From MSHP President
John Clark:

Greetings:
It’s hard to believe that the summer months are in our rearview mirror! The lazy days of summer vacations have drawn to a close, but that doesn’t mean that MSHP wasn’t hard at work. Earlier, at the end of July, the Board met for the annual strategic planning retreat. It was quite a successful meeting; the Board was truly energized and excited for the upcoming year. Look for the 2017-18 Strategic Plan to be posted to the MSHP website soon.

Many of our tremendous committees also spent the summer working diligently to serve our members. Elsewhere in this issue you can read about what has become one of my favorite events – the Resident Welcome Event. The Residency Committee once again facilitated a terrific event to allow residents and preceptors to meet, catch up and otherwise network.

The Annual Meeting Committee doesn’t sleep either - almost as soon as the meeting had concluded, they were hard at work planning for the next year’s event. Based on survey feedback, they scoured the Commonwealth for the best venue to hold MSHP’s biggest programming event of the year.

The Programming Committee has committed itself to ensuring high quality, diverse programs throughout the year – make sure to check out the CE calendar; there is something for everyone. These are just a few of the many things that MSHP volunteers have been doing to ensure that Massachusetts continues to be the state affiliate that other states want to emulate.

If any of this sounds interesting and you would like more information about getting involved, please don’t hesitate to contact any member of the Board or committee chair. As always, if there are any questions, comments or feedback, we would love to hear from you. Please don't hesitate to email president@mashp.org.

John
MSHP Resident Welcome Event
Very Successful

The MSHP Residency Program Committee was pleased to host the third annual Resident Welcome event on August 17, 2017. This year’s event was held at the Bleacher Bar located within Fenway Park in Boston. Approximately 120 residents, fellows, preceptors and residency program directors were in attendance. Caricature artists contributed to the fun atmosphere by drawing cartoon likenesses of attendees. Wally the Green Monster, mascot for the Boston Red Sox, stopped by for selfies with the residents, fellows and preceptors. The MSHP Residency Program Committee members hope that everyone who participated had a great time!
Continuing Education

Antimicrobial Stewardship in Acute Care Hospitals: Picking the Low Hanging Fruit and Reaching Beyond

**Pharmacist CE**

**When:** Tuesday, October 3, 2017 | 5:30 PM - 6:30 PM  
**Location:** Emerson Hospital, Concord, MA  
**Speaker:** Kirthana Raman, PharmD, BCPS  

Pharmacy Learning Network, Boston Regional Meeting

**When:** Saturday, October 7, 2017 | 7:30 AM - 5:30 PM  
**Location:** Westin Copley Place, Boston, MA  
**Details:** Full day educational conference offering 6.0 CE credits for pharmacists. Registration is $39-99, depending on date of registration. Use code "PARTNER" for $10 off!  
**Event website/registration:** [http://www.managedhealthcareconnect.com/pln-meeting/boston](http://www.managedhealthcareconnect.com/pln-meeting/boston)

11th Northeast Regional Hematology / Oncology Pharmacists Symposium

**When:** Friday, October 13, 2017 | 9:00 AM - 8:00 PM & Saturday, October 14, 2017 | 7:00 AM - 4:40 PM  
**Location:** Boston Marriott Burlington, Burlington, MA  
**Details:** Two day educational conference offering 13 CE credits, including 2 law, for pharmacists. Registration is $150.00 ($130 MSHP members) for 2 days or $115 ($100 MSHP members) for 1 day.  
**Event website/registration:** [http://ce.ahrevents.com/index.cfm?fa=view&eventID=7921](http://ce.ahrevents.com/index.cfm?fa=view&eventID=7921)

Clinical Update: Pain Management, COPD, Type Two Diabetes, Compounding, Pharmacy Law

**When:** Tuesday, November 7, 2017 | 8:00 AM - 5:30 PM  
**Location:** The Westford Regency, Westford, MA  
**Details:** Full day educational conference offering 7.5 CE credits, including 2 law, for pharmacists. Registration is $119 ($109 for MSHP members) and includes CE credits, breakfast, lunch, and PM refreshment. Event held by American Health Resources, Inc, in association with MSHP.  
**Event website/registration:** [https://ce.ahrevents.com/index.cfm?fa=view&eventID=8285](https://ce.ahrevents.com/index.cfm?fa=view&eventID=8285)

Residency Program Director and Preceptor Networking Event (No CE Credit)

**When:** Thursday, November 2, 2017 | 6:00 PM - 10:00 PM  
**Location:** La Cantina Italiana Restaurant, Framingham, MA  
**Details:** Please join us for a residency preceptor and residency program director networking event to be held on Thursday, November 2, 2017 at La Cantina Italiana Restaurant in Framingham, MA! Join your colleagues for an evening focused on sharing best practices in residency training. Buffet dinner with dessert, coffee and/or tea is planned. Registration is $25 ($20 MSHP members). Registration deadline is Wednesday, October 18, 2017.  
**Event website/registration:** [https://mashp.site-ym.com/events/EventDetails.aspx?id=1016336](https://mashp.site-ym.com/events/EventDetails.aspx?id=1016336)
Policies Approved by the 2017 ASHP House of Delegates

Communicating the outcome of the ASHP policy process to constituents is the responsibility of every delegate. The new policies, as approved by the House and the Board, are available in several formats on the ASHP website. ASHP has prepared a set of slides (also available as a PDF) as a resource. Please reach out to our delegates, Ross Thompson, Snehal Bhatt, Karl Gumpper, Erin Taylor, or Ernest Anderson (alternate delegate), with questions, via the MSHP office.

2017 Call for ASHP Nominations

ASHP is now accepting nominations for the following awards:
- Board of Directors’ Award of Excellence
- Board of Directors’ Award of Honor
- Board of Directors’ Distinguished Leadership Award
- Board of Directors’ Donald E. Francke Medal
- Board of Directors’ Honorary Membership Award
- Chief Executive Officer’s Award for Courageous Service
- ASHP-ABHP Joint Leadership Award

The deadline for nominations is October 1, 2017. Please submit all nominations using the Award Nominations Form.

The ASHP awards program is designed to publicly recognize and express gratitude to those who have made important contributions, directly or indirectly, to advance pharmacy practice in acute and ambulatory care settings. By putting the spotlight on extraordinary individuals, the program also is intended to inspire others to service and leadership in hospitals and other healthcare settings. Selections will be made in February 2018.

If you have questions about the nomination procedure, please contact ASHP staff member, Rachael McGarry, at awards@ashp.org or (301) 664-8789.

Save the Date for 2018 MSHP Spring Event!

May 14 and 15, 2018: Sheraton Framingham Hotel and Conference Center, Framingham, MA

Non-Disciplinary Pharmacy Substance Use Disorder Program Established

A voluntary, non-disciplinary program has been established in Massachusetts for pharmacists, pharmacy interns and pharmacy technicians with a substance use disorder involving alcohol or drugs. The program is called the Pharmacy Substance Use Disorder Program (PSUD). A fact sheet outlining information about the program can be reviewed by CLICKING HERE.
Practice Changing News

Editor: Jonathan Zand, PharmD BCPS

All views expressed are those of contributing members and the sources listed but are not views or statements of either MSHP or ASHP.

Ambulatory Care; Infectious Diseases: Debate over the ideal antibiotic course continues
(Thanks to Jeff Pearson, PGY2 Pharmacy Resident (ID), BIDMC, for his contribution)

Does it always make sense to “take all of your antibiotics, even if you feel better”? Stopping antibiotics before completing the full course has been discouraged, based on the assumption that doing so promoted drug resistance, but there is little evidence to support this claim. On the contrary, controlling antibiotic over-use helps mitigate resistance. A recent highly-publicized commentary in BMJ focuses attention on the need to better identify infections in which shorter-courses are clinically appropriate, especially in the outpatient setting in which 85% of antibiotics are prescribed. Pharmacists can play an important role in promoting appropriate use and translating study findings to their patients: While it is likely that shorter courses of antibiotics are warranted for certain uncomplicated infections, particularly in lower-risk patients who respond quickly to treatment, more studies are needed to make definitive recommendations. Patients should only stop antibiotics early under medical supervision.

Source: Llewelyn MJ, Fitzpatrick JM, Darwin E et al. The antibiotic course has had its day. BMJ 2017;358:j3418. doi: 10.1136/bmj.j3418. PMID 28747365

Emergency Medicine; General Practice: Epinephrine injection for anaphylaxis, recent developments

When the price of an EpiPen 2 pack jumped from under $200 to over $600, many clinics and hospitals felt compelled to substitute low-cost epinephrine ampules or vials. Within months ISMP registered an increase in medication errors due to IV “bolus” administration of the 1 mg/mL strength of epinephrine injection which is intended for IM administration in anaphylaxis. IV bolus administration of epinephrine for anaphylaxis is rarely warranted and should be discouraged, but if it is ordered (e.g., for a poorly perfusing patient not responding to IM injections, while preparing an infusion), only the 0.1 mg/mL preparation is to be used IV (not 1 mg/mL) and the IV dose is 0.05 to 0.1 mg for an adult, about 1/10th or less of the dose used in ACLS.

Recent developments that pharmacists can incorporate in to practice at their facilities to improve safety in giving epinephrine for anaphylaxis include:

- Familiar ratio expressions are being removed from the labels of epinephrine injection. “1 mg/mL” can no longer be labeled “1:1000” and “0.1 mg/mL” can no longer be labeled “1:10,000”. Many clinicians are accustomed to seeing the ratio expressions and nighttime hypoglycemia but this can be counteracted in most patients with T2DM with a bedtime snack. Regular insulin is usually given 30 minutes before a meal and is thus less convenient than analogs, but study data show that regular insulin can also be given just before a meal without sacrificing glycemic control in T2DM. Insurance plans are shifting costs to patients and coverage may not be available or affordable. Pharmacists can help by recommending regular and/or NPH as lower cost alternatives to analogs for type 2 diabetic patients with high out-of-pocket costs. Be prepared to explain to the team how the pharmacokinetics of the older agents compare with newer analogs and to recommend a specific strategy to assure safe conversion.


Ambulatory Care; Diabetology: Regular and NPH insulins are useful alternatives to high-cost analogs in patients with type 2 diabetes mellitus (T2DM)

The price of a single vial of analog insulin (glargine, detemir, aspart, or lispro) now exceeds $170. Although regular and NPH insulins are available for about $25 per vial, they are now prescribed less frequently. The main advantage of long-acting analogs in type 2 diabetes (T2DM) is a modest reduction in the risk of
could benefit from an in-service communication. A graphic explaining the change is available. Source: US Food & Drug Administration Important Labeling Changes to Critical Care Medications; June 27, 2017

- A prefilled syringe for IM injection containing 0.3 mg epinephrine per dose was approved this summer and is expected to be less costly than auto-injectors. It is for treating anaphylaxis in patients weighing ≥30 kg. Source: Symjepi US prescribing information June 2017.

- A recent study of 31 EpiPens found that devices that were as much as four years past the expiration date still contained 84 to 88% potency. Thus, patients should understand that expired devices retain most of their potency for up to 4 years and that if anaphylaxis develops, using an outdated device is preferable to not injecting epinephrine at all. Source: Cantrell FL, Cantrell P, Wen A et al Epinephrine Concentrations in EpiPens after the Expiration Date. Ann Intern Med 2017 June 20; 166(12):918-9. PMID 28492859

Patients should be counseled on proper use and storage of EpiPens and advised not to delay administration when signs of anaphylaxis occur.

**Critical Care; Cardiology: Timing of IV diuretic therapy in acute decompensated heart failure**

Until recently only retrospective data were available to compare outcomes from diuretic regimens in patients with acutely decompensated heart failure. A recent prospective multi-center study of 1291 patients with acute heart failure with reduced ejection fraction (HFrEF) who received IV furosemide within 24 hours of admission found that those patients who received treatment within 1 hour of arrival in the emergency department had a significant mortality benefit relative to those whose diuretic regimen was initiated later than one hour after presentation. In addition to controlling symptoms of fluid overload, prompt initiation of an appropriate IV loop diuretic step-up regimen may improve outcomes in acutely decompensated HFrEF. Source: Matsue Y, Damman K, Voors A et al. Time-to-Furosemide Treatment and Mortality in Patients Hospitalized with Acute Heart Failure. J Am Coll Cardiol 2017 Jun 27; 69(25):3042-3051 (PMID 28641794)

**Anticoagulation; General Practice: Direct oral anticoagulant (DOAC) under-dosing associated with increased thrombotic events**

(Thanks to Stefanie Stramel, PGY1 Pharmacy Resident, BIDMC, for her contribution)

Two recent studies assessed the dosing of direct oral anticoagulants (DOACs) in relation to frequency of thrombotic events in real world populations with venous thromboembolism and atrial fibrillation. Approximately one-half of patients were prescribed a DOAC dose regimen that was not in accordance with guidelines or FDA labeling. Under-dosing occurred more frequently than over-dosing in both populations and under-dosed patients were at increased risk of thrombotic events. Pharmacists should evaluate DOAC orders carefully and be prepared to intervene when under- or over-dosing is suspected based upon an assessment of kidney function, drug interactions, age, and weight depending on specific DOAC.


**Critical care: Recent data analyses on impact of early interventions in sepsis**

(Thanks to Joshua Etheridge, PGY1 Pharmacy Resident, BIDMC, for his contribution)
The 2016 Surviving Sepsis Campaign guidelines no longer recommend early goal-directed therapy as the sole means of resuscitation in patients with sepsis/septic shock. Early goal-directed therapy (EGDT) is the practice of managing sepsis patients in a protocolized manner that involves intensive monitoring and management of certain hemodynamic parameters. A recent meta-analysis of 3723 patients at 138 hospitals across seven countries found no difference in 90-day mortality for septic patients when comparing EGDT (24.9%) with usual care (25.4%). Additionally, EGDT was associated with similar average quality of life and QALYs with a negative net incremental benefit, implying that usual care measures may be less costly.


A recent analysis of 50,000 patients with sepsis who were treated according to mandatory protocolized early goal-directed therapy (EGDT) identified an increase in mortality with delayed administration of antibiotics (>3 hours) but not with increased time to completion of first IV fluid bolus (>6 hours). This study provides additional support for adherence to surviving sepsis campaign guideline recommendations to give appropriate antibiotics, preferably within the first hour after presentation in both sepsis and septic shock.


**General Practice: Unintended effect of an abuse-deterrent opioid formulation**

A long-acting abuse-deterrent formulation of oxymorphone, Opana ER, has been withdrawn from the US market at the request of the FDA due to concerns related to injection abuse, including reports of thrombotic microangiopathy (TMA) when the oral formulation is injected IV. TMA findings include thrombocytopenia, hemolytic anemia, and kidney failure that can result from tissue injury when platelet rich thrombi accumulate in small blood vessels. Opana ER-associated TMA is thought to be due to an inert component that was added to the formulation to make it crush-resistant and deter IV injection. Generic extended-release oxymorphone products remain on the US market at this time.

Source: US Food & Drug Administration FDA requests removal of Opana ER for risks related to abuse; June 8, 2017

ASHP Pharmacy News

9/2/2017 Houston Methodist Hospital’s Pharmacy Team Weathers the Storm

8/30/2017 First Gene-Transfer Therapy Approved for the U.S. Market

8/25/2017 New Oregon Law Lets Pharmacists Prescribe Drugs and Devices

8/24/2017 Asthma Clinics Combine Pediatric Care, Pharmacy Student Education

8/14/2017 ASHP Fellowship Trains Future Association Executives

8/11/2017 Coalition Seeks Solutions for Clinician Burnout

8/11/2017 Program Teaches MTM-Focused Teams How to Tell Their Stories

7/27/2017 Pharmacists’ Home Visits Target Adherence in Behavioral Health Patients

7/21/2017 Easier Path for Preparing Albuterol for Continuous Nebulization May Complicate Patient Care

7/13/2017 Guideline Highlights Role of Hypertension Control in Preventing Heart Failure

7/10/2017 Survey Finds Sodium Bicarbonate Shortage Affecting Hospitals’ Daily Operations
Programming Committee Seeks CE Presentation Proposals

The MSHP Programming Committee is looking for topics and presenters to offer education sessions at the 2018 MSHP Annual Meeting. Please note that the education sessions are typically 1 hour in length. It is expected that the session have audience participation and interaction. MSHP is pleased to offer 3 distinct tracks at the 2018 MSHP Annual Meeting in addition to Keynote and Law CE. We are seeking proposals for the clinical track, leadership track, and a new resident/early careerist track.

Please complete the requested information in the presentation proposal form by October 18, 2017.

CLICK HERE for more information and to complete and submit the proposal form.

Join an MSHP Committee!

- Looking for a way to make a difference in your pharmacy community by participating in MSHP?
- Not sure you want to dive right into running for a leadership position?
- Then why not consider a position on an MSHP committee?

MSHP is looking for interested pharmacists and technicians like you to provide input and feedback!

Check out this link http://www.mashp.org/?page=committee at MSHP and send us an email, or contact us via FB or Twitter.

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Comments & Suggestions on our Newsbriefs?
Please email us at admin@mashp.org.
Pharmacy Forecast 2017 Examines Complex Demands of Regulatory Requirements

Healthcare is a highly regulated industry—encompassing devices, pharmaceuticals, other healthcare products, and the provision of and payment for patient care services. The breadth of regulations that apply to healthcare organizations is little understood by the general public and many who work in the healthcare field. There is a high level of concern among pharmacy practice leaders about the burden of compliance with the growing array of complex legal requirements. Pharmacy Forecast 2017 examines the factors that make achieving compliance so challenging.

Panelists were surveyed on how they believe various factors will affect the ability to comply with regulatory requirements (see the below chart for an example). In the regulatory requirements chapter, Linda S. Tyler, Pharm.D., FASHP, Chief Pharmacy Officer, and Erin R. Fox, Pharm.D., FASHP, Director, Drug Information Service, both of University of Utah Health Care, Salt Lake City, offer their analysis regarding what pharmacy practitioners can anticipate in this area for the next four years as well as strategic recommendations for navigating the future.

*Take the Forecast Report Quiz:* Respond to the same questions that were posed to the 2017 Forecast panelists and compare your predictions with theirs!

![Chart](chart.png)

Want to Read More?
You can read the entire section on Regulatory Requirements or download the entire Pharmacy Forecast 2017 now!

This free resource explores eight domains that are likely to challenge pharmacists in hospitals and health systems. In addition to managing medication costs, this report looks at:

- Population Health Management
- Health-System Operations
- Health Information Technology
- Therapeutics

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Continued on p. 10
We hope this report will help increase your effectiveness as a leader in pharmacy practice and when planning for your team, department, or health system!

Our Predictions and Analyses Span Multiple Years

You can download every Pharmacy Forecast report from 2013 to the present when you visit the ASHP Foundation website. Each one explores new topics that pertain to the future of pharmacy practice!

More Pharmacy Forecast Please

The Pharmacy Forecast 2017 was supported by a grant from Omnicell, Inc., to the ASHP Foundation’s David A. Zilz Leaders for the Future Fund.