

Job Aid

What is health? What is public health?

- 1** The World Health Organization defines **health** as: "...a state of complete physical, mental, and social well-being; not merely the absence of disease or infirmity."
- The Institute of Medicine defines **public health** as: "...what we, as a society, do collectively to assure the conditions for people to be healthy."
- If we think of health as a means to someone being able to achieve their life's potential, then public health becomes the vehicle by which we create the conditions for populations to be healthy.

How does public health influence population health?

- 2** Public health influences population health by:
- Investigating pressing challenges to health
 - Understanding risk factors and conditions
 - Asking questions and finding answers to on which to base interventions

What are some examples of how public health has improved population health throughout history?

- 3** Evidence of how public health has improved population health can be seen going back thousands of years in these, and many other, examples:
- Aqueducts that carried clean drinking water to ancient cities
 - The introduction of hygiene measures
 - The implementation of health departments
 - The increase in average life expectancy
 - Investigations into root causes of poverty, disease, and starvation

What are the ten greatest public health achievements from 1900 to 1999? From 2000 to 2010?

- 4** The CDC has listed these as the ten greatest public health achievements from 1900-1999:
- | | |
|---|--|
| 1. Motor vehicle safety | 6. Healthier mothers and babies |
| 2. Safer workplaces | 7. Family planning |
| 3. Control of infectious diseases | 8. Fluoridation of drinking water |
| 4. Fewer deaths related to stroke and heart disease | 9. Vaccinations |
| 5. Safer and healthier foods | 10. Recognizing tobacco as a health hazard |

From 2001-2010, the CDC lists these as the ten greatest public health achievements:

- | | |
|--|---|
| 1. Vaccine preventable diseases | 6. Cardiovascular disease prevention |
| 2. Prevention and control of infectious diseases | 7. Occupational safety |
| 3. Tobacco control | 8. Cancer prevention |
| 4. Maternal and infant health | 9. Childhood lead poisoning prevention |
| 5. Motor vehicle safety | 10. Public health preparedness and response |

How do social factors affect population health?

- 5** Social factors (i.e., low education, low social support, racial segregation, income inequality, poverty) contribute to health over the lifespan and can be linked to cause of death as much as medical conditions and diseases, like heart disease, stroke, lung cancer, chronic lower respiratory disease, and renal failure.

What does health equity mean?

6 **Health equity** means that every person has an opportunity to achieve optimal health, regardless of the color of their skin, their level of education, their gender identity, their sexual orientation, the job they have, the neighborhood they live in, and whether or not they have a disability.

Health disparities persist, and have even widened in some cases, despite decades of efforts to reduce and eliminate them. Inequities in health do not have a single cause; rather, they are the result of multiple interconnected complex pathways.

What are two frameworks in which to view public health?

7 The **eco-social model** is a public health framework that examines how different forces at different levels influence our health. This includes social relationships, living conditions, and economic policies.

The **health over the lifecourse model** is a public health framework that investigates health inequities between and within groups at every stage of life. This includes things like birth weight, food choices, physical activity, risky behaviors, and access to elder care services.

What does it mean to invest in health?

8 The US spends more on health care than any other high-income country, but that isn't the same thing as investing in conditions that create health. Investing in conditions that promote good health (i.e., good housing, livable wages, gender equity, clean air, drinkable water, availability of healthy food, access to quality education, mental health support, public health services, environmental protections, recreational opportunities, public safety regulations) can prevent disease and keep populations as healthy as possible for as long as possible.

What are the most pressing trends facing public health today?

9 Urbanization, population aging, climate change, and population migration are all pressing trends that will shape the health of populations in years to come. These, and other upcoming trends, provide many opportunities for public health interventions that can improve population health moving forward.

What is public health's main role in health?

10 Since health is inextricably linked to family, food, clothing, housing, medical care, access to social services, and security in the event of unemployment or sickness, public health, which addresses those social factors, is the glue that provides the conditions that make people healthy. Medical approaches to health focus on improving health for the outliers in health curves; public health, meanwhile, strives to improve the health of the entire population, shifting the entire curve to a healthier zone.

What are the two types of data?

11 **Quantitative data** is information in numeric form (i.e., things that can be counted, measured, or compared on a numerical scale).

Qualitative data is descriptive (i.e., things that can be observed, but not measured).

Both types of data are important to public health work. Data (of both types) provide evidence to support programs and policies that are designed to improve individual and population health.

What are prevalence and incidence?

12 **Prevalence** refers to the proportion of individuals with a disease at a particular point in time. To calculate prevalence, divide the number of people with the disease by the total number of people (including all those healthy, sick, at risk, not at risk).

Incidence, also referred to as risk, is the proportion of new cases of disease (versus existing cases). To calculate incidence, divide the number of new cases by only those at risk of contracting the disease (excludes existing cases and those immune to the disease).

What is statistical inference?

- 13** **Statistical inference** is when we use data from a sample, or a subset, of an entire population to make informed generalizations about the entire population. To account for sampling variability, you can calculate a confidence interval estimate (a range of plausible values for measures of association that likely include the true measure of association), or use statistical tests of hypothesis (statistical procedures that evaluate whether data support an assumed statistical model).

What does data have to be in order to be useful?

- 14** In order to be useful, data must be:
- Relevant
 - Timely
 - Taken in context

What are absolute and relative measures of association between risk factors and outcomes?

- 15** **Absolute measures of association** look at differences (differences in prevalence, differences in cumulative incidence). Absolute measures convey the additional burden or risk for those in a particular group versus those in another group. Absolute measures can be used to answer questions like: How many people would benefit from a certain prevention program? An example of an absolute measure would be: this group has 5 more cases of X disease per 100 people as that group.

Relative measures of association look at ratios (e.g., ratios of prevalence, ratios of risk). Relative measures quantify the relative burden or risk for those in a particular group versus those in another group. Relative measures can be used to answer questions like: How much more likely are people with a particular risk factor to develop a disease compared to those without that risk factor? An example of a relative measure would be: this group is 3 times as likely to develop X disease as that group.

How do you calculate risk difference and risk ratio?

- 16** To calculate a risk difference, subtract the risk of disease of the healthy group from the risk of disease in an unhealthy group – that will give you the excess risk of disease due to the unhealthy behavior.
- To calculate a risk ratio, divide the risk of disease in the healthy group by the risk of disease in the unhealthy group – that gives you the amount of higher risk of disease for the unhealthy group versus the healthy group.

What are some questions to ask when looking at the results of a study?

- 17** Some questions to ask when looking at the results of a study are:
- Who was involved? (attributes of population)
 - How were participants invited into the study?
 - Could anything else explain the outcome?
 - Were groups comparable in terms of other risk factors?
 - Are the results valid/reproducible?

What are the steps to addressing public health questions?

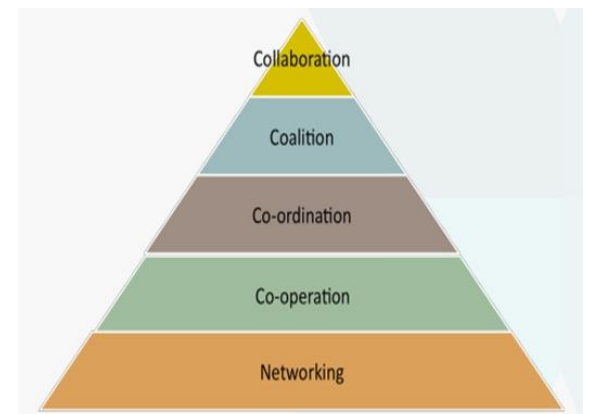
- 18** The steps to addressing public health questions are:
- Look at the common attributes/characteristics of a population
 - Identify the risk factors/exposures and outcomes, and determine how to measure them
 - Explore whether the risk factor/exposure is associated with the outcome
 - Understand what else might explain association or lack thereof
 - Investigate whether the risk factor/exposure causes the outcome

What are the elements of advocacy?

- 19** The elements of advocacy are:
- Define clearly the issue and goal
 - Identify and engage decision makers
 - Identify advocacy partners
 - Identify opposition and obstacles
 - Create a plan with tactics
 - Develop advocacy messages

Why is collaboration important in advocacy?

20 One of the elements of advocacy is to identify advocacy partners. Rarely in public health do we get anything done alone. Working with other people and organizations is an imperative to achieving advocacy goals. This pyramid illustrates ways we can engage with different partners. Partnerships are looser and less structured at the bottom of the pyramid, and become more collaborative, connected, and formalized as you move up the pyramid.



What is the lifespan of a coalition?

- 21** The stages of the lifespan of a coalition are:
1. Purpose
 2. Formation
 3. Setting Goals
 4. Work
 5. Interim Goals
 6. Achieve Goals
 7. End or Re-Contract

What are some questions to consider when forming a coalition?

- 22** Some questions to consider when forming a coalition are:
- What do we want to accomplish?
 - What can we agree on?
 - What can't we live with?
 - What is our plan of action?
 - How will we work together efficiently?
 - How will we make decisions together?
 - Together, what resources do we have?
 - Who else do we need at the table?
 - Who would be ideal to have at the table?
 - Who are our allies?
 - Who are our detractors, and why?
 - Who can be our champions?
 - How will we track our success?

What are some best practices of a successful coalition?

- 23** Some elements of managing a successful coalition are:
- Clarify your purpose and prioritize goals
 - Create and maintain a governance structure, and conduct periodic self-assessments
 - Seek funding
 - Keep your eye on the prize as the process is not linear and there will be mistakes along the way
 - Have clear leadership who can manage the long-range process (including overall timeline and deliverables)
 - Develop good communication strategies, fully engage stakeholders, and don't burn bridges
 - Host well organized and facilitated meetings with carefully planned agendas

What are some challenges of being part of a coalition?

- 24** Some challenges of being part of a coalition are:
- Turf and mistrust
 - Poorly defined decision making processes
 - Who owns the resources
 - Withdrawal of support by key member
 - Adding a new member
 - Compromising beyond comfort
 - Different levels of commitment

What's the difference between law and policy? How do public health law and public health policy shape population health?

25 Laws are standards, principles, and procedures that are primarily designed to ensure justice in society. Policies outline what a government is going to do (or not going to do), and can often inform and lead to new laws. Public health law and policy affect population health by shaping the environment in which we live. They can either propagate or reduce underlying causes of health in our population. Public health law and policy are often quite controversial because of the difficulty in finding a balance between legitimate interest of the community and the legitimate interests of individuals, corporations, and groups.

Who is responsible for public health in the United States?

26 The United States is a federal system, meaning that states and the national government both have very important powers and roles to play in terms of public health.

The federal government has the power to create major health policies, including the Commerce Clause, which allows the federal government to raise taxes and spend money to promote general welfare. The Civil Rights Act of 1964, the Clean Water and Clean Air Acts, the Occupational Safety and Health Act (OSHA), and many others, were all created under the Commerce Clause.

The states also hold important powers related to public health – police power to compel or prohibit individual behavior (including state-level mandatory immunization programs); licensing of health personnel/facilities; insurance licensing/regulation; public welfare; water/sewer/utility regulation/pricing; epidemic surveillance/control; public education; housing standards; and public transit/highways.

What is the status of the Affordable Care Act (ACA)?

27 The Affordable Care Act (ACA) builds upon existing components of our health care system, and attempts to provide expanded access to and affordability of medical care to all Americans. The goal was that most people would continue to be covered by employer-sponsored insurance with market reforms to ensure more comprehensive and equitable coverage, Medicaid coverage was to be expanded to provide universal coverage for the poor, and the exchanges would provide affordable access to care for those not covered by employer-sponsored insurance. The individual mandate, which would have ensured that everyone fell into one of those three categories (employer-sponsored insurance, Medicare/Medicaid, or the exchanges), was challenged in the Supreme Court. The result was that the individual mandate was changed to a tax levied on people who didn't purchase health insurance. Also, the planned mandated expansion to Medicaid was ruled to be voluntary by state, so states would have to agree to the expansion, which not all did, resulting in over 2 million people remaining uninsured. Although the number of Americans without health insurance fell sharply when the ACA went into effect, it's effectiveness was ultimately limited by the challenges and changes to the original plan.

What are Medicaid and Medicare?

28 Medicare is a national public insurance program, financed by government taxes, but delivered in the private sector, that currently provides coverage to about 55 million people. Medicaid is a partnership between the federal government and the states that provides access to a basic modicum of medical care and support for the poor and the elderly, and is based on income. States have the flexibility to determine Medicaid income eligibility, and can determine whether or not to include additional services (like dental care) to the list of services covered under Medicaid, so coverage varies depending on the state.

Why are health care costs rising?

29 The United States far surpasses other leading countries on health care spending, however, we are the only one of those leading countries to spend significantly more on health care than on social care. One of the most significant contributors to increasing health care costs in the US is the set of recent policy changes that allow, and encourage, hospital ownership consolidation. The consequences of this consolidation include cost increases, smaller and weaker hospitals, harder to access care, no strong evidence of improved quality, and insurance company consolidation (which further increases costs).

What are the five steps of the public health approach?

- 30** The five steps of the public health approach are:
1. Identify and define the health problem – consider the who, what, when, where, and how of the problem
 2. Identify the determinants – the factors that put them at risk for the problem
 3. Develop and test interventions to control/prevent the problem – use data to design evidence-based approaches
 4. Implement interventions to improve health – have an evaluation plan to monitor progress on improving health outcomes
 5. Assess the effectiveness of interventions – evaluate whether the intervention made a difference or not

What are fundamental causes?

- 31** Fundamental causes refer to the primary drivers that underlie public health problems. They influence multiple disease outcomes through multiple risk factors.

Fundamental causes include:

- Social conditions (factors that involve a person's relationships to other people) – race/racism, socioeconomic status, gender/gendered violence, sexual orientation/homophobia/related violence, stressful life events, or stress-process factors
- Contextualizing risk factors – attempting to understand how people are exposed to individually-based risk factors (e.g., poor diet, high cholesterol, lack of exercise)
- Access to resources (money, knowledge, power, prestige, support) – both to avoid risks and to minimize the effects of disease once it starts

What are proximal, intermediate, and distal causes of disease?

- 32** Proximal causes of disease act through personal health behaviors and conditions (i.e., inactivity, smoking, poor med adherence).

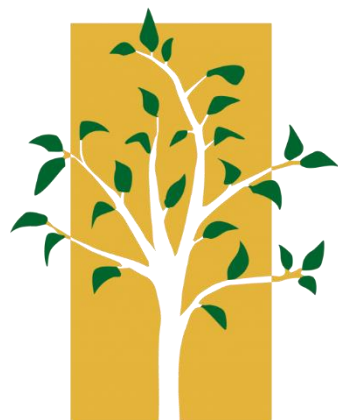
Intermediate causes of disease act through immediate/surrounding norms, infrastructure, resources, and capacities (i.e., mistrust of medical community, lack of support for quitting smoking).

Distal causes of disease act through broader historic, political, social, environmental, and economic context (i.e., ambient air pollution across a city, racism, colonialism).

What are the five levels we can intervene in a public health problem?

- 33** The five levels in which we can intervene in a public health problem are:

1. Intrapersonal/individual
2. Interpersonal
3. Institutional/organizational
4. Community
5. Public policy



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