



LA HEALTH-SYSTEM PHARMACIST

Newsletter of the Louisiana Society of Health-System Pharmacists

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FROM THE DESK OF THE PRESIDENT

Greetings from the office of LSHP and the Board of Directors. I hope everyone had a Merry Christmas and a Happy New Year. I wish this coming year will bring you and yours much prosperity and happiness.

I recently returned from the ASHP midyear meeting in Anaheim and wanted to share with everyone some of what was going on and being discussed. The topic most talked about was the release of the discussion paper prepared by APhA and ASHP, "Concerns about the Accelerating Expansion of Pharmacy Education: Time for Reconsideration." This is a much debated subject that many people have a very passionate opinion about. I am going to try to give everyone an unbiased review of the paper or you can read the entire paper at www.ashp.org/DocLibrary/News/Accelerating-Expansion-of-Pharmacy-Education.aspx.

The stated purpose of this paper is to discuss whether the continued expansion of schools/colleges of pharmacy will compromise the quality of pharmacy graduates and impact the workforce needs of the profession. The paper proposes that a reduction in the quality of graduates could potentially occur due to an insufficient number and/or experience of faculty members as well as an insufficient number of practitioners and practice sites to mentor students during the introductory and advanced experiential education portion of the curriculum.

During the late 1990s, in response to a shortage of pharmacists, many institutions in the US began a significant expansion in pharmacy education through the creation of new schools of pharmacy and the expansion of existing schools. Revised manpower projections have not seemed to abate the continued expansion. APhA/ASHP states that among the potential risks of the continued expansion:

1. New graduates will have an array of knowledge, skills, abilities, and attitudes that are not well aligned with the current and evolving needs in practice.
2. Education's expansion plans will significantly exceed the capacity of practitioners to offer high-quality experiential education.
3. A decline may occur in the quality of graduates.
4. There will be substantial imbalance between the supply of and demand for new pharmacy graduates.

Joint dialogue on these topics between the educational and practitioner sectors of the profession is needed, and until it occurs, it would be wise to avoid further expansion of pharmacy education.

Before 1987, the number of pharmacy schools in the US had remained relatively constant for many years at around 72. Since then, there has been a rapid growth of new pharmacy schools and expansion programs. As of July 2010, there are 115 US based colleges and schools of pharmacy with accredited professional degree programs and five schools with pre-candidate status (AACP – Academic Pharmacy's Vital Statistics). As of December 2009, students are enrolled at 120 US colleges and schools of pharmacy. According to ACPE, from 2005-08 a 36.5% increase in student enrollment was expected. Expansion at existing schools accounted for 84% of this enrollment growth. The rapid growth of pharmacy educational programs has many potential implications for pharmacy practice, which practitioner organizations and educational institutions have an obligation to assess. Among the issues raised by pharmacy education's expansion are:

1. The actual effect on ameliorating the shortage of pharmacists
2. Exacerbation of the already-serious faculty shortage
3. Inability of practice sites to accommodate increased demands for experiential education
4. The potential for a negative effect on the quality of education and on the quality of new graduates practicing pharmacy.

The history of the pharmacy profession has shown periods of both a shortage and a surplus of practitioners. During the last decade the profession experienced a pharmacist shortage. The current pharmacist shortage began around 1998. It was characterized as potentially more drastic than those of the past because of the population's growing need for medications. Reasons for the shortage include:

1. New pharmacist patient-care roles
2. New pharmacist roles in areas such as information technology and managed care
3. More public and health-professional awareness of the expertise of pharmacists

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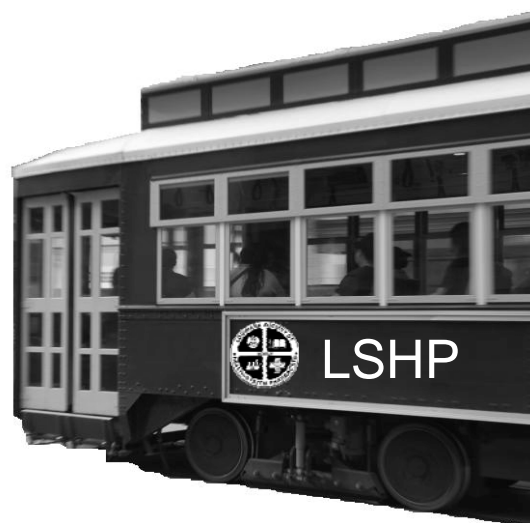
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LSHP 2011 Annual Meeting

May 26-28, 2011
Hilton Riverside

Visit www.lshp.org for more
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register online!

**LSHP Bimonthly Newsletter****LA HEALTH-SYSTEM PHARMACIST****Publisher Information**

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Please send article submissions to the newsletter editor, Dana Jamero, via email at djamero@xula.edu.

LSHP Technician Corner: Technicians at the 45th ASHP Midyear Clinical Meeting and Exhibition

By: Richard Ponder, MBA, CMRP, CPP, CEPP, CPhT

Informative and innovative speakers illustrated why technicians continue to advance their value within LSHP and at the 45th ASHP Midyear Clinical Meeting and Exhibition. Working under the direction of JoAnn Harris, Director of Educational Services for ASHP, the 2009-2010 Section Educational Steering Committee for Pharmacy Technicians coordinated a program to match the diverse roles technicians engage in daily. This committee is made up of several technicians including two LSHP members, Richard Ponder and Winona Thomas. The diverse presentations and roundtable discussions, many presented by technicians themselves, covered: automation, involvement at the state and national level, managing drug shortages, medication reconciliation, motivation and goal setting, pharmacy waste, professionalism, healthcare reform, regulations, teaching skills and training programs. The following is how our members participated:

- Richard Ponder, MBA, CPhT, CPP, CEPP, CMRP, Division Inventory and Procurement Analyst for HCA and Co-Chair of the LSHP's Membership and Marketing Committee, was involved in multiple programs during this year's meeting. He was the facilitator for the Pharmacy Technician Meet and Greet Networking Session, presenter during the Management Pearls 2010 section titled, "Impact of Pharmacy Purchasing Professionals on Pharmacy Finances," co-presenter with Mark Brunton on automation titled "Thinking Outside the Box Instead of Using It Right Out of the Box," participated on a panel discussion titled, "Which Program Fits? Technician Training Programs," and facilitated a roundtable discussion on pharmacy waste.

- Winona Thomas, CPhT, Pharmacy Technician Program Coordinator for Ayers Career College and Co-Chair of the LSHP's Technician Activities Committee, was also involved in multiple programs during this year's meeting. She was the facilitator for a panel discussion titled "Which Program Fits? Technician Training Programs," co-presented with Lezlie Cohn-Oswald on titles "Get Involved in Your State Affiliate," and "State-By-State Review of Pharmacy Technician Requirements," and facilitated a roundtable discussion on techniques to enhance good teaching skills.

These technicians were two of the 138 technicians in attendance networking with other pharmacy professionals and exhibitors. Through these networking experiences they were able to learn specific offerings related to their practice; for example, Cengage's interactive technician candidate educational offerings, training modules for technicians through Therapeutic Research Center's Pharmacy Technician University, advance degrees from the University of Florida's College of Pharmacy and additional resources from ASHP's Affiliate Relation Division. Ms. Vanderpool, Director of Affiliate Relations for ASHP, commended the efforts technicians have made and reaffirmed ASHP's commitment to technicians with the launch of the Pharmacy Technician Information Center website <http://pharmtechinfocenter.com/index.html>. The committees, presenters, attendees and the pharmacy technician profession should be commended for their efforts in making the 45th ASHP Midyear Clinical Meeting and Exhibition a success. If this year is a sign of things to come, the impact LSHP's Technicians will have on the 46th ASHP Midyear Clinical Meeting in New Orleans, December 4-8, 2011, will be a sight to behold.

LSHP ULM Student Chapter Update

By: Julie Sheridan, ULM Student Chapter President

Happy New Year fellow members of LSHP! I am very excited about the upcoming semester. I will soon meet with the executive team to plan out our busy spring semester. We will be hosting two professional developments. Dr. Greg Smith has graciously offered to discuss poison prevention to the chapter members. We will also offer our annual residency informational and discussion, which will be open to all students. Many of the faculty and students are already asking about our LSHP Pet Party. I think everyone had a wonderful time last year. This may also become an annual event based on the participation. However, that will be later in the spring semester and I will keep you all updated.

As for last semester, we hosted the Clinical Skills Competition. It went very well for all five teams who competed. Our winners were Monica Morgan and Victoria Williams. They are outstanding students who represented our college at the national meeting. Also, we had a professional development with Dr. Jeffrey Evans with great feedback from

the members. The students really appreciated the information on licensure, reciprocity, and other helpful hints for beginning our practice of pharmacy.

I was so excited about our wonderful turnout for the LSHP Mid-year meeting and I hope to continue that trend for the Annual meeting. We enjoyed meeting the students from Xavier and I have included a photo of our groups together. I hope that, through LSHP, we can foster unity and possibly plan some combined events in the future.

Finally, our fleur-de-pharm fundraiser was an absolute success thanks to each of you! We shipped blankets and t-shirts all over the state. I hope that everyone liked them as much as our students! We will have another t-shirt this semester titled, "When Life Calls for an Auxiliary Label." If you are interested, we will send out emails as soon as we begin selling them. Thank you all again for your support!

LSHP Xavier Student Chapter Update

By: Mia Incaprera, Xavier Student Chapter President

Xavier's chapter of LSHP is extremely proud to announce our placement in the Top 10 of the Clinical Skills Competition at the ASHP Midyear meeting. Congrats Ifeanyi Onor and Christopher Gillard! We are so proud of you! Such an exciting way to end the great semester we had. Last semester was very successful with a prosperous membership drive, award winning flu project, and educational, informative meetings. We also completed community service events that included time at a health clinic where we measured blood pressure, glucose, and cholesterol. It was beneficial to the community as well as students. We enjoyed practicing our clinical assessment and counseling skills.

The Spring semester has a lot in store for us. We are looking forward to bringing in some first year residents to speak at our next meeting, along with some P4s that have gone through the residency match program later in the year to answer the many questions our students have. We also plan to host a visit from a VA pharmacist at one of our meetings to give our members a look into the life of a federal employee pharmacist. We have already hosted a can food drive this semester that had a bigger turnout than we have ever seen. Thank you students!! We have a few more things planned to assist the community in the upcoming months and hope your enthusiasm and participation continues! Our chapter is looking forward to a great semester!! Good luck to all of the students!



Xavier & ULM Students at the LSHP Mid Year Meeting in October.

Front row from left: Mia Incaprera, Catherine Chaucer, Julie Sheridan, Danielle Meche, Breanna Peyton.

Back row from left: Maxwell Haslauer, Josiah Land, Heather Scullin, Jana Treece, Monica Hartman, Jonathan Savoy & Shawn Thomas.

Welcome to the following members who joined LSHP in the second half of 2010 and in January of 2011! We're glad to have you as members!

Katie Barber
Mia Bassaragh
Mustafa Benrahla
Jill Comeau
Melinda Fontenet
Lenore Forbes
Wendy Gaudet
Christine Hamilton
Charlye Henderson
Phi Ho
Gary Jean
Jessica Landry

Joseph LaRochelle
Eging Lu
Brittany Mallini
Elizabeth Morgan
Chau Nguyen
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Kristen Pate
Karlye Pesci
Phillippe Pucheu
Melissa Sanchez
Jeremy Taylor
Tiffany Upshaw

Barry Valure
Hui Yun



“President” continued from page 1

4. Business expansion of the chain drugstore industry.

However, as the decade draws to a close, evidence demonstrates that the shortage is rapidly ending and the profession is likely entering a period of surplus. The Aggregate Demand Index (ADI) published by the Pharmacy Manpower Project (PMP) was 3.28, down 0.09 from the previous month and 0.45 from the same month the previous year. The ADI scale is 1-5 with 1 reflecting a high surplus and 5 a high demand. The ADI for community pharmacy has fallen to 2.96 and 3.35 for institutional pharmacy demonstrating that a surplus currently exists in both practice settings. The trend line of the ADI has been declining for the last decade.

(www.pharmacymanpower.com Aggregate Demand Index)

Faculty recruitment and retention has been identified as one of the top issues and challenges of colleges and schools of pharmacy. Nationally, there is a severe shortage of faculty in colleges of pharmacy (AACP Institutional Research Brief). In the 2008-2009 academic year there were 396 total vacant/lost faculty positions. The top reasons for all vacancies were: moved to a faculty position at another school of pharmacy (20.1%), moved to a practice position in the health care private sector (15.4%), or retired (12.6%). In 2008-09, nearly half of the positions (48.1 %) remained vacant because there were not enough qualified candidates. There appears to be a serious shortage of qualified, experienced faculty at schools of pharmacy and this may well compromise the quality of education for student pharmacists.

One of the most significant concerns about expanded pharmacy education is the availability of quality experiential rotation sites. The APhA and ASHP conducted a survey of experiential education directors nationwide in 2005 to assess the scope of this issue. Respondents reported that placing students in a quality hospital or health-system pharmacy setting is by far the most difficult. For this sector of practice, 81% of respondents said it is “extremely difficult” or “somewhat difficult” to find student rotations. The degree of difficulty of placing students in quality community sites was somewhat easier, with the overall response of 51% “extremely difficult” or “somewhat difficult.” A few experiential coordinators volunteered that they expect to have more difficulty in placing students in quality rotations as class sizes increase and new schools open. Hiring managers in pharmacy practice were surveyed separately on their facility’s capacity to accommodate the number of requests they receive

for advanced student rotations during the last year of the curriculum. About 46% of hospital and health-system respondents indicated that the requests “somewhat exceeded” or “far exceeded” their capacity. In community pharmacy, almost 18% of hiring managers responded that requests “somewhat” or “far exceeded” their capacity. These data corroborate the findings from the survey of experiential education directors, especially in hospital and health-system settings.

Conclusions and Recommendations from APhA and ASHP:

The profession of pharmacy—as embodied in its practitioner and educational organizations—is expected by the public to make wise workforce planning decisions. Consistent with that expectation are:

1. A reasonable balance between the demand for and supply of practitioners
2. Reasonable synchronization between planning for practice and planning for education
3. Preparation of quality practitioners who have the necessary knowledge, skills, abilities and attitudes to serve the public well
4. Care must be taken to preserve the patient-oriented focus of pharmacy education, which is a significant strength of the profession.

Examination of these issues has led to the following recommendations:

1. Pharmacy practitioner and educational organizations should jointly convene a stakeholders’ conference on workforce planning to analyze the full range of issues related to the preparation of pharmacists for contemporary and future practice.
2. Informed by the findings of such a conference, pharmacy educational and practitioner organizations should establish an ongoing process for jointly assessing the near-term and long-term workforce needs in pharmacy practice and how to best meet those needs.

I hope this summary helps to clear up a very complex and controversial matter that is expected to have a profound effect on our profession in the next few years.

Teresa Nash, PharmD
LSHP President



Xavier Students are finalists at ASHP Competition

Christopher Gllard P4 and Ifeanyi Onor P4, Xavier University Students and LSHP Xavier Student chapter members were honored at the ASHP Student Awards Ceremony in December at the ASHP National Clinical Skills Competition for being among the 10 finalists. There were 110 teams that competed. During the competition, administered by ASHP’s Pharmacy Student Forum and sponsored by the ASHP Research and Education Foundation, students demonstrated their skills by assessing patient information and current therapy, identifying and prioritizing drug therapy problems, identifying treatment goals and recommending a pharmacist’s care plan.

Congratulations to Chris and Ifeanyi!

Isotretinoin (Accutane®)- Is it worth it?

By: Lauren C. McCauley, PharmD Candidate

Accutane® (isotretinoin) is a popular acne drug that is indicated for the treatment of severe recalcitrant nodular acne. Recent controversy over the drug's severe side effects has surfaced many questions especially whether the drug should still be used.

Isotretinoin is a derivative of vitamin A/retinoic acid and is classified as a retinoid. The exact mechanism of action is unknown, but it is thought to inhibit sebaceous gland function and keratinization. Its improvement in nodular acne patients is usually associated with a reduction in sebaceous gland size, reduced sebum secretion, and regulation of cell proliferation and differentiation. Due to the significant adverse reactions associated with this drug it should be reserved for patients who have failed all other conventional acne therapy such as topical gels and creams, topical and oral antibiotics, and topical retinoids.

Adverse reactions associated with isotretinoin include fetal abnormalities (pregnancy category X), depression, psychosis, suicidal ideation/attempts, violent behavior, tachycardia, increased blood glucose levels, hypertriglyceridemia, dry mouth, skin, lips, and nose, photosensitivity, and inflammatory bowel disease among others.

The FDA recognizes the risk associated with this drug and mandates that all prescribers, dispensers and patients be registered with the iPLEDGE program. The program requires that physicians and pharmacies be registered, activated and trained by the iPLEDGE program in order for the drug to be prescribed and dispensed. iPLEDGE also states that isotretinoin cannot be dispensed in more than a 30 day supply, each refill requires a new prescription and new authorization through the program's system. A medication guide must be given each time the drug is dispensed. Due to the severity of the birth defects associated with this drug, iPLEDGE requires that all patients must register in order to receive the drug. Female patients in particular must verify that two forms of contraception are being used 1 month prior to, during treatment, and 1 month after treatment. Also, treatment cannot begin until the patient has had two negative pregnancy tests at least 19 days apart. Throughout the regimen a monthly pregnancy test must be completed at a CLIA-certified lab within 7 days of the next refill.

With all the risks and requirements associated with this drug many physicians and pharmacists don't believe this drug should still be on the market. Recent commercials and law suits have brought these concerns to the public. So the question must be asked, "If this drug has so many adverse reactions and must be watched so closely, why is isotretinoin still available for use?"

Many studies have been done to see if the side effects reported with isotretinoin use are directly associated with the drug or be linked to other causes. Most studies have come to the conclusion that there is not enough evidence to prove that the adverse reactions are a direct correlation with isotretinoin use.

A study done in 2009 titled "Isotretinoin Is Not Associated With Inflammatory Bowel Disease: A Population Based Case-Controlled Study" came to the conclusion that patients with IBD were no more likely to have used isotretinoin than the patients in the control group. Similar conclusions have been made in studies that have looked at many of the other adverse events thought to be associated with isotretinoin. On the other hand, certain studies have linked effects with isotretinoin usage such as the "Isotretinoin and the Risk of Depression in Patients With Acne Vulgaris: A Case Crossover Study" which concluded that depression increased three-fold in patients exposed to isotretinoin who had no previous history of depression. Studies such as this one are the reason the manufactures of isotretinoin and have added warnings to their product's labels.

The reason why isotretinoin is still available for use can basically be summed up by saying that there are not enough reliable studies available to directly link isotretinoin to its many assumed adverse effects. There are many success stories of patients who have battled with severe acne who have been cured or controlled by this drug, who have not experienced the severe adverse effects. Until more evidence is available to link isotretinoin to these severe reactions, it is best that this drug is used under the close supervision of a trained and experienced health professional and the rules of the iPLEDGE program are followed.

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Use of Denosumab for Osteoporosis in Postmenopausal Women

By: Linh Han, PharmD Candidate

Osteoporosis is a disease characterized by low bone mass and loss of bone tissue that may lead to weak and fragile bones. In the United States, about 8 million women and 2 million men have the disease. Osteoporosis prevalence increases with age as bone density decreases after age 35 and decreases even more rapidly after menopause. Risk factors also include cigarette smoking, lack of exercise, thin/small body frame, and calcium/vitamin D intake.

Prevention or treatment of osteoporosis alone with nonpharmacologic interventions may not be sufficient. Therefore, drug therapy is often necessary. The current drug classes for fracture prevention include bisphosphonates, selective estrogen receptor modulators, and hormonal medication. On June 1, 2010, denosumab (Prolia®) became the first and only biological agent FDA-approved for treatment of osteoporosis in postmenopausal women.

Bone is a tissue that undergoes constant remodeling through a balance of specialized cells (osteoclast/osteoblast). RANK Ligand is a protein expressed on the osteoblast cells. RANKL interacts with RANK receptor on osteoclasts which results in activation, migration, differentiation, and fusion of osteoclast to bone, releasing enzymes that begin the process of bone resorption. Denosumab is a fully human monoclonal antibody that specifically inhibits RANKL which results in decrease formation, function, and survival of osteoclasts. This leads to decreased bone resorption and increased bone density.

The FREEDOM trial randomized 7868 postmenopausal women ages 60-90 with osteoporosis and T-scores between -2.5 and -4.0 at the lumbar spine (LS) or total hip (TH) to either subcutaneous denosumab or placebo. Compared to the placebo, denosumab showed improvement in bone mineral density of the LS (9.2%) and TH (4.0%) after three years, whereas there was no improvement in the LS (0%) and TH (-2.0%) with placebo. In a second trial, 1189 postmenopausal women with low bone mineral density (T-scores \leq -2.0 at the LS or hip), were randomly assigned to denosumab 60 mg subcutaneously every 6 months with oral placebo or to oral alendronate 70 mg weekly with subcutaneous placebo injections every 6 months. After one year, denosumab showed improvement of bone mineral density of the hip (3.5%) and of the LS (5.3%), whereas the alendronate only showed an improvement of 2.6% of the hip and 4.2% of the LS.

Not only does denosumab illustrate improvement in bone mineral density, it has also been shown to reduce fracture risks. The FREEDOM trial described fracture risk benefit with denosumab compared to placebo after three years: incidence of new spine fracture (denosumab 2.3%, placebo 7.2%), incidence of hip fracture (denosumab 0.7%, placebo 1.2%), and incidence of non-spine fracture (denosumab 6.5%, placebo 8%).

Denosumab is dosed as a single-use prefilled syringe or vial containing 60 mg in 1 mL solution and should not be shaken. It has to be refrigerated at 36-45°F in its original carton. If stored at room temperature, the drug must be used within 14 days. Denosumab is a subcutaneous injection in the upper arm, upper thigh, or abdomen every 6 months and should be administered by a healthcare professional. Along with denosumab, patients should be instructed to take at least 1000mg of Calcium and 400 I.U. of Vitamin D daily.

Generally, denosumab is well tolerated with the most common adverse effects being back, extremity and musculoskeletal pain, and hypercholesterolemia. Denosumab should not be given to patients with hypocalcemia until it is corrected as this drug decreases calcium levels in the blood that can lead to spasms, twitches, muscle cramps, or tingling in the peripheral extremities. In patients with renal impairment, calcium levels should be monitored and measured approximately 10 days after denosumab administration. No dose adjustment is needed for renal impairment and there are no clinical studies to assess the effects of hepatic impairment on the pharmacokinetics of denosumab. Other adverse effects include osteonecrosis of the jaw due to over suppression of bone remodeling, dermatologic reactions such as rashes and eczema, and serious infections of the urinary tract and abdomen. Patients should be advised to seek medical attention if any signs are developed.

Denosumab should not be administered to pregnant women based on animal studies, which show that it may cause fetal harm. There are inadequate studies in humans.

Patients with severe renal impairment are at a greater risk for developing hypocalcemia and clinical monitoring of calcium, phosphorus and magnesium is highly recommended. Patients should also be advised to take adequate amount of calcium and vitamin D.

Denosumab is a new efficacious alternative for postmenopausal women who are at risk of fractures and cannot tolerate other available therapies. Though oral bisphosphonates are preferred as the initial treatment of osteoporosis due to their long term safety data and efficacy, denosumab can be a favorable option for patients who have a greater risk of fractures and older patients who would need dosing adjustments of the oral bisphosphonates. As more clinical studies are conducted in the future, a better insight will lead to a greater standpoint on where denosumab will stand amongst other osteoporosis therapies.

References found on page 8.

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Go to http://www.ashp.org/legtowork?WT.ac=cp_20110128 Legislator for more information!

Congratulations to the 2011 LSHP Award Nominees.

Award winners will be announced at the Awards Luncheon as part of the LSHP 2011 Annual Meeting on Saturday, May 28, 2011 at the Hilton Riverside in New Orleans. Congratulations to these nominees and thank you for all you do for LSHP and health-system pharmacy in Louisiana!

Health-System Pharmacist of the Year

Jackie Hall
Loretta Lemoine
Michael Mohundro
Teresa Nash
Mandy Ranzino

Technician of the Year

Shelly Dillon
Olivia Dong
Chuck Everton

Outstanding Service Award

David Loftin
Tommy Mannino
Brice Mohundro

Industry Award

Corey Chimento
Cherie Saucier

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