The Pharmacist’s Role in Rural Communities
Objectives

› List and describe the types of services community pharmacists can provide to optimize patient care

› Explain the role and impact of community pharmacists providing immunizations

› Describe the role of the community pharmacist as a member of the patient care team
Scope of Pharmacy Practice & Medication Therapy Management

Michael A. Biddle, Jr., Pharm.D., BCPS
Poll: What does a community pharmacist do?
Pharmacy Education: Creating “Medication Experts”

› 2 years of Pre-Pharmacy Coursework
  – Similar requirements to other pre-professional programs

› 4 years of Pharmacy School
  – 3 years of classroom and practice laboratory work
    › Biomedicine
    › Pharmaceutical Sciences
    › Social, behavioral and administrative sciences
    › Clinical Sciences
  – 1 year of rotations (APPEs – Advanced Pharmacy Practice Experiences)
Additional Training/Certificates

› Post-Graduate Training
  – Residency (1 to 2 years)
  – Fellowships (3 years)

› Board of Pharmacy Specialties Certifications
  – Pharmacotherapy (BCPS)
  – Ambulatory Care (BCACP)

› Additional Certificates
  – Diabetes, Asthma, Anticoagulation, Smoking Cessation, Pain, Lipids, HIV/AIDS, etc.
Pharmacists provide patient care through:

- Ensuring appropriate therapy and outcomes
- Dispensing medications and devices
- Health promotion and disease prevention
- Health systems management
Public Perceptions of Pharmacists

› 3\textsuperscript{rd} largest group of health professionals (after physicians and nurses)

› One of the most trusted health professionals (Gallup Polls)

› The public sees a pharmacist 12 to 15 times per year compared to 2 to 4 visits to a physician
Pharmacists’ Potential

› Facts
  – 91,000 – Expected physician shortage by 2020
    › Mostly in primary and elderly care
  – 90% of the US population lives within 5 miles of a pharmacy
    › Most accessible healthcare provider
  – 81% of adults take at least one medication
  – 1/3 of adults take 5 or more medications

› Pharmacists are positioned and trained to provide patient care services in underserved areas
Community Pharmacy Patient Care Services

**BASIC SERVICES**
- Medication Dispensing
- Patient Counseling/Education
- Self-Care Counseling
- Compounding
- Drug Information
- 340b Medications
- Medication Adherence
- Durable Medical Equipment (DME)
- Medicare Part D Navigation

**ADVANCED SERVICES**
- Transitions of Care
- Health Screenings
- Point-of-Care Testing
- Disease State Management
- Medication Therapy Management (MTM)
- Immunizations
Basic Services
Medication Dispensing

› Classic role of the pharmacist

› Involves

  – Brief patient history (for new patients)
    › Demographics
    › Current medications and conditions
    › Allergies / adverse reactions
    › Insurance
  – Prescription processing
  – Prospective medication review
  – Insurance processing
  – Patient counseling
    › Medication education
Patient Counseling/Education

› Must be offered to all patients receiving a new prescription

› May include:
  – Drug name, dose, formulation, route of administration, duration of therapy
  – Indication for therapy and mechanism of action
  – Common and/or severe side effects
  – Suggestions for self-monitoring
  – Proper storage
  – Refill information
  – Instructions for missed doses
  – Device education and demonstration
Self-Care (OTC) Counseling

› In 2010, 240 million people spent $24 billion on over-the-counter (OTC) therapies

› There are more than 700 OTC products available

› Many common conditions can be treated with OTC medications
Conditions Amenable to Self-Care

- Headache
- Fever
- Musculoskeletal Injuries and Disorders
- Vaginal and Vulvovaginal Disorders
- Disorders Related to Menstruation
- Prevention of Pregnancy and Sexually Transmitted Infections
- Colds and Allergy
- Cough
- Heartburn and Dyspepsia
- Intestinal Gas
- Constipation
- Diarrhea
- Anorectal Disorders
- Pinworm Infection
- Nausea and Vomiting
- Overweight and Obesity
<table>
<thead>
<tr>
<th>Conditions Amenable to Self-Care (cont.)</th>
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<tbody>
<tr>
<td>› Ophthalmic Disorders</td>
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<tr>
<td>› Otic Disorders</td>
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<tr>
<td>› Oral Pain and Discomfort</td>
</tr>
<tr>
<td>› Atopic Dermatitis and Dry Skin</td>
</tr>
<tr>
<td>› Scaly Dermatoses</td>
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<tr>
<td>› Contact Dermatitis</td>
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<tr>
<td>› Insect Bites and Stings and Pediculosis</td>
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<tr>
<td>› Fungal Skin Infections</td>
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<tr>
<td>› Prevention of Sun-Induced Skin Disorders</td>
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<tr>
<td>› Minor Burns, Sunburn, and Wounds</td>
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<tr>
<td>› Warts</td>
</tr>
<tr>
<td>› Hair Loss</td>
</tr>
<tr>
<td>› Insomnia, Drowsiness, and Fatigue</td>
</tr>
<tr>
<td>› Tobacco Cessation</td>
</tr>
<tr>
<td>› Adult Urinary Incontinence</td>
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</tbody>
</table>
New and Future OTC Medications

NEW OTC MEDICATIONS
› Allergic rhinitis
  – Nasacort Allergy 24HR
  – Flonase Allergy Relief
› Overactive bladder
  – Oxytrol for Women
› Frequent heartburn
  – Nexium 24 HR

FUTURE OTC MEDICATIONS
› Erectile dysfunction
  – Viagra, Cialis, Levitra
› Migraine
  – Axert, Relpax, Amerge, Maxalt, Imitrex, Zomig, Frova
› Cholesterol
  – Lipitor, Mevacor, Pravacol, Zocor
› Overactive bladder
  – Vesicare, Detrol, Sanctura
› Benign prostatic hypertrophy (BPH)
  – Flomax

NEW and FUTURE OTC Medications
Pharmacist’s Role in Self-Care

› Identify the condition through a brief interview

› Determine if the patient is a candidate for self-care

› Recommend an appropriate product

› Counsel on proper use

› Recommend appropriate follow-up
Compounding

› Medications or products made specially for a specific patient
  – Depending on the ingredients, either prescribed, requested by the patient or suggested by the pharmacist

› Recommended when:
  – A specific product strength or dosage form is not available on the market
  – Making a medication more palatable (flavoring) or easier to swallow
  – Avoiding unwanted ingredients (ex. gluten, dyes)

› Dosage forms
  – Capsules, tablets, solutions, suspensions, syrups, creams, ointments, lotions, gels, patches, inhalants, injectables, IVs etc.

› Veterinary Compounding

› Availability depends on the expertise of the pharmacist and the resources available
Drug Information/Education

› As medication experts, pharmacists have the training and resources to answer questions about medications
  - For providers and patients

› Pharmacists are taught to critically evaluate the literature and implement evidence-based recommendations in their practice

› Pharmacists are also trained to adapt and present drug information to a variety of audiences
  - Resource for providers and other healthcare professions to remain up-to-date on guidelines and therapies
  - Resource for patient education and health promotion
Drug Information Categories

› Adverse effects
› Availability
› Compatibility/stability
› Compounding
› Dosing and administration
› Drug interactions
› Herbals
› Identification
› Pharmacokinetics
› Pharmacology
› Poisoning/toxicology
› Pregnancy and lactation
› Therapeutic use
340B Medications

› Created in 1992, this program provides discounted medications to patients in qualified safety net clinics
  – Details on eligibility can be found on the HRSA website (http://www.hrsa.gov/opa/)

› Discounts range from 20-50% of the average wholesale price of medications
  – Manufacturers are mandated to offer these discounts

› Community pharmacies can contract with qualified entities to store and dispense 340b medications
Medication Adherence

› Impacts
  – 20-30% of prescriptions are never filled
  – Non-adherence counts for 1250,000 deaths and costs $100-289 billion annually

› Pharmacists are uniquely positioned to identify and address adherence issues
Medication Adherence Tools & Strategies

**TOOLS**
- Pill boxes
- Dosing spoons / droppers
- Bubble packing
- Medication calendars
- Telephone reminders
- Internet/e-mail/app reminders

**STRATEGIES**
- Education/behavioral support
- 90 days supplies
- Automatic refills
- Refill synchronization
- Regimen simplification
- Alternative treatments
Durable Medical Equipment

› Equipment that helps patients manage medical conditions

› Examples
  – Diabetes supplies (monitors, test strips)
  – Hospital beds
  – Canes, crutches, wheel chairs, scooters
  – Home oxygen equipment and supplies
  – Infusion pumps
  – Nebulizers
  – Ostomy supplies

› Covered by Medicare Part B and private insurers

› Availability depends on the pharmacy
Medicare Part D Navigation

› Created in 2003 as part of the Medicare Modernization Act
  – Provides prescription drug coverage for patients on Medicare
  – Coverage is offered through private insurers
  – Over 40 plans offered in Vermont

› Patient Costs
  – Monthly premium (variable between plans)
  – Yearly deductible (variable between plans)
  – Medication copays (variable between plans)
  – Coverage gap (starts at $2,960)
  – Catastrophic coverage
    › Starts when the patient pays $4,700 out of pocket
  – Penalties for not enrolling during the open enrollment period (Oct. 15 – Dec 7)

› Pharmacists can help patients pick the right plan based on the cost of their medications and budget
Advanced Services
Transitions of Care (TOC)

› Occurs when patients are transferred from an acute care setting to home, rehabilitation or long-term care

› High potential for miscommunication and hospital readmission

› Approximately 20% of Medicare patients are re-hospitalized within 30 days of discharge
Transitions of Care (TOC)

› 2013 Affordable Care Act – added special Medicare reimbursement codes for providers and qualified healthcare providers
  – Patient must be contacted within 2 days of discharge and be seen face-to-face within 7 to 14 days after discharge

› TOC Visit Activities
  – Collection and review of discharge information
  – Patient/caregiver education
  – Determine need for follow-up
  – Coordination of referrals and follow-up with providers and services
Pharmacists are trained as health promoters and can offer a variety of screening services to patients

Examples
- Blood pressure
- Tobacco cessation
- Diabetes
- Heartburn
- Osteoporosis
- High cholesterol
Point of Care Testing

› CLIA-waive point of care testing further expands the health promotion role of the pharmacist
  – Diagnostic tests performed outside of a laboratory that produce reliable results

› Types of Tests
  – Cholesterol, Hep C, HIV, influenza, Group A *Streptococcus*, A1c, INR, renal function, liver function

› Some local pharmacies have implemented screening and treatment protocols for influenza and *Strep*. 
Disease State Management

› Under a collaborative practice agreement with a provider, a pharmacist can manage a specific disease state
  - Order labs, initiate or discontinue medications, adjust medications, refer to other healthcare professionals, etc.
  - Patient is diagnosed by their provider and referred to a pharmacist
    › Pharmacists do not diagnose

› Usually chronic diseases
  - Diabetes, hypertension, asthma/COPD, high cholesterol, anticoagulation, heart failure, chronic pain, etc.

› Allows providers to see more complex or acute patients

› Can be conducted in the provider’s office or at the pharmacy
  - Location dictates type of reimbursement available
Disease State Management

› Collaborative Practice Agreement (VT)
  – Written agreement between a pharmacist and provider allowing the pharmacist to provide patient care functions as specified by a protocol
  – Requires an annual quality assurance review
  – Must be renewed yearly
  – Pharmacists can have an agreement with more than one provider
Medication Therapy Management (MTM)

- “A service or group of services that optimize therapeutic outcomes for individual patients”
  - 2004 Consensus Statement

- Comprehensive review of a patient’s entire medication regimen to identify and address medication-related problems

- A holistic, patient-centered approach beyond the day-to-day dispensing role
How does MTM differ from dispensing?

› Patient makes an appointments to see the pharmacist

› Patient provides a detailed medical history

› Pharmacist conducts a comprehensive medication review

› Patient is provided with a detailed summary of medication issues and an action plan to follow
MTM Core Elements

› Core Elements
  - Medication Therapy Review (MTR)
  - Personal Medication Record (PMR)
  - Medication-Related Action Plan (MAP)
  - Intervention and/or referral
  - Documentation and follow-up
Medication Therapy Review (MTR)

› Components
  – Collecting patient specific information
    › Patient history, labs, medication lists, etc.
  – Assessing medication therapies
    › Identifying medication related problems (MRPs)
  – Developing a prioritized list of MRPs
  – Creating a plan to resolve MRPs
Personal Medication Record (PMR)

› A comprehensive record of the patients’ medications
  – Prescription, nonprescription, herbals and dietary supplements

› Detailed information for each medication
  – Medication name, indication, instructions for use, start date, stop date, ordering provider and special instructions

› Provided by the pharmacist at the end of the visit
Medication-Related Action Plan (MAP)

› A list of actions for the patient to use in tracking progress for self-management
  – Patient “to dos”
  – “What I need to do . . . “
  – “What I did and when I did it . . .”

› Completed collaboratively with the patient and pharmacist

› Provided to the patient at the end of the visit to help track progress
Intervention and/or Referral

› **Intervention**
  – The pharmacist addresses the medication related problems (MRPs)
  – May involve
    › Direct action with the patient
    › Collaborating with the provider or other healthcare professional
      – Opportunity for collaborative practice agreements

› **Referral**
  – Occurs when the solution to an MRP is outside of the pharmacist’s scope of practice or expertise
Documentation and Follow-up

› Documentation
  – Varies depending on the MTM system being used and the setting
  – Classically a SOAP note
    › Subjective
    › Objective
    › Assessment
    › Plan
  – Facilitates communication and tracks interventions and potential impacts

› Follow-up
  – Should be scheduled to assess patient’s progress and address additional medication related problems
  – Number allowed may be limited by insurances
Impacts
- 1.5 million preventable adverse events occur each year in the US and result in $177 billion in injury and death

Currently being provided by both public and private insurers
- All Medicare Part D plans are required to offer MTM services

Most pharmacies now offer some form of MTM service
Immunizations

Catherine Friend Rph
IMPORTANCE OF IMMUNIZATIONS IN ADULTS IN RURAL FARMING COMMUNITIES

› Prevention of disease such as influenza, pneumonia, and shingles that would impact ability to work
› Environmental exposure to tetanus
› Exposure to unimmunized employees
The universal vaccination strategy avoided 7,810 hospitalizations and 514 deaths, saving 3,787 years of life and costing a total of USD $31,507,012 and USD$44,548,180, respectively, from the health system and societal perspective. The universal immunization would result in ICERs of USD$1,297 per LYS, from the perspective of the health system, and USD$904 per LYS, from the societal perspective.
<table>
<thead>
<tr>
<th>Age group</th>
<th>Averted cases No.</th>
<th>(95% CI)</th>
<th>Averted medically attended cases No. (95% CI)</th>
<th>Averted hospitalizations No. (95% CI)</th>
<th>Fraction prevented % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5–19 yrs</td>
<td>1,185,034</td>
<td>(837,466 – 1,638,601)</td>
<td>604,368 (423,423 – 841,847)</td>
<td>3,249 (2,296–4,493)</td>
<td>22.3 (20.9–23.6)</td>
</tr>
<tr>
<td>20–64 yrs</td>
<td>4,786,265</td>
<td>(3,626,912–6,259,499)</td>
<td>1,770,918 (1,331,958–2,330,947)</td>
<td>32,296 (24,473–42,237)</td>
<td>15.0 (14.4–15.3)</td>
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<tr>
<td>≥65 yrs</td>
<td>549,317</td>
<td>(240,964–998,517)</td>
<td>307,618 (134,114–561,318)</td>
<td>49,938 (21,906–90,774)</td>
<td>20.9 (12.1–27.0)</td>
</tr>
<tr>
<td>All ages</td>
<td>7,178,318</td>
<td>(5,071,966–9,910,260)</td>
<td>3,123,563 (2,135,866–4,414,614)</td>
<td>90,068 (51,231–144,571)</td>
<td>16.9 (15.3–18.0)</td>
</tr>
</tbody>
</table>

Abbreviation: CI = confidence interval
Why the pharmacist plays a vital role in community immunizations

- Pharmacists are the most accessible healthcare providers in the community

- Considered by the community as a trusted source for health information

- Convenience for patients
Pharmacists are the most accessible community health care providers

- Pharmacists interact with patients more often than any other healthcare provider
- Pharmacists have knowledge of the disease states and medications the patient is on
- Pharmacists can bill insurances for most vaccines and can save patients the cost of an additional office visit
Pharmacists are considered a trusted healthcare provider in the community

› Have been in the top ten of most trusted professions consistently for the past couple of decades

› Have a relationship with the patients that is conducive of them taking advice from them

› Have a broad scope of knowledge and can relate to the patient on a one on one basis
Convenience for the patient

› Pharmacies have extended and weekend hours
› No need to make an appointment
› Patients are more likely to get vaccinated when the pharmacist can recommend and administer right away
In Vermont Pharmacist that are certified to give immunizations can give any CDC recommended vaccine to Patients 18 years old and older. (See guidelines below)

Some common vaccinations are
- Influenza (flu)
- Zostavax (shingles)
- Pneumonia
- Tetanus/ Diptheria/Pertussis
ADULT RECOMMENDED VACCINATIONS

- Full text included in required readings
- Most notable-
  - Tdap 1 dose, tetanus every 10 years
  - Flu vaccine yearly
  - Shingles 1 dose after age 60
  - Pneumonia conjugate time
  - Pneumonia polysaccharide 1 or 2 doses dependent on age first given
Next Steps
How will you incorporate pharmacists into your patient care team?

› Where do you see utilizing a pharmacist in your profession?