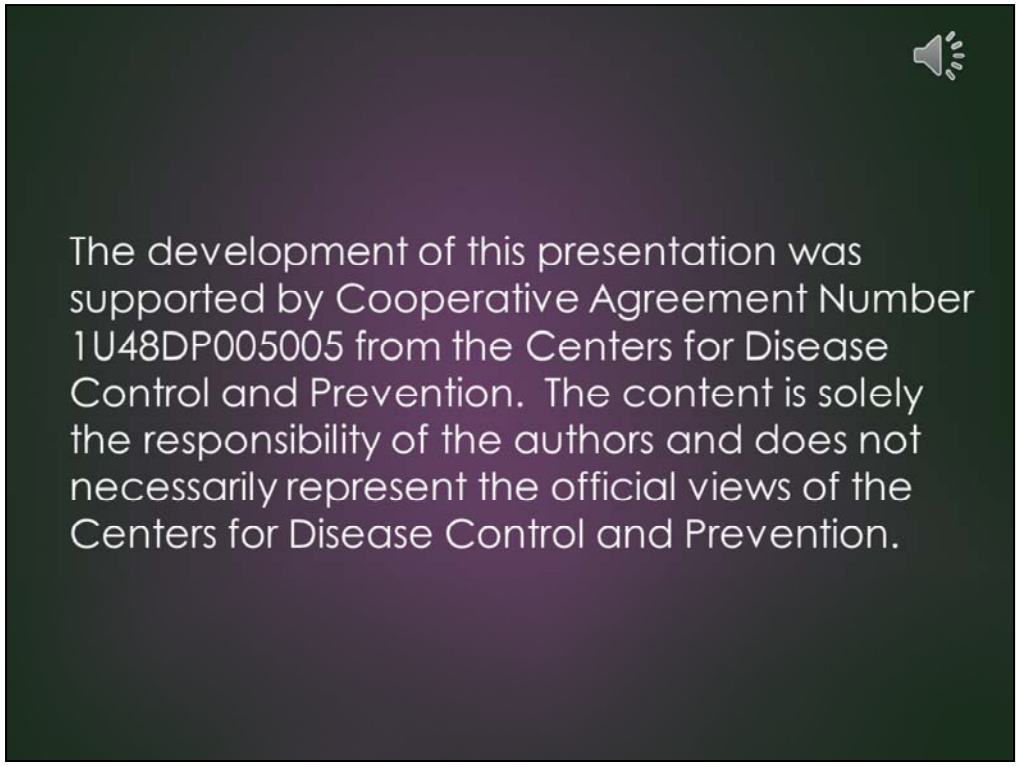
Now that we have covered the major social determinants of health, let's spend some time thinking about how this information might be used to change the health status of our populations.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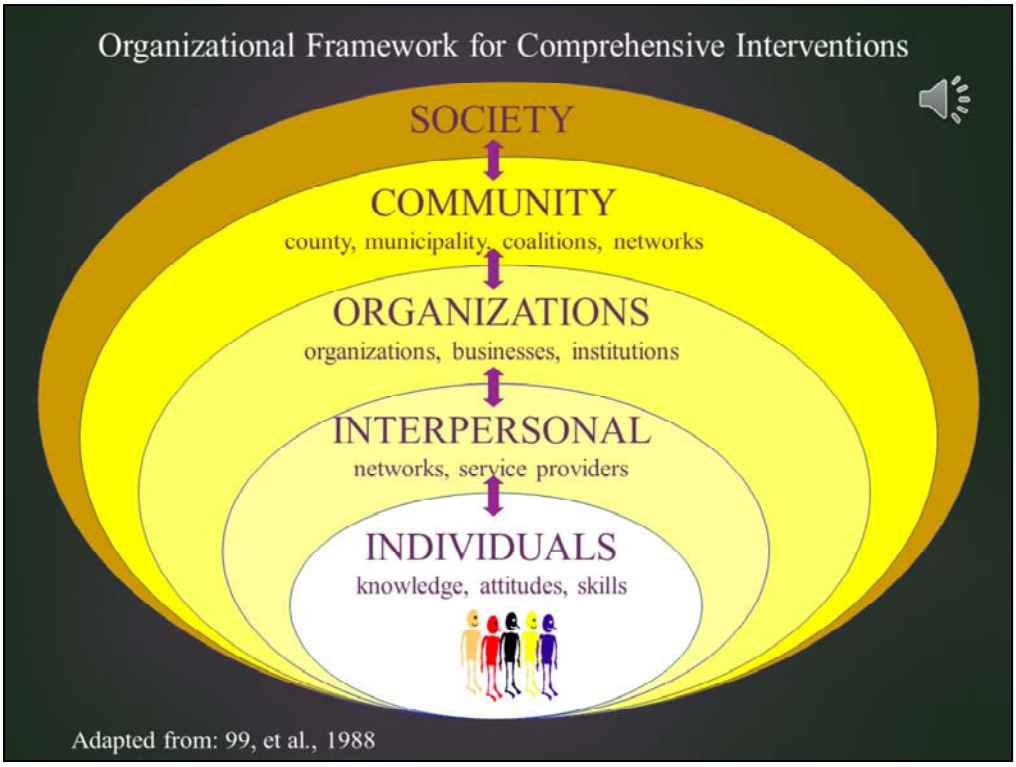
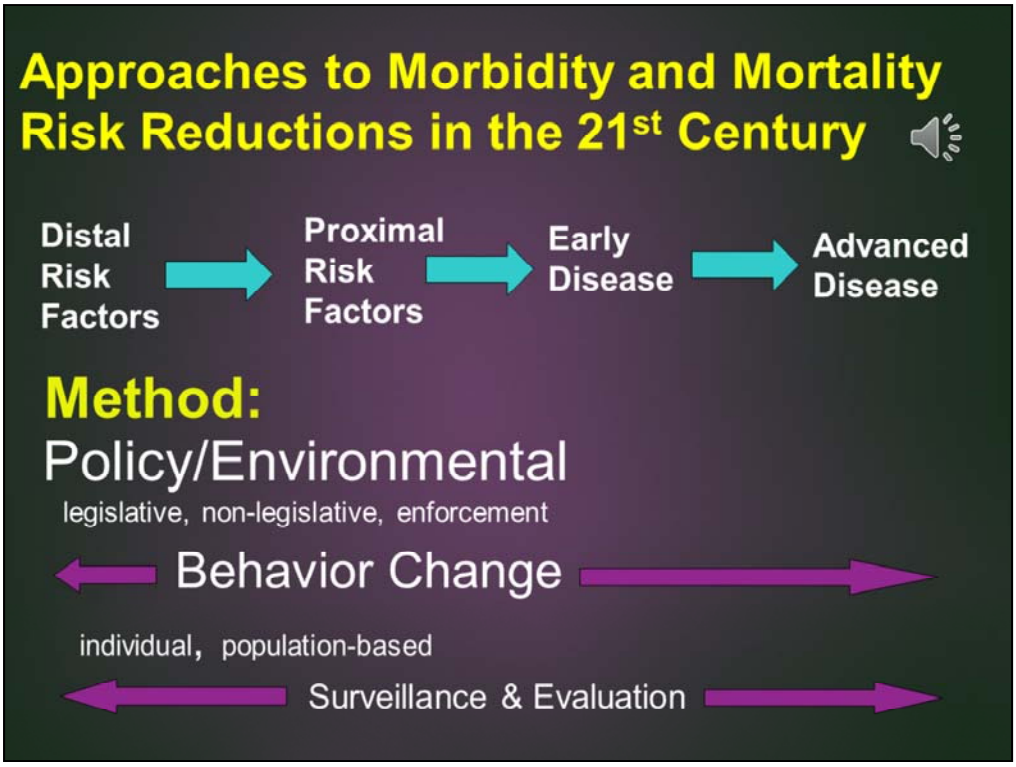
References

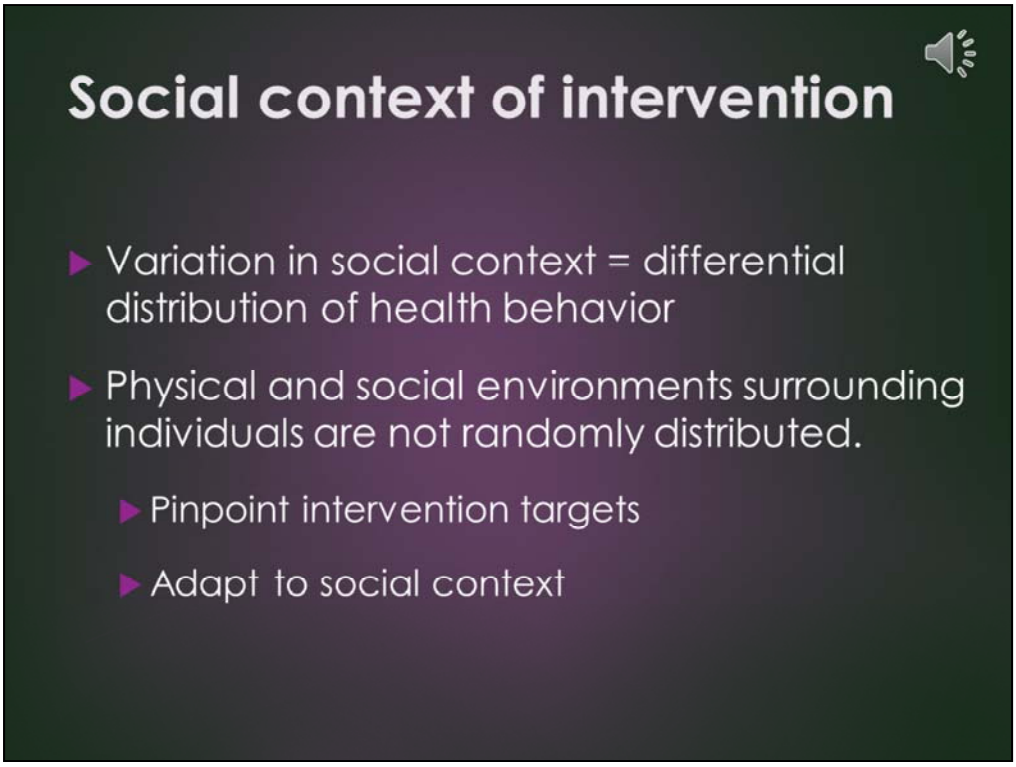
- Berkman LF, Kawachi I, & Glymour MM (eds). *Social Epidemiology* (2nd edition). Oxford University Press, 2014.
  - Chapter 10: Changing health behaviors in a social context
  - Chapter 12: Policies as tools for research and translation in social epidemiology



The socio-ecological model should be familiar to you by now, if you are reviewing these slides in order. We believe it is important to consider in changing any kind of risk factor. The more that you can develop interventions that address different levels within this socio-ecologic perspective, the more successful your interventions are likely to be. It is also important to realize as you consider this model that when we are talking about individuals, we are talking about primarily behavior change interventions. When we are talking about changes in the broader contextual factors, we are talking generally about incorporating policy-level interventions. If you can incorporate both policy and individual approaches, you're going to get a synergistic effect between the two and will likely get greater change.



There are really two basic approaches to reducing morbidity and mortality: the policy/environmental-level intervention and behavior change intervention. Those work synergistically to create the maximal change. Surveillance and evaluation are there as well, not as a method of changing the behavior or the risk factor of a population, but to allow us to identify the factors we want to intervene upon and evaluate the effects of what we are doing so that we know where the change is coming from and if there is a change in the risk factor within the population.



Health behaviors and risk factors are not distributed randomly in the population. The differential distribution of health behaviors, by social and economic characteristics, often reflects variation in the social context in which individuals live their daily lives. The physical and social environments are not randomly distributed either. If we understand those structures and the relationships among them, we can more effectively pinpoint targets for interventions and develop more efficacious interventions. It is important to recognize that the accumulation of social disadvantage increases one's risk of many harmful health behaviors and reduces the likelihood of successful behavior change. Knowing that can also help guide the development of interventions.

Remembering that the most effective interventions are those that are multi-level, that consider and address all levels of influence, we should consider some of the various options for health behavior interventions. The ones that come to mind most readily are the individually-oriented programs. Traditionally, in public health, we have focused on health education programs in various forms. Recently there has been an emphasis on training counselors to use motivational interviewing techniques to help tailor programs to individuals. Motivational interviewing involves the use of nonjudgmental and non-confrontational approaches to help individuals work through their ambivalence (or resistance) to behavior change. The technique emphasizes dissecting the positive and negative aspects of behavior change and mapping out a new course of action. Individually-based programs are, however, expensive to deliver; thus, public health practitioners have been working to identify alternative delivery methods.

Telephone-based interventions have been used to reach a larger audience of people. More recently, practitioners have begun to deliver programs through mobile websites, text messages, or emails. These eHealth programs have the potential for wide delivery because of advancements in technology and the widespread use of electronic devices. These programs may be especially useful to reach population in lower socioeconomic positions, but program planners should be cautious to know the target population. For example, older adults are still not as likely to receive information through electronic devices as their younger counterparts.

Community-based programs can very effectively target social and environmental

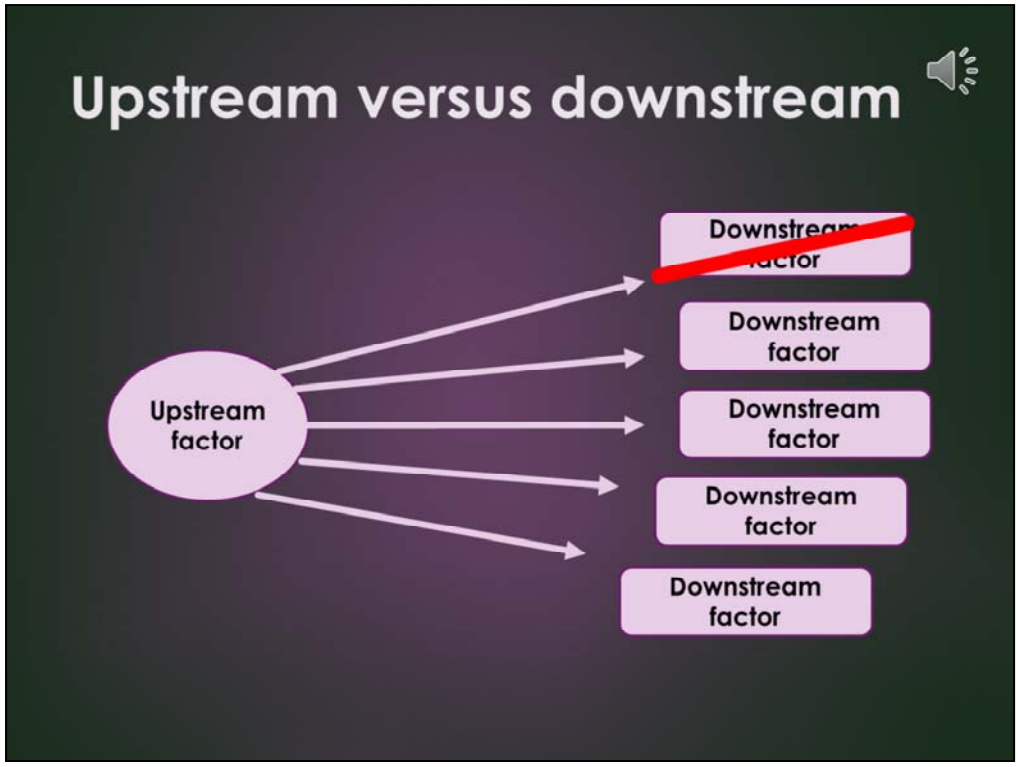
influences. An important basis of their effectiveness is community participation and ownership of health promotion activities. Programs that engage the community in development and implementation benefit from local knowledge of sociocultural contexts and the ability to culturally tailor the program.

Worksite programs may be excellent venues for reaching target populations. Various studies have shown that when workers are trying to adopt healthier behaviors, the workplace can play a critical role in supporting or obstructing their efforts and progress.

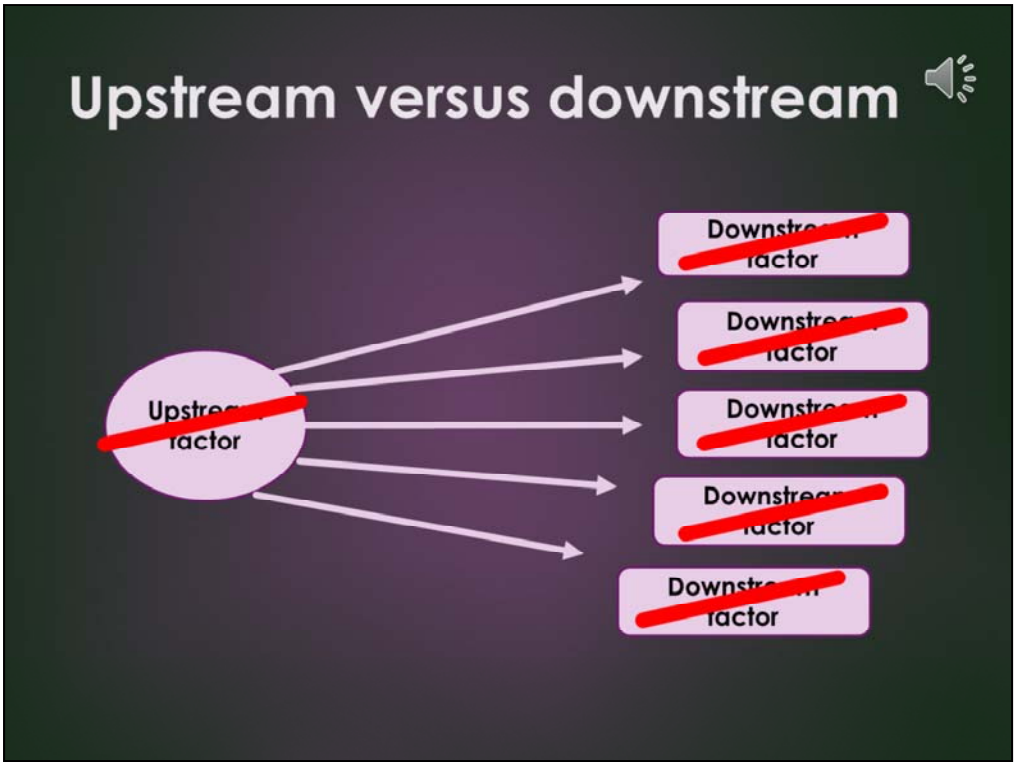
Similarly, many places of worship play a key role in addressing social structural factors that influence health. They may also have important structural resources that facilitate the conduct of health promotion programs and opportunities to implement policies that support health.

Finally, family-based programs – those that engage the entire family in behavior change – have become more popular, recognizing that families can either support or hinder the efforts of a family member who is trying to make behavioral changes. Involving parents in efforts to support children, spouses to support spouses can minimize barriers and maximize the chance that change can occur and be more durable.

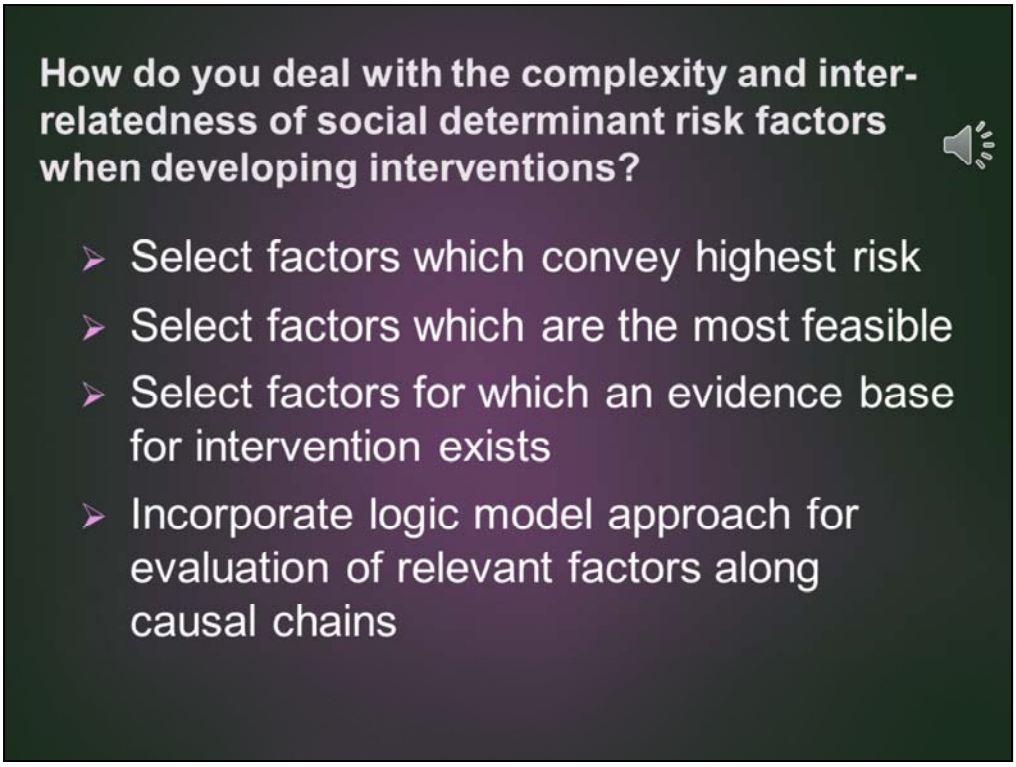
Increasingly, public health is turning to policy initiatives to accomplish our goals. These approaches are important, in part, because they allow us to reach larger segments of the population simultaneously, in contrast to health behavior interventions, which target individuals or smaller groups. Policy approaches can translate evidence gleaned from public health research and practice into efforts to improve population health more broadly. Perhaps most important, policy approaches may be particularly helpful in addressing the upstream factors – including social determinants.



Upstream social factors influence health through a cascading sequence of downstream events and exposures. Fundamental cause theory suggests that policies that operate upstream can have larger impacts because they affect multiple downstream factors simultaneously. Trying to interrupt any single mechanism downstream is less like to be effective overall because there are many other factors to continue the operation.



However, operating on the upstream factor itself effectively reduces or eliminates the effect of all the downstream factors – thus, targeting the fundamental cause of the problem can be more effective, efficient, and can produce more long-lasting consequences.



You have probably realized already during the course of these modules that social determinants and the interactions between them are very complex. It can be daunting to think about mapping out the downstream (proximal) and upstream (distal) risk factors that lead to a particular health outcome. It is important to do, so that you can figure out where to attack the problem most effectively and efficiently. But how do you go about doing that? There are four things we believe you need to think about in selecting the focus of a particular intervention and planning the implementation of the intervention. First, and it sounds probably pretty self-evident (and it really is), select the factors which convey the highest risk for that particular health outcome that you are interested in working on. Put your effort and your resources into those things that are really going to produce some sort of change.

Second, select the factors along the causal chain which convey the most risk overall and are feasible to build into an intervention design. Some potential interventions may be so controversial in a community (for example, condom distribution or needle exchange programs) that, no matter how effective they are likely to be, you simply cannot easily implement them. So think about which factors you can feasibly address and still have the impact you desire.

Third, it is important to select factors for which there is evidence that they can be changed. There are some things that, quite honestly, we have not yet been able to

develop what we would call “effective interventions.” If that is the case and you are going to have to develop a new, untested intervention for your program, you may want to reconsider. Developing new programs can be expensive and somewhat risky. If you can approach your target from a different direction, using an evidence-based approach, you may want to seriously consider it.

The fourth consideration is including an evaluation in your intervention. We recommend using a logic model approach, which will help you link the relevant factors leading to your desired outcome and then develop an evaluation to consider the success of your intervention as it moves through the stages.

Thought questions

- What did you read or hear in this discussion that was new information for you?
- What surprised or challenged you?
- What did you agree with or disagree with and why?
- How does this information make sense in terms of your work in the field of public health?