

Pharmacists in Public Health: Training, Contributions, and Opportunities

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Pharmacy and Public Health

“Pharmacy has traditionally been an isolated profession; its ability to break out of its isolation will largely determine the success or otherwise of its public health role in the future.”

Anderson S. Community pharmacy and public health in Great Britain, 1936 to 2006: how a phoenix rose from the ashes. J Epidemiol Community Health. 2007;61:844-848.

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Pharmacist’s Role in Public Health

- Reiterates the need for increased awareness of the role of pharmacists in public health through the dissemination of information
- Encourages trans-disciplinary collaborations to develop legislation and advocate for plans that address health care needs
- Supports the influx of more pharmacists trained in public health

American Public Health Association. Policy 200614:
The Role of the Pharmacist in Public Health.
www.apha.org/advocacy/policy/policysearch/default.htm?id=1338.

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Health-System Pharmacists’ Role in Public Health

“Pharmacists who practice in hospitals and health systems play a vital role in maintaining and promoting public health...have a responsibility to participate in global, national, state, regional and institutional efforts to promote public health and to integrate the goals of those initiatives into their practices.”

American Society of Health-System Pharmacists. ASHP Statement on the Role of Health-System Pharmacists in Public Health. Am J Health-Syst Pharm. 2008; 65:462-467.

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Health-System Pharmacists’ Role in Public Health

“Furthermore, health-system pharmacists have a responsibility to work with public health planners to ensure their involvement in public health policy decision-making and in the planning, development, and implementation of public health efforts.

American Society of Health-System Pharmacists. ASHP Statement on the Role of Health-System Pharmacists in Public Health. Am J Health-Syst Pharm. 2008; 65:462-467.

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Objectives

- Explain the educational directives and initiatives on pharmacists’ training in public health.
- Describe professional initiatives and contributions regarding public health pharmacy.
- Cite at least three examples of pharmacists’ micro- and macro-level activities and opportunities in public health.

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PPH Self-Assessment Q1

- Which of the following is NOT one of the Center for Advancement of Pharmacy Education (CAPE) educational outcomes?
 - A) Medication Therapy Management (MTM)
 - B) Pharmaceutical Care
 - C) Systems Management
 - D) Public Health
 - E) None of the above

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Educational Directives, Initiatives and Supports for the Pharmacist's Role in Public Health

- American Association of Colleges of Pharmacy (AACP) Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes (2004)
- Accreditation Council for Pharmacy Education (ACPE) Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree (2007)
- Institute of Medicine (IOM) Report on Health Professions Education: A Bridge to Quality (2003)
- Association for Prevention Teaching and Research (APTR) Clinical Prevention and Population Health Curriculum Framework for Health Professions (2004; revised 2009)

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CAPE Educational Outcomes: What Do Pharmacists Do?

- CAPE Educational Outcomes 2004
 - Organizing Framework
 - Integrating science, professional attributes, inter-professional practice, and professionalism across new major areas of...as they are in the practice of pharmacy
 - P _____ C _____
 - S _____ M _____
 - P _____ H _____

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ACPE Standards and Guidelines: Public Health in Pharmacy Curriculum

- Standards for Curriculum
 - Standard 12: Professional Competencies and Outcome Evaluations
 - Promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an inter-professional team of health care providers
 - Guideline 12.1
 - Basic knowledge, skills, attitudes, and values to practice pharmacy independently... and competent to:
 - Provide population-based care
 - Promote the availability of effective health and disease prevention services and health policy

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Institute of Medicine Report (2003): Health Professions Education – A Bridge to Quality

- 5 Competencies
 - Delivering patient-centered care
 - Working as part of interdisciplinary team
 - Practicing evidence-based medicine
 - Focusing on quality improvement
 - Using informational technology IOM

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APTR Clinical Prevention and Population Health Curriculum Framework for Health Professions

- 4 Components with 19 Domains

Evidence-Based Practice	Clinical Preventive Services and Health Promotion	Health Systems and Health Policy	Population Health and Community Aspects of Practice
Problem Description - Descriptive Epidemiology	Screening	Organization of Clinical and Public Health Systems	Communicating and Sharing Health Information with the Public
Etiology, Benefits and Harms - Evaluating Health Research	Counseling for Behavioral Change	Health Services Financing	Environmental Health
Evidence-Based Recommendations	Immunization	Health Workforce	Occupational Health
Implementation and Evaluation	Preventive Medication	Health Policy Process	Global Health Issues
	Other Preventive Interventions		Cultural Dimensions of Practice
			Community Service

PharmD/MPH Dual Degree Program

- Schools/Colleges of Pharmacy Offering Doctor of Pharmacy and Master of Public Health Dual Degree Programs

University of California-San Francisco	University of Florida
University of Georgia	University of Kentucky
University of Iowa	University of Maryland
University of Southern California	University of Wisconsin-Madison
Virginia Commonwealth University	

Adapted from: Vincent WR, Smith KM, Steinke D. Opportunities for pharmacists in public health. Am J Health-Syst Pharm. 2007; 64(19):2002-2007

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Advanced Educational/Training Opportunities for Pharmacists

- Continuing Professional Education
- Master in Biostatistics/Epidemiology
- Master in Health/Public Administration
- Master in Public Health (MPH)
- Certified Health Education Specialist (CHES)
- Certified in Public Health (CPH)
- Public Health Residency (4 programs)
- Health Policy Fellowship (2 programs)

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PPH Self-Assessment Q2

- HP 2010 includes 467 specific health objectives in 28 primary focus areas. According to the ACCP White Paper, which of the following focus area(s) is/are NOT in Category 2, where pharmacists are perceived to be active but have not yet established a leadership role?
 - A) Access to quality health services
 - B) Arthritis, osteoporosis, and chronic back conditions
 - C) Immunization and infectious diseases
 - D) Tobacco use
 - E) Mental health and mental disorders

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Professional Directives, Initiatives and Supports for the Pharmacist's Role in Public Health

- Joint Commission of Pharmacy Practitioners (JCPP): Future Vision of Pharmacy Practice 2015 (2004)
- American College of Clinical Pharmacy (ACCP) white paper: "Healthy People 2010: Challenges, Opportunities and a Call to Action for American's Pharmacists" (2004)
- American Pharmacists Association (APhA) adopted policy statements (1963-2007)
- American Society of Health-System Pharmacist (ASHP) policy statement on the Role of the Health-System Pharmacist in Public Health (2008)
- American Public Health Association (APHA) position paper and statement on "The Role of the Pharmacist in Public Health" (1980 and 2006)

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Joint Commission of Pharmacy Practitioners (JCPP)

- **Future Vision of Pharmacy Practice 2015 (Adopted 2004)**
- Consensus document on vision for pharmacy, pharmacy practice and benefits to society
 - Pharmacy education will prepare pharmacists to promote health improvement, wellness, and disease prevention
 - Pharmacists will practice as experts regarding medication use and be responsible for promotion of health improvement, wellness, and disease prevention
 - Pharmacy practice's benefits to society – medications-related public health goals are more effectively achieved

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American College of Clinical Pharmacy (ACCP) White Paper (2004)

- Reviewed the **Healthy People 2010** objectives and prepared an analysis to:
 - Identify objectives for which pharmacists are especially capable or positioned to exert a significant leadership role in conceiving and/or implementing programs
 - Identify objectives to which pharmacists would be expected to contribute toward conceiving and/or implementing programs
 - For those identified objectives, recognize gaps to assess how well the profession is doing in contributing to the objectives' achievement or in fulfilling its leadership role
 - Offer recommendations to the profession as a whole and to ACCP in particular intended to narrow any gaps identified

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American College of Clinical Pharmacy (ACCP) White Paper (2004)

1242 PHARMACOTHERAPY Volume 24, Number 9, 2004

Table 1. Healthy People 2010 Focus Areas by Category

Category	Perceived Role of Pharmacists in Meeting Objectives	Focus Areas
1	Pharmacists role is well established. Leadership role is well documented in the literature and/or positive outcomes data are available. Pharmacists are active in these areas, receive adequate education or specialized training, and have adequate manpower.	Diabetes mellitus Heart disease and stroke Immunization and infectious diseases* Medical product safety Respiratory diseases
2	Pharmacists are active in these areas but have not yet established a leadership role. A leadership role is possible or may be emerging. Pharmacists are capable and reasonably well positioned to assume a leadership role. Currently, documentation of pharmacy's role is insufficient and/or outcomes data are limited.	Access to quality health services* Asthma, osteoporosis, and chronic back conditions Cancer Chronic kidney disease Family planning Health communication Human immunodeficiency virus* Tobacco use* Mental health and mental disorders*
3	Opportunities exist for pharmacists' involvement but primarily in a supportive role. Future leadership role is possible, but only if additional efforts are made and if existing barriers (e.g., inadequate training, insufficient manpower) are addressed.	Disability and secondary conditions Educational and community-based programs Maternal, infant, and child health* Nutrition and overweight* Physical activity and fitness* Sexually transmitted diseases* Substance abuse*
4	Little or no role exists for pharmacists in these areas, and opportunities for expansion are limited.	Environmental health* Food safety Injury and violence prevention* Occupational safety and health Oral health Public health infrastructure Vision and hearing

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American Pharmacists Association (APhA) Adopted Policy Statements

- **Alcohol and Tobacco**
 - 2006 Tobacco Use Data Entry Field in Pharmacy Patient Records
 - 2005/1971 Cigarette Sales in Pharmacies
 - 1996 Exclusion of Alcohol & Tobacco Sales in Pharmacy Practice Settings
- **Community Awareness and Education**
 - 2005/1992 The Role of Pharmacists in Public Health Awareness
 - 2005/1986 Pharmacists' Responsibilities in Community Medication Awareness
- **HIV/AIDS**
 - 2005/1993 HIV/AIDS Education and HIV Testing
 - 2005/1990 Needle/Syringe Exchange Programs for Prevention
- **Immunizations**
 - 2007 Pharmacy Personnel Immunization Rates
 - 2005/2003/1996 Empowerment of Pharmacists as Drug Therapy Manager
- **Other Public Health Issues**

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American Society of Health-System Pharmacist (ASHP) Policy Statement

- Increase awareness of health-system pharmacists' contributions
- Describe the role of the health-system pharmacists in public health planning and promotion
- Identify new opportunities for health-system pharmacists' involvement in future public health initiatives
- "...despite the practice setting and services performed... lessons learned from the management of individual patients can have an even greater impact when they result in practice guidelines or health policies that affect the larger population...[after]...careful evaluation and synthesis of health information using epidemiologic principles."

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American Public Health Association (APHA) Policy Statement (2006)

- Statement of the Problem
 - Product-oriented functions evolved to patient-oriented, administrative and public health functions
 - Pharmacist's unique expertise including pharmacotherapy, access to care, and prevention services
 - Pharmacist's accessibility as resource for health and medication information
- Desired Actions
 - Encourages the trans-disciplinary collaborations [and research] of health planning agencies...policy-makers and pharmacy and public health professionals to develop legislation and advocate for plans that address health care needs...
 - Urges Congress to charge CMS to recognize pharmacists as health care providers within its programs (e.g., under Medicare) to function in public health capacities and to be eligible for proper reimbursement.

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Pharmacists in Public Health: Educational and Professional Efforts

- AACP CAPE Educational Outcomes (2004)
- ACPE Standards and Guidelines (2007)
- IOM Report on Health Professions Education (2003)
- APTR Clinical Prevention and Population Health Curriculum Framework (2004 and 2009)
- JCPP Future Vision of Pharmacy Practice 2015
- ACCP White Paper (2004)
- APhA Policy Statements (1963-2007)
- ASHP Policy Statement (2008)
- APHA Policy Statement (2006)



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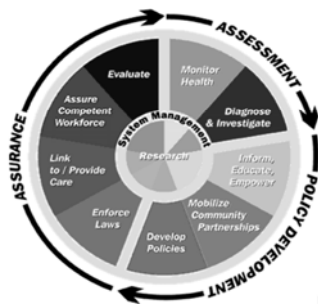
PPH Self-Assessment Q3

- Which of the following is NOT a micro level public health activity?
 - A) Immunizing patients
 - B) Developing health policy affecting populations
 - C) Providing pharmaceutical care/MTM for patients
 - D) Providing health education & screening for patients
 - E) All of the statements above are micro level public health activities

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Core Functions and Essential Services of Public Health

- 3 Core Functions
 - Assessment
 - Policy Development
 - Assurance
- 10 Essential Services of Public Health



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10 Essential Services of Public Health

- Used as a foundation for the National Public Health Performance Standards Program (NPHPSP) instruments
- Provides a foundation for any public health activity
- Describes public health at both the state and local levels
- NPHPSP Instruments include sections addressing each ES
- Assessment Instruments:
 - State public health system
 - Local public health system
 - Local governance



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10 Essential Services of Public Health

1. Monitor health status to identify and solve community health problems
2. Diagnose and investigate health problems and health hazards in the community
3. Inform, educate, and empower people about health issues
4. Mobilize community partnerships to identify and solve health problems
5. Develop policies and plans that support individual and community health efforts



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10 Essential Services of Public Health

6. Enforce laws and regulations that protect health and ensure safety
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable
8. Assure a competent public and personal health care workforce
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
10. Research for new insights and innovative solutions to health problems



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Pharmacist's Functions on Micro- and Macro-Level Public Health

Micro and macro level public health efforts reinforce the desired outcomes of preventing the incidence of disease, injury, or disability (primary prevention), screening to detect or diagnose disease, injury, or disability (secondary prevention), and treatment to minimize the severity of the disease, injury, or disability (tertiary prevention).

Bush PJ, Johnson KW. Where is the public health pharmacist?
Am J Pharm Educ. 1979;43(3):249-253.

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Clinical (Medicine & Pharmacy) and Public Health

Clinical Health (Degrees/Training)	Public Health (Degrees/Training)
Individual	Population
Ill/Sick	Still Healthy
Partial	Ongoing
Treatment	Prevention

Source: www.asph.org

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Pharmacist's Functions: Micro-Level Activities

- Patient-centered care
- Tobacco cessation
- Immunizations
- Health screening and referral
- Health education
- Patient counseling
- Monitoring and responding to adverse drug events (ADEs)
- Other activities emphasizing the well-being of the patient



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Pharmacist's Functions: Macro-Level Activities

- Assessment, identification, and prioritization of the public health needs in a community or population
- Policy development
- Quality assurance
- Population-based interventions/activities
- Administrative and health-systems
- Data analysis and literature evaluation
- Emergency preparedness
- Health policy and advocacy
- Program planning, implementation, and evaluation

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Example of Public Health Pharmacist Definition

- Combines pharmacy and public health skills to plan, organize, manage, and perform drug-related activities with a specific public health focus or within a public health setting;
- Work in agency-run pharmacies, or serve as the liaison between private pharmacies and the public health agency in regards to standards, procedures, and education;
- Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use;
- Advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

Adapted from: National Center for Health Workforce Information and Analysis, Bureau of Health Professions, HRSA.

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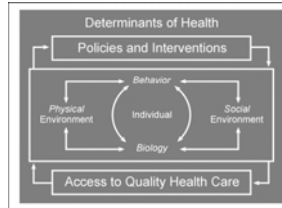
Examples of Activities for Health-System Pharmacists

- developing disease prevention and control programs (including medication safety) in their institutions and communities
- developing health education policies and programs within their institutions that address the needs of patients, other health care professionals, community leaders, and the public
- collaborating with state and local authorities, including local and state health departments and boards of health, to address local and regional health care needs (including emergency preparedness programs)
- advocating for sound legislation, regulations, and public policy regarding disease prevention and management
- engaging in population-based research and initiating campaigns to disseminate new knowledge

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Healthy People 2010

- **Overarching Goals**
 - Increase quality and years of healthy life
 - Eliminate health disparities
- 10 leading health indicators and 28 focus areas
- Pharmacists have opportunities in at least 50 of the 467 objectives.



Healthy People 2010. <http://www.healthypeople.gov>
Babb VJ, Babb J. Pharmacist involvement in Healthy People 2010. J Am Pharm Assoc. 2003; 43(1):56-60. 37

MTM and Healthy People 2010

- Healthy People 2010 (a macro level public health policy) aims to reduce the number of hospital admissions attributable to drug therapy management problems (primary prevention).
- MTM services for individuals inpatient/outpatient (micro level) allow clinicians to identify ADEs and prevent them from worsening (secondary prevention), as well as treat the affected patients (tertiary prevention).
- Evaluating these clinical experiences can lead to development of dispensing guidelines or utilization studies that could then be used as a primary prevention tool on the macro level.
- Effective MTM services also help conserve health care resources and address an unmet need within health care system; improve access to care for underserved populations

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Healthy People 2020

- **Overarching Goals**
 - Eliminate preventable disease, disability, injury, and premature death
 - Achieve health equity and eliminate health disparities
 - Create social and physical environments that promote good health for all
 - Promote healthy development and healthy behaviors at every state of life



Healthy People 2010. <http://www.healthypeople.gov/>

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To Err is Human: Building a Safer Health System

“The pharmacist has become an essential resource... and thus access to his or her expertise must be possible at all times....”

– Institute of Medicine

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Additional Opportunities in Public Health



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