Hypertension: Role for pharmacists

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Overview

• Background on Pharmacists
• Approaches to Controlling Hypertension by Pharmacists
• Challenges and Opportunities
Background Information
Pharmacists

30,060 pharmacists licensed in Texas FY 2015
4,935 community pharmacies

- Graduating since 2003 with Doctor of Pharmacy degree
  - 6-yr min. degree plan; at UT-Austin most are entering with Bachelor degree
    - 150+ credit hours
    - 300 clock hours of introductory practice experience
    - 1500+ clock hours of advanced practice experience
      - Mandatory: community, hospital, ambulatory, adult inpatient medicine
  - Pass NAPLEX & MPJE exams
  - 30 CE hours every 2 year license renewal cycle
- Can adequately assess and manage chronic diseases requiring pharmacological and non-pharmacological agents
Advanced Practice Pharmacists

- Additional residencies & specialties (1-2+ yrs)
- Board Certification (residency and/or practice experience + exam)
  - Oncology
  - Ambulatory Care
  - Pediatrics
  - Nuclear
  - Pharmacotherapy
    - Infectious Disease
    - Cardiology
  - Nutrition
  - Psychiatric
  - Geriatrics
  - Critical Care
- 100-120 CE hours in specialty every 7 years or by re-examination
Specialty Certification

• Not limited to pharmacists
• Practice hours & exam; renewable
• Examples
  • CDE – Certified Diabetes Educator
  • BC-ADM – Board Certification in Advanced Diabetes Management
  • CTTS – Certified Tobacco Treatment Specialist
  • ASH-CHC – Certified Hypertension Clinician
  • CLS – Clinical Lipid Specialist
Pharmacy/Pharmacist Types

- Outpatient
  - Community Pharmacy/Pharmacist
  - Ambulatory Care Pharmacist
    - Specialists
- Inpatient
  - Hospital Pharmacy/Pharmacist
  - Clinical Inpatient Pharmacist
    - Specialists
Community Pharmacy

- Chain, grocery, big box stores, Amazon(?)
- Mail order
- Independent
- Closed door

Easily accessible (like Starbucks)
Sometimes 24 hours
Internet & phone app access
Delivery
Community Pharmacists

Same basic training as all pharmacists
  2-4 years undergraduate school
  4 years professional pharmacy school
Sometimes additional training but atypical
Work in community pharmacies
Community Pharmacists

What we do:
- Dispense medications
- Counsel/educate
- Immunize
- Supervise up to 4 technicians
- Ensure medication safety
  - Last line of defense to protect the public

Role is changing from traditional dispensing
- Technicians
- Robots
- Centralized functions
Ambulatory Care Pharmacist

Same basic training as all pharmacists
Additional training typical
  1-2 year generalist/specialist residency training
  Board certifications or degrees (i.e. PhD, MD, MBA, MPH)
Different than community and hospital based pharmacists
Work in physician offices and outpatient clinics
Ambulatory Care Pharmacy

What we do:

Manage chronic diseases (i.e. diabetes, hypertension, asthma, COPD, lipids, anticoagulation, CHF, many others)
  Monitor, order labs, change/optimize medications
Counsel/Educate patients and providers
  Disease state & self-management education; “health coaching”
Ensure medication safety, adherence, & affordability
Provide clinical decision support
  Drug information & “curbside” consults
Transitions of Care, Medicare Annual Wellness Visit, CCM
Teach
Pharmacists

What we don’t do:
Diagnose
Texas Administrative Code Rule §295.13 – Drug Therapy Management by a Pharmacist under Written Protocol of a Physician

(c) Physician delegation to a pharmacist.

(1) As specified in Chapter 157 of the Texas Medical Practices Act, a physician may delegate to a properly qualified and trained pharmacist acting under adequate physician supervision the performance of specific acts of drug therapy management authorized by the physician through the physician’s order, standing medical order, standing delegation order, or other order or protocol.

(2) A delegation under paragraph (1) of this subsection may include the implementation or modification of a patient’s drug therapy under a protocol, including the authority to sign a prescription drug order for dangerous drugs, if:

(A) the delegation follows a diagnosis, initial patient assessment, and drug therapy order by the physician;
(B) the pharmacist practices in a hospital, hospital-based clinic, or an academic health care institution; and
(C) the hospital, hospital-based clinic, or academic health care institution in which the pharmacist practices has bylaws and a medical staff policy that permit a physician to delegate to a pharmacist the management of a patient’s drug therapy.

Consult your legal team
Clinical Pharmacy Practice

Collaborative Practice Agreement (Protocol)
  Formal consult or visit note

Typical clinic schedule
  New consults 1-1.5 hrs
  Follow up visits 30-45 min
  About 4 patients per half-day

Other models
  Visit same day pre/post provider
  Visit during
Clinical Pharmacy Practice

Success story…
In general, pharmacists…

- Can manage patients through a collaborative practice agreement with individual prescribers
- Are easily accessible
- May see a patient more frequently than the patient sees their PCP
- Can perform CLIA-waived labs on site
- Can be reimbursed in some situations; Not recognized as billing providers by Social Security Act
Approaches to Controlling Hypertension by Pharmacists
Team-based care


Meta-analysis of 37 articles of nurse or pharmacist BP interventions

Results:
- Education about BP medications (-8.75/-3.60 mmHg)
- Pharmacist treatment recommendations (SBP -9.30 mmHg)
- Intervention by nurses (SBP -4.80 mmHg)
- Use of a treatment algorithm (SBP -4.00 mmHg)

Odds for controlled BP: nurses, 1.69; pharmacists within primary care clinics, 2.17; and community pharmacists, 2.89.

Mean reductions in SBP: nursing studies, 5.84 mmHg; pharmacists in clinics, 7.76 mmHg; and community pharmacists, 9.31 mmHg.
Treatment algorithms

**Algorithm for Treatment of Hypertension**

**Lifestyle Modifications**
- Not at Goal Blood Pressure (<140/90 mmHg) (<130/80 mmHg for patients with diabetes or chronic kidney disease)
  - See Strategies for Improving Adherence to Therapy

**Initial Drug Choices**
- Without Compelling Indications
  - **Stage 1 Hypertension** (SBP 140–159 or DBP 90–99 mmHg)
    - Thiazide-type diuretics for most. May consider ACEI, ARB, BB, CCB, or combination.
- With Compelling Indications
  - **Stage 2 Hypertension** (SBP ≥160 or DBP ≥100 mmHg)
    - 2-drug combination for most (usually thiazide-type diuretic and ACEI, or ARB, or BB, or CCB).
  - Drug(s) for the compelling indications
    - See Compelling Indications for Individual Drug Classes
    - Other antihypertensive drugs (diuretics, ACEI, ARB, BB, CCB) as needed.

**Not at Goal Blood Pressure**
- Optimize dosages or add additional drugs until goal blood pressure is achieved. Consider consultation with hypertension specialist.
  - See Strategies for Improving Adherence to Therapy
Medicare STAR ratings & value based care
Pharmacists can reduce hypertension collaboratively

*Arch Intern Med.* 2010;170(18):1634-39

Randomized controlled trial of 179 patients to receive pharmacist-physician collaborative management or usual care.

- Daytime SBP reduced 15.2 mmHg (tx) vs. 5.5 mmHg (control)
- Nighttime SBP reduced 12.1 mmHg vs. 3.4 mmHg
- 24h SBP reduced 14.1 mmHg vs. 5.5 mmHg
- BP control 75% vs 50.7% (p<0.001)
Pharmacists can reduce hypertension independently

*Circulation*. 2015;132(2):93-100

RxACTION Study. Randomized controlled trial of 248 patients in 23 community pharmacies in Alberta, Canada.

Baseline BP 150±14/84±11 mmHg. Avg age 64; 49% male.

- Pharmacists can independently assess CVD risk, order labs, interpret results, & prescribe
- Follow up every 4 weeks for 6 months
- Usual care received an info pamphlet and follow up with PCP

Results:
- Systolic BP reduced by 18.3 mmHg vs 11.8 mmHg (p=0.0006)
- 2.32 odds of reaching goal vs usual care
BP reduction by pharmacists is cost effective

*Hypertension.* 2015;66(6):1145-51

**CAPTION** Study. Randomized controlled trial of 625 patients in 32 clinics in 15 states. Pharmacists communicated with patients and physicians making therapy recommendations.

- At 9 months, SBP -6.1 mmHg, DBP -2.9 mmHg than control group
- HTN control 43% vs. 34%
- Cost include meds, pharmacist & physician time
- Treatment group $1462.87 vs $1259.94 (diff $202.93)
- $33.27 to lower SBP 1 mmHg
- $69.98 to lower DBP 1 mmHg
- $22.55 to increase HTN control by 1%
Pharmacists can help!
Current Challenges
Patient challenges

Unrecognized risk - THE silent killer
Reluctance to take medication
Treatment burden & polypharmacy
Medication nonadherence ($44bn avoidable health care costs)
Medication side effects & intolerance
Cost/ Insurance (Not as bad now due to generics)
Access to healthcare or pharmacy
Social determinants of health
Non-adherent to lifestyle modifications
Lack of education/ knowledge
Genetics & Aging
Prescriber challenges

Treatment burden
Competing priorities/co-morbidities (ie. Acute cold)
Obtaining lab results
Inadequate family history
Drug interactions & Managing side effects
Conflicts between guidelines
Time / Reimbursement
Lack of follow up
Forget to recommend or “prescribe” lifestyle modifications
Clinical inertia
Pharmacist challenges

Time
Lack of/difficult communication with prescribers
Insurance problems
Knowledge/confidence managing chronic diseases
Not considered providers by SSA
Reimbursement
Prescribers not familiar with pharmacist training/abilities
Rules & Regulations
Opportunities
What can be done?

Education & Outreach
Patient-centered care & Behavioral health models
Group fitness
Financial incentives for achieving goals
Pharmacists & Other health care professionals
Regimen simplification & synchronization
CLIA-waived labs
Population health management
Electronic health information exchange
Treatment algorithms
Practicing Evidence-Based Medicine
Partner with a College of Pharmacy near you
Required rotation; high need

Texas Colleges of Pharmacy

Texas A&M University – Kingsville (Kingsville, College Station)
Texas Southern University (Houston)
Texas Tech (Lubbock, Abilene, Dallas)
University of Houston (Houston)
University of North Texas (Ft. Worth)
The University of Texas at Austin (Austin, San Antonio, El Paso, Edinburg)
The University of Texas at El Paso (El Paso)
The University of Texas at Tyler (Tyler)
University of the Incarnate Word (San Antonio)
Questions?