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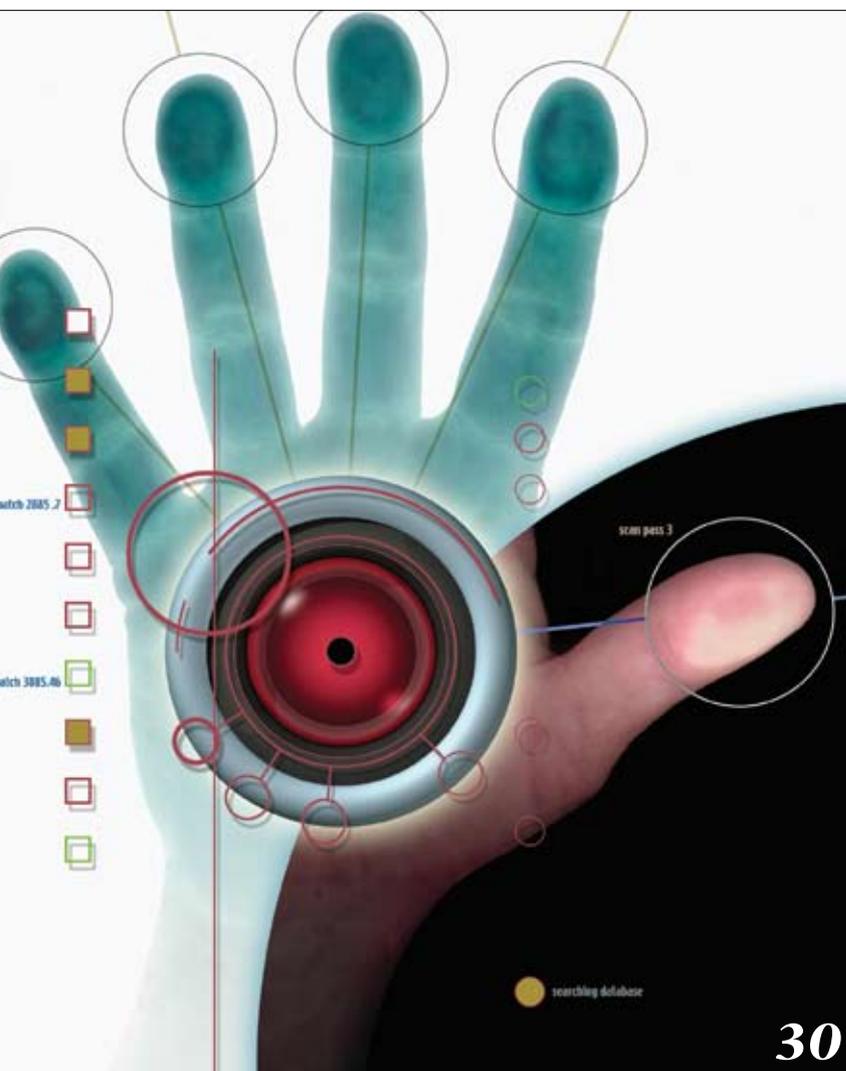
BIOMETRIC READERS •
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Riders of the Storm

GULF COAST PHARMACIES REEL AND REBOUND



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Cover: Storm-tossed debris litters sand-covered Highway 90 in Gulfport, Miss., where Hurricane Katrina Struck Aug. 29, 2005.
Photography by Jim Reed

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Editors note: *America's Pharmacist* has a fresh new look. The design is bolder, brighter, more forward-looking—just like NCPA. There is less white space on the cover and more on the inside. The type size for articles is larger and more modern for quicker and easier reading. We view the design changes as evolutionary and will be tweaking it in the months ahead. The editorial content will continue to provide community pharmacists with the information they need for their practice and profession, but that, too, will evolve. As the face of community pharmacy changes, we encourage you to look to *America's Pharmacist*, “The voice of the community pharmacist,” for guidance on business growth, professional development, and legislative actions.



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NCPA® represents the nation's community pharmacists, including the owners of more than 24,000 pharmacies. The nation's independent pharmacies, independent pharmacy franchises, and independent chains represent a \$92 billion market-place, dispensing nearly half of the nation's retail prescription medicines. Visit the **NCPA Web Site** at www.ncpanet.org.

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Solutions, Not Excuses



THEY MAY NOT SOUND sexy, but standardized messages are extremely important to less stressful pharmacy operations. For that reason, NCPA is continuing collaborations with the Centers for Medicare

& Medicaid Services (CMS), the National Association of Chain Drug Stores (NACDS), AHIP (America's Health Insurance Plans), and the National Council for Prescription Drug Programs (NCPDP) to define common messaging for electronic claims processing. Earlier this year, those efforts resulted in two new Medicare Part D-specific reject codes:

- A5: "Not Covered Under Part D by Law"
- A6: "This medication may be covered under Part B and therefore cannot be covered under the Part D basic benefit for this beneficiary"

In May, CMS required use of those codes by all Part D plans.

We are continuing that work to create standardized reject messages in the following situations:

- Non-formulary medications
- Prior authorization medications
- Plan limits exceeded due to quantity, days supply, time period, patient age, patient gender
- Pharmacy not contracted

That collaboration is just part of our many efforts to find solutions—not excuses—since the enactment of the Medicare Modernization Act three years ago next month. Another prime example is our work with MemberHealth to develop the Community Care Rx (CCRx) Part D plans to bring out the best in community pharmacy.

We aligned reimbursement and copay incentives. We insisted that there be no mail order and allow 90-day prescriptions at retail. We also ensured that Medicare-mandated medication therapy management (MTM) services are delivered through community pharmacies.

The CCRx MTM program identifies a targeted population. Qualified patient cases are "pushed" to their pharmacy for MTM service. And, the CCRx approach uses the new Community MTM (CMTM) service for communications.

That *collaboration* is just part of our many efforts to find *solutions*—not excuses—since the enactment of the Medicare Modernization Act...

CMTM engages pharmacists in patient care services. It is making a real impact for patients, pharmacists, and CCRx. It also has broad applications beyond Part D.

That latter point is often overlooked. CMTM's Web-based, pharmacist-sponsored communications platform is a neutral "industry solution" for a wide variety of other programs such as formulary utilization management; compliance, persistence, and patient education; adverse events tracking; clinical trials/drug alerts; specialty drug services; benefit counseling; and disease management.

These varied services represent an enormous opportunity for community pharmacy to do well by doing good. But let's allay the concerns of some as we talk about a new paradigm for pharmacy and the prescription drug benefit. We have no intention of compromising the pharmacist's duty of ensuring that the right medicine, in the right dose, gets to the right patient, at the right time. Some things never change, nor should they.

Bruce Roberts, PD
NCPA Executive Vice President & CEO



Pharmacy Compounding Protected by Court

A federal judge has reaffirmed and extended his earlier oral ruling that protected the rights of compounding pharmacists. U.S. District Judge Robert Junell issued a written opinion recently holding that state-compliant pharmacists who compound drugs for a valid prescription do not create “new drugs” or “new animal drugs” requiring prior approval from the Food and Drug Administration.

The opinion went further than his ruling from the bench in May. This time he wrote that compliant pharmacies may also compound drugs from legal bulk drug ingredients for pet and companion animals, a position opposed by the FDA.

The ruling Aug. 30 in Midland, Texas, came in a lawsuit filed by 10 compounding pharmacies seeking to block the FDA’s ability to regulate compounded drugs. They were represented by Terry L. Scarborough

and Matthew T. Slimp of the Austin, Texas, law firm of Hance, Scarborough, Wright, Woodward & Weisbart.

“Taken to the FDA’s admitted conclusion, the addition of cherry flavoring to a drug to make it palatable for a child, or mixing a patient-specific I.V. therapy, would have been criminal conduct if the FDA had prevailed,” said Scarborough.



A federal judge reaffirmed an earlier ruling protecting compounding pharmacists.

DEA Shifting Policy on Schedule II Scripts

Reversing course, the Drug Enforcement Administration (DEA) has proposed a rule that would allow physicians to write three prescriptions for up to a 90-day supply of Schedule II controlled substances

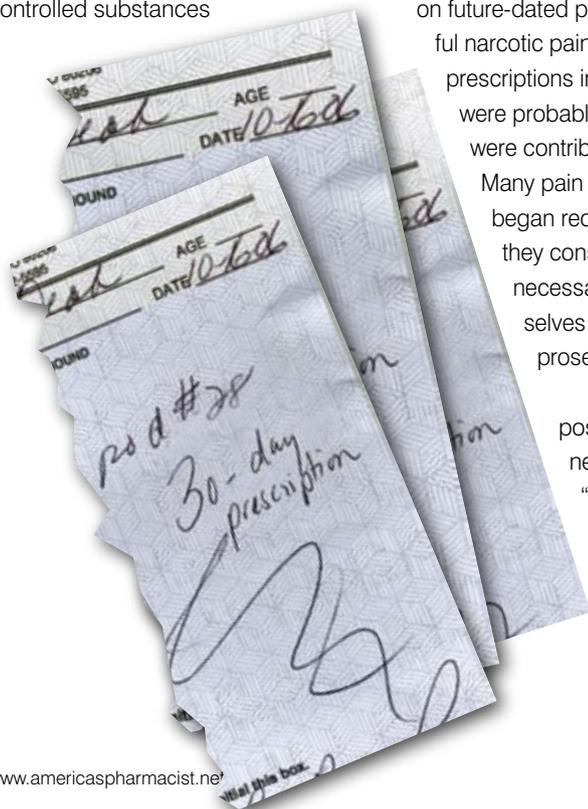
in a single office visit. Two of the 30-day prescriptions would instruct pharmacists on the earliest date they could be filled.

In 2004, the agency clamped down on future-dated prescriptions for powerful narcotic painkillers. It said multiple prescriptions in a single office visit were probably illegal and possibly were contributing to drug abuse. Many pain control specialists began requiring office visits that they considered medically unnecessary to protect themselves from DEA scrutiny or prosecution.

DEA also has posted on its Web site a new policy statement, “Dispensing Controlled

Substances for the Treatment of Pain” and a new page entitled, “Cases Against Doctors,” where, “Everyone will be able to see for themselves the criminal acts committed by those few physicians who are subject to prosecution or administrative action each year.”

“We listened to the comments of more than 600 physicians, pharmacists, nurses, patients, and advocates for pain treatment, and studied their concerns carefully,” said DEA Administrator Karen P. Tandy. “The policy statement,” she continued, “reiterates the DEA’s commitment to striking the proper balance to ensure that people who need pain relief get it, and those who abuse it, don’t.”



Three, 30-day prescriptions for a 90-day supply of Schedule II controlled substances now can be written in a single office visit.

INDEPENDENT PHARMACY TODAY

MULTIPLE-PHARMACY OWNERS MULTIPLY

More than one-third of all independent pharmacy owners either own outright or are partners in two or more pharmacies. Overall, the average independent owns 1.9 pharmacies.

In 2005, there were 24,500 single-store independent pharmacies, independent chains (not issuing publicly traded stock), independent franchises, independent long-term care and home I.V. pharmacies, and independent pharmacist-owned supermarket pharmacies. They dispensed more than four out of every 10 retail prescriptions. Some 56 percent of those prescriptions were for generic drugs.

Source: 2006 NCPA-Pfizer Digest

THE AUDIT ADVISOR

DOCUMENT OVERRIDE CODES

Q: When I use an override code to force an early refill, do I really have to document the override code I use?

A: From time to time nearly all third parties have audited the documentation of override codes for appropriate use in a situation. This is especially true with Medco Health. Medco continues to get tougher and tougher on pharmacies, auditing their use of override codes. Pharmacies are cautioned to follow Medco Health's documentation requirements when using one of these codes to obtain an adjudicated claim. These codes include 03 for Vacation Supply Early Refill, 04 for Lost or Spilled Medication Early Refill, 05 for Dosage or Therapy Change, and 02 for Maximum Daily Dosage Exceeded. For audit purposes, document the reason for any override on the hard copy prescription, and if applicable include any authorization override number given by the third party.

Additionally, double check your pharmacy dispensing software to ascertain how it handles override codes. Several pharmacies have reported software glitches. Some systems apparently hold an override code and continue to transmit the same override on subsequent fills, even though the prescription isn't being refilled early. This is a big audit flag that could cost your pharmacy a lot of money.

By H. Edward Heckman, RPh, PAAS National, the Pharmacy Audit Assistance Service. For more information call toll free to 888-870-7227.

Part D Gets Poor Grades From RPhs

More than half of independent pharmacists (53 percent) have an unfavorable impression of the Medicare Part D benefit and give implementation of the benefit a grade of D or F (56 percent), according to a national survey by the Kaiser Family Foundation.

Additionally, more than one-quarter of the independents surveyed (27 percent) have had to take out a loan or line of credit because of cash flow problems related to Part D. Among independents the survey also found:

- Seventy-three percent dispensed prescriptions before knowing for sure they would be reimbursed.

- Seventy-eight percent received reimbursements from Medicare plans lower than from other plans.
- Sixty-seven percent had to wait longer than usual for reimbursements to arrive.

The Kaiser survey of 222 independents was conducted April 21 through July 27, and it affirms a survey of 507 pharmacists done for NCPA between July 12 and July 30. Nearly nine out of 10 of those pharmacists (89 percent) said that their overall cash flow was worse now than before the Part D program started; thirty-three percent

said they had considered closing their pharmacy as a result.

The NCPA survey also found that nearly six out of 10 (58 percent) pharmacists reported that they had provided an emergency supply (a few days or more) of medication to Part D patients to tide them over until their Medicare prescription problems were straightened out.



E

YE ON PBMS

Every month, *America's Pharmacist* highlights an example of PBM abuse of the nation's independent community pharmacies. These transgressions not only hurt our business and our profession, they negatively affect our patients, their employers, and our local economies. E-mail a recent example of a problem you've had with a PBM to mike.conlan@ncpanet.org, or fax it to 703-683-3619. We may edit it for length and clarity.

BELITTLE, THEN MAKE IT UP

"I had a rejection on generic Darvocet N-100 from a Caremark Part D plan. After dealing with the automated phone system, I was put on hold for several minutes, only to be told that I needed 'a different department within Caremark.'

"After five or so more minutes on hold, I got a help desk representative who explained that it was rejecting for 'negative coverage.' When I asked her what 'negative coverage' meant she said, 'That is like a child asking why.' I asked her what that meant and she said, 'It means what it sounds like.'

"She then went on to give me an 800 number for a PA [prior authorization]. I asked her why I needed a PA for propoxyphene. She said, 'That is a Part D rule straight from the federal government.'

"I told her that was not correct that virtually every part D plan pays for this medicine. She said 'no,' that the MD would have to call Medicare (whatever that means).

"It is infuriating that I have to face a patient in pain and tell them that after 15 minutes on the phone I have no good reason for them why their plan will not pay for their drug. Meanwhile, the help desk worker feels free to make up whatever they want and stand on 'facts' that are outrageously wrong, all the while comparing questions being posed by a health care professional attempting to care for his patient to a 'child asking why.'"

No Proof of Mail Order Savings: Study

Mail order doesn't save payers money, so that must be why the mail order lobby wants to make it mandatory. That's the conclusion one could draw from reading a study by Michael Johnsrud, PhD, associate director of the Center for Pharmacoeconomic Studies, the University of Texas at Austin College of Pharmacy.

Johnsrud noted that mail order is the fastest growing segment of the retail pharmacy marketplace. That growth has been fueled in part in recent years by PBMs and plan sponsors mandating mail order for maintenance medications in the assertion that mail order will save the payers money.

"A review of the literature turns up numerous documents, but we find a lack of rigorously-designed studies that support the conclusion that use of mail order results in significantly lower overall drug benefit costs for plan sponsors," stated Johnsrud. "Studies from peer-reviewed literature generally do not provide evidence to support claims of savings. Most reports assert that mail order saves money rely on qualitative studies and anecdotal information."

The NACDS Foundation contracted with Johnsrud through a grant from Owens-Illinois Prescription Products, Inc. —*Michael F. Conlan*

CCRx Begins Network Recontracting for 2007

MemberHealth is recontracting its Community Care Rx (CCRx) network for 2007. To continue to participate, providers must sign and return the new agreement by Dec. 1, 2006. Existing agreements will expire on Dec. 31, 2006.

The reimbursement rate will remain unchanged. The new agreement includes changes required by the Centers for Medicare & Medicaid Services, specifically mentions that mail order is prohibited, and is an 'evergreen' contract that will automatically renew annually in future years. Once signed, any changes to the

master agreement will be in the form of addenda. Third party contracting entities are being contacted to sign the agreement on existing providers' behalf if they also signed the previous provider agreement.

Pharmacists may call 888-868-5854 x145 or x371 if they have any questions. MemberHealth is a national Medicare Part D sponsor, offering plans in 49 states under the Community Care RxSM brand in 49 states and as Community Pharmacists Care Rx in Oklahoma. —*Michael F. Conlan*



Promoting Independent Pharmacy Across Kansas

By Amanda Hurley

Promoting independent pharmacy's importance is a vital part of the success of our NCPA chapter at the University of Kansas. Our chapter has a great relationship and support from the independent pharmacies across Kansas. They provide constant mentoring and are a resource on what independent pharmacy really means.

In addition, a goal of the KU School of Pharmacy is producing pharmacist graduates for service in the state, and KU takes great pride in providing rural Kansas with needed pharmacists. In Kansas, independents outnumber chain stores 336 to 230, and most of these independents support very small communities. The owners of these pharmacies know that if they do not support our school, finding a pharmacist to take over their store will be difficult; conversely, as students we support the independents by highlighting what they do.

One of the ways we show what independent pharmacists do in their business and their communities is by offering a fundraiser called the "Day of Labor." As a means of qualifying for partial reimbursement of expenses for students wanting to attend the NCPA Annual Convention and Trade Exposition, they can contact participating independent pharmacies in the state and work for them for a day. In turn, the pharmacy donates \$100 to our student chapter. The chapter then provides reimbursement of \$100 back to the student in the form of financial support for attendance at state, regional, and national meetings. In doing so, a student who may have never worked in an independent pharmacy gets to see their operations first hand.

Our chapter takes a number of road trips throughout the year. One trip was to ScriptPro in

Mission, Kansas. ScriptPro is a company that develops, provides, and supports robotics-based management and workflow systems for pharmacies. Many independent pharmacists in Kansas use technology such as ScriptPro to lower their operating costs, reduce dispensing errors, and allow the pharmacist more time to be active in medication therapy management. The ScriptPro tour included demonstrations of how the dispensing units are made, the shipping capabilities, and the advantages of increased accuracy and workflow while using advanced technology in robotics. We believe it is important to let students see a first-hand account of how technology can help a pharmacy, especially in the independent setting.

Another trip was a visit to Right Choice Pharmacy in Tonganoxie, Kansas. Fourteen students made the trip during our annual Independent Pharmacy Week. Right Choice Pharmacy is an independent's answer to mail order. While being independently owned by pharmacists, they have established contracts with PBMs to allow their patients the right to still visit their neighborhood pharmacy to receive services through their employer and/or other prescription benefit plans. The pharmacy scans and e-mails the prescription to Right Choice. Right Choice then fills the prescriptions and overnights it back to the pharmacy, where the patient picks it up and still get the appropriate counseling they need. These visits allow students to examine their op-



Five KU-NCPA pharmacy students, (fourth from right, back) Amanda Hurley, Nathan Wiehl, Kelly McKee, Morgan Saylor, and Megan Way, join Kansas pharmacists and Rep. Jerry Moran (R-Kan.) (fourth from left), after an NCPA press conference on Capitol Hill during the NCPA Legislative Conference.

tions and see exactly what kind of practices they like or do not like.

INDEPENDENT PHARMACIST VISITS

The final way we promote independent pharmacy is by inviting independent pharmacists to campus to visit our chapter and talk about their practices or certain niches. We hosted three brownbag lunches where guest pharmacists came to talk to our members.

At the first NCPA sponsored brownbag, we invited Miranda Wilhelm and Audrey Smith to come talk about the community pharmacy residency program. Smith, who was a past NCPA chapter member, told us that after graduation she wanted to go into independent pharmacy, but believed that she had a lot more to learn before she could buy her own pharmacy. She chose to take part in a community pharmacy residency where she could see how certain disease state management programs were implemented, and that community pharmacy could also be clinical. Through her internship, she also gave guest lectures to pharmacy school classes about OTC medications, and also facilitated health screenings throughout the Kansas City metro area. Finally, she told us how this residency has made her a better-rounded pharmacist who can offer the best care to her patients.

Our second brownbag featured Don Hill, RPh, an independent pharmacy owner in Emporia, Kansas. Hill operates two Medicine Shoppe pharmacies, along with a newly opened compounding pharmacy. He also serves as a representative for the 60th district in the Kansas House of Representatives. Hill spoke about the importance of getting involved politically as a pharmacist and how significant it is to stand up for the rights of small business. Hill also explained the importance of NCPA and what it has done for him on a national and local level. He encouraged our chapter to contact our local, state, and national representatives to make them familiar with issues that are facing independent pharmacy, such as Medicare Part D and Medicaid.

Our last brownbag speaker of the year was Amber Dempewolf, a past graduate of the KU School of

Dempewolf told us how important NCPA was to her as a student, and how it *opened her eyes* to independent pharmacy...

Pharmacy and an NCPA member. Dempewolf currently works for Hill at his Medicine Shoppe Pharmacies in Emporia, and manages the pharmacies while he is in session with the Kansas Legislature. As a recent graduate, Dempewolf spoke of the unpaved path she took and why she chose independent pharmacy.

Dempewolf told us how important NCPA was to her as a student, and how it opened her eyes to independent pharmacy. She stated that she had always planned on being a clinical pharmacist in a hospital, but being an NCPA member helped her realize the endless opportunities of health care she could offer her patients in the independent setting. Dempewolf spoke about taking a community pharmacy residency in California her first year out of school and coming back to Kansas and applying what she had learned into the Medicine Shoppe Pharmacy. She also spoke on the salaries, benefits, hours, and overall job satisfaction, which she says are better at her stores than at local chain stores. As students, we consider visits by these pharmacists to be the best source of information on how to operate a successful practice. **AP**

Amanda Hurley is a 2008 PharmD candidate at the University of Kansas.

COMING IN **DECEMBER**

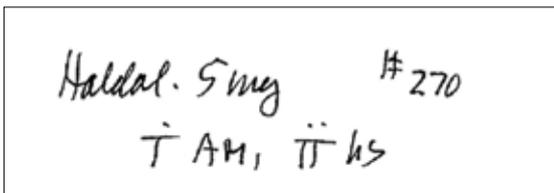
In the December issue of *America's Pharmacist*, we will provide news on student activities from NCPA's 108th Annual Convention and Trade Exposition in Las Vegas.



Avoiding Decimal Errors

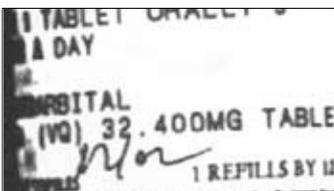
Numbers containing decimal points are a major source of error and when misplaced, can lead to misinterpretation of prescriptions. Decimal points can be easily overlooked, especially on prescriptions that have been faxed, prepared on lined order sheets or prescription pads, or written or typed on carbon and no-carbon-required (NCR) forms. If a decimal point is missed, an overdose may occur. The importance of proper decimal point placement and prominence cannot be overstated.

A decimal point should always be preceded by a whole number and never be left “naked.” Decimal expressions of numbers less than one should always be preceded by a zero (0) to enhance the visibility of the decimal. For example,



without a leading zero, a prescription for “Haldol .5 mg” (see graphic above) was misinterpreted and dispensed as “Haldol 5 mg.”

Additionally, a whole number should never be followed with a decimal point and a zero. These “trailing zeros” (such as “3.0”) are a frequent cause of 10-fold overdoses and should never be used. For example, when prescriptions have been written for “Coumadin 1.0 mg” patients have received 10 mg in error. Similarly, a prescription for “Synthroid 25.0 mcg” could be misread as “Synthroid 250 mcg.”



Dangerous use of decimals can also be problematic if they appear in electronic order entry systems or

on computer generated labels. A newly admitted hospital patient told her physician that she took phenobarbital 400 mg three times daily. Subsequently, the physician wrote an order for the drug in the dose relayed by the patient. A nurse saw the prescription vial and verified that this was the correct dose. However, prior to dispensing, a hospital pharmacist investigated the unusually high dose. When he checked the prescription vial, he found that it was labeled as “PHENO-BARBITAL 32.400MG TABLET” (see graphic).

To avoid misinterpretations due to decimal point placement, health care practitioners should consider the following:

- Always include a leading zero for dosage strengths or concentrations less than one.
- Never follow a whole number with a decimal point and a zero or multiple zeroes (trailing zero).
- Eliminate dangerous decimal dose expressions from pharmacy and prescriber electronic order entry screens, computer-generated labels, and preprinted prescriptions.
- Eliminate the lines on the back copy of NCR forms so that a person can clearly see decimal points or other marks that were made on the top copy.
- Avoid using decimals whenever a satisfactory alternative exists. For example, use 500 mg in place of 0.5 gram, or 125 mcg instead of 0.125 mg.
- Identify drugs with known 10-fold differences in dosage strength (such as Coumadin 1 mg and 10 mg, levothyroxine 25 mcg and 250 mcg) and place reminders in electronic order entry systems to alert practitioners to double check the dosage strength.
- When sending and receiving prescriptions via fax, health care practitioners should keep in mind that decimal points can be easily missed due to “fax noise.” Prescribers should give the original prescription to the patient to take to the pharmacy for verification. Pharmacists should clarify prescriptions that contain fax noise.
- Educate staff about the dangers involved with expressing doses using trailing zeros and naked decimal points. **ap**

This article has been provided by the Institute for Safe Medication Practices (ISMP). Contact them at 215-947-7797.



Riders of the **STORM**

When hurricanes ravaged the Gulf Coast, pharmacy responded

By Michael F. Conlan



August and September were grievous months for the Gulf Coast last year. Two massive hurricanes scourged a crescent from Florida to Texas with near biblical woe, leaving death, destruction, and diaspora in their wake.

Wounds endure unhealed. Losses still overwhelm, more than a year later.

Hurricane Katrina roared ashore in Louisiana and Mississippi on Aug. 29, 2005. Those in its path could see that Katrina was reaping lives, homes, and businesses. But that the disaster was of epic proportions was absorbed slowly by many elsewhere. It took weeks for normal communications to and from the storm zone just to improve

from impossible to unreliable—where they remain in some pockets to this day.

Independent pharmacists have a proud tradition of helping colleagues in need. The NCPA Foundation has long been at the forefront, raising money and donating it to independent pharmacy owners—members and non-members alike—to restore their businesses to their

“One day ripped the soul out of a 300-year-old city.”

communities. Often the cases are geographically isolated—several perhaps knocked out of business by a flood or tornado. But hurricanes are different.

As expected, NCPA members and friends of independent pharmacy responded generously to appeals for help. Some 400 of them contributed more than \$150,000 for relief from Katrina and Rita, another punishing hurricane that lashed the Louisiana-Texas border on Sept. 24, 2005. Rita wreaked new misery as far away as New Orleans with more levee breaches and reflooding.

Giving away money should be easy, but it wasn't in this case. Contemporary notes by Vivian Byrley, special assistant to the foundation, in late September 2005 indicate some of the difficulty. Calling a list of pharmacies in the storms' course, she wrote: phone rings—no answer; recording says line is busy; phone rings—no answer; call cannot be completed due to technical difficulties

She also reported these conversations: “Home fine; pharmacy up & running; have full power now. Give funds to those who need it....” Has good insurance & minimal problems. Would feel guilty taking/seeking funds.... “All OK—some tree damage at home; none to store. Help those who have been devastated....”

Then there was this: “Every store in St. Bernard Parish gone. Six to eight independents wiped out.”

The NCPA Foundation worked through the fall distributing relief funds. An almost foreboding sense that there were still pharmacy owners unreached led to a renewed effort in April 2006. In all, the foundation distributed \$138,000 to the owners of 51 pharmacies: 29 in Louisiana, 17 in Mississippi, and five in Texas.

As the anniversary of the storms neared, the foundation sent Michael F. Conlan, editor of *America's Pharmacist* and an NCPA vice president, to Louisiana and Mississippi. Of the many things learned on that brief visit, comments by two pharmacists stand out. A pharmacist in Mississippi remarked, “When people ask if things are back to normal, it means they just don't have a clue.” And a pharmacist in

New Orleans said, “One day ripped the soul out of a 300-year-old city.”

What follows then is not a comprehensive report on all the affected pharmacies, those damaged, rebuilt, or closed; nor on those overwhelmed by evacuees and emergency workers and all the medications generously given away and the quiet heroics of so many pharmacists, wholesalers, responders, drug companies, and ordinary citizens.

It is not intended to be. Perhaps that still is not possible, or never will be. It is simply a look at where some pharmacy owners were, and where they are.

Carr Drugs

New Orleans

From the neatly cut opening through the roll-down steel gate that once protected the exit door, it looked like the cops were right. The fire department apparently had cut through the gate with a rotary saw to get into the pharmacy on General DeGaulle Drive. They were after prescription drugs for their emergency medical technicians to give to storm victims and rescue workers.



Pharmacies in the storm zone often were targets.

Apart from that, when co-owner Mitch Boyter was able to get there almost two weeks later, little seemed to be wrong from the outside. As he stepped through the doorway and into the gloom, though, a voice said, “Keep your hands where I can see them.”

Like many pharmacists in Louisiana and Mississippi then, Boyter was armed. He had a Sig .40-caliber pistol on his belt, and he saw an assault rifle pointed his way. Quickly he realized that behind the rifle were federal agents, perhaps from the Customs Service, he remembers. The pharmacy Boyter owns with his brother-in-law, Randy Carr, RPh, had been looted and burned and the agents were looking around. Neither the fire department nor anyone else had had the manpower to secure the site after the gate was cut. Five days after the hurricane, criminals walked in and lit the front end's aerosol spray cans, wielding them like blow torches. They set the greeting

card display on fire, and the store was gutted. Water and batteries were left behind untouched.

“We never expected to lose everything in a cinder-block building,” Boyter said. Their two other pharmacies survived both Katrina and its aftermath.

Boyter was asked if the fire department had ever repaid them. “This is New Orleans,” he laughed. “The city is bankrupt.” Did they ever acknowledge what they did? “No,” he replied.

The partners had been planning to close the phar-

HURRICANE KATRINA'S AFFECT ON MY LIFE AS A PHARMACIST

By Dominick A. Sciortino Jr., RPh

On Saturday, Aug. 27, 2005, my three pharmacies experienced their largest daily prescription volume ever. The people who lived in the eastern New Orleans and St. Bernard Parish areas were stocking up on their medications in anticipation of Hurricane Katrina. A mandatory evacuation had been called.

The amazing thing is that our pharmacy staff accomplished this in only four hours. At the close of the business day, 1 p.m., we ran duplicate backups of all store records and actually took the mirror image backup computers in my truck in anticipation of the evacuation of my family from our home in Metairie. We had a total of three separate sets of complete information for the three pharmacies. This was the same procedure that we used when we evacuated in 2004 for Hurricane Ivan. I never imagined the devastation that was about to occur.

My family and I evacuated to St. Francisville, Louisiana, about 100 miles northwest of New Orleans. About a week after the hurricane, I went into the New Orleans and St. Bernard Parish with two Drug Enforcement Administration agents and two federal marshals. I was concerned about the controlled drugs in my pharmacies and wanted to secure them if possible.

No problem. Two of my pharmacies had been completely looted and the third pharmacy in St. Bernard Parish had been under seven feet of water and 1–1/2 feet of oil from a local refinery.

I wanted to board up the pharmacy that was looted. One of the federal marshals shook his head and advised me that there was nothing left to save. His assessment was correct. I was overcome by emotions that day, and I wasn't making

good decisions. I had never seen this type of total devastation.

After two weeks of being away from my pharmacy practice, I realized how much I missed my vocation. I missed my home, my employees, and the customers that we serve. Two of our pharmacies are community pharmacies and the third pharmacy was a closed-door institutional pharmacy. We had renovated all three pharmacies in the last three years and had installed a Script Pro dispensing robot in the one in St. Bernard Parish. Also, we had put all of our inventory on automatic reorder, which gave us a perpetual inventory. This was extremely important when it came time to file our insurance claim. There was no guessing. Our inventory was accurate.

When my family and I returned home in October I was contacted by many of my friends and fellow pharmacists who called to check on us and to encourage us. Also, I was contacted by the National Community Pharmacists Association, which sent me a check for \$3,000, and by my wholesaler, Cardinal Health Care, (whose member stores are called Leader Drug Stores) which sent me a check for \$5,000.

What a brotherhood we pharmacists are. This outpouring of help and fellowship made me miss my chosen vocation even more.

Katrina changed all of us. When we meet we don't ask, “How are you?” Now we ask, “How did you make out?” We seem to have been left with two choices: choose to remain a victim or realize that the Wizard of Oz was not coming to fix the Emerald City.

I decided to open the store with the least amount of damage in New Orleans East. We had 10 inches of water in that store. I needed electricity, water, and a tele-

phone system. I contacted the Louisiana Independent Pharmacists Association, a political action group of which I am a member. Tammy Woods, one of the lobbyists, put me in touch with state Sen. Diana Bajoie to help me get Entergy (the local power company) to come out and bring electricity to my pharmacy. Also, we contacted Public Service Commissioner Lambert Boissiere III, and his staff got Bell South to do its job. There are people who live in this area who still do not have either service.

We completely gutted the building. We installed sheetrock, painted, installed new store fixtures, bought new computers, restocked, and were opened for Dec. 15, 2005. The employees who work at our pharmacy have been very patient with me during this process.

For me, pharmacy has become more rewarding. Filling prescriptions, counseling patients about their prescriptions, listening to the people tell their stories of Katrina and how they are trying to rebuild their homes and community makes me feel humble that they would share this part of their lives with me.

You don't have to wait for a hurricane to blow into your life, like I did, to fully appreciate a joy of fulfillment in your profession. Rather, I believe this “hurricane experience” has given me a chance to put on a “new heart,” a new opportunity to reach out to others with care and concern. If we accept this challenge, we will inevitably act differently, more helpful and sincere in our actions to the people we serve as pharmacists.

Dominick A. Sciortino Jr., RPh, is owner of St. Bernard Drugs, 10200 Chef Menteur Highway, New Orleans, La. 70127, 504-242-1100

macy on DeGaulle and already were building a 60 percent larger store a few blocks away with three times the parking and the first drive through independent pharmacy in New Orleans. It was supposed to open in November, 2005, but delays in getting construction crews back put off the opening until this past March.

“We lost some business,” Carr said. “Apartment complexes are just gone, the people displaced. We lost a lot of Medicaid business. We’re at 70-75 percent of what we were. We are picking up new business with transfers.”

“One of the biggest problems we’re having is help,” Carr continued. “We lost every single technician that worked for us,” and it’s hard to find pharmacists, doctors, and virtually any other profession or craft you can think of because so many people have left the New Orleans area. “It took me three months to arrange to get three days off,” Carr said.

A year after the storm, the partners reflected. “Know your insurance plan and review it ... don’t just think you know it,” said Boyter, who has a degree in finance, and “have a [disaster] plan.” Said Carr: “We’re in business. We have three stores that are functioning. Every month it gets better. July is usually the worst and this July was better than last.”

Majoria Drugs **Terrytown, Louisiana**

Maybe it was just one tornado spawned by Katrina, or three mini-twisters, as some insisted. Whatever happened, it “peeled the roof off like a banana,” said Steve Sandoz, RPh. “Most of our damage was from rain.” And, there was plenty of it—at least eight to 10 inches of rain dropped on the west bank of the Mississippi River across from New Orleans where Sandoz and his two partners, brothers Rhett Majoria, RPh, and Reagan Majoria, own two pharmacies.

“Every drug store nearby except one was looted,” remembers Rhett Majoria. “It felt very lawless, very unsafe. We all had guns. We were all armed.”

In fact, as partners Steve and Rhett tried to salvage what they could from their damaged pharmacy, as they knew they would be likely targets for those seeking opportunity. So for their own protection they taped up signs: “Armed and Inside. Looters Will Be Shot.”

“We went into salvage mode,” Sandoz said. “Our efforts were focused on salvaging records, equipment, and computers.” And although there was no electrical power near their other pharmacy, and there wouldn’t be for several weeks, they had generator power from the very beginning and were able to reopen within 10 days. They brought the server from their Terrytown pharmacy so they could accommodate those patients at that store as they returned to the area.



Trailers were pressed into service as temporary pharmacies.

Meanwhile in Florida, partner Reagan Majoria helped keep customers informed of the status of the pharmacies by updating their company Web site daily and fielding phone calls. By acting quickly, he was also able to arrange for the delivery of a double-wide trailer, where it was placed in the parking lot of the devastated pharmacy.

Rhett and Steve had carpenters and various trades customize it into a working pharmacy, and with the help of hard-working employees had it stocked and opened in less than a month. They went from having 10,000 square feet, including 4,500 feet for OTCs, to 1,300 total in the trailer with little space for non-prescription items.

“Post-Katrina is busier than before because of the influx of people uprooted from other areas,” said Sandoz. “Except for lower Plaquemine’s Parish and a few other areas, much of the West Bank was spared significant flooding and those people didn’t have to relocate.”

They had leased their first floor retail area of the two-story Terry Parkway building since 1991, but they bought the entire building after the storm when the owners decided they did not want to renovate. Construction is continuing and they hope to reopen in February 2006.

Beach Pharmacy **Gulfport, Mississippi**

The beach is still there, but Beach Pharmacy is not. The 3,200-square foot cinderblock building with steel beams supporting its concrete roof was smashed by a 27-foot tidal surge from the Gulf of Mexico just across state high-



Winds and waves punished Beach Pharmacy just across Highway 90 from the Gulf of Mexico.

way 90, shoved forward by 120 mph winds. Walls on the side and back collapsed.

“We’d been having the best year we ever had until Katrina came along,” reflected owner Larry Krohn, RPh. Krohn had worked at that location since 1974—five years after Hurricane Camille had knocked the pharmacy into a trailer for a couple of months. He bought the business in 1991, leasing the building. After a hectic Saturday, August 27, filling prescriptions for people who were evacuating, Larry and pharmacist son Jason, who works at Beach, used Sunday to batten down.

“We had boards to board up the windows,” said Larry. “But we knew this was going to be a bad one. Not only did we do a backup of the computer system...we pulled our computers out and printers, the fax machine. We grabbed a couple of cases of prescription labels, just in case....”

“A few things I didn’t think to haul out were some of my compounding supplies, my scales. I just didn’t think about it. There was no way to get the entire inventory out of the store, obviously.” So, they put insulin in an ice chest, took all of their records, and drove them in the delivery truck to Larry’s home about two miles away.

By late afternoon Monday, Aug. 29, the winds had died down enough for Larry and his daughter to drive and slog their way to where the pharmacy was. “We just weren’t expecting the whole building to be gone,” said Larry.

Not much later he told Jason, “We’ve got to find a

“For 10 days, we didn’t charge,” John said. “We gave everybody a week’s worth of medicine.”

place to go. People need their medications.”

They found it in a medical building, offices with about 2,100 square feet with a challenging layout and no way to fit in a front-end. Still, they were able to open the “off the Beach Pharmacy” about two weeks after Katrina.

“It’s hard to know exactly (how much storm cost him),” Larry said. “I would say somewhere between \$400,000 and \$500,000. We did get about \$340,000 back on the insurance.” He had flood insurance, but not enough, he now realizes, and also insurance for wind and hail. The value of the fixtures had been depreciated, and he hadn’t thought about the cost of replacing them.

A year later, business is off about 10-15 percent. “People are slowly coming back,” said Larry, “but you’ve got some that moved away and are never coming back—older people whose homes were washed away. They’ve gone away to live with the kids and they’re never coming back.”

Larry is optimistic about Beach Pharmacy’s future. “We’re better off than most, which is why you don’t see me belly-aching and complaining,” he said. He’s building a 4,500-square foot pharmacy—away from the beach, but with the familiar name. “Hopefully, we’ll do more business,” he said. “I’m borrowing money. I never thought I’d have to go in debt at 55.”

Burnham Drugs **Moss Point, Mississippi**

Mud was everywhere in the pharmacy, left behind when the storm surge pushed 18 inches of brackish water from the Pascagoula and Moss Point rivers down Main Street. John and Wendy McKinney, the husband and wife pharmacy owners, started filling prescription three days after Katrina hit and the water receded. They hooked up a generator and placed a card table by the back door for people who needed prescriptions refilled. Their computers were up, but the phone lines weren’t so filing claims was out of the question.

“For 10 days, we didn’t charge,” John said.

“We gave everybody a week’s worth of medicine,” Wendy said. Added John: “If you had a bottle and could tell us what you were on and needed it, and it wasn’t a narcotic, it didn’t matter what drug store the bottle came from.”

Wendy remembers a particular conversation with the



Flooding rivers left a muddy mess for days in Burnham Drugs in Moss Point, Miss.

customer of a chain drug store that had not reopened yet.

W: "We'll settle up with you later."

C: "You trust me for that?"

W: "Did you trust me standing here in the mud filling your medicine?"

C: "Yes, mam."

W: "Well, we trust you'll come back and settle up where that poor girl was standing in the mud."

He did, and is now a regular customer.

The Kinneys pretty much lost everything in that pharmacy and another in Escatawpa that had its roof blown off. "I had flood insurance," said John. "It was just a fluke that I bought it several years ago."

It was about three months before anyone could use the front door of their Moss Point pharmacy. The exterior of the building (built in the late 1800s and never before flooded) is still being repaired. About 90 percent of everything inside is new. Business is picking up, and after a year is about where it was before Katrina.

Still, two major bridges on Highway 90, the main tourist route that parallels the Mississippi Gulf Coast just south of Moss Point, remain closed a year later. So do five of the pre-storm casinos that have spurred tourism. The coast's \$2 billion plus hospitality industry is rebuilding, but the hotel inventory, for example, is only 38 percent of its pre-Katrina level, according to the Mississippi Development Authority.

"If someone asks me, 'are things back to normal,' they

don't have a clue," John said. "Maybe in 10 years it will be back to normal," said Wendy. "Maybe there'll be a new normal," added John.

Through it all, they never thought about walking away. The unforgettable experiences of neighbors helping neighbors, strangers sharing ice or a loaf of bread, are vivid. John struggles to explain his feelings. "I'm glad we were able to help," he said.

C & C Drugs

Arabi, Louisiana

When Scott Vallee, RPh, finally closed the pharmacy doors, he and the five other pharmacists, four techs, and 10 clerks had handled 680 prescriptions in about six hours. Usually only a single pharmacist, a tech or two, and a couple of clerks worked the shortened Saturday hours.

"We didn't have time to call any insurance companies to get an override. We just gave it to them," said Jim Valle, RPh, Scott's father, who bought the former gas station in 1976 in St. Bernard Parish, just across the New Orleans line.

They had expected they might get some water damage, but after the levees broke they were prepared for the worst. The roof had blown off and water inside had probably been 17 to 20 feet deep, but by the time they were able to return—more than two weeks later—there was mostly just two inches of mud and some rainwater inside.

"We didn't get looted because there was no way anyone could find anything they were looking for," said Scott. "We couldn't find what we were looking for." They did find, though, \$20,000 in checks from third-party payers; dirty, water-stained checks that they got reissued.

Just two days after the storm, they decided to relocate their pharmacy to Mandeville on the north shore of Lake Ponchartrain across from New Orleans. "We figured we could open up here quicker and serve more people," said Jim from the new C and C Drugs.

"If someone asks me, 'are things back to normal,' **they don't have a clue,**" John said.

"Maybe in 10 years it will be back to normal," said Wendy. "**Maybe there'll be a new normal,**" added John.

“We knew St. Bernard Parish was not probably going to have enough business to support a pharmacy for a long time and infrastructure also,” said Scott. “A lot of our old patients relocated, so we opened here on a smaller scale.”

Instead of the 4,200 square feet and 400 prescriptions a day they used to have, they moved into a new building with 2,500 square feet. They survived on those reissued checks, business interruption insurance, unemployment insurance, and food stamps. The doors opened Dec. 23, and they filled 81 prescriptions. The average now is about 100.

They figure they could have sold their business in Arabi for as much as \$3 million before Katrina. “Our sales were \$6 million and growing every year,” said Jim. “We were starting over in 24 hours.”

Later in the fall of 2005, officials in St. Bernard Parish called and said they were in desperate need of a pharmacy to service a 22,000-square foot medical clinic being run by Catholic nuns. After the storm there was and still is no operating hospital in the parish, once home to 68,000 people and about 125 doctors. This past August, there

DISASTER PREPAREDNESS CHECKLIST

As hurricanes Katrina and Rita demonstrated, the forces of nature are not to be taken lightly. The storms that devastated the Gulf Coast in 2005 only reinforced the message that pharmacies need to be prepared for worst-case scenarios. The following checklist from the NCPA Foundation offers some suggestions to help mitigate the potential consequences of a disaster.

1. **Compile primary phone numbers.**
 - State board of pharmacy
 - Computer company
 - DEA/fire and police departments
 - Insurance agent(s)/landlord
 - Wholesalers and major suppliers
 - Employees
 - Utility companies
2. **List all vendors.**
 - Mail and e-mail addresses
 - Phone and fax numbers including help desk
 - Complete representatives' information, including after hours phone numbers.
 - Phone/electric/cable/DSL/computer
3. **Maintain important documents—copies of current licenses.**
 - State license/DEA license/pharmacist and tech licenses
 - Diplomas
 - Controlled substance inventories
 - State tax license/federal tax license
 - Patent medication license
 - Copies of your corporate charge cards
 - Copies of your bank account numbers
 - Any other license or posted notice that would normally be required to be posted at your business site
 - All of your insurance documents
 - Original drafts/all riders/all changes
4. **Have the ability to store the appropriate quantity of invoices/claim advices/contracts, etc.**
5. **Take pictures of everything.**
 - Counters/bays/aisles/technology/all fixtures/lights/shelving/carpet/windows/displays/basement/office areas
6. **Retake pictures every six months or add pictures when needed—keep a complete and up to date visual history of your business.**
7. **Create a “before video.”**
 - The use of the video and narration of damage reduces the time needed by the insurance adjuster to make a decision on equipment damage
 - Update video p.r.n.
8. **Back-up tapes/CDs/hard drives**
 - Dual/redundant external hard drives—back up each day
9. **Full system backup (Rx and POS)**
 - Business office computers
 - Take home each day and swap out next day
10. **Form a “cooperative agreement” with another pharmacy on an in-case-of emergency basis.**
11. **Scope out potential storage sites.**
12. **Maintain a good rapport with your business neighbors. They will be indispensable in a time of need.**
13. **Consider having an off-site answering service or device.**
14. **Delegate authority when possible to key personnel who will obtain and maintain any store information “tidbits” that can aid your business during a transitional period.**
15. **Prepare a policy analysis and claim strategy.**
16. **Set up a post-loss plan to protect your operations and market, and to notify your customers, banks, and suppliers.**
17. **Pre-prepare a public relations program to inform all stakeholders and the general public of the store’s status and where they can obtain their medications.**
18. **Know the players, including who the insurance company’s representatives are.**
19. **Make the decisions that are best for the survival of your organization.**
20. **Before entering the damage area:**
 - Check with police and fire departments and utility companies
 - Work in pairs
 - Wear protective clothing

ON-SITE PHARMACY PROTECTION TIPS

Randy Gros, RPh, owner of Dekle Drugs in Marrero, Louisiana, offers several suggestions for pharmacists to protect their physical site and contents to help minimize potential losses in the event of a disaster.

- Combat heat to protect the integrity of inventory: Close windows to keep out heat from sunlight. Construct buildings with high attics.
- Have emergency lighting, including battery-powered lights; have an electrician add a generator connection in case of emergency.
- Combat water during flooding by removing inventory from low shelves and place in Pac 'n Totes; pack in alphabetical order

to find medications when dispensing during emergency conditions and when restocking medications on shelves.

- Disconnect electrical equipment (telephones, computers, printers) and place on top of counters.
- Install power surge protectors to combat typical electrical power surges during an emergency.
- Remove perishables from refrigeration units.
- Be sure that you have adequate accessories for a generator. During long-term emergencies you will need fuel (gasoline or diesel) and oil to operate the generator (oil for lubricating generator every 24 hours).



The old and temporary home of C&C Drugs.

were an estimated 10,000-12,000 residents and three or four prescribers.

Jim and Scott leased a double-wide trailer in a special guarded compound in Chalmette next to the clinic after parish officials arranged for water, electricity, sewer, and Internet service, which most of the parish did not and still does not have.

"We need doctors," said Don Serpas, RPh, working in the trailer in the parking lot of an empty Wal-Mart. "Three doctors for 10,000 people just doesn't cut it."

The lease on the trailer is good until next year, when they'll decide whether to rebuild in near-by Arabi. "It depends on how many people come back," explained Jim. You need people to survive." Added Scott: "You can't put \$300,000 into [just] a building."



Randy and wife Nancy Gros at the 2005 NCPA convention.

Dekle Drugs **Marrero, Louisiana**

When Randy Gros stood to applause at NCPA's 2005 convention, he was on the hook for \$500,000 he didn't have. Gros (pronounced "grow") was being honored for his efforts at staving off a government "drug raid" that sought to commandeer his pharmacy. Thanks to a tip, he got to his pharmacy and convinced officials that his retail background was better for running a dispensary from it and a tent outside than taking the medications to a hospital to dispense to emergency workers, military personnel, and the people of Jefferson Parish.

Critical to that effort was getting medications. On Labor Day, a week after Katrina made landfall, Gros called his wholesaler, Morris & Dickson Co., in Shreveport, Louisiana. He explained the need for a credit extension and remembers that Paul M. Dickson, vice president of the firm his family founded in 1841, agreed and told him: "We don't have to talk again until you hit \$500,000."

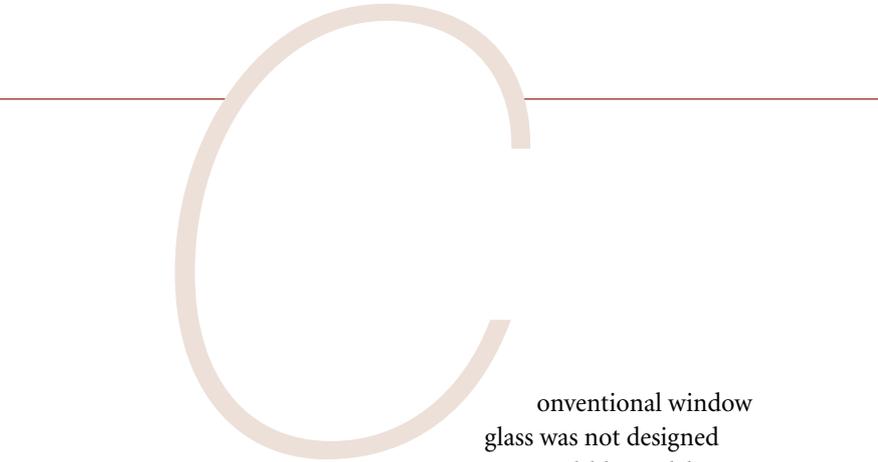
(Just how Morris & Dickson was able to supply Gros and thousands of other customers is reported in *Hurricane Chronicles*, a 48-page book the company published earlier this year.)

On Oct. 19, the day the NCPA convention ended, Gros was reimbursed for the medications he gave away by the Jefferson Parish government. **aP**

SECURITY

Security window film can protect your customers and staff from the lethal dangers of broken window glass

By Marty Watts



Conventional window glass was not designed to resist wind-blown debris, earthquakes, and explosions.

Subject to such stresses, existing glass often breaks into lethal shards to be hurled from the window frame, endangering your customers and staff. Broken glass causes property damage that would not have occurred had the glass remained in its frame.

Security window film can improve the ability of existing glass to mitigate the impact of explosive force and wind-blown debris. The primary function of security film is to hold glass intact in the event of it being broken, preventing glass from becoming lethal flying projectiles. In some cases, the glass may shatter but remain intact.

“The most significant damage in approximately 75 percent of all bombings is the failure of architectural glass,” says Ron Massa, a security consultant quoted in *Buildings* magazine.

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The 1998 bombings at the embassies in Kenya and Tanzania injured more than 5,000, many due to broken glass. The 1996 terrorist bombing of Khobar Towers at the U.S. Air Force base in Saudi Arabia resulted in more than 330 injuries, with 80-90 percent caused by broken glass.

Obviously, the destruction of the World Trade Center was of such magnitude that no window system would have been able to survive. However, the broken glass in adjacent buildings may not have occurred had those windows been equipped with security window film.

According to an article in *Public Works*, "...after building collapse, the most significant threat to people and property in bombings arises from the failure of conventional glass."

Glass Damage From Natural Disasters

Broken glass also occurs from natural disasters such as earthquakes and hurricanes. Wind storms and tornadoes produce intense winds which cause damage and injuries from flying glass. Earthquakes twist or flex the glass. The intensity of the earthquake will determine whether the glass breaks. In earthquakes of significant magnitude, thousands of panes of glass can be broken.

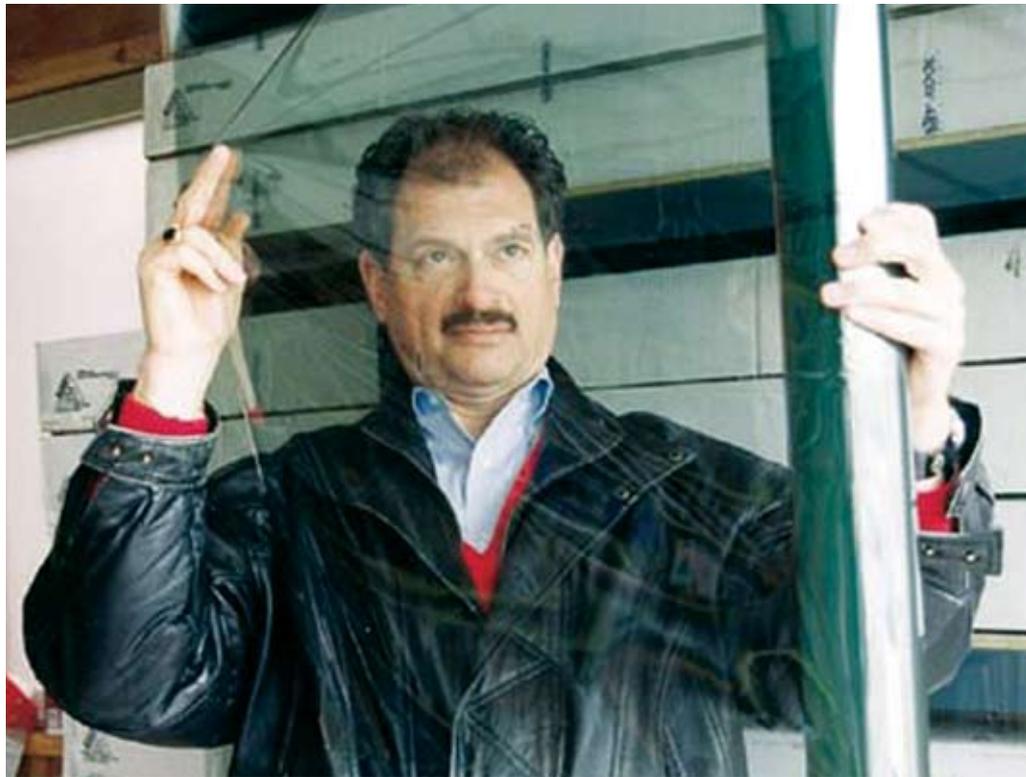
The insurance industry has adopted a grim new phrase—mega catastrophe—one in which insured losses exceed \$1 billion. Before 1990 there were no mega catastrophes. Since then, there have been seven. Of the 25 largest insured catastrophes in the United States, more than 21 have occurred in the last decade. Global warming indicates volatile weather

may cause more large scale property damage and glass-related fatalities and injuries.

Broken Glass, Injuries, and Death

Most injury from glass is caused by walking into a pane of glass. When broken, glass falls, causing injuries to the knee and upper leg. The next most likely area of injury is to the head, neck, and shoulder. If not fatal, these injuries can lead to severe damage to tendons and loss of limb or limb function.

A wind storm can project an object through a window, causing dagger-like glass shards to strike occupants.



▲ Because it can stretch without tearing, security window film can absorb much of the shock wave of an explosion.

PHOTOGRAPHY: VIKOOL, INC.

An explosion of a bomb creates a shock wave that causes glass to break into lethal projectiles. If the explosion is sufficient glass may become atomized. In an explosive shock wave, victims may breathe in atomized glass particles, often causing death.

Glass penetrating the body assumes the color of the bodily organ. Because glass particles cannot be detected by X-rays, emergency room physicians have difficulty finding glass inside the body.

How to Make Window Glass Safer

Windows transmit light and allow building occupants to see outside. In retail facilities, windows facilitate being seen from the outside. On a building's south exposure, windows generate passive solar energy.

Typical window performance problems include unacceptable air infiltration, poor insulating capability, inability to block solar heat, the transmission of ultraviolet radiation and noise, and vulnerability to electronic eavesdropping. Security enhancements to glass become more economically feasible if they do not impede, but actually improve energy and other window performance capabilities.

Existing glass can be replaced with laminated glass (two or more pieces of glass bonded by a polyvinyl bu-



Security window film is an alternative to replacing existing glass with laminated glass. It can be applied to the interior surface of existing glass.

tyral plastic interlayer). Compared to conventional glass, laminated glass can provide increased resistance to wind blown debris, seismic, and explosive force.

Security Window Film

Security window film is an alternative to replacing existing glass with laminated glass. Security window film is either optically clear, tinted, or reflective layers of polyester film applied to the interior surface of existing glass. Typical film installations cover the visible portion of the surface of the glass, all the way to the edge of the frame, but do not extend to the glass edge within the frame.

Film can be applied to both single pane and many types of insulating glass. Proper application of appropriate film to insulating glass does not impact the integrity of an insulating glass sealant or generate thermal stress to glass from uneven heat absorption. Applied security window film is available with and without solar control capabilities.

Because security window film has the ability to stretch without tearing, it can absorb a significant degree of the shock wave of an explosion. As this explosive force moves toward the glass and pushes it inwards, the glass eventually crack and breaks. However, the security film applied to the rear of the glass continues to absorb the shock wave stretching until it can no longer bear the pressure, at which time it bursts.

The shock wave, while great enough to break the glass, is not enough to shear the film. The glass is broken but held intact by the film. In these cases, not only are there no injuries, but there is no damage in the building. In other cases, the shock wave breaks the glass and shears the film. The glass collapses attached to the security film with minimal damage and injuries. In multi-story buildings, security film may also prevent glass from falling to the street below.

Security Window Film Versus Laminated Glass

Both laminated glass and security window film may mitigate the impact of explosions, wind-blown debris, and earthquakes. The performance of both depends on the relationship of each to the existing window frames.

In the case of laminated glass, the window frame must support the weight and thickness of the glass for the total glass and window system to resist stress. Installing laminated glass in existing window frames that are not designed to support the weight of laminated glass may not prevent the glass separating from the frames when it is stressed.



The effectiveness of security window film is shown in this sequence of photos taken during a test explosion. The window glass, attached to the security film, shatters but stays largely within the frame, as opposed to flying through the building's interior.

Similarly, the ability of security window film to resist force may increase if the film is not only applied to the glass, but also attached to the frame. Many window film manufacturers market film attachment mechanisms to secure film to the window frame.

Independent tests verify that many security window films provide equivalent, or in some cases, superior ability to withstand stress compared to laminated glass.

Also, laminated glass is not as energy efficient as other glass options, resulting in a trade off between energy and safety/security performance. Its composition and resis-

tance to force impedes the ability to break laminated glass for emergency entrance or egress. Those are factors that need consideration.

Cost Comparisons

The cost of laminated glass installed is approximately \$20 a square foot. The cost of conventional security window film applied to the interior surface of existing glass is approximately \$5 to \$6 a square foot, though the most energy efficient security films cost from \$10 to \$13 a square foot installed. A system to physically attach the film to the window frames would cost approximately \$6 to \$16 a square foot.

The optimum security window film not only provides increased protection from stress, but also may reduce a property's energy consumption by blocking solar heat. The cost of disruptions to business in removing and replacing existing glass compared to applying security window film to existing glass also needs to be taken into account when comparing laminated glass and security film. **aP**

SECURITY FILM CONSIDERATIONS

Consider the following when choosing security film:

Price

The true value of the film is determined by its independently verified performance in terms of mitigating explosive and other forces, life expectancy, and energy efficiency. More expensive films should perform better than less expensive films.

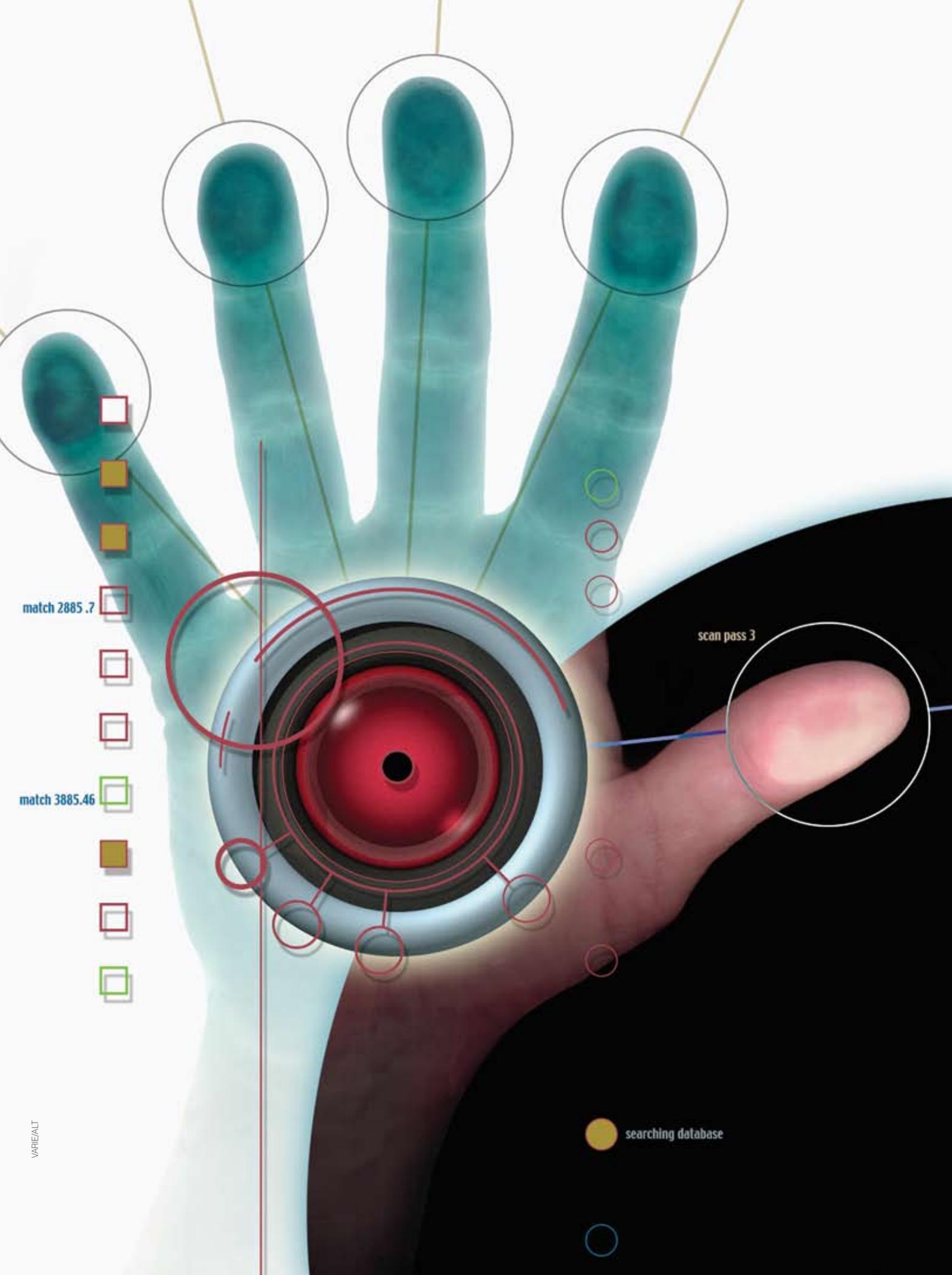
Energy Benefits

Review not only the film's ability to block solar heat, but also its ability to transmit desirable daylight. Most security films that block heat also block significant amounts of light. Look for security film that provides optimum security plus optimum energy performance, which is a dual function of blocking heat and transmitting visible light.

Aesthetic Considerations

The ideal security film provides optimum security and energy performance without changing the appearance of a property. Clear, colorless security film is applicable on all or selective windows of a building.

Marty Watts is president and CEO of V-Kool, Inc., Houston. V-Kool is a sales and marketing distribution company of security and spectrally selective applied films for architectural, automotive, and specialized vehicular applications. For information, contact V-Kool at 800-217-7046, and online at www.v-kool-usa.com.



match 2885.7

match 3885.46

scan pass 3

searching database

BIOMETRIC READERS:

The Next Level in Security

Evolving technology provides greater protection for sensitive online information

By Richard Edmund

A pharmacy's computer security is only as safe as its employees make it. Just the act of keying in a password means that someone else has the potential to see it entered. Or, think back to the passwords you've chosen over the years. Typically, people pick words they can easily associate with their lives. How many times have you used a birth date or names such as a spouse, child, or even a pet? It's easy to remember—and easy for others to figure out. The other problem with passwords is that most people write them on a note close to their computer. In small, often unintentional ways, employees can make it easy to hack their own systems.

The increased availability of online medical information has created a heightened awareness of consumer privacy and a greater demand for security as part of an overall effort to improve patient safety.

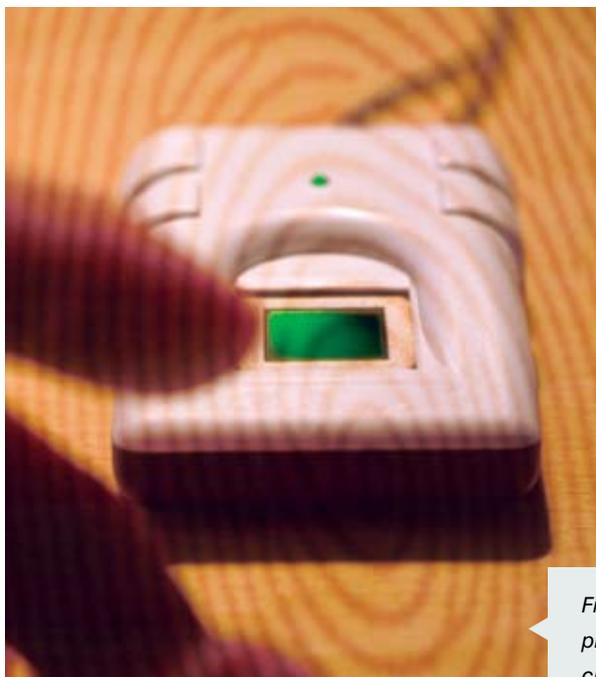
The Health Insurance Portability and Accountability Act (HIPAA) established standards for electronic health care transactions and the security and privacy of per-

Biometrics is based on something you are instead of something you have, such as a password, ID card, or paper.

sonal health information. Biometrics is specifically cited in HIPAA's "Technical Security Services" as one of several means of entity authentication (along with password, pin, telephone callback, and token) from which health care providers must choose to protect health care information.

A Growing Trend

Over the past year, Spartanburg, South Carolina-based QS/1—a leading developer of pharmacy technology—



has closely watched a growing trend toward biometrics in computer security. Biometrics is based on something you are instead of something you have, such as a password, ID card or paper documentation.

What features make-up biometrics? Biometric security can use unique physical attributes, such as a person's face, fingerprints, hand geometry, eyes (iris/retina), or voice pattern as a means to identify or verify identity. Biometric security scanners and readers can be used in combination or with passwords to increase system security.

You might be able to guess a co-worker's password, but it will be hard for someone to mimic his or her voice well enough to fool a computer, or use a fingerprint without that person's knowledge. It's this kind of technology that is going to make gaining access more difficult.

"Using biometrics gives the pharmacy owner one more level of security," says Brian Cannon, director of application development with QS/1.

When you think fingerprints, your mind might draw an image of the criminal suspect being arrested and booked into jail. However, fingerprints are now commonly used to identify the good guys. A fingerprint reader allows an employee to scan his or her fingerprint, and the computer would compare that fingerprint to several samples on file to verify the employee's identity. The biometric system analyzes each scan and becomes more accurate as it is used.

"Most readers are very sensitive," says Cannon. "A large cut on your finger, small burn or even thick hand cream can cause misidentification. That's when having multiple samples can help."

Biometrics Gaining Acceptance

According to the Biometric Consortium, a group that works to research and further the technology (see related box, page 33), biometrics is quickly becoming an accepted standard being used by more companies, and even individuals, to safeguard the data stored on their computers. Fingerprint scanning is expected to be the largest portion of the biometrics market in 2006 (43.6 percent),

Fingerprint scanning likely will be the preferred security method for pharmacies. Readers require little counterspace, allowing pharmacies to have one at each workstation.

followed by face recognition (19 percent), according to a recent report by the International Biometric Group.

Fingerprint scanning likely will become the preferred security method in pharmacy and home medical equipment industries, as fingerprint readers generally are smaller and less costly.

“Fingerprint readers require very little counter space, allowing pharmacies to have one at each workstation if needed,” says Cannon.

Along with providing another means of security, biometrics can streamline some functions and save time. Fingerprint scanning often is faster than keying in a password. With HIPAA regulations, many systems automatically log out access at certain intervals, perhaps every five minutes or so. Biometrics could replace rekeying a complex password throughout the day, saving valuable time in a fast-paced environment (and limiting the number of times someone could oversee another’s secure password).

System administrators also may like it because if

biometrics replaces passwords, they won’t be required to make the mandatory periodical password changes. Most companies, though, will likely require passwords with the use of biometrics.

QS/1 plans to utilize the technology to protect pharmacies and their important data. Biometric authentication soon will be integrated into the graphical user interface (GUI) software applications.

Long-Term Potential Significant

The long-term potential for biometrics in pharmacy is significant.

“In the future, pharmacies will be able to use biometrics to easily customize the roles of its users,” says Cannon.

For example, a pharmacy could use biometrics to allow permission-based use on several stations. Just as keyed log-ins can allow or restrict access on each computer, an employee would only be able to perform tasks for which they are classified based on his or her fingerprint scan.

In the future, biometrics may replace the use of manager keys in systems such as point of sale (POS). Instead of needing a key to void a transaction, a manager’s fingerprint may be required.

Developers expect to implement biometrics technology in pharmacy management settings before the end of the year. A move into POS systems—securing employee access—and home medical equipment management should soon follow.

“Customers will help decide where biometrics goes next,” says Cannon. “They’ll certainly have ideas on how it can help them in other ways and we’ll listen.” **aP**

THE BIOMETRIC CONSORTIUM

Since 1992, a working group known as the Biometric Consortium has been meeting to share information and advice and to serve as the focal point for coordinating and developing advanced biometric processing, testing, and evaluation techniques within the federal government. The consortium is presently comprised of representatives from six executive departments of the federal government and each of the military services.

A goal of the consortium is to develop an independent assessment facility to evaluate and test evolving biometric devices. The National Security Agency (NSA) initiated the formation of the consortium as part of its information systems security mission, with a goal to increase the availability of biometric authentication and identification to meet the needs of the Department of Defense and other federal agencies. Toward that goal, the NSA has invested personnel resources and funds to provide organizational and administrative support to the consortium. The consortium has been, and continues to be, the federal government’s primary source of technical information for biometric considerations.

Richard Edmund is a staff writer for *Insight* magazine, published by QS/1. Founded nearly 30 years ago, QS/1 serves independent, chain, and institutional pharmacies, along with home medical equipment businesses, with software solutions. For additional information, visit www.qs1.com, or call 800-231-7776.



Internal THEFT: *Protection for Pharmacies*

Digital video recorder-based surveillance systems and other emerging technology can help reduce “shrink”

By Van Carlisle

According to several statistics, retailers lose tens of billions of dollars annually to employee theft, or “internal shrink,” as it is known in the parlance of security and loss prevention professionals. The 2004 University of Florida National Retail Security Survey study showed that employee theft remains the single largest source of inventory loss in retail. The same study showed that among retail categories, pharmacies have the second-highest employee theft rate.

Relative to other retail categories, pharmacies are extremely proficient at securing inventory. A pharmacy may have stringent, robust, and up-to-date measures in place to prevent theft of drugs, OTC items such as ephedrine containing cold medicine, and high value health items. Yet it still has one or more point-of-sale

(POS) devices that are vulnerable in terms of the most common form of employee theft: cash pilferage.

Catching an employee in the actual act of the theft itself is very challenging, and it is almost as difficult to detect theft after the fact, since it is costly and time-consuming to perform thorough cash and/or inventory audits on a frequent basis. Even in cases when there is a well-founded suspicion of ongoing internal theft, a pharmacy owner or operator is hard-pressed to render an accusation without hard physical evidence, as he/she is then an easy target for a lawsuit without solid evidence to support the accusation.



Retailers lose tens of millions of dollars annually to employee theft—much of which can be prevented.

There are quite a few ways a cashier can steal cash at the POS. The most common method is to wait for a customer to pay with exact or nearly exact change, and simply ring a no-sale and pocket the cash.

Why Employees Steal

Why do employees steal? It can be summed up in one word—opportunity. A common (and expensive) fallacy is that most employees who pilfer are already “dirty.” Therefore as long as a pharmacy develops and utilizes a thorough and extensive hiring process, they will be able to weed out these people via background checks on applicants, reference checks, and standardized pre-employment honesty and ethics tests. While these are admittedly better than making hiring decisions solely based on “gut feelings,” none of these methods are even close to foolproof.

This highlights the major weakness associated with human resource-driven employee theft mitigation. The

reality is that internal thefts usually occur not necessarily because an employee is ethically challenged and always intended to steal cash. Often it’s simply an irresistible opportunity that has presented itself, with a low risk of being caught. Rising living costs and stagnant wages levels for lower-tier earners, such as retail clerks, cause the threshold for the decision of an employee to commit theft to be much lower than most people think. Most employees who steal are not professional thieves. In most cases they do experience uncomfortable guilt emotions, which are overcome by rationalizing the act, such as thinking, “They take such advantage of me through low pay and long hours, so I’m evening the score.” Or, “They make so much money, no one will miss what I take anyway.”

According to Keith Aubele, a veteran retail security consultant with The Loss Prevention Group, “Some employees will steal when the reward is perceived to be greater than the risk, and when there is a clear window of opportunity.” He continued: “Our objective, as loss prevention professionals, is to use the tools and methods at our disposal to increase the element of risk, and to eliminate the opportunity to steal.”

The bottom line is that human behavior always has and always will be the “x-factor” in security situations. Trying to defeat employee theft solely by changing human behavior can be a difficult, expensive and ultimately unsuccessful process.

With regard to technology, Aubele says, “It is critically important for retailers to utilize refined systems tools, including exception analysis reporting, an advanced surveillance system, and a well-trained and educated investigative staff when approaching the internal theft problem.”

How to Stop It

Based on the observations of the driving factors behind most employee theft, it is obvious that any method that allows for the removal of the theft opportunity will be a much more effective measure than one that attempts to detect and (after the fact) record employee thievery. So, while employee theft may be a human resources problem, one of the most proven, effective solutions lies not in human interaction or manipulation, but in technology.

The technology solution that makes undetected employee theft next to impossible is a digital video recorder

(DVR)-based surveillance camera system, which records all in-store activities, including the point of sale(s). The key factor here is that the DVR system is set up to interface with the POS, and when necessary, can produce an exact digital replica of every sales receipt (commonly called “POS data”) to track every purchase or transaction.

Many pharmacies already deploy some form of closed-circuit TV video security system. However, a video surveillance system becomes much more valuable when it’s integrated with the POS solution. POS integration essentially makes the process of reviewing video footage of a cashier’s activities much more efficient. The integrated system can index specific events that occur at the POS station, such as sales over a particular dollar amount or returned merchandise, and review the video footage that corresponds with those events to confirm (with little room for doubt) that an act of theft has or has not taken place. POS data that is extracted from the DVR system can also be used to search for corresponding images or video captures (such as images related to a particular incident), as well as triggering recording and creating audit trail entries.

Consider the typical situations where store owners, management, or loss prevention personnel might suspect ongoing employee theft. It is simple to note that a particular shift consistently and inexplicably logs higher-than-usual no sales, voids, cancels and returns—all possible indications of internal theft. To confirm suspicions, evidence is required. If the pharmacy is not equipped with a DVR that is linked to the POS, the concerned party would have to unroll dozens of feet of journal tape and manually check off every suspect transaction, and then he or she would have to go through literally hours of video footage to match the transactions. This tedious process costs time and money, a fact of which a thieving employee is usually well aware.

Real-Time Information

When the DVR with POS interface is installed, mitigating internal theft becomes quite a different set of actions. Every transaction can be digitally stored, cross-indexed with the video footage, and easily searchable—right down to the second. The sales receipts of every single shift can then be quickly and thoroughly examined, and questionable transactions or other red-flags that may indicate internal thievery can be noted for closer scrutiny. POS data can be readily used as sufficient evidence to build a strong case against a dishonest employee, immediately involve law enforcement, and file charges, if necessary. The DVR with POS

interface also allows store owners and management to observe their locations in real time, allowing operators to keep an eye on who’s doing what and when, and to deter employees from various schemes to “steal” besides outright theft of money and merchandise (such as false time clocking, sleeping on the job, or letting friends shoplift, to name several).

According to most operations that have deployed a DVR that is integrated with the POS, it usually does not come to that. Once the system is installed and employees

The reality is that **internal thefts** usually occur because... an **irresistible opportunity** has presented itself, with a low risk of being caught.

are presented with a simple five-minute demonstration of the system and its capabilities, two things usually happen. The first and immediate occurrence is that one (or more) employees who are stealing will realize that the ride is over, so to speak, and simply quit. The second is that sales go up. In most cases it is dramatic enough to enable the store owner to recover the cost of the DVR within six months or less.

In the modern era of increased competition and decreasing margins, many pharmacies are looking for ways to boost revenues any way that they can. As a result, they are starting to put more emphasis on loss prevention as a means to reduce the costs of inventory “shrink.” AMR Research, a technology advisory firm for the retail sector, released a report in 2001 that stated: “Loss prevention technology is a great bet in a down economy—dropping shrink from two percent to one percent of sales has the same net effect on profit as a 40 percent increase in sales.”

The bottom line is that DVRs linked to the POS are the next evolution in surveillance and have proven quantifiably successful in reducing losses through employee theft. As one expert in retail loss prevention has said, “Using a DVR is like plugging a leak in your cash register.” **AP**

Van Carlisle became president and CEO of FireKing, one of the premier security and loss prevention companies in the nation, at age 24 in 1975. Carlisle brings a unique level of security expertise to the company. For more information, please visit www.fireking.com.



Asthma Breath Test Useful for Chronic Cough

An easy, quick, and inexpensive breath test can help determine whether inhaled corticosteroids can treat a patient's chronic cough, a Mayo Clinic team reports.

Chronic cough refers to coughing that lasts a few weeks or longer. The condition, which can disrupt a person's daily life, has three causes: postnasal drip syndrome, asthma, and gastroesophageal reflux. A less common cause of coughing is non-asthmatic eosinophilic bronchitis.

The study of 114 patients evaluated for chronic cough concluded that a test commonly used for people with asthma—called the exhaled nitric oxide test—is much easier for patients and predicts response to corticosteroid treatment better than an-

other commonly used test, called the methacholine challenge.

"We're thinking this could be a significant development in the field of chronic cough," study lead investigator and Mayo Clinic pulmonologist Peter Hahn said.

The exhaled nitric oxide test measures inflammation in the lungs' bronchial tubes. The patient breathes into the analyzer four or five times over 10 minutes. Abnormal scores indicate either asthma or possibly non-asthmatic eosinophilic bronchitis.

In patients with these conditions, inflammation irritates the airway and triggers coughing. Corticosteroids can help reduce the inflammation and ease this chronic condition.

Study Indicates Limited Drug Research on Children

Determining how prescription drugs affect children isn't easy, even for pediatricians, a new study says.

That's because very little research on children and drugs is published in medical journals that help guide doctors on treatment. The result is that some prescribe the wrong dose or use drugs that could be harmful to kids.

"Ironically, some of the times when drugs do work (in children), they're still not getting published," said Danny Benjamin, an associate professor at Duke University who led the study and also works for the Food and Drug Administration.

He said an FDA program meant to encourage drug companies to test how drugs affect children has led to hundreds of studies. The problem is that about half the time, the results don't get published in peer-reviewed medical journals, mainly because researchers and sponsors don't submit them for publication, Benjamin said.

Drug companies that conduct or sponsor pediatric research are motivated mostly to get their products on the market, "not to tend to the public health concerns," Benjamin said.

Also, parents often are reluctant to let their children participate in studies. So the research often involves many institutions with a few children at each location, which complicates compiling data and submitting them for publica-

tion, Benjamin said.

Examples the authors cited include unpublished data suggesting that an anesthesia drug might increase children's risk of death when used for sedation. Also, unpublished data has suggested that some steroid creams used for skin rashes in adults could cause a hormone imbalance in children.

In 1997 legislation was introduced granting drug companies longer patent protection when they agree to study a medication's effects in children.

Between 1998 and 2004, 253 pediatric studies were submitted to the FDA under this program but only 45 percent were published in peer-reviewed journals, the researchers found.

December Health Events

■ National Aplastic Anemia

Awareness Week — Dec. 1–7

Aplastic Anemia & MDS International Foundation, Inc.

www.aamds.org

■ The National Association of Health

Data Organizations — Dec. 4–5

21st Annual Meeting

Washington, D.C.

■ Shots for Tots State Immunization

Conference — Dec. 7–8

Centers for Disease Control—National Immunization Program

New Orleans

www.cdc.gov/nip

Taking Preventive Medications Curbs Diabetes Risk

Individuals at risk for developing type 2 diabetes who are prescribed metformin should stick with it, doctors say. In a large study, individuals who adhered to a metformin-based diabetes preventive strategy had a reduced risk of developing diabetes, they report.

The Diabetes Prevention Program (DPP) investigated the value of intensive lifestyle intervention (diet and exercise) or metformin in delaying or preventing type 2 diabetes in high-risk individuals with impaired glucose tolerance, a precursor to full-blown diabetes.

Elizabeth A. Walker, a doctor at George Washington University, and colleagues examined medication adherence and health outcomes in the metformin and placebo arms of the DPP. A total of 2,155 subjects who were randomly assigned to either the metformin or placebo treatment arms were included in the analysis.

The overall adherence rates—the proportion of patients taking at least 80 percent of the prescribed dose—were 71 percent in the metformin group and 77 percent in the placebo group.

Compared to patients who were adherent to placebo, those adherent to metformin had a 38.2 percent reduced

risk of developing diabetes, the investigators report. In this study, “the level of medication adherence predicted the primary outcome of diabetes,” they write in the journal *Diabetes Care*.

Among patients taking metformin, older subjects were more adherent than younger subjects. Walker’s team reports that the most commonly reported barriers to taking the medication as prescribed were forgetting to take doses (22 percent), adverse effects (8 percent), and disruption of routines (8 percent).

Overall, 15 percent of women and 10 percent of men reported adverse effects in the metformin group. These results, the team concludes, “lend support for future development and evaluation of brief, practical medication adherence interventions for primary care settings.” **ap**



“Inside Pharmacist Care®” is the monthly news report of NCPA’s National Institute for Pharmacist Care Outcomes division.



Novel Therapeutic Uses of Vitamins, Minerals, and Nutraceuticals

By Beverly A. Sullivan, PharmD

- Upon successful completion of this article, the pharmacist should be able to:
1. Understand why patients seek self-care with selected vitamins, minerals, and nutraceuticals.
 2. Understand the role of the pharmacist in assisting patients in the rational choice and therapeutic use of these agents.
 3. Understand the clinical data surrounding the therapeutic use of selected vitamins, minerals, and nutraceuticals.
 4. Describe the clinical activity, benefit and toxicity associated with selected vitamins, minerals, and nutraceuticals.
 5. Demonstrate the ability to counsel patients on the rational therapeutic use of selected vitamins, minerals, and nutraceuticals.

The concept that vitamins, minerals, and nutraceuticals possess therapeutic utility is not new, but it has evolved in recent times. In addition to preventing nutritional deficiency states, selected vitamins, minerals, and nutraceuticals are now used therapeutically to prevent or treat clinical problems and diseases. The use of dietary supplements has grown as patients become more involved in self-care and realize the limitations of modern medicine. Use of dietary supplements as primary or adjunct therapy also has grown as the basic scientific knowledge regarding the interplay of diseases with dietary supplements has mushroomed.

Complicating the picture, however, is the fact that basic scientific knowledge does not always translate well when it is applied to the clinical setting. This article reviews the rational use of some dietary supplements that have been advocated to manage a variety of clinical entities, such as

age-related macular degeneration, migraine headaches, pre-menstrual syndrome, hypercysteinemia, insulin resistance, diabetes, obesity, neuropathies, and erectile dysfunction. It is hoped that this discussion will provide the community pharmacist with tools to assist and counsel patients that desire to treat or prevent disease with vitamins, minerals and nutraceuticals.

ADVANCED AMD

Non-exudative macular degeneration is a condition occurring in the elderly that starts with the accumulation of extra-cellular deposits underneath the retinal pigment epithelium. Gradually over time this can lead to central vision loss, and AMD is the leading cause of blindness in the elderly throughout the developed world. In the United States, it is estimated that more than eight million elderly persons have early AMD, and 1.3 million have advanced AMD. With the baby-boom generation just starting to enter into their golden years, the prevalence is expected to double by 2020.

Modifiable risk factors that are reported to be associated with advanced AMD are smoking and obesity. It has been proposed for many years that another modifiable factor, diet, especially one rich in antioxidants, may provide protection against AMD progression. In recent years, dietary supplementation with anti-oxidant vitamins and minerals in patients with early AMD has been aggressively investigated.

Useful Web Sites

- www.nccam.nih.gov/health/diabetes/
The National Center for Complementary and Alternative Medicine (NCCAM) Web site has a section covering the treatment of type 2 diabetes with dietary supplements.
- www.naturaldatabase.com/
The Natural Medicines Comprehensive Database was created by the editorial staff at the Therapeutic Research Center. The Natural Medicines Comprehensive Database was launched in September 1999. Since then, its research and editorial team continues to update the Database daily.
- www.obesity.org/subs/consumeralert/
The American Obesity Association is focused on changing public policy and perceptions about obesity. It has become an authoritative source for policy makers, media, professionals and patients on the obesity epidemic.

In the Age-related Eye Disease Study (AERDS), 3,294 patients with early AMD were randomized double-blinded to daily (1) placebo, (2) zinc/copper (80 mg/2 mg), (3) anti-oxidants (vitamin C [500 mg]; vitamin E [400 IU]; beta-carotene [15 mg]) or 4) antioxidants plus zinc/copper. After an average of six years, the group receiving the combination of antioxidants plus zinc/copper showed a significant risk reduction (~25 percent) in the development of advanced AMD. While a reduction by 25 percent may seem small, it has been estimated that if all at risk individuals received supplementation this would prevent more than 300,000 cases from developing advanced AMD and visual loss over the next five years. The same study investigated whether supplementation could prevent the progression of cataracts; in this case no combination of antioxidants with or without zinc/copper was beneficial.

Ocuvite PreserVision is a commercial preparation that contains a combination of anti-oxidants and Zn/Cu similar to that studied in the AERDS trial. The suggested dose is two tablets two times a day. If taken as suggested, the formulation provides 452 mg of vitamin C, 400 IU of vitamin E, 69.6 mg of Zn, 1.6 mg of Cu, and 28,640 IU of vitamin A beta-carotene, at a cost of about \$14 per month. Important counseling tips include (but are not limited to) the following:

- Take as directed every day to derive full benefit from the formulation. This is intended to be long-term therapy.
- The anti-oxidant/Zn-Cu combination found in Ocuvite PreserVision has been tested and shown to prevent the development

of advanced AMD in patients with early AMD. It has not been tested in other groups; there is no data that supports using this supplement in patients with other eye disorders (cataracts, for example) or patients with normal eyes.

- Smokers should not use this supplement unless directed by their physician. Beta-carotene supplementation has been shown to increase the risk of lung cancer in smokers.
- It is suggested that you continue to take a normal multivitamin such as Centrum along with Ocuvite PreserVision. (Patients received daily multivitamins along with the anti-oxidant/Zn-Cu combination in the AERDS trial.)

Lutein and zeaxanthin, known as ocular pigments, are dietary carotenoids that decline in ocular concentration with aging and have been positively associated with better night and daytime vision. Whether these carotenoids improve visual performance or prevent advanced AMD is a matter of debate and clinical study. In counseling patients about lutein/zeaxanthin eye supplements, pharmacist should tell them that the rationale for use of these carotenoids is conjectural and not based on clinical studies in humans, but, ongoing studies should provide an answer in the future.

Study/Design	Dose/Regimen	N=	50% Response	P=	Comment	Ref.
CoQ10 vs. placebo RDBPCT	100 mg tid	42	47.6% vs 14.4%	0.02	NNT=3 German formulation	Neurology 2005
Riboflavin [B2] vs placebo RDBPCT	400 mg qd	55	59% vs 15%	0.002	NNT = 2.3	Neurology 1998
Riboflavin [B2] vs beta-blockers NRACT	400 mg qd	26	53% vs 55%	N.S.S.	-	Headache 2000
Mg citrate vs placebo RDBPCT	600 mg qd	68	55.6% vs 31.3%	0.149 N.S.S.	Excluded drop-outs; 7% Mg patients dropped due to toxicity	Cephalgia 1996

RDBPCT = randomized double-blind placebo controlled trial; NRACT = non-randomized active agent comparative trial; NNT = number needed to treat; N.S.S. = not statistically significant

MIGRAINE PREVENTION

It is estimated that up to 25 percent of the U.S. population suffers from migraine headaches, and they are responsible for the loss of approximately \$13 billion per year in missed workdays and lost productivity. If migraines reoccur on a regular basis, or the nature of the migraine is problematic or is refractory to abortive therapies, it is reasonable to consider prophylactic therapy. Several dietary supplements have been proposed as useful in preventative strategies. The most studied are vitamin B2 (riboflavin), magnesium, and Coenzyme Q10. (See Table 1, left.)

Riboflavin (vitamin B2) and Coenzyme Q10 (Co-Q10) both improve mitochondrial energy metabolism. Mitochondrial dysfunction resulting in impaired oxygen metabolism has been proposed as a pathogenic factor in migraine headaches. While the quantity of well-controlled clinical trials is limited for B2 and Co-Q10, they both demonstrate minimal short-term toxicity. Long-term toxicity data, however, is not available. Also, as with all dietary supplements, studies are performed with specific formulations that may not be mirrored in commercially available products.

Laboratory and clinical studies have associated low serum magnesium concentrations with migraine headache, and conversely the administration of magnesium in deficient patients results in alleviating headache pain. However, attempts to study both oral and intravenous magnesium in well-designed trials in patients with migraine have been disappointing, and magnesium in high doses is associated with diarrhea, diminished reflexes, and gastrointestinal distress.

In a recent review of migraine prophylaxis in the *American Family Physician*, it was recommended that agents such as B2 and coQ10 be reserved as second line prevention after established prescription-only agents such as propranolol and amitriptyline have been tried. As second line agents, B2 and coQ10 are possibly effective and are relatively safe. If taken as recommended the cost of therapy per month is about \$60 for coQ10 and \$5-\$10 for riboflavin, respectively. In counseling patients on the use of these agents, include the following points:

1. High dose riboflavin (400 mg qd) and coQ10 (100 mg tid) are possibly effective in the prevention of migraine and short-term toxicity is minimal.
2. Maximum benefit usually takes two to four months to achieve.
3. Long-term therapy (more than six months) at these doses is not studied and long-term toxicities are unknown. Therefore, discuss use of these agents with your doctor before using them.
4. Always purchase dietary supplements from a reputable source that is recommended by your pharmacist.

PREVENTION OF PRE-MENSTRUAL SYNDROME (PMS)

Up to 40 percent of women of child-bearing age suffer from PMS, and 3-5 percent experience a severe form known as premenstrual dysphoric disorder (PMDD). To have PMS, a woman must suffer at least one moderate to severe mood symptom and at least one physical symptom. These symptoms must result in functional impairment. Symptoms also must be present during the luteal phase of the menstrual cycle and abate by day four of menses. A variety of vitamins, minerals, and nutraceuticals such as vitamin B6, vitamin E, magnesium, calcium and γ -linolenic acid have been advocated for prevention of PMS, but only calcium has been shown consistently in well-designed clinical studies to be effective and safe in this disorder.

The rationale for calcium supplementation in the prevention of PMS is multi-factorial. Studies demonstrate that calcium levels fluctuate throughout the menstrual cycle and some data suggest that women with PMS may have greater derangements in calcium homeostasis. It also has been proposed that aberrant calcium homeostasis results in a variety of psychological disturbances, such as irritability, depression, and anxiety, and that calcium supplementation helps to alleviate these symptoms.

In one large randomized, double-blind, placebo-controlled trial, calcium carbonate 1,200 mg (elemental Ca++)/day administered to women with PMS for three menstrual cycles resulted in an overall 48 percent reduction in PMS symptoms, including negative mood, water retention, food cravings, and pain. Other smaller studies have reported similar results.

Chronic calcium is well-tolerated and calcium supplementation provides the added benefit of helping to maintain bone density. For women seeking self-treatment of mild-moderate PMS, a trial of three to four months of calcium carbonate 1,200 mg/day is a reasonable and effective/safe first step. It also may be a helpful adjunct for women with severe PMS that must be treated with prescription drug therapy. Some counseling points to consider:

- Calcium carbonate or calcium citrate may be used. The effective dose is 1,200 mg of elemental calcium per day divided into two to three doses.
- No more than 600 mg of elemental calcium should be taken at one time.
- Calcium carbonate should be taken with meals; calcium citrate can be taken regardless of meals.
- Optimal benefit from calcium takes three to four months to achieve.
- Most patients will experience approximately a 50 percent

decrease in symptoms, but not all symptoms will completely go away.

- It is helpful to monitor symptoms with a daily diary.

Erectile Dysfunction

Some form of erectile dysfunction (ED) is estimated to occur in approximately 50 percent of men between the ages of 40 and 70. At the same time it is estimated that worldwide only 10 percent of men seek medical help for the condition. While there are several pathologic mechanisms that contribute to ED, the majority of drugs used in this condition enhance nitric oxide (NO) production due to NO's key role in normal penile vasodilatation. L-arginine, a semi-essential amino acid, is the biologic precursor of NO and is sold as a dietary supplement to enhance sexual performance. While laboratory studies demonstrate that supraphysiologic doses of L-arginine enhance NO production and erectile response in animals,

in ED is mixed and requires further study.

- Long-term safety data is not available.
- Best results have been seen in patients depleted in NO who use large doses (5–6 gms) every day for three to four weeks.
- Do not use L-arginine if you have a history of herpes infection, asthma, or cancer.
- Do not combine L-arginine with other ED agents. Combining L-arginine with other agents used in ED (Viagra, yohimbine, ginseng, ginkgo) have either not been studied or have been poorly studied.
- If you have cardiovascular disease, diabetes, AIDS or any serious chronic disease, consult your physician before using L-arginine.

Proposed Mechanism	Agent
Modulate Carbohydrate Metabolism	Chromium
<ul style="list-style-type: none"> ↑ Fat Metabolism or ↓ Fat Synthesis or ↓ Protein Breakdown 	<ul style="list-style-type: none"> L-carnitine Hydroxycitric acid Vitamin B6 Conjugated linoleic acid Pyruvate Hydroxy-methylbutyrate

clinical data in humans has been mixed. It would appear from looking at the few well-designed studies that best results may be achieved with high doses (5–6 gms per day) of L-arginine, administered three to four weeks in men that produce low levels of NO. L-arginine has also been studied in numerous other NO associated clinical maladies such as congestive heart failure, angina pectoris, atherosclerosis, coronary heart disease, hypertension, intermittent claudication, type 1 diabetes, and AIDS cachexia.

Short-term, adverse effects of L-arginine even in large doses, have not been reported. Long-term safety data is not available and it is generally agreed, based on hypothetical grounds, that L-arginine not be used in patients with a history of herpes infection, asthma, or cancer. Large doses (5–6 gms/day) cost the consumer approximately \$32–\$37 per month.

Helpful counseling tips for the consumer include the following:

- Well-designed clinical data evaluating the utility of L-arginine

OBESITY

Obesity is commonly defined as having a very high amount of body fat in relation to lean body mass, or a Body Mass Index (BMI) of 30 or higher. In 2001, 21 states reported that 15-19 percent of the state's population was obese, 27 states reported that 20-24 percent of the population was obese, and one state reported that 25 percent or greater of its population was obese. It is commonly stated that the prevalence of obesity has doubled in the last 30 years and that 33-50 percent of adults are either overweight or obese. This epidemic has led a greater number of people to seek over-the-counter (OTC) diet aids to help control their weight. OTC vitamins, minerals, or nutraceuticals that are commonly present in these weight loss products are listed in Table 2 (left) and are classified by proposed mechanism.

Laboratory studies demonstrate that chromium is an essential co-factor for insulin activity and results in less body fat and increased lean body mass. It also improves insulin sensitivity and decreases insulin resistance. In human studies, a recent meta-analysis of blinded, randomized controlled trials concluded that daily chromium picolinate creates a relatively small (about 2.5 lbs.) weight loss relative to placebo over a period of two to three months. At typical doses of 500 mcg once or twice a day, chromium picolinate appears to be well tolerated when administered on a short-term (months) basis; insufficient evidence is available to advocate long-term (years)

administration. In case reports, acute rhabdomyolysis, renal failure and exanthematous pustulosis have occurred in individual patients taking chromium picolinate. However, the relationship as to causation is unclear.

Along with weight loss, chromium is reported by the Natural Medicines Comprehensive Database to be *possibly effective* but inconclusive as adjunct therapy in type-2 diabetes and dyslipidemia. Again, the safety of long-term therapy is unknown. The cost of 500 mcg once or twice a day is \$2-\$4 per month.

Results from controlled clinical studies regarding the effectiveness of L-carnitine, hydroxycitric acid, vitamin B6, and pyruvate for weight loss have been contradictory and inconclusive. Hydroxy-methylbutyrate (HMB), while along with creatine augments the development of lean mass and strength with resistance training, has not shown any clear benefit as a weight loss supplement.

Conjugated linoleic acid (CLA) is thought to promote apoptosis in fat tissue and thereby decrease fat deposition. In the laboratory, CLA reduces weight gain and fat deposition in rats and mice, but in humans these effects are less consistent and of smaller magnitude. While CLA has been well tolerated in short-term clinical studies, it induced insulin resistance and fatty liver/spleen in animal studies at therapeutic effective doses. Again the tolerability of chronic long-term administration of CLA is unknown. A typical dose of 1 mg three times a day costs between \$10-\$20 per month.

As it appears that dietary supplements are of limited value in weight management, it is best to direct clients to non-pharmacologic approaches. In counseling a patient that desires to manage their weight, the pharmacist should help the client determine:

- The client's readiness for change
- Safe weight management goals: weight maintenance versus weight loss
- Appropriate levels of physical activity
- Appropriate strategies for a healthy diet
- Individualized behavioral modification strategies
- Referral networks: dietitians, support groups, counseling, physicians

HOMOCYSTEINEMIA AND CARDIOVASCULAR PROTECTION

Epidemiologic studies show a strong association between homocysteine levels and cardiovascular risk. It is known that homocysteine causes oxidative damage to vessels and increases the risk of thrombosis, leading to myocardial infarction and stroke. It is also well known that the daily administration of folic acid, B6 (pyridoxine), and B12 decreases levels of homocysteine by about 25 percent by facilitating its conversion to methionine.

What has been unknown until recently was whether decreasing homocysteine level with B6, B12, and folic acid supplementation would prevent myocardial infarctions, stroke, or death from cardiovascular causes. Results from two recent primary and secondary prevention studies in the *New England Journal of Medicine* confirm findings from other studies that decreasing homocysteine levels with vitamin B supplementation does not improve cardiovascular outcomes among high risk patients. It appears from these results that the combination of B6, B12, and folic acid for cardio-protection in at risk patients is not supported by the evidence and should not be advocated. Questions that remain to be answered are whether supplementation would help patients with extremely high homocysteine levels, and whether some other combination of vitamins and other doses may be protective. For now it's best to just recommend a daily multivitamin as part of a healthy lifestyle of exercise, good nutrition, weight management, and yearly check-ups with a physician.

DIABETES

The number of patients with type 2 diabetes is growing yearly in part due to the increasing prevalence of obesity. Whereas, type 2 diabetes was once restricted to the adult population, with the current epidemic of obesity in juveniles it is now becoming commonplace to hear of children as young as 5 with type 2 diabetes. With growing numbers of diabetes patients, end organ damage is becoming more common.

Microvascular, macrovascular, and neuropathic sequelae lead to blindness, renal damage cardiovascular disease, and neuropathies. It is well known that to prevent diabetic end-organ damage, the key to prevention is control of blood glucose. Unfortunately, even with strict adherence to regimens and insulin pump technology, many diabetes patients suffer unfavorable consequences from the disease.

Current preventative and treatment strategies that can stem the tide of progressive damage or help ameliorate symptoms are inadequate. As a consequence, physicians may recommend or diabetes patients may seek to self-treat

Table 3. Dietary Supplements in Diabetes

		Comments
Vitamins	Vitamin B6 Vitamin E Vitamin B12	B6 not beneficial in diabetic neuropathy in DBRPC trials. Limited data for high doses of vitamin E; do not recommend. B12 – more clinical trials needed.
Minerals	Chromium picolinate Magnesium	Cr – Inconsistent results on FBG, PPG in controlled trials. Mg – Minimum benefit on FBG, HgA1c in controlled trials.
Nutraceuticals	α -lipoic acid γ -linolenic acid conjugated-linoleic acid acetyl-L-carnitine	αLA – may be beneficial for diabetic peripheral neuropathy and insulin resistance in oral doses of 600-1,800 mg/day. γLA – limited but inconclusive benefit for diabetic peripheral neuropathy. CLA – Requires more data; limited benefit in obesity. ALC – inconsistent results

FBG = fasting blood glucose, PPG = postprandial glucose

with vitamins, minerals, and nutraceuticals. Oral supplements and their effect on insulin resistance or diabetes neuropathy that have been evaluated in randomized clinical trials are listed in Table 3 (above).

A popular hypothesis that attempts to explain, in part, the molecular basis for insulin resistance and progressive diabetes damage involve oxidative stress and stress-activated signaling pathways. Inflammation and oxidative stress have been shown to be increased in type 2 diabetes patients, and patients with metabolic syndrome. Therefore, anti-oxidants such as vitamin E and alpha-lipoic acid have been investigated for their potential benefit in insulin resistance and diabetes neuropathy.

Alpha-lipoic (α LA) acid is an endogenous co-factor in carbohydrate metabolism that functions as a potent mitochondrial free-radical scavenger. It is approved in Germany for the management of diabetes neuropathy, and has been used in Europe for more than 40 years for this purpose. When administered at oral doses of 600-1,800 mg/day for at least three weeks, α LA has improved insulin resistance and peripheral neuropathy in patients with type 2 diabetes in controlled clinical trials. While it would appear to have clinical potential, controlled trials defining the long-term efficacy and safety of α LA have not been completed, so caution in recommending it is advised.

At higher doses α LA may cause gastrointestinal upset, and rash has also been reported. It should not be given to patients that are thiamine (B1) deficient. Also, theoretically, caution should be exercised when α LA is co-administered with hypoglycemic agents or insulin, and its use should be avoided

during cancer chemotherapy or radiation therapy. Metals such as iron and copper are chelated by α LA, so it must be administered separately from multivitamins with minerals. For 1,200 mg/day, a month's supply of 300 mg α LA costs about \$10. Patient counseling tips include the following:

- In patients with diabetes, take α LA only after consultation with their primary care provider.
- At best, α LA is a possible adjunct to primary diabetes management, with diet, exercise, and pharmacotherapy.
- As α LA is a metal chelator, it may deplete iron stores. Monitoring of iron may be necessary with chronic administration.
- Do not co-administer α LA with multi-vitamins, minerals, or antacids. Separate administration by at least two hours.
- Patients that are thiamine (B1) depleted should receive a thiamine supplement before starting α LA.
- The onset of benefit is delayed by approximately three weeks and may take several months to achieve maximum effects.

The use of vitamins, minerals, and nutraceuticals for therapeutic purposes is a dynamic area of clinical investigation, and it is essential that pharmacists keep abreast of progress in this area. Frequently, however, patients have the desire to self-treat with supplements before clinical data is mature and definitive. The pharmacist can help patients by providing a critical analysis of risk/benefit, and provide much needed information on the appropriate use of these agents. **AP**

Beverly A. Sullivan, PharmD, is professor of pharmacy practice at the University of Wyoming School of Pharmacy.

CONTINUING EDUCATION QUIZ

Select the correct answer.

1. P.O. is a 66-year-old patient with HTN, diabetes, peripheral neuropathy and erectile dysfunction (ED). P.O. is an avid reader, surfs the Internet daily, and frequently approaches his pharmacist about the use of vitamins, minerals, and nutraceuticals for therapeutic purposes. P.O. complains to his pharmacist that there must be more that can be done to help his medical conditions. Which of the following are reasons why P.O. desires to use dietary supplements?

- P.O. desires to be knowledgeable and involved in self-care.
- P.O. wants to discontinue all his prescription medicines.
- P.O. may be dissatisfied with the limitations of modern medicine.
- A and b.
- A and c.

2. P.O. takes Viagra for his ED, but has had unsatisfactory results. He asks you, his pharmacist, whether L-arginine would be a good alternative or additive to his current ED regimen. Which of the following would be reasonable counseling points?

- L-arginine is contraindicated in patients with HTN.
- Well-designed clinical data evaluating the utility of L-arginine in ED is mixed and requires further study. P.O. should consult his physician.
- Adding high dose L-arginine to augment Viagra is proven to be beneficial.
- L-arginine counteracts nitric oxide synthase, therefore potentially inhibiting the activity of Viagra.
- Discontinue Viagra and use L-arginine instead; it is more effective and is safer.

3. P.O. has a wife that has early age-related macular degeneration (AMD), and her ophthalmologist has recommended that she take OcuVite PreserVision daily. P.O. asks if he should also take it to prevent AMD. Which of the following is a reasonable response?

- OcuVite PreserVision contains a mixture of herbs and minerals that in general are good for preserving eye function and health.
- OcuVite PreserVision contains anti-oxidant vitamins (A[beta-carotene], E, C) and minerals (Zn, Cu) that have been shown to prevent early AMD.
- OcuVite PreserVision contains anti-oxidant vitamins (A [beta-carotene], E, C) and minerals (Zn, Cu) that have been shown to prevent advanced AMD in patients with early AMD.

- OcuVite PreserVision is beneficial in preventing cataracts.
- C and d

4. DF is a 60-year-old female with early AMD who also smokes. She failed to discuss smoking with her physician because she doesn't want to disappoint her doctor. DF comes to the pharmacy to purchase OcuVite PreserVision. As DF's pharmacist you know that she has a smoking history because you have helped her purchase nicotine replacement therapy in the past. Which of the following statements is (are) reasonable advice for you to give her?

- Discuss the pharmacologic activity of anti-oxidant vitamins and minerals in preventing advanced AMD and blindness.
- Counsel DF that it is recommended that smokers NOT take OcuVite PreserVision because of increased health risks, including an increased risk of lung cancer.
- Counsel DF that it is recommended that smokers take OcuVite PreserVision because it decreases the risk of lung cancer.
- Suggest that DF talk with her doctor if she is still smoking.
- B and d

5. Patients taking OcuVite PreserVision should NOT take a normal multivitamin daily.

- True
- False

6. P.O. (see question No. 1) also has concerns about his peripheral neuropathy. His physician has suggested that he add alpha-lipoic acid to his current regimen. P.O. comes to talk with you after selecting Natrol (alpha-lipoic acid 300 mg) from the shelf. You notice that the product labeling states, "Take one capsule daily with a meal." What counseling advice do you give P.O.?

- In clinical studies an effective dose of alpha-lipoic acid has ranged from 600-1,800 mg/day. Try taking one capsule two times a day with a meal and increase the dose after three weeks if needed.
- Alpha-lipoic acid has no food, vitamin, or drug interactions.
- Alpha-lipoic acid may cause iron over-load.
- You should feel much better after one dose.
- B, c and d

7. Patients that are thiamine (B1) depleted should receive a thiamine supplement before starting alpha-lipoic acid.

- True
- False

8. Up to what percentage of the U.S. population suffers from migraine headaches?

- Twelve percent
- Fifteen percent
- Twenty-five percent
- Fifty percent
- Seventy-five percent

9. CC is a 25-year-old college student and mother of two preschool children who suffers from PMS, migraine headaches, and is obese (BMI=31). Her medications include Imitrex for acute migraines, amitriptyline 25 mg q hs for migraine prevention, and Jasmin oral contraception for birth control and PMS. CC has noticed that she has gained 10 pounds since starting amitriptyline. She has discontinued the amitriptyline and wants to try riboflavin for migraine prophylaxis. You notice that she was on propranolol for three months last year, but discontinued it due to side effects and lack of efficacy. Which of the following is (are) appropriate counseling point for CC regarding the use of riboflavin for migraine prevention?

- a. Low dose (4 mg) riboflavin is effective in the prevention of migraine.
- b. High dose riboflavin (400 mg qd) is possibly effective in the prevention of migraine and short-term toxicity is minimal.
- c. The maximum benefit may take two to four months to achieve.
- d. A and c
- e. B and c

10. CC states that the Jasmin has helped decrease bloating and water retention prior to menses, but she still is anxious and irritable. CC wants to know what OTC product you recommend to prevent PMS symptoms. You suggest:

- a. Trying 1,200 mg of elemental calcium per day divided into two or three doses for three to four months
- b. Midol PMS (pamabron [diuretic], pyrilamine maleate, acetaminophen) when symptoms arise
- c. Trying 600 mg of elemental calcium per day
- d. Trying 1,200 mg vanadium per day divided into four doses
- e. C and d

11. CC says she is serious about losing weight and asks about the virtue of chromium. She has heard that it redistributes weight from fat tissue to muscle and helps people lose weight. She asks you, her pharmacist, what she can expect if she takes chromium picolinate. You answer:

- a. Studies indicate that daily chromium picolinate at doses of 500 mcg qd-bid results in a relatively large weight loss (25 pounds) over two to three months.
- b. Studies indicate that daily chromium picolinate at doses of 500 mcg qd-bid results in a relatively small weight loss (2.5 pounds) over two to three months.
- c. Chromium picolinate appears to be well-tolerated when dosed over a couple of months but long-term safety is unknown.
- d. A and c
- e. B and c

12. Over the counter dietary supplements are of enormous value as part of a weight management program.

- a. True
- b. False

13. LO is a 56-year-old overweight transportation consultant who smokes two packs per day; drinks two to three beers per day; loves high fat, fried foods; and has untreated mild hypertension. LO says he doesn't have time for doctors and prefers to take care of himself. LO takes half of an aspirin per day. LO comes to you to ask about taking vitamins to protect his heart. He says a neighbor of his was put on some B vitamins after a heart attack, and he wants to take them as well. Which of the following is a correct statement regarding B vitamins and cardioprotection?

- a. The combination of 2.5 mg folic acid, 50 mg B6, and 1 mg B12 increase the level of homocysteine, an endogenous cardioprotective substance.
- b. The combination of 2.5 mg folic acid, 50 mg B6, and 1 mg B12 decreases the level of homocysteine, a powerful oxidant that can damage blood vessels.
- c. Recent studies conclude that the combination of these B vitamins does not prevent heart attacks, stroke, or cardiovascular death in patients at risk for a primary or secondary cardiovascular event.
- d. For now, LO should just take a daily multivitamin as part of a healthy lifestyle of exercise, good nutrition, weight management, and yearly check-ups.
- e. B, c and d

14. Lutein and zeaxanthin

- a. Are dietary fatty acids
- b. Are proven to improve daytime and nighttime vision in everyone
- c. Are ocular pigments that are being studied for potential benefit in patients at risk for poor night and day time vision
- d. Are weight loss agents
- e. A and d

15. Both coQ10 and riboflavin:

- a. Improve mitochondrial energy metabolism and may help prevent migraine headaches
- b. Are effective in preventing insulin resistance
- c. Are effective in the treatment of sinus headache
- d. Improve mitochondrial energy metabolism and effectively treat acute migraine headaches
- e. C and d

16. Magnesium salts have been studied in the treatment and prevention of migraine headaches and are highly effective and non-toxic.

- a. True
- b. False

17. For PMS prevention, calcium carbonate should be taken:

- a. Irrespective of meals
- b. With meals only
- c. Should be taken with alpha-lipoic acid
- d. A and c
- e. B and c

18. The best therapeutics results from L-arginine in ED has occurred under what circumstances?

- a. Low doses taken 30 minutes prior to sexual activity
- b. In men that produce low levels of NO
- c. High doses (5-6 gms/day) daily over three to four weeks
- d. A and b
- e. B and c

19. In what disease states should the use of L-arginine be discouraged?

- a. Asthma
- b. Congestive heart failure
- c. Angina
- d. Cancer
- e. A and d

20. Conjugated linoleic acid:

- a. Promotes apoptosis in fat tissue thereby decreasing fat deposition
- b. Augments the development of lean mass with resistance training
- c. Is associated with rhabdomyolysis and renal failure in high doses
- d. Long-term safety is well described
- e. B and c

Novel Therapeutic Uses of Vitamins, Minerals, and Nutraceuticals

November 3, 2006 (expires December 3, 2009)

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Last 4 digits of SSN MM-DD of birth

Name

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Address

City State ZIP

Phone number (store or home)

Store e-mail (if avail.) Date quiz taken

Quiz: Shade in your choice

- | | a | b | c | d | e | | a | b | c | d | e |
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| 6. | <input type="checkbox"/> | 16. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> | 17. | <input type="checkbox"/> |
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| 9. | <input type="checkbox"/> | 19. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> | 20. | <input type="checkbox"/> |

Quiz: Circle your choice

21. Is this program used to meet your mandatory C.E. requirements?
a. yes **b.** no
22. Type of pharmacist: **a.** owner **b.** manager **c.** employee
23. Age group: **a.** 21–30 **b.** 31–40 **c.** 41–50 **d.** 51–60 **e.** Over 60
24. Did this article achieve its stated objectives? **a.** yes **b.** no
25. How much of this program can you apply in practice?
a. all **b.** some **c.** very little **d.** none

How long did it take you to complete both the reading and the quiz? _____ minutes



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Surefire Moneymakers

By Bob Owens

Have you ever asked yourself, “What can I do that is sure to work?” We opened up the vault to find some ideas that are proven to work, and found these sure-fire marketing moneymakers.

TRAFFIC STOPPER TABLE

Place a table (or a bin, gondola, or shelf) at the front of the store. Stock it with a mixture of free literature, and clearance items at hot prices. Keep it fresh by changing it often.

FREE SAMPLES

Nothing helps OTC sales more than giving away free samples, and it's easy to do. Always have free samples of good tasting products that you normally sell at your counter. For example, chewable vitamins for adults or children make great free samples. For patients with diabetes, some of the nutrition bars (such as Glucerna) taste good and are therapeutically effective. The trick is for the staff person to ask, “Would you like to try a sample of _____?” Have a few bottles at the counter for quick impulse sale.

BAG CLIPPER

This is the cheapest advertising medium and over the long haul, one of the most consistently effective. A bag clipper is a slip of paper, usually one-third of a letter size sheet that you staple to the outside of the prescription bag. It can carry any good message that you want to convey to your customers, but you should lean toward making some kind of attractive offer or deal that will capture the customer's attention. For example, the coupon you were going to put in the newspaper may bring better results if you put it on the Rx bag instead. Another idea is a referral offer. For example, “Bring a Friend and Have \$5 to Spend.” Use it on the bag clipper.

“TODAY ONLY” COUPON

Most of the time, coupons get very low redemption. In fact, the big companies such as Proctor and Gamble actually depend on a low redemption rate...or they'd go broke if all their coupons were actually redeemed.

You have the opposite problem: how to *increase* coupon redemption and give customers a reason to buy something while they are still in the store. Here's how: Create a “Today Only” coupon with a special offer that you *present to the customer when they enter the store or when they drop off their prescription*. Make it a good deal with a discount on something you need to move. Tell the customer that you have a special just for today on the item. Another twist is to call it an “Instant Rebate.”

KEEP YOUR CUSTOMERS

Keeping a customer that you might otherwise have lost is a money maker. Customers are worth a lot of money, hundreds and sometimes thousands of dollars over the lifetime of their patronage, and it takes a lot less to keep a customer than to find a new one.

We all know that we can't please every customer every time. Sometimes, they have to wait too long to have their prescription filled, or maybe everyone is just having a bad day.

How do you keep them? When these things happen, tell your customers that you appreciate their business by giving them a “Customer Appreciation Certificate” to make up for their inconvenience. Make it worth something...such as \$5 off any non-prescription product, for example. **ap**

Join our Moneymaker of the Month Club! New ideas and tools, plus “How To” every month. Call me at 360-318-9485 Pacific time, or write for details at robert@robertowens.net.

Bob Owens provides consulting services to independent pharmacies through his firm, Robert Owens International (robert@robertowens.net; 360-318-9485). He has recently launched a new package of services including coaching, online seminars, and customized marketing programs for owners who need more in-depth answers to questions like the ones in this month's column.



NPI Transition Issues Need Attention

By William A. Lockwood Jr.

I recently attended the 15th annual conference of the Workgroup for Electronic Data Interchange, known as WEDI. This is the private-sector advisory organization working with the Department of Health and Human Services and the Centers for Medicare & Medicaid Services on matters dealing with electronic health care transactions.

At this conference I happened to sit in on a breakout session on NPI. That stands for the national provider identifier that every provider sending electronic claims must start using come May 23, 2007. The dialog I heard on NPI was a bit alarming—there is a lot of confusion over payment issues tied to this new identifier. It was clear to me that, come the deadline for compliance next year, we could be looking at a replay of Part D in terms of disruption to pharmacy operations. Let's say a prescription comes in and the prescriber doesn't have an NPI. How can the prescription be billed? Then there is the possibility of pharmacies being given the wrong NPI—that is, the NPI for the organization, instead of the prescriber. Pharmacies, as covered entities under HIPAA, must also be enumerated with this new identifier to bill outpatient prescriptions. The National Council for Prescription Drugs (NCPDP) is offering to handle this enumeration for pharmacies that authorize them to do so. This is the organization that now enumerates pharmacies with the identifier used in claim submissions. Even if your pharmacy applies directly for an NPI, it would be a good idea to register this number with NCPDP. This is the file the PBMs will be using to verify pharmacy NPIs.

Also clearly evident at this year's conference is that the 835 electronic remittance advice is still not working as planned. What I heard is that there

is rampant misuse of this transaction, making reconciliation of what's been billed versus what's been paid difficult. I can't help but ask: Where's the administrative simplification we were all expecting from HIPAA (Health Insurance Portability and Accountability Act)?

PHARMACY REPRESENTATION

Space doesn't permit addressing other takeaways from this conference. But one observation I had is that representation from pharmacy is noticeably lacking, and this is a shame. WEDI is looking to expand its scope by pursuing a clinical track. Up to this point the emphasis has always been on financial and administrative transactions. Perhaps this will motivate pharmacy to get involved.

On a different note, I want to touch on consumer medication information (CMI)—the patient education leaflets or monographs you are handing out with new prescriptions. From what I hear, I don't think that the industry comprehends the ramifications of not improving readability of this information. Yes, going to 10-point type, providing more white space, and shortening line length will cause space problems with the single-pass label document that is so prevalent in pharmacies. But the downside to not doing anything is forcing the Food and Drug Administration's hand and having it step in and take charge. Would you rather have a slightly longer monograph or be required to distribute MedGuides for every prescription? These could range from three to four pages up to 20 pages—talk about cost and workflow ramifications. **aP**

This article was originally printed in *ComputerTalk for the Pharmacist*, and has been reprinted with permission from William A. Lockwood Jr., founder and publisher. Lockwood also serves as the executive director of the American Society for Automation in Pharmacy (ASAP). ComputerTalk and ASAP are located in Blue Bell, Pa. The author can be reached at wal@computertalk.com.



LDF Needs Help to Help You

By Bruce Roberts, RPh

NCPA is fighting to improve dispensing fees, ensure Part D prompt pay, and stop the on-going abuses of the pharmacy benefit managers (PBMs).

We are making progress thanks to your participation in our grassroots initiatives—on Capitol Hill and with state legislatures across the country. However, if we are going to win on the issues that impact all of our bottom lines and the future of our profession, it is going to take an even more concerted effort.

NCPA's ability to fight for community pharmacy is dependent on our Legislative Defense Fund (LDF). The LDF was specifically designed to raise money to support NCPA's political and legal advocacy initiatives.

LDF funds were used to save the average pharmacy participating in Medicaid over \$11,000 per year. LDF funds were used to help pass legislation in Louisiana that increased Medicaid dispensing fees and which now will serve as a baseline for other state efforts. LDF funds were used for our direct lobbying that helped us secure more than 200 members of Congress as cosponsors of legislation that would improve Medicare Part D. LDF funds help support the Coalition for Community Pharmacy Action, our joint government affairs venture with NACDS, which ensures all 55,000 community pharmacies speak with one voice on key political issues.

That is progress, but it is not enough. Let's face facts; the PBM lobby is not going away. It will do virtually anything to undermine the pharmacist-patient relationship. Each year millions of dollars are spent on efforts to influence lawmakers so they pass legislation favorable to specific interest groups.

Today, dollars are flowing freely to pass proposals that would do irreparable damage to community pharmacy. We must compete. Point blank: community pharmacists must unify behind NCPA with contributions to our LDF.

I have seen first hand—as you have—our colleagues who have been tragically forced out of the profession. Many of you are reminded of those statistics daily as you see your revenues depend on decreasing government-set reimbursement rates. Reimbursement rates are a battleground where we must fight. We have no choice. Our businesses

Mark Your Calendar

Don't miss NCPA's 39th Annual Conference on National Legislation and Government Affairs. Washington, D.C., May 14–16, 2007.

For more information, call 800-544-7447, or visit www.ncpanet.org.



depend on winning this fight.

That why we need your help. I would like to ask you to give \$250 a month on your corporate credit card to the LDF. It is an easy way to contribute. Your contribution ensures us that we will have the resources to combat the challenges that lie ahead. If you cannot give \$250, consider giving a \$100 a month on your credit card. If you can give more, please do. There is no limit on corporate contributions to our LDF. If you can just make a one-time contribution please do that. All contributions will make a difference.

If we fail in our efforts to protect the pharmacy profession, it will not be because of the anti-pharmacy lobby, it will be because our profession did not band together to aggressively fight the threats we face.

I know our profession is unified. I know there is a bright future for community pharmacy. We just need to secure that future by pledging to step up to the plate and fight more aggressively any threat that comes our way.

It is never easy asking for money. It is the part of my job I enjoy least. I would not be asking if this was not important for all of us. I am calling on you to help us continue to grow our political strength. All it takes is a corporate contribution to the LDF. You are the key to helping us make a difference for your business. **aP**

Bruce Roberts, RPh, is NCPA executive vice president and CEO.