Practice Advancement Initiative (PAI): Pharmacist Roles in Public Health

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Disclosure

• The presenter for this continuing education activity report no relevant financial relationships.

• No off-label uses of medications will be described in this presentation.
Learning Objectives

• Identify steps the pharmacy profession may take to help advance patient care contributions

• Describe Practice Advancement (PAI) implementation, activities, and resources

• Discuss the use of the PAI Hospital and Ambulatory Care Self-Assessments as strategic planning tools to advance pharmacy practice

• Identify three areas where pharmacy professionals have a role in public health activities
The Big Picture

Annual Per Capita Healthcare Costs by Age

Imperative for Change

• **Patient Protection and Affordable Care Act**
  - Needs steady enrollment growth and enough healthy people to keep premiums in line
  - Focuses beyond acute care to value-based purchasing, population management, and cost mitigation

• **More consolidation will reshape healthcare landscape**
  - Vertical integration (i.e., clinical and strategic) is taking place to diversify portfolios (e.g., insurance companies purchasing PBM and urgent care clinic operators)

• **Different models of care delivery and reimbursement continue to emerge** (e.g., ACOs, PCMH, bundled payment arrangements)
Imperative for Change

• Movement away from volume toward value-based payment (e.g., reward performance)
• Aging population and declining Medicare beneficiary ratio amplifies unsustainable trajectory of healthcare spending
• 40 percent of older Americans take at least five prescription medications, and the number is growing
• Self-care, cost-effective innovations, and infrastructure to support “aging in place” (e.g., CMS Independence at Home demonstration project)

Managed Care. 2015; 24:30-47.
Key Points in 2016-2020 Report

• Medication expenditures will increase by at least 5% annually until 2020
• Significant shift of health-system resources from inpatient to ambulatory care
• Growing emphasis on population health management
• Formal program in place to rigorously to coordinate post acute care services
• Increase in mergers and acquisitions or partnering with outside entities to create economies of scale
• Increase in patient assistance programs

www.ashpfoundation.org/pharmacyforecast
## Distribution of Outpatient vs. Inpatient Revenues

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Outpatient Revenue</th>
<th>Gross Inpatient Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>27%</td>
<td>73%</td>
</tr>
<tr>
<td>1994</td>
<td>28%</td>
<td>72%</td>
</tr>
<tr>
<td>1995</td>
<td>30%</td>
<td>70%</td>
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<td>1996</td>
<td>31%</td>
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<tr>
<td>1997</td>
<td>33%</td>
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<td>1999</td>
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<td>2003</td>
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<td>2004</td>
<td>36%</td>
<td>64%</td>
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<td>2005</td>
<td>37%</td>
<td>63%</td>
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<td>2006</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>2007</td>
<td>38%</td>
<td>62%</td>
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<tr>
<td>2008</td>
<td>39%</td>
<td>61%</td>
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<tr>
<td>2009</td>
<td>41%</td>
<td>59%</td>
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<td>2010</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>2011</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>2012</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>2013</td>
<td>45%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Source: Avalere Health analysis of American Hospital Association Annual Survey data, 2013, for community hospitals. Data for Chart 4.3
Essential Strategies to Expand the Pharmacy Enterprise

- Change perspective
- Understand and participate in the C-suite’s ambulatory care strategic plan
- Assess revenue cycles
- Invest in outpatient pharmacy, specialty pharmacy, and home infusion
- Population health management
- Transitions of care focused planning
- Develop a layered learner model expanding student and resident training within primary care and ambulatory care
- Actively engage technologies to reach ambulatory care patients
- Market pharmacists’ value
- Advocate for the profession
ASHP Accredited Pharmacy Residency Program Growth in Last 30 Years

NOTE: *Ambulatory Care* +25 programs in last year (131 total PGY2 programs)
Origins of PAI

• Pharmacy Practice Model Initiative (PPMI) – started with invitational summit in November 2010
• The PPMI summit resulted in 147 recommendations and statements on the future of health system practice
• An Ambulatory Care Summit (ACS) was held in March 2014, recognizing the acute care focus of PPMI and the clear need to bring focus to ambulatory care practice
• The ACS14 resulted in 25 recommendations specific to practice in ambulatory care
• In 2015, PPMI and ACS14 collectively were rebranded to...
Why the change from PPMI to PAI?

- Pharmacy practice advancement not limited to inpatient care or just the hospital
  - “PPMI” was considered a hospital initiative by members
- Allows us to broaden the scope to include both acute and ambulatory care settings
- Practice advancement related to pharmacist’s role in transitions of care is included
- PAI is not just a tool for managers but one that brings value to clinicians and extenders
Transforming how pharmacists in acute and ambulatory settings care for patients

The Practice Advancement Initiative (PAI) is a profession-led initiative that is empowering pharmacists to take responsibility for patient outcomes in acute and ambulatory care settings.

<table>
<thead>
<tr>
<th>Care Team Integration</th>
<th>Leveraging Pharmacy Technicians</th>
<th>Pharmacist Credentialing &amp; Training</th>
<th>Technology</th>
<th>Leadership in Medication Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promotes a team-based approach to health care</td>
<td>• Empowers the pharmacy team to ensure that pharmacy technicians perform all traditional preparation and distribution activities</td>
<td>• Elevates the reputation of the pharmacy team</td>
<td>• Evaluates the available technologies to support patient safety and quality of care</td>
<td>• Empowers pharmacists to take responsibility for patient outcomes</td>
</tr>
<tr>
<td>• Shifts the roles of the healthcare team to enable pharmacists to optimize their time with patients across the continuum of care</td>
<td>• Urges technicians to handle non-traditional and advanced responsibilities and activities to allow pharmacists to take greater responsibility for direct patient care</td>
<td>• Ensures pharmacists, residents, and students have the training and credentials for activities performed within their scope of practice now and in the future</td>
<td>• Encourages use of available automation and technology to improve patient safety, quality, and efficiency, while also reducing costs</td>
<td>• Positions pharmacists to promote health and wellness, optimize therapeutic outcomes, and prevent adverse medication events</td>
</tr>
<tr>
<td>• Enhances the relationship between pharmacists and patients by positioning pharmacists as healthcare providers</td>
<td>• Promotes technician training and certification requirements, such as the need for uniform standards for advanced technician roles</td>
<td>• Promotes the use of credentials to provide services at the top of the scope of practice</td>
<td>• Identifies emerging technologies to improve pharmacy practice</td>
<td>• Emphasizes that, given their extensive education and training, pharmacists are integral to achieving the best outcomes</td>
</tr>
</tbody>
</table>
PAI: The Journey to Improve Patient Care
Polling Questions

• How many of you have done an ASHP Hospital Self-Assessment?

• How many of you know that there are two ways to take the Ambulatory Care Self-Assessment?

• How many of you have read an article/case study/spotlight on the PAI website?

• How many have used the State Affiliate Toolkit?
Hospital Self-Assessment

• **Complete Hospital Self-Assessment**
• **Prepare Action Plan** – identify priorities based on feasibility and impact
• **Consists of 106 questions designed to assess an individual hospital’s alignment with the recommendations**
• **Covers a wide range of topics:**
  – Advancing the application of IT in the medication-use process
  – Advancing the use of Pharmacy Technicians
  – Care team integration
PAI Tools and Resources

**PAI AmCare Self-Assessment**
A tool to evaluate ambulatory care services against the ASHP Ambulatory Care recommendations and create an action plan to improve practice. Learn more.

**PAI Hospital Self-Assessment**
A web-based assessment tool to help pharmacists determine how their hospital or health system aligns with PAI recommendations. Learn more.

**PAI C-Suite Resources**
Provides practical resources to engage health-system executives in discussions to advance patient care and pharmacy practice. Learn more.

**Quick Links**
- Ambulatory Care Summit Proceedings
- PPMI Summit Proceedings
- PAI State Affiliate Tool Kit
- PAI State Affiliate Grants
- Hospital Pharmacy Progress Measures
- Ambulatory Care Pharmacy Progress Measures
- Frequently Asked Questions

**Practice Advancement Initiative Progress**

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FEATURING ARTICLE:
N.M. Clinic Pharmacists Wield Extensive Prescribing Privileges

Presbyterian Medical Group (PMG) in Albuquerque, New Mexico, is breaking new ground in terms of pharmacists' patient care services. Clinical pharmacists who practice in PMG ambulatory care clinics there can independently prescribe any medication typically used in a primary care visit.

LEARN MORE
Hospital Self-Assessment Tool

The tool consists of 106 questions assessing adoption of the PAI recommendations at the hospital level. Upon completing the questions, the tool will allow the user to develop a list of priorities (an "Action List") individualized to their own hospital/health system. Hospitals will also have the opportunity to generate reports comparing their data with aggregated data collected from similar hospitals within and across their state. A list of resources will also be provided to assist hospitals in implementing change in their institution.
PAI Hospital Self-Assessment Resources

1. Murphy EM, Ovencia CJ, Klaus JA et al. Medication reconciliation at an academic medical center: implementation of a comprehensive program from admission to discharge. Am J Health Syst Pharm. 2009;66(3):2129-2131. [PDF]

2. A Hospital Pharmacist’s Guide to Antimicrobial Stewardship Programs (ASHP White Paper) [PDF]


6. Telepharmacy intervention to improve inhaler adherence in veterans with chronic obstructive pulmonary disease [PDF]

7. ACP position statement: board certification of Pharmacist Specialists [PDF]


9. ACP-White Paper-Value of Conducting Pharmacy Residency Training—The Organizational Perspective 2010 [PDF]

10. Adachi J, Loddice AR. Failure mode and effects analysis to reduce risk of anticoagulation levels above the target range during concurrent antimicrobial therapy. Am J Health Syst Pharm. 2006 May 1;63(9):617-20. [PDF]

PAI Hospital Self-Assessment Summary Report
Institution: Fauquier Hospital
Assessment Date: November 18, 2014

Optimal Pharmacy Practice Characteristics - Part I
Overall Score: 72%

<table>
<thead>
<tr>
<th>Questions</th>
<th>Your Response</th>
<th>Your Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do pharmacy leaders engage in regular, direct communications with hospital administration and the board of directors about medication management systems performance (e.g. through the use of safety and quality measures and beyond routine Pharmacy and Therapeutics Committee reporting)? [B6a]</td>
<td>Yes</td>
<td>100%</td>
</tr>
<tr>
<td>Does resistance to change among pharmacy staff impede development of an optimal pharmacy practice model at your hospital? [B6b]</td>
<td>No</td>
<td>100%</td>
</tr>
</tbody>
</table>
1,718 assessments completed (24.42%) including DC and Puerto Rico

Nine states have achieved ≥ 50% completion
HSA Action Plan Opportunities

• **Top Three Action List Priorities**
  
  – Residency-trained pharmacists
  
  – Assigning initiation of medication reconciliation to appropriately trained pharmacy technicians to:
    
    • Capture admission and discharge medication histories for a reconciled personal medication list
    
    • Care coordinate patient assistance services for post-discharge medication use (e.g., ensuring patient access to affordable medications)
  
  – Provision of discharge counseling by pharmacists to include standardized process for hand-offs to next level of care (e.g., skilled nursing facility, home health)
The Hospital Self-Assessment is recommended for use by hospitals because:

A. It provides a gap analysis to assist in identifying priorities
B. It defines a preferred practice model
C. It supports initiating practice change by providing reference sources
D. A and C
Ambulatory Care Conference and Summit

• Held March 2014 in Dallas, TX
• Educational program and consensus recommendation development
  – Attendees participated in discussion and voting on recommendations
  – Proceedings published in AJHP August 15, 2014
• Four Domains:
  – Defining Ambulatory Care Pharmacy Practice
  – Patient Care Delivery and Integration
  – Sustainable Business Models
  – Outcomes Evaluation
• Resulted in 25 recommendations – broad based statements with multiple components
Why do the Ambulatory Care Self-Assessment?

- Assess how your practice aligns with the ASHP Ambulatory Care recommendations
- Reflect on where you are and showcase what is going well
- Identify areas of need
- Two versions of the self-assessment (system and practitioner)
- Create an action plan to improve practice
  - Put data to use (e.g., strategic planning priorities, business plan development)
  - Determine steps to move from current state to a desired future state
- Benchmark against other facilities and measure progress over time
The Ambulatory Care Self-Assessment Tool (ACSAT) was developed to evaluate environments and perspectives to assess adoption of the Ambulatory PAI recommendations at the practice level.

A. True
B. False
FEATED ARTICLE:
N.M. Clinic Pharmacists Wield Extensive Prescribing Privileges
Presbyterian Medical Group (PMG) in Albuquerque, New Mexico, is breaking new ground in terms of pharmacists’ patient care services. Clinical pharmacists who practice in PMG ambulatory care clinics there can independently prescribe any medication typically used in a primary care visit.

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- Ambulatory Care Pharmacy Progress Measures
- Frequently Asked Questions

Practice Advancement Initiative Progress

Am Care Recommendations. Learn more
PAI Hospital Recommendations. Learn more
Ambulatory Care Self-Assessment Tool

Do you want to see how your practice aligns with recommendations from the 2014 ASHP Ambulatory Summit recommendations? Simply complete the following assessment. Once you complete the assessment, you will be given the opportunity to develop an action plan that will focus on practice priorities that are individualized to your site.

A list of resources to help you implement practice change is provided with the action plan.

Please note that this assessment tool does NOT assist with therapeutic decision making.

Principles of Use

ASHP’s Ambulatory Care Self-Assessment Tool was developed by an expert panel which relied on the following principles:

- Every practice stands to benefit from adopting the 2014 ASHP Ambulatory Care Summit recommendations.
- This tool will help practitioners in all outpatient healthcare settings. However, its utility will vary based on various factors, such as, the institution’s size, geographic location, services provided, and available resources.
- The reports that result from use of the Ambulatory Care Self-Assessment Tool are for internal, peer-review purposes only. Please note that in some cases, an assessment question might be applicable to multiple planning categories.
344 assessments completed (172 practitioner, 172 system)
NOTE: no data for DC, DE, GA, HI, NM, and PR
**Ambulatory Care Self-Assessment Summary Report**

Completed: May 13, 2016  
Assessment Title: Test Assessment (Eric Maroyka)  
Institution Name: ASHP  
Assessment Type: System  
* Indicates the answer(s) you selected

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**Program Development/Sustainable Business Models**

2.1S - Which of the following are included within the scope of practice of pharmacists providing patient-care services in your ambulatory setting? (Check all that apply)

* Perform patient assessments
* Have prescribing authority to manage disease through medication use and provide collaborative drug therapy management
* Order, interpret, and monitor medication therapy related tests
* Monitor responses to drug therapy, adverse medication-related effects, and adherence
* Assess patients' health literacy and self-sufficiency
* Provide information about the patient's diseases and related medication therapy and offer strategies to optimize the outcomes of therapy
* Determine if patients are appropriate candidates for self-care and identify any exclusions for self-care

Provide preventative care and wellness programs  
Provide immunizations

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**Ambulatory Care Self-Assessment Action List**

Assessment Date: May 13, 2016  
Assessment Title: Test Assessment (Eric Maroyka)  
Assessment Type: System  

Below is a list of areas on which to focus efforts going forward. You can return to the Assessment website and use the prioritization tool to create an Action Plan, which includes useful resources for some action items.

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Feasibility</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 4.1S (Per recommendation 2.2) Pharmacists who provide ambulatory care services must collaborate with patients, care givers, and healthcare professionals to establish consistent and sustainable models for seamless transitions across the continuum of care.</td>
<td>low med high</td>
<td>low med high</td>
</tr>
<tr>
<td>Question 5.5S (Per recommendations 2.3 and 4.3) Pharmacists who provide ambulatory care services must leverage health information technology to efficiently identify populations of patients for whom evidence-based comprehensive medication management is indicated. Interoperable health information technology must be developed to optimize patient care delivery and enable timely collection, monitoring, and analysis of data for ambulatory care services provided by pharmacists.</td>
<td>low med high</td>
<td>low med high</td>
</tr>
<tr>
<td>Question 5.1.2S (Per recommendation 2.3) Pharmacists who provide ambulatory care services must collaborate with patients, care givers, and healthcare professionals to establish consistent and sustainable models for seamless transitions across the continuum of care.</td>
<td>low med high</td>
<td>low med high</td>
</tr>
<tr>
<td>Question 5.2S (Per recommendation 4.3) Interoperable health information technology must be developed to optimize patient care delivery and enable timely collection, monitoring, and analysis of data for ambulatory care services provided by pharmacists.</td>
<td>low med high</td>
<td>low med high</td>
</tr>
</tbody>
</table>
# Prioritizing Action List

**Assessment Title:** Test Assessment (Eric Maroyka)

**Institution Name:** ASHP

**Assessment Type:** System

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Based on your organization's needs and resources, rank your action items below in terms of feasibility and impact of implementation.

<table>
<thead>
<tr>
<th>Action Items</th>
<th>Feasibility</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 4.1S (Per recommendation 2.2)</strong></td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Pharmacists who provide ambulatory care services must collaborate with patients, caregivers, and healthcare professionals to establish consistent and sustainable models for seamless transitions across the continuum of care.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Question 5.5S (Per recommendations 2.3 and 4.3)**                         | ☐ ☐ ☐ ☐     | ☐ ☐ ☐ ☐  |
| Pharmacists who provide ambulatory care services must leverage health information technologies to efficiently identify populations of patients for whom evidence-based comprehensive medication management is indicated. Interoperable health information technology must be developed to optimize patient care delivery and enable timely collection, monitoring, and analysis of data for ambulatory care services provided by pharmacists. |             |          |

| **Question 5.10S (Per recommendation 2.2)**                                 | ☐ ☐ ☐ ☐     | ☐ ☐ ☐ ☐  |
|                                                                         |             |          |
Ambulatory Care Self-Assessment Action Plan

Assessment Date: May 13, 2016
Assessment Title: Test Assessment (Eric Maroyka)
Assessment Type: System

Listed from highest feasibility and impact to lowest feasibility and impact.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Action Items</th>
</tr>
</thead>
</table>
| 1.       | Question 4.1S (Per recommendation 2.2) Pharmacists who provide ambulatory care services must collaborate with patients, caregivers, and healthcare professionals to establish consistent and sustainable models for seamless transitions across the continuum of care.  
  
  Tools and Resources  
  - Pharmacist involvement in establishing a patient-centered medical home [Website]  
  - Stepwise approach to implementing ambulatory clinical pharmacy services [Website]  
  - Variations in pharmacy-based transition-of-care activities in the United States: A national survey [Website] |
| 2.       | Question 6.2S (per recommendation 4.3) Interoperable health information technology must be developed to optimize patient care delivery and enable timely collection, monitoring, and analysis of data for ambulatory care services provided by pharmacists.  
  
  Tools and Resources  
  - PHIT: System vendor checklist for pharmacist clinical documentation workflow [PDF]  
  - Electronic prescribing in the ambulatory care setting [Website]  
| 3.       | Question 5.10S (Per recommendation 2.2) Pharmacists who provide ambulatory care services must collaborate with patients, caregivers, and healthcare professionals to establish consistent and sustainable models for seamless transitions across the continuum of care.  
  
  Tools and Resources |
Ambulatory Care Action Plan

Opportunities

- **Top Three Action List Priorities (System Assessment)**
  - Ambulatory care pharmacists actively engaged in transitions of care activities
    - Decrease care fragmentation across the continuum
    - Establishing and engaging in a comprehensive ambulatory care strategy (e.g., community pharmacy, specialty pharmacy, ambulatory care pharmacist in a primary care setting)
  - Use of billing codes when providing ambulatory pharmacist patient-care services
    - Use of standardized framework for clinical documentation (i.e., SNOMED CT)
    - Clinical pharmacist engaged in team-based, patient centered care (e.g., Patient Centered Medical Homes, ACOs, bundled payment-arrangements, aging in place demonstration pilots)
    - Creating financially sustainable services
  - Active participation by ambulatory care pharmacists in organization-wide committees
The Action Plan developed by use of the Hospital and Ambulatory Care Self-Assessments are strategic planning tools that are focused on impact and feasibility.

A. True
B. False
Impact of a Pharmacist-managed, Student-supported Inpatient Warfarin Education Program on HCAHPS Scores in a Community Teaching Hospital

CASE STUDY

Submitted by: Daniel T. Alazraki, Pharm.D., BCPS, Clinical Pharmacist-Internal Medicine, Capital Health Regional Medical Center; 750 Brunswick Avenue, Trenton, NJ 08628; 609-989-6100; ext. 880-9926; delta@capitalhealth.org; Clinical Assistant Professor Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey

1. The impact of the pharmacy department's educational and practice improvement initiatives.
2. The benefits of student support and involvement in pharmacy practice.
3. The importance of pharmacist-managed warfarin education programs.
4. The role of HCAHPS scores in measuring patient satisfaction and quality of care.

Relevant PAI Recommendations

B3. The following characteristics or activities should be considered essential to pharmacist-provided drug therapy management in optimal pharmacy practice models:

B3a. Provision of at least one discharge education service.

B3b. Every pharmacy department should:

B3b.1. Identify drug therapy management services that should be provided consistently by its pharmacists.

B3b.2. Develop a plan to reallocate its resources to devote significantly more pharmacist time to drug therapy management services.

B3b.3. Develop a plan to allocate pharmacy student time to drug therapy management services.

Primary Intended Outcomes

1. Ensure all patients initiated on warfarin therapy on non-maternity, critical care, and mental health units receive appropriate education prior to discharge.
2. Expand clinical pharmacy services to areas not currently served by clinical pharmacists.

Situation Analysis

Capital Health is a two-hospital, 500-bed health system that serves an area that straddles the Delaware River in Mercer County, New Jersey and Bucks County, Pennsylvania.
PAI is focused on computer modeling of pharmacy workflow to identify strategies for increased pharmacy efficiency.

A. True
B. False
Peer Discussion

• Briefly discuss pharmacy practice advancement activities you are engaged in at your workplace and how they contribute to public health

• Be prepared to offer responses as part of full-audience discussion
Role of Pharmacists in Public Health

MAJOR CAUSES OF DEATH

1900
1. Pneumonia & flu
2. Tuberculosis
3. Digestive disease
4. Heart disease

2015
1. Heart disease
2. Cancer
3. Lung disease
4. Stroke

TOP 4 CAUSES OF DEATH THAT WERE LARGELY PREVENTABLE

1900: NONE

2015: ALL

Role of Pharmacists in Public Health

- Efforts directed at assuring conditions in which people can be healthy and/or safely treated
- Emphasis on prevention and health needs of population as a whole
- Focus areas:
  - Macro level (e.g., planning)
  - Micro level (e.g., direct patient care)
  - Primary, secondary, tertiary prevention
Role of Pharmacists in Public Health

• **Population-based care and disease prevention**
  – Immunizations and travel medicine
  – Infectious disease
    • Antimicrobial stewardship
    • Disease outbreak prevention (e.g., Zika, influenza)
    • HIV management
  – PDMP programs/sole provider
  – Ambulatory care presence (e.g., diabetes, MTM/polypharmacy, obesity, pain management)
  – Pharmacogenomics
  – Medication adherence (e.g., call backs, prescription synchronization, open-ended questions)
  – Access to care/disparities in healthcare (e.g., underserved, VA mid-level examples)
  – Women’s health and family planning

• **Medication safety**
  – Sterile compounding (USP 797)
  – Hazardous drug handling and disposal (USP 800, proper disposal IAW federal, state, local requirements)
  – Standard 4 Safety Initiative
  – Medication reconciliation/transition of care/care coordination
  – Medication safety leader (e.g., drug recalls, drug shortage management, clinical decision support, smart pump analytics, FMEA, adverse drug event trigger detection, Just Culture)
Role of Pharmacists in Public Health

• **Health education**
  – OTC counseling (e.g., mosquito repellant dispensing – Medicaid reimbursement)
  – Tobacco cessation
  – Substance misuse and abuse (e.g., opioid, alcohol)
  – Healthy nutrition (e.g., obesity)
  – Discharge counseling (e.g., meds to beds program)
  – Sleep hygiene

• **Public health policy**
  – Emergency preparedness (e.g., terrorism, natural disasters, CBRNE, infectious disease outbreaks)
  – Drug pricing, affordability, access to care crisis
  – Implications of regulatory demands on operations
  – Advocating for legislation, regulations, and policy

• **Research and training**
  – IRB
  – Data monitoring and safety committees
  – Pharmacovigilance
Role of Pharmacists in Public Health

• **Opioid crisis**
  - Naloxone distribution/administration (e.g., standing orders)
  - PDMP programs/sole provider agreements
  - Drug take back programs
  - Responsible prescribing, Medication-Assisted Treatment (MAT) programs
  - ASHP Guidelines on Preventing Diversion of Controlled Substances (released October 2016)
  - HHS Opioid Initiative (March 2015)
    • Person-centered and population-based strategies to reduce the risk of opioid disorders, overdoses, inappropriate prescribing, and drug diversion
    • Expanding naloxone use, distribution, and access
    • Emphasis on increasing access to medication-assisted treatment
    • Increase use of evidence-based practices for acute and chronic pain management
Role of Pharmacists in Public Health

- Inappropriate use of medications
- Lack of care coordination
- Drug shortages
- Lack of IT interoperability
- Medication errors
Inappropriate Use of Medications

- Includes overuse, underuse, unintentional use, and nonmedical use
- Significant cause of hospitalization, harm, death
- Occur with ordinary medications used every day

<table>
<thead>
<tr>
<th>Medication</th>
<th>Annual National Estimate of Hospitalizations (N=99,628)</th>
<th>Proportion of Emergency Department Visits Resulting in Hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Redacted]</td>
<td>[Redacted]</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>Most commonly implicated medications†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warfarin</td>
<td>33,171</td>
<td>33.3 (28.0–38.5)</td>
</tr>
<tr>
<td>Insulins</td>
<td>13,854</td>
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</tr>
<tr>
<td>Oral antiplatelet agents (Aspirin, Aspirin-Oral acetylsalicylic acid, Clopidogrel, Ticagrelor, Ticlopidine)</td>
<td>13,263</td>
<td>13.3 (7.5–19.1)</td>
</tr>
<tr>
<td>Oral hypoglycemic agents (Gliclazide, Glimepiride, Glipizide, Glyburide, Nateglinide, Pioglitazone, Pioglitazone, Rosiglitazone, Sulfonylureas, Tianeptine)</td>
<td>10,656</td>
<td>10.7 (8.1–13.3)</td>
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<tr>
<td>Opioid analgesics</td>
<td>4,778</td>
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<td>Anticonvulsants</td>
<td>1,653</td>
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<tr>
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</tr>
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<td>Beers-criteria potentially inappropriate medications, excluding digoxin</td>
<td>3,170</td>
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</tr>
</tbody>
</table>

Inappropriate Use of Medications

• ADEs associated most frequently with advanced age and multidrug regimens
Inappropriate Use of Medications

• **Drug classes most implicated in adverse events (67% of hospitalizations)**
  - Anticoagulants → Warfarin, oral anti-platelet drugs (bleeding)
  - Antidiabetics → Insulins, oral hypoglycemics (hypoglycemia)
  - Cardiovascular
  - Central nervous system agents
  - Anti-infectives

• **Conclusion:**
  - Oral anticoagulants and oral hypoglycemics represent a substantial contribution to hospitalizations

• **Recommendation: improved management of anti-thrombotics and antidiabetic drugs**
# Inappropriate Use of Medications

How would you address this in your organization?

<table>
<thead>
<tr>
<th>Medication</th>
<th>Annual National Estimate of Hospitalizations (N = 99,628)</th>
<th>Proportion of Emergency Department Visits Resulting in Hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most commonly implicated medications†</td>
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<tr>
<td>Valproate, Carbamazepine, Lamotrigine</td>
<td>1,653</td>
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<td>Diuretics</td>
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<td></td>
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Inappropriate Use (Antimicrobials)

- Acinetobacter
- Campylobacter
- Candida
- ESBLs
- VRE
- MDR P. aeruginosa
- Non-typhoidal Salmonella
- Salmonella typhi
- Shigella
- MRSA
- S. pneumoniae
- M. tuberculosis

**THREAT LEVEL SERIOUS**

These bacteria are a serious concern and require prompt and sustained action to ensure the problem does not grow.
Inappropriate Use (Antimicrobials)

- 20-50% of all antibiotics prescribed in U.S. acute care hospitals are either unnecessary or inappropriate.

- More than two million people are infected with antibiotic-resistant organisms, resulting in approximately 23,000 deaths annually.

- ...antibiotic resistance [is] one of the most serious and growing threats to public health

Inappropriate Use: (Antimicrobials)

- White House Forum on Antibiotic Stewardship
- CDC published Core Elements of Hospital Antibiotic Stewardship Programs (ASPs)
- Joint Commission ASP standard (Jan 1, 2017)
Role of Pharmacists in Public Health

• Resources
  – Healthy People 2020
  – ASHP Foundation Pharmacy Forecast 2017
  – Using the Pharmacist Patient Care Process to Manage High Blood Pressure (CDC)
  – ISMP newsletters
  – AACP Population Health domain (EPAs)
PAI Grants

• Research Grants
  – Practice Advancement Demonstration
  – Resident & Master’s Resident
  – New Investigators

• State Affiliate Grants
State Affiliate Grants

• **Goal**: Promote the dissemination and implementation of PAI

• **Leadership Workshop**
  – Honoraria and travel support

• **$2,000 grant to support advancement-focused programs**
# PAI State Affiliate Grants

- 20 total grants awarded
- FL, OH, SC, and WI have been awarded two
- Five grants awarded in 2016
- Two PAI workshop dates pending
- One grant pending approval (IA)

<table>
<thead>
<tr>
<th>State Affiliate Chapter</th>
<th>Award Letter Sent</th>
<th>Date of Workshop</th>
<th>Status</th>
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<tr>
<td>Indiana</td>
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<td>5/23/13</td>
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<tr>
<td>Ohio</td>
<td>3/27/13</td>
<td>9/9/13</td>
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<td>Florida</td>
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<td>10/23/13</td>
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<tr>
<td>Mississippi</td>
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<td>California</td>
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<td>West Virginia</td>
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<td>Alabama</td>
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<td>Oregon</td>
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<td>Ohio (Amb Care)</td>
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<td>Florida (Amb Care)</td>
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Probing Questions for PAI Engagement

• In what ways do pharmacists work with an inter-professional care team to provide medication therapy management?
• How are pharmacists involved with clinical decision support (e.g., order set development, smart infusion pump analytics)?
• Where do you see pharmacy practice in the next five years?
• How is the pharmacy staff involved in transitions of care?
• How often is medication reconciliation performed by pharmacy staff?
• Describe your pharmacy technician roles & responsibilities.
• How are meetings and assignments delegated among the pharmacy staff?
What You Can Do Now

• Complete the self-assessments and share with your pharmacy team to develop actionable plans
• Evaluate the medication management system for quality and safety gaps
• Engage in discharge counseling after monitoring inpatient
• Medication reconciliation at admission and discharge
• Get involved with ambulatory care (e.g., community, specialty, population health)
• Improve patient interview and assistance skills
• Educate others on PAI and be a catalyst for change
• Demonstrate the value of pharmacy services
Maximize Student Society Participation

• Pharmacy practice is becoming more reliant on student pharmacists and pharmacy resident engagement for the provision of essential patient care services
• Not every recommendation works for every institution or practice-setting
• Student pharmacists can work with pharmacy and/or senior leadership to engage extenders and advance pharmacy practice
Key Takeaways/Conclusion

• Complete the assessment(s) locally!
• Use the assessment, action list, and reports to develop specific ACTIONS to take in your own setting
• Explore collaborative use of the assessment in your state, region, or system
• Apply for a State Affiliate Grant
• Submit Case Study or Spotlight
• Connect practice advancement activities to advocacy efforts
Questions?