PHC 6102: Principles of Health Policy & Management
Health System Research: Building Evidence for the future (The Future of Public Health) 
(26 slides)

1. Hello and welcome to our final lecture in this course which focuses on the future of public health and the importance of public health partnerships. The content of this final lecture is taken, among other cited sources, from Public Health Administration edited by Lloyd F. Novick, Morrow, and Mays, Chapter 3 (Public Health Infrastructure; section on Inter-organizational Efforts in Public Health) and Chapter 24 (The Future of Public Health).

2. The objectives of this lecture are to identify the main components and issues in the development of organization and delivery of health services and public health systems in the US. Apply the concepts of systems thinking to organizations and organizational problems in public health and health services, which us brings us to the role of public health partnerships.

3. Americans spend more on health services than any other nation but continue to experience higher rates of morbidity and mortality than many other industrialized countries. The threat of terrorism and emerging infectious diseases such as SARS and pandemic influenza have brought increasing attention to gaps and inadequacies in the basic infrastructure that protects health at the population level.

Over the past three decades, a growing body of evidence has demonstrated wide variation in the availability and quality of public health services across communities. We want to know why that is for issues of justice in looking at disparities but also when we think about pandemics, which make no distinctions between communities, states, or countries.

4. So what’s the role of research in public health improvement? Strengthening the nation’s public health systems requires better information on how to best to organize, finance, and deliver public health services to achieve improvements in population health. The academic and research communities have responded by applying the concepts and methods of health services research to the study of public health practice.

5. What is health services research? It is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and population. Let me say that ‘communities and populations’, as part of definition, was added in recent years as the health services research community recognize the lack of and the importance of that research. So, health services research has looked at who and which populations are getting healthcare, the role of insurance and its effect on whether or not individuals and populations get healthcare, and the impact of insurance and healthcare utilization on morbidity and mortality.

6. With the inclusion of “communities and populations” in health services research, the Sub-discipline of ‘public health systems research’ has emerged as a specialized branch of health services research (HSR) that focuses on the operation and impact of public health systems. Health services research had traditionally focused on the organization financing and delivery of medical
Public health systems research is a field of inquiry that examines the organization, financing and delivery of public health services within communities and the impact of these activities on population health.

7. Public health research has looked at public health systems in their entirety. Other studies look at specific components within the systems such as local health departments, community-based initiatives, and linkages between medical care and public health providers. Often researchers have compared local health departments and their various activities - what they are doing; how are they financed, and the outcomes that they get. Linkages between medical care and public health providers are of concern because of the contentious history between public health and medical care: as the healthcare profession wants to hold onto its privileges and its means of making a living and are very concerned about government and public health intervening in that area. Much of the health services research conducted to date have focused on the organization, financing and the delivery of care.

8. Now let’s take a look at intervention and systems research. They are slightly different in approach and in generating evaluative findings. Much of the research carried out in public health settings can be classified as intervention research as oppose to systems research. These intervention studies focus on testing the efficacy of specific public health interventions. For example studies of teens who had the smoking intervention versus those who didn’t. Studies of exercise programs designed to increase the proportion of adults engaged in regular physical activity or studies of social marketing programs designed to increase rates of influenza vaccination among the elderly.

9. Public health systems research focuses on identifying how best to implement and maintain effective public health interventions in real world public health settings. This type of research seeks to identify organizational, technical, and human resources needed to operate public health interventions successfully and efficiently.

10. Here’s a brief review and comparison of intervention research and systems research.

   Intervention research determines whether specific public health intervention worked and uses experimental research designs and controlled trials; for example, studies of teens that had the smoking intervention versus those who didn't.

   Public health systems researchers aim to identify how best to implement and maintain effective public health interventions in real world public health settings. So, there will be observational research designs and participatory research approaches. In many cases at this point there is not the rigor that the lab scientists and the epidemiologist and the evaluator of many public health interventions have looked for in the past.

   With intervention research, we are interested in health behavioral and or economic endpoints and the comparison between groups that are exposed vs. not exposed. In PH systems research, our measures of interest reflect elements of public health system performance, such as service availability, accessibility, quality, efficiency and/or equity. Comparisons are made across different
public health settings defined by characteristics such as their organizational, financial, human and technical resources.

So for example we might compare services in a highly centralized structure like Florida, a centralized state public health system, and the other systems like Massachusetts and Connecticut with very fragmented systems with the a lot of power in those local health agencies.

11. Systems research must often rely on or use observational research designs that collect data during the normal course of operations in public health settings. Randomly assigning communities to different types of public health systems in order to compare the outcomes is not feasible.

Rather than compare outcomes observed in intervention and control groups, systems researchers usually compare outcomes observed in different public health settings and/or across different time periods, using advanced statistical methods to control for factors that may confound the analysis. So we may be talking about the types of regression analysis. These methods allow researchers to estimate the differences in outcomes that are attributable to differences in system characteristics such as the organizational, financial, technical, and human resources available within public health settings.

12. Well-designed research studies can produce many different types of evidence for improving the nation’s public health system. Some of the most important areas under study are: Descriptive studies on the current organization and operation of public health systems. Keep in mind that we have a multitude of public health systems throughout the country.

The scope and scale of public health services needed within communities. Some work has been done on this to go towards refining the functional definition of a public health agency; and what a local community should expect from a public health agency. Research is being conducted on how organizational and financial characteristics affect the effectiveness and efficiency of public health system. How public health systems performance affects community health: which is the ultimate outcome that we are looking for in public health systems research -- community health status improvement as judged by mortality and morbidity figures.

13. Research needs in the public health system are many and varied. The Institute of Medicine (IOM) report: The Future of the Public’s Health in the 21st Century (2002) identified a number of important roles that the research community can play in strengthening public health. Specifically, public health systems research will be vital for achieving the IOM’s recommendations concerning:
- Developing accountability and accreditation systems for public health.
- Monitoring and strengthening the competency of the public health workforce.
- Strengthening governmental public health infrastructure and partnerships with other sectors.
- Making evidence the foundation of decision making in public health: researchers have begun looking at all of those different areas.
14. There is a lot of groundwork that must be laid in order to build capacity for public health system research. We must establish research and quality data resources to support system-level research: A persistent barrier to conducting research on public health systems is the lack of current and longitudinal data on basic characteristics of the nation’s public health infrastructure, including information on the public health workforce, public health spending, for state and local public health agencies.

We must also establish research practice partnerships: public health systems research is a practice-based field of inquiry that requires strong partnerships between researchers and public health practitioners to be successful. So we have had calls for the (development of) academic public health departments. There are methodological challenges of defining public health systems. Measuring what they do is daunting given the enormous diversity that exists in the organization and delivery of public health services at state and community levels.

15. Public health professionals are far behind their counterparts in the medical profession in having basic reliable and relevant research on which to base their decisions. A fundamental question concerning the public health system of the future involves capacity to achieve continued gains in population health is: Can the earlier public health successes in sanitation and immunization be reshaped so as to reduce the behavioral risks now responsible for the bulk of preventable mortality and morbidity? So when we look at some of the graphs of years of life gained over the years, we know that life expectancy has been greatly increased greatly through the 20th century. However, the question that we must now asks ourself is: can we or how do we deal with behavioral risks that now face us?

16. The public health system is more than just the public health agency. It includes all public, private, and voluntary entities that contribute to public health in a given area. Thus, for effective public health research and practice, it is important to develop partnerships. These partnerships can be with public and private healthcare providers and institutions, community-based organizations, and government agencies (e.g., housing authority, criminal justice, education). The important point is that the partnership, regardless of its make-up, would be engaged in services that affect the health of the community or some defined population within the community. The function of the partnership would be to collectively identify, alleviate, and act on the sources of public health problems.

17. So I hope you can now visualize what we mean when we talk about public health system. This figure illustrates what we’re talking about: that’s the system. This complex network or system became very clearly an issue, for example, in pandemic planning, when many of these various partners have to be at the table. We constantly hear from doctors, hospitals, laboratory facilities the issues they face in the “system” when a pandemic occurs. In public health systems research, this network or system is equally important. As previously mentioned, public health systems research is a practice-based field of inquiry which requires strong partnerships between researchers and public health practitioners in order to be successful.
Consequently, effective public health partnerships are extremely important to the future of public health.

18. Developing partnerships is even part of the functional definition of a local public health agency. A functional local health department is one that: Develops partnerships with public and private healthcare providers and institutions, community-based organizations, and other government agencies (e.g., housing authority, criminal justice, education) engaged in services that affect health to collectively identify, alleviate, and act on the sources of public health problems.

19. Here a Florida example of partnerships within a functional local health department in Florida. In 1995 the immunization rate for two-year-olds was 72%. An Immunization Task Force was formed composed of representatives of public health, managed care, MDs, pharmaceutical companies, hospitals, and business representatives. They met and developed a multifaceted plan to improve the immunization rate. Components of the plan that were successfully implemented included:
   1) Local immunization registry for vaccines provided in the public sector.
   2) Immunization assessments in private providers’ offices.
   3) Workplace immunizations.
   4) Educational conferences for providers including national expert speakers.
   5) Development of joint vaccine statements to parents distributed through Managed care organizations mail outs. The county had a much improved immunization rate using that strategy.

20. Public health partnerships can be categorized in three ways: strategic, functional, and structural. First let’s look at the strategic orientation which includes opportunistic partnership, resource dependency partnership, and the stakeholder model.
   An opportunistic partnership is usually a short-lived partnership where the participants get what they want from each other. It may be a certain type of training or knowledge. In any event, the opportunistic partnership is generally to the mutual benefit of participants on both sides of the partnership. Essentially, opportunistic partnership is of limited duration, restricted focus, and pursuant to partners’ interests.

   Another type of strategic orientation partnership arrangement is the resource dependency partnership. A resource dependency partnership is similar to an opportunistic partnership in that the participants use the partnership primarily to pursue individual organizational interests. However, in the resource dependency model, organizations share the costs of a product or a service that is needed by different organizations for different purposes. In this arrangement, public goods are created that contribute to the process of community health improvement.

   The third type of public health strategic partnership under the strategic orientation is the stakeholder partnership, which involves organizations that pursue a shared mission or a shared set of interests through collective action. In contrast to the opportunistic or resource dependency partnerships, stakeholder partnerships are formed by organizations that seek to achieve a common outcome from their collective actions. This outcome would typically involve improvements in one or more areas of community health. To achieve this improvement, stakeholder partnerships often seek participation from the widest array of organizations that may contribute to the outcome of interest.
21. The second category of partnerships is functional. Most functional partnerships can be classified into one of four functional categories and these include service delivery, planning and policy development, surveillance and assessment, and education and outreach.

The service delivery partnership involves what are called joint referral arrangements which are designed to enhance service accessibility and service coordination at the community level. For example, in one study the local hospitals, community health center, and medical society participate in an agreement to refer patients who are at risk for diabetes to a screening and case management program operated by the local health department.

The planning and policy development partnership involves joint strategic planning and priority setting to delineate the respective roles of alternative community organizations in addressing health issues. It also involves adopting mutually developed service delivery standards, guidelines, and policies. And formulating public health policies and lobbying for their adoption by local, state, and federal legislative bodies.

22. In the surveillance and assessment model, it is not at all uncommon for organizations to team up in carrying out surveillance and assessment activities of disease patterns and other factors affecting the health and safety of the community.

The outreach and education model simply entails participants in a partnership to provide education to the public. A good example might be the American Cancer Society teaming up with the local school system to generate an informational campaign on the link between cancer and cigarettes.

23. Under the structural partnership orientation we find partnership types reflecting characteristics of informal collaboration, contractual agreements, shared governance, and shared ownership. Informal collaboration represents loosely structured agreements between organizations that are maintained by manual expectations and patterns of behavior. Organizations participating in these types of informal collaborative groups typically maintain a long history of operating within the same community or market and depend on reputation and peer pressure to enforce the expected behavior of the partners. These partnerships most often focus on collaborative activities that entail relatively small risks to the participating organizations.

Contractual agreements specify organizational roles and performance expectations within multi-institutional ventures. The most important aspect regarding contractual agreements is that it creates a legal mechanism for enforcing those performance expectations. These legal mechanisms may be called the terms of the contract, as they spell out specifically the rights and obligations of each party involved in the agreement. An example of a contractual agreement might be where a local government through its health and human services department contracts with a not-for-profit organization to carry out home health visits to the elderly.

The shared governance model formalizes decision making process to be used in developing and implementing collective action. The shared governance partnership model adds flexibility to the partnership structure by avoiding the need to fully specify the nature of the collective action and the contingencies for every foreseeable outcome of this action. The shared governance model is
essentially an arrangement between two or more organizations to share services. One example might be two local governments who come together and utilize the same resources for police and fire protection, as opposed to having two separate police and fire departments.

Shared ownership is very close in definition to the shared governance model. However, the shared ownership model has an added dimension of mutual ownership. Under the shared ownership model, each of the organizations participating in the partnership maintains equity ownership in a separate corporate entity that is formed to administer the partnership activity. As a result, each organization has financial liabilities and assets accrued by the new entity. The structural arrangement helps to align the incentives faced by participating organizations and creates a single shared mission for the jointly owned venture. An example of a shared ownership model would be where a group of hospitals and a network of community health centers sustained a coordinated care program for serving vulnerable and underserved populations within several counties. The hospitals in this arrangement could collectively own three quarters of the shares in the joint venture while the network of health centers owned the remaining one quarter share.

24. The integration of the partnerships within the structural orientation framework increases starting from informal collaboration to shared ownership.

25. Take a look at the systems model of a partnership within a logic model. The systems model is expressed in terms of inputs, activities, and outputs. As you can see on the slide, inputs are comprised of staff, funds, expertise, facilities, etc. Activities would include recruiting members, facilitating meetings, developing a mission, etc. Outputs would include formal agreements, meetings, and the number of active committees or task groups, etc. What is missing on this chart that you would normally find when reviewing the systems model is the feedback loop. The feedback loop represents ongoing monitoring of the partnership with changes occurring as needed.

26. This is Figure shows the life cycle of public health partnerships. As you can see, we begin with the initial alliance or the adoption of the partnership. The arrow from the adoption of the partnership advances immediately to evaluation of processes and outcomes. What this means is that evaluation of the partnership doesn’t just happen only at the end of the process, but is an ongoing evaluation and monitoring of the successes and weaknesses of the partnership. From the evaluation phase, and based upon what evaluation results tells us, there are a number of options that can be carryout to benefit the effectiveness of the partnership.

One possible option that we could do based upon the evaluation is to expand the partnership. For example, we can increase the scope and intensity of activities, perhaps even increasing the numbers and types of partners. In this vein, we might be saying that the partnership needs to be accomplishing more in the area of goal attainment, and that by expanding the partnership hopefully the desired level of goal attainment will be achieved.

Results from ongoing evaluation may also tell us to maintain the partnership: just sustain the status quo of the partnership’s activities. We may conclude that the partnership is successful in its planned achievements of goals and objectives, so we should leave well enough alone. Perhaps monitoring and evaluation of the activities of the partnership indicate that we need to improve processes and outcomes of the partnership. This may involve changing the structure of the
alliance, and this process would be called formalization. Evaluative efforts may also point to the need to carry out a process called migration. This would mean that we would need to redirect the partnership to focusing on new issues.

Finally, evaluation efforts may reveal that the partnership has accomplished what it had set out to accomplish. Therefore, it’s time to terminate the partnership. Partnerships may also be terminated because they couldn’t or wouldn’t do what they were intended to do. The partnership may be terminated because of resource limitations. There have been studies performed on partnerships and findings tend to indicate that most of the time, partnerships are terminated due to the mission being completed and that sufficient progress had been attained.

This brings us to the end of our lecture, thank you for listening. These questions provided can help you on the exam. This is our last week together, so I wish you all the best as you matriculate through your academic program at USF’s College of Public Health. I also wish you all the best on your upcoming exam.

Finally, the training and development of the public health workforce is critical to the future of public health. Developing effective and efficient courses in public health is part of the process of workforce training and development. Please, provide feedback on the course: the good, the bad, and the ugly. We NEED your feedback, its important.