

An Ethics Framework for Public Health

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More than 100 years ago, public health began as an organized discipline, its purpose being to improve the health of populations rather than of individuals. Given its population-based focus, however, public health perennially faces dilemmas concerning the appropriate extent of its reach and whether its activities infringe on individual liberties in ethically troublesome ways. In this article a framework for ethics analysis of public health programs is proposed.

To advance traditional public health goals while maximizing individual liberties and furthering social justice, public health interventions should reduce morbidity or mortality; data must substantiate that a program (or the series of programs of which a program is a part) will reduce morbidity or mortality; burdens of the program must be identified and minimized; the program must be implemented fairly and must, at times, minimize preexisting social injustices; and fair procedures must be used to determine which burdens are acceptable to a community. (*Am J Public Health*. 2001;91:1776-1782)

Public health as an organized discipline began more than 100 years ago, with the goal of improving the health, primarily, of populations rather than of individuals. Given its population-based focus, however, public health continually faces dilemmas concerning the appropriate extent of its reach and at what point the work of public health professionals is infringing on individual liberties in ethically troublesome ways. Nonetheless, there have been few attempts to articulate an ethics of public health.

Bioethics, as a discipline, helps health care professionals identify and respond to moral dilemmas in their work. In this article I suggest that the contexts out of which bioethics emerged—medical care and human research—were oriented toward a different set of concerns than those typically arising in public health. While the founders of bioethics articulated principles equally relevant for public health, the more specific action guides and codes of health care ethics that have followed are an imperfect fit for public health. Codes of medical and research ethics generally give high priority to individual autonomy, a priority that cannot be assumed to be appropriate for public health practice.

A framework of ethics analysis geared specifically for public health is needed, both to provide practical guidance for public health professionals and to highlight the defining values of public health, values that differ in morally relevant ways from values that define

clinical practice and research. A first attempt at such a framework is offered here.

PUBLIC HEALTH

Public health is the societal approach to protecting and promoting health. Generally through social, rather than individual, actions, public health seeks to improve the well-being of communities. By maintaining a safe water supply, immunizing schoolchildren, or engaging in epidemiologic research, public health seeks to ensure societal conditions under which people can lead healthier lives,¹ minimizing threats to our health “that can be averted or lessened only through collective actions aimed at the community.”^{1(p20)} The providers of public health interventions often are governments, rather than private practitioners. Indeed, the provision of health services, generally the domain of medicine, becomes the responsibility of public health departments when services are provided by public clinics or hospitals.

Public health interventions date back more than 3 centuries. In 1701, Massachusetts passed laws for isolation of smallpox patients and quarantine of ships.^{1(p57)} In the early 1800s, Edward Chadwick demonstrated in England that differences in social conditions led to a more than 2-fold difference in life expectancy between upper and lower classes. Also in the 1800s, Lemuel Shattuck, in Massachusetts, implemented the first system of

vital health statistics.² Governments began conducting investigations of housing conditions and garbage heaps and mapping them in relation to outbreaks of disease,² and by the end of the 19th century, state and local boards of health were being created to enforce sanitary regulations.^{1(pp60-61)}

By the early 20th century, public health was seen as cost-effective as well as useful,² and more money was directed to public health programs. During World War II, given the need for a healthy population for the military, the US Public Health Service established the Center for Controlling Malaria in the War Areas, later the Centers for Disease Control and Prevention. Epidemiology developed as the science of public health, to study “the distribution and determinants of health-related states or events in defined populations and [to apply this knowledge] to the control of health problems.”^{3(p42)}

Today, public health practitioners use tools in addition to epidemiology to accomplish their work, still focusing primarily on communitywide, typically prospective, approaches to improve health. Some public health functions—surveillance, vital statistics, disease and injury reporting, and disease registries—relate to epidemiology and the collection of data. In addition, practitioners investigate outbreaks, conduct contact tracing, provide health education and other preventive interventions, and conduct research related to public health. Last, public health professionals sometimes create or enforce health-related regulations and legislation, for example, mandating screening, treatment, immunizations, or—rarely—quarantine.

States’ authority to pass laws to improve the public’s health dates to the 19th century and is referred to as the “police power”: “coercive action under state authority to encourage educational efforts. . . . seize property, close businesses, destroy animals, or involuntarily treat or even lock away individuals.”^{4(p42)} These various public health tools and functions, while together successful in decreasing morbidity and mortality, nonetheless raise ques-

tions of ethics in terms of the means by which these successes are achieved.

BIOETHICS AND PUBLIC HEALTH

Bioethics helps health professionals and public policymakers recognize moral dilemmas in health care and biomedical research and provides principles and moral rules with which to navigate through these dilemmas. (A framework of bioethics based on principles, as put forward by Beauchamp and Childress,⁵ will be used here. However, there are many other bioethical frameworks, including, for example, ethics of care, casuistry, and virtue-based ethics.)

Dating to the 1960s and 1970s, bioethics grew out of questions of fairness in resource allocation, moral issues raised by new technologies, and a lack of oversight in human-subjects research. The public was swept up in debate about whether the first artificial kidney center should allocate scarce resources on the basis of social criteria and whether Karen Ann Quinlan should be kept alive artificially when she had no meaningful cognition.

In 1969, the Institute of Society, Ethics, and the Life Sciences (now the Hastings Center) was created to address questions of bioethics and to provide frameworks with which to analyze contemporary moral dilemmas in medicine and science.⁶ In 1974, after several reports of US government-sponsored research that compromised the rights and welfare of study subjects, a new national commission issued the Belmont Report, which included ethics principles to guide the conduct of human subjects research—beneficence, respect for persons, and justice.⁷ Early framers of bioethics elaborated on these principles and provided examples of how they were useful in analyzing dilemmas from other areas of health care, not just research.⁵

These early framers argued that, a priori, no principle ought to have moral superiority over any other. At the same time, the issues that animated bioethics in the early years—the need to tell patients and research subjects the truth, the patient's right to refuse care or research participation—were ones in which the principle of respect for autonomy, perhaps given too little moral attention pre-

viously, was now given preeminent moral status.^{8–10} Informed consent, a practical application of the autonomy principle, became a hallmark of the new bioethics, and codes of ethics for clinical practice, while still emphasizing the need not to harm the patient, added clauses requiring physicians to “best care for the dignity of man in patients or research subjects.”¹¹(p21)

That contemporary medical ethics or research codes have made the right to noninterference central is understandable, given the context out of which they emerged. That public health practitioners, lacking guidelines of their own, must turn to these same codes for professional moral direction, however, is more problematic. In rare instances, existing medical or research codes do discuss traditional public health functions, such as breaching patient confidentiality to report diseases to the state.¹² In such instances, however, the physician's behavior is presented as an allowable exception to usual ethics rules in the name of public health.

At best, this leaves public health professionals needing to muddle through most other situations on their own; at worst, it could lead them, or even the public, to assume that public health is the branch of health care sanctioned by bioethics to make exceptions to existing ethics rules at will, in the name of public health and safety. Indeed, it is in great part *because* such power is vested in public health by law that a code or framework of ethics designed specifically for public health is so very important. The need for a code of ethics for public health, then, might be viewed as a code of restraint, a code to preserve fairly and appropriately the negative rights of citizens to noninterference.

A code or framework of public health ethics must emphasize positive rights as well, however. Public health has affirmative obligations to *improve* the public's health and, arguably, to reduce certain social inequities. A code of public health ethics is needed to address such social justice functions of public health. While frameworks have been put forward in medicine to help clinicians think through the ethical issues in a clinical case,^{13,14} no analogous framework is available for public health practitioners.

We live in a morally pluralistic society, and it is inevitable that moral appeals will conflict when attempts are made to determine appropriate public policy. A framework for public health ethics will help public health professionals recognize the multiple and varied moral issues in their work and consider means of responding to them.

AN ETHICS FRAMEWORK FOR PUBLIC HEALTH

A 6-step framework is proposed for consideration. Components of this framework were proposed in an earlier article,¹⁵ and a similar framework was proposed for public health and human rights by Gostin and Lazzarini.¹⁶ This is not a code of professional ethics, which more likely would address general norms and expectations of professional behavior and probably would be the product of a professional society. Rather, this is an analytic tool, designed to help public health professionals consider the ethics implications of proposed interventions, policy proposals, research initiatives, and programs.

1. What are the public health goals of the proposed program?

The first step for any proposed public health program is to identify the program's goals. These goals generally ought to be expressed in terms of public health improvement, that is, in terms of reduction of morbidity or mortality. For example, an HIV screening program should have as its ultimate goal fewer incident cases of HIV, not simply that a certain proportion of individuals will agree to be tested. A health education program in cardiac risk reduction should have as its ultimate goal (or the ultimate goal of a larger program of which it is a part) that individuals will have fewer heart attacks, not simply that individuals will learn new information or even that they will change their behavior. A research study should have as its ultimate goal (or the ultimate goal of a larger trajectory of which it is a part) that findings, if positive, will be implemented with the target population and improve its health status.

While more proximate and process goals (such as whether individuals will learn health information or whether they will

agree to be tested) are critical pieces of program planning and evaluation and may be crucial to achieving health improvement, the fundamental goal of decreased morbidity and mortality is the outcome by which the program or series of programs ultimately must be assessed. This is not to say that each individual program or research study must achieve this end. Epidemiologic studies may provide descriptive data that lead scientists years later to develop an intervention that will result in a reduction in morbidity or mortality; a health education program may be one of multiple and varied interventions that together reduce risks and ill health. The argument put forth here, however, is that public health programs, interventions, or studies must be designed with an awareness of the relationship between this program and an ultimate reduction in morbidity or mortality.

Of course, other types of benefits, generally social benefits, can accrue from public health programs as well. Public health programs can result in greater employment, for example, as well as less tangible benefits, such as coalition-building or the strengthening of communities. These benefits are extremely important and should be given strong consideration. They are, however, the incidental or intermediary outcomes of public health programs, rather than the programs' final goal. If a program has as its goal to increase employment as an end in itself (rather than, for example, to increase employment as a means to lower psychological morbidity or as a means to improve socioeconomic status and therefore lead to improved health) or to strengthen communities (rather than to strengthen communities as a means to decrease interpersonal violence or as a means to help watch out for the well-being of the young or old persons in the community), then the program is primarily a social program, not a public health program.

As described further below, a reduction in morbidity and mortality need not and could not be the goal of every individual public health intervention or program; however, individual public health programs should not be undertaken that are not part of a larger package of programs whose combined goal is the reduction of morbidity and mortality.

According to this view, an intervention whose goal is to improve access to care among hard-to-reach populations has an extremely relevant public health goal, assuming, of course, the program is effective in improving access. Other examples of interventions designed to reduce social inequalities will be discussed further in step 5.

Also relevant when we consider public health goals and benefits is to whom the benefit will accrue. Public health interventions often are targeted to one set of individuals to protect *other* citizens' health. Partner notification programs and directly observed therapy for tuberculosis are designed primarily to protect citizens from the health threats posed by others. In some contexts, public health programs are designed primarily to protect individuals from themselves, revealing that much of public health is inherently and unabashedly paternalistic. Health education campaigns, blood pressure screening, seat belt laws, and 55-mile-per-hour speed limits, while motivated in part by social concerns about costs, are, I suggest, motivated primarily to further individuals' ability to protect their own health. Restricting someone's liberty to protect him- or herself and restricting liberty to protect another person pose different ethical burdens, discussed further in step 3.

2. How effective is the program in achieving its stated goals?

Proposed interventions or programs are based on certain assumptions that lead us to believe the programs will achieve their stated goals. Step 2 asks us to examine what those assumptions are and what data exist to substantiate each of them. A cardiac risk reduction program has as its ultimate goal the reduction of fatal and nonfatal cardiac events. The assumptions of this education program (or the larger effort of which it is a piece) are that the program will reach individuals at risk for cardiac events; those individuals will learn the risk reduction messages; individuals will change their behavior (e.g., stop smoking, change diets, increase exercise) in ways suggested by the program; these changes would not have occurred without the program; and the behavior change in itself will result in fewer cardiac events.

While many health education programs are very effective at transmitting information that recipients learn and understand, programs generally are less successful at inducing behavior change.^{17,18} Thus, while a rather narrow evaluation may demonstrate success (in terms of participants' understanding the message), a program ultimately cannot claim success if behavior is unaffected and morbidity and mortality rates remain unchanged.

This is not to suggest that each program must reduce morbidity by itself. Individual health education or screening programs, for example, might be pieces of larger initiatives to reduce cardiac morbidity and mortality. Data may show that multiple education campaigns in different formats and with different messages are required to induce widespread behavior change. Multidimensional efforts are appropriate and useful, if data show that the combination is likely to evoke the desired result. Again, however, if the multiple approaches are simply hypothesized or assumed to reduce illness events, then further research must be done; a public health program is not yet justified.

This step of examining existing data to challenge our assumptions and implement only data-based policies or programs is often neglected in public health. One can assume that this is not because professionals are indifferent to whether their methods relate to their outcomes, but because we simply assume that they do, and we neglect to find data that prove us right or wrong. Thus, we introduce a program based on the assumption that some number of people who learn that cigarettes cause asthma and lung cancer will quit smoking, or we call for HIV screening because we assume that individuals who learn they are infected will begin to use condoms in sexual relationships. It is when our assumptions seem most intuitively obvious that we are at greatest risk of neglecting to determine to what extent they are supported by real evidence.

While all programs must be based on sound data rather than informed speculation, the quality and volume of existing data will vary. The question for policy and ethics analysis, then, is what quantity of data is enough to justify a program's implementation? As a rule of thumb, the greater the burdens posed

by a program—for example, in terms of cost, constraints on liberty, or targeting particular, already vulnerable segments of the population—the stronger the evidence must be to demonstrate that the program will achieve its goals. Indeed, because many public health programs are imposed on people by governments and not sought out by citizens, the burden of proof lies with governments or public health practitioners to prove that the program will achieve its goals. Thus, if at least some data do not exist that demonstrate the validity of a program's assumptions, the analysis can stop right here, and, ethically, the program should not be implemented. Conversely, the presence of good data alone does not justify the program; it allows us to move to the next stage of the analysis.

3. What are the known or potential burdens of the program?

If data suggest that a program is reasonably likely to achieve its stated goals, then the third step of the framework asks us to identify burdens or harms that could occur through our public health work.

Although a variety of burdens or harms might exist in public health programs, the majority will fall into 3 broad categories: risks to privacy and confidentiality, especially in data collection activities; risks to liberty and self-determination, given the power accorded public health to enact almost any measure necessary to contain disease; and risks to justice, if public health practitioners propose targeting public health interventions only to certain groups. Different types of burdens are more or less likely to result from different types of public health activities.

Disease surveillance and vital statistics, designed to monitor health and population trends, raise potential privacy concerns, especially since data collection is mandatory and data often are individually identifiable and, in many cases, publicly available. Although the types of data collected are not considered very personal or sensitive by most persons, everyone has his or her own boundary of privacy. Further, for some individuals, particular elements of vital statistics, such as paternity or cause of death, could be seen as invasions of their privacy. Finally, vital statistics and other publicly collected data can reveal patterns

about ethnic groups or neighborhoods that may be stigmatizing or otherwise harmful.

Communicable disease reporting raises privacy concerns as well, but the infringement and risks potentially are greater, since names are reported only of those who have reportable (and often socially stigmatizing) conditions. Given that individuals typically want the ability to control whether and to whom private information is disclosed, disease reporting carries the additional risk of a breach of confidentiality if security measures are not followed or do not work. For some, there is a risk of privacy infringement only to the extent that confidentiality is not maintained and harms such as social stigma or loss of employment ensue from unwarranted disclosure. For others, the privacy infringement is viewed as a wrong in itself, regardless of whether any tangible harm ensues.

Disease reporting is an example of a public health function that, at least on its face, is distributionally unfair, in that the burdens of the program are borne by those with the disease, generally for the benefit of others who do not have the disease. This unevenness of burdens and benefits may be justified in certain instances, when the benefits are important and when there are no less burdensome ways to achieve them. Unevenness in benefits and burdens is never appropriate, however, if groups are burdened in ways that are arbitrary and without public health justification. Further, a program that does not target particular groups explicitly may, in fact, lead to targeting in its implementation. One study, for example, suggested that doctors are more likely to report a patient with HIV to the health department if the patient is Black and male,¹⁹ despite language in the statute requiring the reporting of *all* persons with HIV. The appropriateness of creating targeted public health programs justified by epidemiologic data is discussed further in step 6.

Contact tracing, which sometimes accompanies communicable disease reporting, poses additional privacy risks. Not only are an individual's name and condition reported, but individuals are asked to provide the names of other (usually sexual) contacts they have had. Obviously a privacy infringement in itself, contact tracing also invades the privacy of individuals whose names are disclosed, who are

not able to decide for themselves whether to release their names to officials. As stated above, harms can occur if confidentiality protections fail, and individuals can feel wronged simply by virtue of the violation of their privacy. Justice concerns also arise if contact tracing programs are not implemented fairly.

Health education poses interesting questions in terms of ethics. In certain ways, health education is the ideal public health intervention, since it is completely voluntary and seeks to empower people to make their own decisions regarding their health once they are equipped with accurate information. From an ethics perspective, education clearly is preferable to other preventive strategies, to the extent that they are equally effective, because it poses few, if any, burdens.

Health education, however, although an essential component of most public health campaigns, will not be appropriate for all situations. First, education may not work in all settings, and more burdensome measures may be required. Second, to increase effectiveness, educational programs may introduce ethically questionable practices, such as manipulation or even coercion. A smoking cessation program, for example, may try to manipulate attitudes by suggesting that smokers are unpopular and by providing only partial or even false information to achieve its ends.²⁰

Third, all health education campaigns are potentially paternalistic, suggesting that certain ways of being (e.g., in greater aerobic health) are universally valued. Additional work is needed to examine when and where paternalism in public health is justified, especially since biomedical ethics generally has steered professionals away from paternalism except when it is specifically requested by patients. (See Bernard Lo for a discussion of paternalism in which he concludes that “when disagreements persist after repeated discussions, the patient's informed choices and definition of best interests should prevail,”²¹ [pp39–43] and a discussion of patients who do not want to make their own decisions.²¹ [p29])

Fourth, health education programs may target messages to certain audiences. Although such targeting is often justified on public health grounds (e.g., epidemiologic data demonstrate that members of this population are

at greatest risk, so their pictures will go on the billboards and messages will be promoted on the radio stations they listen to), the social and even public health ramifications of targeting must be seriously considered. Social stigma can result if, for example, certain subgroups of the population are assumed to be the ones who carry sexually transmitted diseases, and opportunities for public health intervention will be missed entirely if we all come to believe, through well-intentioned media campaigns, that only certain groups are at risk for domestic violence or HIV.

Finally, health education campaigns may be accompanied by incentives. Incentives generally are considered ethically less problematic than coercive measures or threats, but even incentives could be ethically questionable in certain contexts, such as when financial incentives are given for using particular types of birth control or avoiding pregnancy.²²

Public health research carries burdens. Human subjects regulations already describe the types of harms that could occur through research participation. These include medical risks if the research is clinical, and psychological or social risks if the research is epidemiologic or social science. In recent years there has also been increased attention to the personal and social burdens that can result from injustice or exploitation in research when certain populations are disproportionately disadvantaged or privileged through research participation.

In addition to these well-articulated risks, however, is the harm that can occur if public health research findings are never implemented in public health policy or practice. Any study conducted imposes, at the very least, the burden of inconvenience on those who participate, and may, of course, pose more significant risks to the individuals or communities who volunteer. An institutional review board allows research to go forward because of the benefits expected to emerge from study findings. If research findings are never translated into policy, however—a situation that occurs far too often—no benefits accrue from the research. In such instances, participants were wronged through a misleading (albeit not deliberately so) informed consent process, and the risk-to-benefit ratio could rarely be considered favorable.

Regulations and legislation, strictly speaking, are coercive, since they impose penalties for noncompliance. As such, they pose risks to liberty and self-governance. While many of these measures, such as reduced speed limits, child-proof bottles, and immunization, have demonstrated efficacy, they nonetheless are the most intrusive approach to public health. Edmund Pellegrino and David C. Thomasma write:

Involuntary and coercive measures must be undertaken with a clear perception of the dangers they pose to a democratic society: loss of personal freedom to choose a lifestyle, dependence upon governments to define values and concepts of the good life, and the imposition of cultural homogeneity. Involuntary measures also assume a benign, wise, and responsive government—something history finds singularly rare.^{10(p375)}

While threats to autonomy are the most obvious threats posed by public health regulations and legislation, such regulations and legislation can, in some circumstances, be associated with physical risks, or risks to individuals' health, as well. Federally approved and mandated vaccinations carry health risks to individuals; widespread spraying to prevent the spread of mosquito-borne viruses can cause proximate health problems to some individuals who inhale the chemicals. Finally, in this instance as well, the law can impose, by design or inadvertently, threats to justice if regulations impose undue burdens on particular segments of society.

4. Can burdens be minimized? Are there alternative approaches?

This piece of the framework requires us to minimize burdens once they have been identified. If step 3 suggests that a program or policy carries potential or actual burdens, we are ethically required to determine whether the program could be modified in ways that minimize the burdens while not greatly reducing the program's efficacy. Public health professionals, for example, when ready to report a patient's name and disease to the state, should inform patients that their names, by law, must be reported to public health authorities but that the law also requires that they be reported confidentially. Although reporting programs are not optional, the policy is more respectful of patients if patients are adequately informed.

Contact tracing programs, similarly, pose threats to privacy and confidentiality. Yet con-

tact tracing programs, strictly speaking, are voluntary, in that no sanctions are imposed on citizens who refuse to cooperate. It is ethically incumbent on public health practitioners to inform individuals sought for contact tracing of their right to refuse to disclose the names of their partners, as well as of their right to inform partners themselves, have a known health care provider do it, or have partners contacted by an agent of the state.

If 2 options exist to address a public health problem, we are required, ethically, to choose the approach that poses fewer risks to other moral claims, such as liberty, privacy, opportunity, and justice, assuming benefits are not significantly reduced. Making this assessment relies on the existence of sound data. If data show that a voluntary screening program will test essentially the same number of individuals as a mandatory one, because almost no one refuses testing when asked, then it would be ethically improper to implement a mandatory program.^{23(chap6)} If disease surveillance is equally effective with unique identifiers or with names, a program of unique identifiers is the morally preferable choice.

5. Is the program implemented fairly?

This piece of the framework corresponds to the ethics principle of distributive justice, requiring the fair distribution of benefits and burdens.^{5(pp326–394)} Public health benefits, such as clean water, cannot be limited to one community, nor can a single population be subjected to disproportionate burdens. HIV screening programs, for example, cannot be implemented only in poor or minority communities without strong justification (see Stoto et al.²³ for a discussion of why universal HIV screening programs are ethically preferable to targeted programs); cardiac risk reduction programs cannot be targeted exclusively to White men when women and minorities are also at substantial risk of heart disease.

That programs be implemented fairly is even more important if restrictive measures are proposed. Injustice is wrong for its own sake, and also for the material harms it can evoke. Social harms result if social stereotypes are created or perpetuated, such as the stereotype that only certain segments of the population are vulnerable to sexually transmitted diseases. In addition, real public health

harms result when individuals do not believe that they are at risk for disease because they were never targeted in education campaigns, or because their own doctors never screened them for a condition because they didn't fit the popular risk profile.²⁴ This does not mean that programs or resources must be allocated equally to all communities—rather, the allocations must be fair. That is, differences cannot be proposed arbitrarily or on the basis of historical assumptions about who might be at risk. Again, unequal distributions of programs must be justified with data. Moreover, the social consequences must be considered if a community is allotted resources unequally, and these consequences must be balanced against the benefits to that community or others.

Discussed less frequently is whether, or the degree to which, public health has any explicit role in righting existing injustices, especially given the strong link between poor living conditions and poor health outcomes. To what extent is there a positive responsibility on the part of public health professionals to advocate better housing, better jobs, and better access to food programs, since such advocacy might be the best route to improving the public's health?

Several notions of justice allow and even require unequal allocation of benefits to right existing inequities. John Rawls posits that justice requires us to allocate our resources unequally to help the least well-off.²⁵ Norman Daniels discusses the need for all members of society to be brought to a level of “species-typical normal functioning,”²⁶ which also could result in the unequal distribution of certain resources. Admittedly, not all philosophers have adopted this notion of justice; some make a distinction between preexisting societal inequities that are unfair (because they resulted from a person or community having been wronged by an identifiable source), where intervention is owed, and inequities that are merely unfortunate (that is, due to acts of God or circumstance), where no intervention is morally required.²⁷

Public health, I would argue, does have a positive responsibility to engage in programs and interventions that seek to lessen societal inequalities, at the very least when those inequalities relate (as essentially all do) to health

outcomes. Indeed, it is hard to find a more powerful predictor of health than class,^{28,29} and it is thus an appropriate, if not obligatory, function of public health to reduce poverty, substandard housing conditions, and threats to a meaningful education—if for no other reason than to reduce the incidence of disease.

6. How can the benefits and burdens of a program be fairly balanced?

If it is determined that a proposed public health intervention, policy, or program is likely to achieve its stated goals, if its potential burdens are recognized and minimized, and if the program is expected to be implemented in a nondiscriminatory way, a decision must be reached about whether the expected benefits justify the identified burdens. Recognizing, of course, that public policy is based on multiple considerations in addition to ethics, the question must still be asked whether, from an ethics perspective, the program should go forward. Health department officials and other public health professionals may not have the power to implement all programs they think would be beneficial, but they do have a responsibility both to advocate programs that do improve health and to remove from policy debate programs that are unethical, whether because of insufficient data, clearly discriminatory procedures, or unjustified limitations on personal liberties.

And yet while most reasonable people will agree, in the abstract, that burdens and benefits must be balanced, and that the most burdensome programs should be implemented only in the context of extensive and important benefits, disagreements are all but guaranteed over the details. Depending on one's perspective, there will be differing views over how burdensome various programs are, such as having one's name reported to the state or being required to immunize children before they start school. Citizens can be expected to differ over how important it is to protect a water supply for future generations, particularly if it means significantly higher taxes or prohibiting recreational use of a public body of water—which is clearly a benefit, not only in terms of individual pleasure, but also in terms of community cohesiveness.

Solutions to these inevitable disagreements must be reached through a system of fair pro-

cedures. Procedural justice requires a society to engage in a democratic process to determine which public health functions it wants its government to maintain, recognizing that some infringements of liberty and other burdens are unavoidable. There should be open discussion of what a society gains from good public health and why such benefits often cannot be obtained through less communal or more liberty-preserving methods. The discussion, of course, should also address why other interests also have moral claim. Such a process, even when procedurally fair by most standards, must not result in decisions based solely on the will of the majority. Indeed, deliberations, particularly around significantly burdensome proposals, must be scrutinized to ensure that the views of the minority are given due consideration. Highly burdensome programs should be preceded by public hearings, not just votes, so that minority views can be heard and considered.

At the same time, it is important to acknowledge that there will always be some number of persons who do not want their water fluoridated, do not want their children immunized, do not want to wear seat belts, and do not want speed limits on public roads. That there is dissent is insufficient justification for blocking a public health program; indeed, dissent is inevitable in all proposals. Dissent must be considered, however, and it deserves special attention if it is raised exclusively by a particular identified subgroup such as an ethnic minority, a particular age group, or residents of a particular neighborhood.

In balancing values and interests, the greater the burden imposed by a program, the greater must be the expected public health benefit, and the more uneven the benefits and burdens (that is, burdens are imposed on one group to protect the health of another), the greater must be the expected benefit. Programs that are coercive should be kept to a minimum, should never be implemented when a less restrictive program would achieve comparable goals, and should be implemented only in the face of clear public health need and good data demonstrating effectiveness. Nonetheless, we are a pluralistic society, including with regard to our notions of ethics. Different states and communities will decide differently which public health activities are appropriate and which are

overly burdensome. Ultimately, that different communities will enact different public policies, based on their own balancing of benefits and burdens, may be indicative of a fair process, or at least a pluralistic process, steering local public health policy.

CONCLUSION

Of course, public policy is based on many factors in addition to public health goals and ethical reasoning. Weighing alternatives according to this public health ethics framework should lead to an ethically acceptable option, but it may not lead to the politically preferable option for a given time. That politics often takes a divergent and somewhat unpredictable path, however, is not an excuse for abandoning ethics analysis when a public health proposal is up for discussion. An ethics analysis must always be conducted, both because bringing truth, fairness, and respect to our work is right in itself and also because, from a more utilitarian perspective, public health work will be more effective if we do.

Engaging in the steps of an ethics analysis makes us meticulous in our reasoning, requiring us to advocate interventions on the basis of facts and not merely belief. Further, an ethics analysis holds us to high standards, not only for scientific method but also for how respectfully we communicate with and involve constituent communities. The involvement of communities will help identify the public health threats divergent groups face and will create, if not partnerships, at least—one can hope—a reasonable amount of trust. To succeed, the field of public health must gain the public's trust that the inevitable higher proportions of government involvement and population targeting imposed by public health, relative to other branches of health care, are appropriate and in these various communities' best interests.

Public health professionals must go through the steps of an ethics analysis to assure the public of their integrity. The public must feel confident that public health professionals will offer only those proposals that will improve the health of the public, that proposed measures are minimally burdensome, and that a fair procedure has determined that the magnitude of the problem and the ensuing benefits justify overriding conflicting moral claims. It is

reasonable to assume that the public will be concerned about which functions are necessary and which are overly burdensome, offensive, or simply wasteful. This process, then, must be integrated, constant, and ongoing. The most important asset that public health can have is the public's trust that work is being done on its own behalf. In such a context, public health professionals can and must advocate what they believe, on balance, are the ethically best approaches for furthering social justice and the public's health. ■

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