Why a Public Health Experience is Essential for Medical Students

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A Profile of El Paso County

• **Population**: 663,519 (2014), 91% urban, 9% rural

• **Land area**: 2,126.8 square miles, 11% urban, 89% rural

• **Cities & Towns**: Colorado Springs, Fountain, Manitou Springs, Calhan, Green Mountain Falls, Monument, Palmer Lake, and Ramah

• **Military Installations**: Fort Carson, US Air Force Academy, Peterson AFB, Schriever AFB, Cheyenne Mountain AFB/NORAD/NORTHCOM

• **Colorado’s Most Populous County**

*EPCPH Community Health Indicators Report*
El Paso County Public Health Department

http://www.elpasocountyhealth.org/
Benefits to El Paso County

- Projected need of 120 physicians in the next several years
- Highlight connection of Public Health programs to overall health
- Potential for new Public Health physicians locating in El Paso County
- Integration with County social services, mental health services
- Potential for vertical integration of health care services
- Benefits of teaching training on Professional development
- Cutting edge program highlights EPCPHD
Where we’ve been?

• **Disasters and Public Health**, a 4 Course certificate program at UCCS
• Interest in bringing an MPH (Masters in Public Health) to C. Springs
• Lane Center and Univ. of Colorado, Colorado Springs Branch, 2016
• Rocky Vista University, Osteopathic Medical School, Parker Colorado
  – Initial discussions and commitment
  – 4 medical students every other month for 12 months
  – Curriculum development
  – Classes began in February 2015
Rocky Vista University

- Long term association with Penrose St. Francis and Memorial
- Long term commitment to Colorado Springs
- Graduates 156 new physicians each year
- Excellent learning opportunity in a diverse and growing community
- Dedicated clinical preceptors
- Strong military connection
- Emphasis on rural medicine and primary care
Who are these guys?

- 3rd and 4th year osteopathic medical students, rural and military track
- Elective rotation for them
- Background checks passed
- Immunizations up to date
- All in good standing with RVU
- Scary smart......................
What does the research show?

• Recent study by the ASPH and AAMC to develop common PH goals
• Recent study by ASPH to determine PH competencies
• Recent study by ASPH to determine cross-cutting domains
• Five core discipline-specific domains
  – Biostatistics
  – Environmental Health Sciences
  – Epidemiology
  – Health Policy Management
  – and Social and Behavioral Sciences
How do we do it?

• Four weeks, four students, each rotates through 4 of 6 divisions
• Observe, participate, ask good questions, think about it...
• Programs, competencies, activities, contact hours
• Total of 128 contact hours
• Series of lectures on Friday afternoons
• Final paper due last day of class
  – Pick a topic relevant to EPCPHD programs, needs to be useful
  – Evaluation (pass/fail grading)
Why does it Matter?

- Social Determinates of Health
- Cultural Competency
- Principles of Population Health
- Healthcare Financing and the ACA
- Environmental Health
- Disaster Medicine
- Team Approach
Evaluating the Program

Retrospective Pretest and Posttest for Medical Student Public Health Rotation

• We measure changes in;
• Knowledge
• Skills
• Behaviors
• Interests
Final thoughts

• Need for flexibility
• Students want to be here, this is an elective rotation
• Teaching can be fun
• Building a “deep bench” of future Public Health professionals
• Cutting edge program for medical school and public health dept.
• “Buck stops here” responsibility with Dr. Terbush for all med-student matters
Questions?
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Back-Up slides
What is Public Health?

- Public Health as Defined by the World Health Organization (WHO)
- Public health refers to all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease. The three main public health functions are:
  - The assessment and monitoring of the health of communities and populations at risk to identify health problems and priorities.
  - The formulation of public policies designed to solve identified local and national health problems and priorities.
  - To assure that all populations have access to appropriate and cost-effective care, including health promotion and disease prevention services.
Public Health is Focused on Prevention

Public health is a discipline which;
Protects and improves the health of communities through;
education, promotion of healthy lifestyles, research into disease and injury prevention.

It deals with prevention over the curative aspects of health.
Public Health is Population Health

• It deals with populations and communities, rather than individual healthcare issues.
• It uses epidemiological methods to analyze and predict.
• Public health interventions save lives.
• Motto of Johns Hopkins School of Public Health is *Saving Lives by the Millions*
Social Determinants of Health: A Definition

“Economic and social conditions that influence the health of people and communities”

*Commission on Social Determinants of Health, World Health Organization, 2008

Social determinants affect factors related to health outcomes, morbidity and mortality, quality of life, and life expectancy.
Health Disparities

• The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. (WHO definition).

• Examples of social determinants include:
  Availability of resources to meet daily needs (e.g., safe housing and local food markets)
  Access to educational, economic, and job opportunities
  Access to health care services
  Quality of education and job training
Cross cutting interdisciplinary domains

- Seven interdisciplinary, cross-cutting domains
  - Communication and Informatics
  - Diversity and Culture
  - Leadership
  - Professionalism
  - Program Planning
  - Public Health Biology
  - and Systems Thinking
What do we focus on?

- Interpret results of statistical analyses found in public health studies.
- Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
- Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
- Identify the principles and limitations of public health screening programs.
- Apply the basic terminology and definitions of epidemiology.
What do we focus on? (part 2)

• Identify the main components and issues of the organization, financing and delivery of health services and public health systems in the US.

• Explain methods of ensuring community health safety and preparedness.

• Demonstrate leadership skills for building partnerships.

• Identify the causes of social and behavioral factors that affect health of individuals and populations.

• Describe steps and procedures for the planning, implementation and evaluation of public health programs, policies and interventions.
What do we focus on? (part 3)

• Describe how the public health information infrastructure is used to collect, process, maintain, and disseminate data.
• Collaborate with communication and informatics specialists in the process of design, implementation, and evaluation of public health programs.
• Use informatics and communication methods to advocate for community public health programs and policies.
• Use the basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities.
What do we focus on? (part 4)

- Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention.
- Describe the attributes of leadership in public health.
- Articulate an achievable mission, set of core values, and vision.
- Describe how behavior alters human biology.
- Articulate how biological, chemical and physical agents affect human health.
- Apply biological principles to development and implementation of disease prevention, control, or management programs.
What do we focus on? (part 5)

• Discuss sentinel events in the history and development of the public health profession and their relevance for practice in the field.
• Analyze determinants of health and disease using an ecological framework.
• Distinguish between population and individual ethical considerations in relation to the benefits, costs, and burdens of public health programs.
• Assess evaluation reports in relation to their quality, utility, and impact on public health.
What do we focus on? (part 6)

• Explain how the contexts of gender, race, poverty, history, migration, and culture are important in the design of interventions within public health systems.

• Analyze the impact of global trends and interdependencies on public health related problems and systems.

• Analyze the effects of political, social and economic policies on public health systems at the local, state, national and international levels.
Health Equity vs. Health Equality

*American Public Health Association, https://www.apha.org/topics-and-issues/health-equity*
Healthy People 2020

- 2020 LHI Topics
- Are You Leading the Leading Health Indicators?
  Healthy People 2020 is looking for real stories from organizations implementing innovative programs to target specific Leading Health Indicators.
  The Leading Health Indicators are composed of 26 indicators organized under 12 topics. The Healthy People 2020 Leading Health Indicators are:
  - Access to Health Services
  - Clinical Preventive Services
  - Environmental Quality
  - Injury and Violence
  - Child Health
  - Mental Health
  - Nutrition, Physical Activity, and Obesity
  - Reproductive and Sexual Health
  - Substance Abuse
  - Tobacco

http://www.healthypeople.gov/
The Future of Public Health?

- Precision Healthcare
- Access/ Rationing
- Single Payer System
- Aging Population
- Emerging Infectious diseases
- Aging Public Health infrastructure
- Prevention/ health promotion as a lifestyle choice
What are the top ten accomplishments of Public Health, (in the 20\textsuperscript{th} Century)?

- Vaccination
- Motor vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer, healthier food
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco as a hazard
What are the 10 essential services of Public Health?

Public Health's ten essential services are to:

• Monitor health status to identify community health problems
• Diagnose and investigate health problems and health hazards in the community
• Inform, educate, and empower people about health issues
• Mobilize community partnerships to identify and solve health problems
• Develop policies and plans that support individual and community health efforts
• Enforce laws and regulations that protect health and ensure safety
• Link people to needed personal health services and assure the provision of health care when otherwise unavailable
• Assure a competent public health and personal health care workforce
• Evaluate effectiveness, accessibility, and quality of personal and population-based health services
• Research for new insights and innovative solutions to health problems
Cultural Competence

• Culture is the blended patterns of human behavior that include "language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups." Cultural competence is "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations." "Competence" in the term cultural competence implies that an individual or organization has the capacity to function effectively "within the context of the cultural beliefs, behaviors, and needs presented by consumers and their communities."