	SUCCESS RATE
O-6	5	32	16%	18	73	25%
O-5	8	66	22%	31	78	40%
O-4	30	39	77%	64	82	80%

- Why are I.H.S. success rates lower compared to overall P.H.S. rates?
- What is new for the upcoming promotion year?
- How can I maximize my chances for promotion in 2006 and beyond?

#### Go to the I.H.S. Pharmacy home page

<http://home.pharmacy.ihs.gov> for

- ✓ [Comments on 2005 promotion rates](#)
- ✓ [Suggestions on how to format your CV](#)
- To prepare your Officers' Statement, go to [http://dcp.psc.gov/PDF\\_docs/Officer\\_Statement\\_2006.pdf](http://dcp.psc.gov/PDF_docs/Officer_Statement_2006.pdf)
- To confirm your Readiness Status, go to <http://ccrf.hhs.gov/ccrf>
- Fax numbers for electronic Official Personnel Files submissions:  
(301) 480-1436 or (301) 480-1407

# Management Minute

## **Do your Commissioned Officers have CNACI clearance?**

### **Calls to Active Duty/Transfers delayed if background check not on file.**

A “CNACI” is the “Child Care National Agency Check and Inquiries”. It is a suitability check that most officers coming on active duty receive. It is not a security clearance; it is merely a check to see if the applicant/officer should be put in a position of public trust.

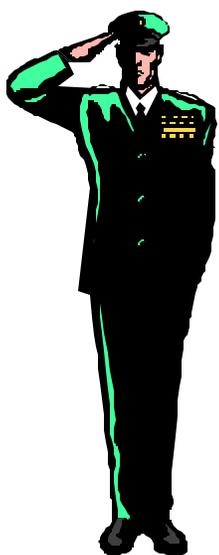
The CNACI was initiated in the late 90s as it was required by law for IHS health professionals working with children. Since then, it has expanded to the point where OCCO initiates CNACIs on all PHS applicants coming on active duty – unless a particular agency requires a more detailed investigation. Some offices in organizations receive something higher than the CNACI. For example, all BOP people receive a Background Investigation.

The Assignments Division at OCCO will not prepare transfer orders unless a CNACI is on file. If a CNACI is not on file, the Assignments Division will forward a CNACI packet to the officer for completion. As soon as the required papers with fingerprint cards are received in OCCO, they can at that time prepare the transfer order. OCCO will subsequently process the CNACI packet. If you have officers considering a transfer, please make sure they have a CNACI on file early in the process. If they are unsure if one is on file, they can call (240) 453-6125, or check the pink section of their OPF.

OCCO will be releasing more information on this topic to include a change in the type of suitability check our folks will be receiving in the future. They are responsible for ensuring that the hundreds of officers already on active duty without a favorable suitability check get one and are busily working this project at the current time.

— Robert Pittman

# IHS Pharmacists Called to Active Duty



RANK	NAME	DATE	POSITION	CITY/STATE
CDR	James W. Mitchell	10/01/2005	CP	Belcourt, ND
LT	Chad P. Snuggerud	9/19/2005	SP	Anchorage, AK
LT	Robert T. Gaines, Jr.	9/17/2005	SP	Anchorage, AK
LT	Steven R. Scott	9/11/2005	P	Tahlequah, OK
LT	Abigail J. Bridger	9/01/2005	P	Tsaile, AZ
LT	Jason F. White	9/01/2005	P	Chinle, AZ
LT	Kip D. Landon	8/21/2005	P	Toppenish, WA
LT	Kara A. Thoma	8/15/2005	P	Anchorage, AK
LCDR	Curtis I. Silvis	8/04/2005	P	Hayward, WI
LT	Kelly J. Battese	8/01/2005	P	Lawrence, KS
LT	Chihwei Chen	8/01/2005	P	Ft. Defiance, AZ
LT	Jodi S. Nakai	8/01/2005	P	Sells, AZ
LT	Michael S. Sanders	8/01/2005	P	Hugo, OK
LT	Jacqueline V. Takacs	7/25/2005	P	Phoenix, AZ
LCDR	Julia A. Jones	7/07/2005	P	Tuba City, AZ
LT	Kevin M. Johnson	7/03/2005	P	Gallup, NM
LT	Kristi L. Johnson	7/02/2005	R	Phoenix, AZ
LT	Ladonna T. Lock	7/02/2005	P	Cass Lake, MN
CAPT	Robert C. Adams	7/01/2005	PC	Portland, OR
LT	Anne M. Bott	7/01/2005	R	Anchorage, AK
LT	Jason D. Carter	7/01/2005	R	Talihina, OK
LT	Christel G. Rogers	7/01/2005	P	Cass Lake, MN
LT	Joseph P. Bryant	6/30/2005	R	Tahlequah, OK
LT	Jennifer Chao	6/30/2005	R	Gallup, NM
LT	Timothy G. Langford	6/30/2005	R	Warm Springs, OR
LT	Jodi N. Sparkman	6/30/2005	R	Claremore, OK
LT	Tana N. Triepke	6/30/2005	P	Ft. Totten, ND
LT	Russell B. Appleby	6/28/2005	R	Cherokee, NC
LT	Clinton K. Gropp	6/28/2005	R	Shiprock, NM
LT	Nekia A. Williams	6/26/2005	R	Santa Fe, NM
LT	Shinta I. Lalonde	6/25/2005	R	Chinle, AZ
LT	Roney Y. Won	6/25/2005	R	Gallup, NM
LT	Jennifer R. Dauer	6/24/2005	R	Whiteriver, AZ
LT	Sara E. Doran	6/23/2005	SP	Anchorage, AK
LT	Ralph C. Edwards	6/22/2005	P	Talihina, OK
LT	Travis J. Freeze	6/22/2005	P	Talihina, OK
LT	Steven W. Hall	6/22/2005	CP	Hugo, OK
LT	Mark S. Miller	6/21/2005	SP	Crow Agency, MT
LCDR	Darin L. Allard	6/20/2005	P	Pablo, MT
LT	Stacey M. Thompson	6/13/2005	P	Gallup, NM
LT	Shelly L. Clayton	6/01/2005	P	Wagner, SD
LT	Julie D. Boese	5/09/2005	P	Clinton, OK
LT	Audrey W. Poolaw	5/02/2005	P	Anadarko, OK
LT	Latoya A. Bonner	5/01/2005	SP	Sells, AZ
LT	Jerry Zee	5/01/2005	P	Omak, WA

CP=Chief Pharmacist; SP=Senior Pharmacist; P=Staff Pharmacist/Pharmacist;  
R=Pharmacy Resident; PC= Pharmacy Consultant

# Clinical Focus

## Concepts of Drug Regimen Review: The Geriatric Patient

America is aging and the need for geriatric-specific drug regimen review is going to become more and more important over the next 10 to 20 years as the baby boomer generation ages. There are 38 million seniors in the U.S. today and by the year 2030, that number will rise to 75 million (1). In fact, between 1900 and 1990, the total U.S. population increased three-fold, while the population of persons 65 years of age or older increased ten-fold (2). Today, 12% of the U.S. population is 65 years of age or older, yet they consume approximately 30% of prescription medications written (3). It is estimated that by 2030, 20% of the U.S. population will be over the age of 65 (4). We generally consider the age of geriatrics to be 65 years of age or older.

Nationally, medical students report inadequate time devoted to geriatrics in their schools. Forty-three percent of students in a 2001 American Association of Medical College's (AAMC) graduation questionnaire, reported that time devoted to instruction in geriatrics was inadequate, up from twenty-five per cent a decade ago (4). It is important that prescribing practices reflect the nature of age-related pharmacokinetic and pharmacodynamic changes to optimize pharmacotherapy and to reduce the risk of medication-related problems.

Today, pharmacists are in a unique position to affect positive patient outcome in the geriatric population by considering age-related changes in physiology and drug concentration:response relationships by way of reviewing drug regimens and appreciating the challenges these patients represent.

Adverse drug reactions are among the top five greatest threats to the health of senior citizens (1). On average, people 65 to 69 years of age take nearly 14 prescription medications per year, and those 80 to 84 years of age take an average of 18 prescription medications per year (1). Not only are seniors at higher risk for adverse drug events but they are also at increased risk of drug:drug and drug:disease interactions by virtue of the increased numbers of medications they take and increased number of chronic illnesses they have. Of 167 high risk (taking 5 or more medications) ambulatory, older patients in a year-long study, 35% had confirmed adverse drug events; ninety-five per cent of which were classified as Type A (predictable) reactions (5). The role of the pharmacist is important to reduce the risk of these medication-related problems and to assure correct medication usage. One critical evaluation of the literature concluded that up to 51% of medications for the elderly were "overused" and up to 90% were "misused." (6) Good drug regimen review, patient interview, and patient education go a long way toward positively affecting the health of these senior citizens.

In reviewing geriatric drug regimens, pharmacists should take special care in considering age-related physiologic changes that can affect the action of drugs and their metabolism and excretion. Geriatric-specific drug regimen review is an opportunity for pharmacists to positively affect optimal pharmacotherapy. By attending to the needs of the geriatric patient through active listening, comprehensive drug regimen review, and appropriate recommendation, pharmacists can really make a difference in identifying potential medication-related problems and increasing the likelihood that therapy goals will be met. [Click here to view the entire article and references.](#)

— John McGilvray

# Hurricane Rita Deployment Report

As Hurricane Rita was nearing the coast of Texas in late September, Public Health Service officers and local volunteers were preparing emergency medical facilities in central Texas. As part of those efforts, I was sent to College Station where the Large Animal Hospital at Texas A&M University had been converted into a medical shelter.

Over the course of the next few days, the hospital and veterinary school would become home to approximately 100 officers and over 200 patients. Most of the patients had been evacuated from the Galveston area in advance of Hurricane Rita. They came from nursing homes, the burn unit at Shriners Hospital, and private residences.

The animals had been removed from the hospital; it had been cleaned from top to bottom, and cots had been moved into the animal stalls. The animal hospital's pharmacy had been retooled for use by human patients. Medications had been sent from FEMA along with medical supplies. We were also able to get a few medications from a local hospital and use some of the stock from the veterinary pharmacy. The pharmacists and technicians at the vet school worked around the clock alongside PHS officers filling prescriptions. Many patients had not carried their medications with them when they evacuated, so we dispensed many chronic medications along with antibiotics and pain relievers.

The pharmacists were eager to help out in any area they could. At various times, they could be found helping nurses in turning patients, doing epidemiology surveys or discharge planning, and even helping to get the patients showered.

Within a few days as counties in the Galveston area were declared safe, patients began to return home. A few pharmacists accompanied patients back to their homes to make sure their needs could be taken care of there. After the last patient left on September 28, we received instructions to move on.

Our next step was to divide our group of officers and set up two medical shelters at VA hospitals in central Texas. While one group went to Waco, Texas, my group worked at the VA hospital in Marlin, Texas. It had been closed for about two years, but one floor was still functioning as an outpatient clinic. After some cleaning, two floors of the hospital were in usable condition.

We spent the first day setting up the pharmacy in a small room off the nurses' station. As patients arrived, we interviewed them to determine what medications they were supposed to be taking and how much of each medication they had left. Many of the patients had evacuated from the Beaumont area earlier in the week and had been moved from shelter to shelter, so they were now running out of the supply they had brought with them. We maintained a medication profile on each patient. For security, we kept their controlled substances in a locked cabinet in the pharmacy. Individual doses were then dispensed to nurses at the patient's request.

New prescriptions were filled at the pharmacy, and then dispensed to patients with appropriate counseling. We worked to get patients their chronic medications through the VA in nearby Temple or using their own Medicaid at local pharmacies. We also provided drug information to providers, many of whom were not accustomed to working with this type of patient population.

A special challenge was getting controlled substances for the residents at our shelter. Since most practitioners at federal facilities do not have an individual DEA number, we were unable to take prescriptions to local pharmacies to be filled. In a stressful time such as this, the lack of access to anti-anxiety medications made for a difficult situation. **Continued on Page 9.**

# Hurricane Rita Deployment Report

Throughout my two weeks in Texas, I was able to meet officers from various agencies across the country and learn what they do on a day-to-day basis. I was also privileged to work with many IHS officers, who proved to be very capable clinicians in a setting quite different from their usual practice.

I am most grateful, however, for the opportunity to participate in medical relief efforts during this time of natural disaster and to personally assist hurricane victims whose lives have been uprooted.

— Nicole Bruxvoort

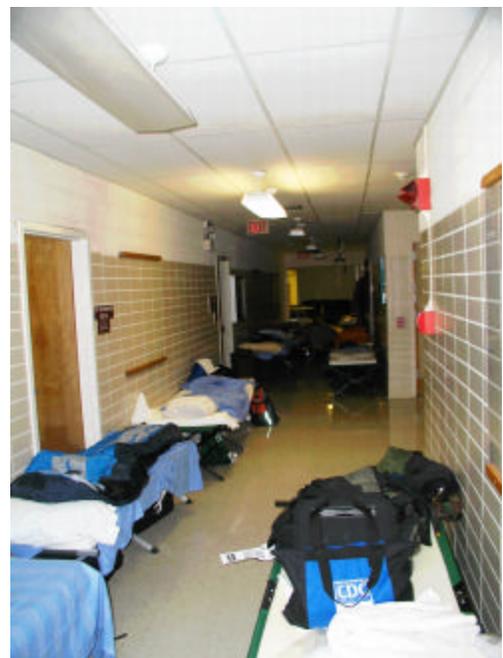


L-R: LCDR Barbara Sanchez (FDA), CDR Roberta Jacobson (IHS), LT Nichole Bruxvoort (IHS), CDR Barbara Finnegan (BOP), LT Michael Kelly (IHS), CDR Traci Gale (IHS), CAPT James Hunter (FDA), CDR Donald Ahrens (IHS), LT Jennifer Essary (IHS), LCDR Jacqueline Thomas (OS), LCDR Derek Teschler (IHS)

CDR Roberta Jacobson (IHS), CAPT Anthony Keller (FDA), LCDR Barbara Sanchez (FDA), CAPT James Hunter (FDA), CDR Stewart Jorgensen (IHS), CDR Don Ahrens (IHS), Ed Stewart (VA), LCDR Derek Teschler



Commissioned officers arriving at Texas A&M Animal Hospital awaiting check-in and directions.



Sleeping arrangements at Texas A&M. This is the hallway of the veterinary teaching school

# NPC Pharmacy Newsletter



## Editor's Note

**Included among the functions of the I.H.S. National Pharmacy Council (NPC) are to serve in an advisory role, to assist in the preparation and advancement of Commissioned Officers, and to address current issues and problems that pertain to I.H.S. pharmacy. In addition to communicating updates from the NPC, this newsletter is intended to serve as a forum to highlight I.H.S. pharmacy personnel.**

**What recent accomplishments of your staff or co-workers—professional, recreational, public service, or other—can you share? What would you like to see in future newsletters? Information on Uniforms? Clinical Reviews? Upcoming Meetings or Training? Photos? Please forward any submissions, questions, comments, photos, or suggestions to [dan.diggins@ihs.gov](mailto:dan.diggins@ihs.gov) or [jefferson.fredy@ihs.gov](mailto:jefferson.fredy@ihs.gov)**

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## IHS MISSION

Provide health care services and consultation that raise the level of health among the Indian People to the highest level possible.

## NPC OBJECTIVE

Provide advice and consultation to the Chief Pharmacist of the Indian Health Service on issues related to the business of developing a pharmacy program that will help meet the mission of Indian Health Service.

## NEWSLETTER EDITOR -IN-CHIEF

Robert Pittman

## NEWSLETTER SENIOR EDITOR

Dan Diggins

## NEWSLETTER DESIGNER

Jefferson Fredy

## CONTRIBUTORS TO THIS EDITION

Jefferson Fredy.....PIMC  
Susan Dunn.....PIMC  
Clint Hinman.....Chinle  
Dan Diggins.....PIMC  
Robert Pittman.....HQ  
John McGilvray.....ANMC  
Nicole Bruxvortt.....Chinle

