

# Virtual Mentor

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## HISTORY OF MEDICINE

### **Behavior Change in America: Public Health, Medicine, and Individual Counseling**

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Behavioral counseling is a generally accepted component of primary care medicine. Few policy makers question the need for and wisdom of such practice. Indeed, with the growing burden of behaviorally mediated chronic diseases on population health and medical care costs, it seems increasingly important that physicians counsel their patients on such behaviors as good diet, exercise, safe sex, and the avoidance of tobacco, excessive alcohol, and illicit drugs [1]. A more thoughtful examination of the historical and ethical context of behavioral counseling by physicians, however, underscores a more complex reality. While physicians since Galen have recognized the strong connection between behavior and health, they have not wholeheartedly embraced the practice of behavioral counseling, nor have patients demanded it. In the past, most physicians saw their role as curing or treating diseases that had already developed. More recently, even as a science of effective prevention services has developed, physicians have done a poor job complying with performance of many of these recommended services [2-5]. Many Americans—particularly those who are arguably most in need of preventive services—do not seek them, and even fewer change their behavior on the advice of physicians [6-11]. This is one reason why some health economists and policy makers advocate for making such services free, as was done in the recently passed Affordable Care Act. Why is such a seemingly important activity honored more in the breach than in the observance?

One answer is that behavioral counseling by physicians is not automatically as necessary and logical an activity as it might appear. What prevents a disease and what treats it once it becomes manifest are not necessarily the same or even closely connected. Avoidance of certain behaviors might prevent the development of premature coronary artery disease, but treatment of a myocardial infarction requires a wholly unrelated set of technical skills—use of monitoring equipment, administration of parenteral medications, and procedures such as stenting or bypass surgery. Why should we expect those who have the latter set of skills to, of necessity, have the set of skills we now call motivational interviewing? Lester Breslow argues that our expectation comes in part from our culture's tendency to outsource responsibility for our health to professionals [12]. This is not necessarily a good thing: do we really need doctors to tell us how to live healthy lives? Arguably, this expectation is part of a broader societal trend to medicalize a host of well-being concerns that might be better addressed elsewhere and by other means. We will return later to the ethical dangers of such cultural beliefs and practices.

## Historical Background

The preventive orientation of public health and the treatment paradigm of medicine first came together not to address the behavioral antecedents of chronic disease but to attack infectious diseases, the major killers in the United States up until early in the twentieth century [13]. Because many infectious diseases are contagious, treatment is a critical component of prevention. The surest way to prevent tuberculosis, for example, is to make sure no-one with active tuberculosis is present to cough the germ into the air that others breathe. The nineteenth-century sanitary movement was a precursor to integration of public health and medicine. Originally focused on environmental cleanliness, the sanitation movement led to the development of our modern water and sewer systems and evolved to the less politically challenging notion of teaching individuals proper hygiene. This change, partly driven by the science of bacteriology, was also more acceptable to the society at large in the increasingly conservative political environment of a country responding to a massive influx of new immigrants, mostly poor and often in ill health [14, 15]. The “New Public Health,” that emerged in the early twentieth century in response to the bacteriologic revolution resulted in the development of dispensaries and school health programs to identify and treat those who were infected.

Several historical events and trends converged in the early twentieth century to set new expectations for both public health and the medical profession [13, 16]. As the new public health system turned its focus to the individual, it came into conflict with private medical practitioners, and, in response to the expanding political power of that profession, the public dispensaries and school clinics dropped treatment and focused on screening and referring to physicians. In the meantime, the rise of corporations (and corporate jobs), the expansion of the insurance industry, and World War I produced powerful stakeholders who had an interest in screening individuals to separate those at risk for ill health from those who were well enough to be good investments for jobs, insurance, and military service. In response, the concept of screening for infection expanded to include other conditions.

The science behind this expansion of clinical preventive services was weak at best [13]. While studies from the military and insurance physicals showed high percentages of abnormalities which were used to launch major campaigns to have all Americans get a regular physical examination [13], the U.S. Preventive Services Task Force subsequently noted that there is no evidence that comprehensive periodic exams lead to interventions that improve health outcomes [17]. Nevertheless, the medical profession embraced the idea—for the business it could provide; the AMA did so formally in 1922 [13]. Having competed successfully to deny public health the responsibility for *treatment*, the medical profession now claimed for itself the responsibility for prevention, and it did so by embracing a purely individual and medical notion of what constitutes prevention.

Despite medicine’s embrace of prevention, neither the practice nor the promise of clinical prevention was fully realized. Numerous studies have shown physicians comply with recommendations for offering preventive services at low rates [2-5].

Patient adherence to recommendations from prevention counseling, which has been studied primarily in the setting of high-risk groups, tends to be low [6-8]. The effect of counseling is not particularly strong—at least not in the case of the best studied area of counseling: smoking cessation [9-11].

In the second half of the twentieth century, as concerns about health care costs and the need for evidence-based practice intensified, the assumptions behind clinical preventive services were reexamined. The potential for waste and harm in unnecessary screening tests was discovered. First Canada and then the United States organized comprehensive reviews of clinical preventive services [17, 18]. The U.S. Preventive Services Task Force (USPSTF), which published its first guide in 1996, developed a robust methodology for examining preventive services [18]. Although initially designed to assess the evidence for conducting screening tests, this methodology can be and was adapted by the USPSTF to look at preventive counseling as well. The recommendations of the USPSTF are both scientific and ethical: they seek to identify the scope and magnitude of both the benefits and harms of proposed services and to recommend services only when there is clear evidence that the benefits outweigh the harms.

### **The USPSTF Framework and Behavioral Counseling**

In discussing preventive services, we need to distinguish between screening and intervention. A screening test by itself does nothing to prevent disease. Rather, it detects a condition or a high risk for a condition in order to inform a decision about whether preventive steps should be taken. A preventive intervention, in contrast, is designed to ward off the disease or alter its course early in order to prevent subsequent morbidity or mortality. Counseling is one form of intervention. Other forms of intervention include vaccines, medication, or technical procedures.

For a preventive service to be recommended by the USPSTF, it must meet several criteria [18]. The condition the service seeks to prevent must be of sufficient prevalence and severity to justify a population-based effort to identify those at risk. The service must do more good than harm. The benefit-harm balance is particularly of concern because preventive services, particularly if offered to an entire population, are almost certain to provide benefit to only a very small fraction. Everyone is exposed to the preventive intervention, however, and so even very small costs or harm done by the intervention, because they affect so many, may outweigh the benefit that accrues to a small number. Furthermore, the intervention must be shown to make a difference in outcome if applied early, prior to the time that the disease becomes clinically apparent and treatment is instituted.

Most preventive counseling services reviewed by the USPSTF are intended for the entire population or a specific age and gender group. Counseling can also be aimed at high-risk groups. In this model, risk is assessed either through a screening test or by history taking. Counseling is then provided only to those deemed higher-risk, sparing those less likely to benefit. This model exposes a small group to the counseling but exposes the entire population to a screening test. Screening by history

has few risks, although false negatives can result in false reassurance, false positives in unnecessary anxiety as well as subsequent exposure to whatever interventions and follow-up screening flow from the result, and the history taking itself can cause patients embarrassment or other distress. If a screening test is required to determine eligibility for counseling, other risks might be present from the testing procedure itself. A full treatment of the risks and benefits of screening tests can be found in the description of the USPSTF methodology [19].

For the general adult population, the USPSTF has reviewed behavioral counseling in regard to tobacco cessation, alcohol and other drug counseling, seat belt use, injury prevention, sexually transmitted disease prevention, and diet modification [20]. Only for tobacco cessation does the task force give a “category A” recommendation, confirming that there is good evidence that the intervention improves measurable morbidity and mortality at the population level. For most of the others, the task force could not find strong evidence that behavioral counseling by physicians produced significant and lasting changes in behavior sufficient to change outcomes at a population level. While in some cases evidence exists for short-term behavior change in at least a small percentage of patients counseled, evidence is lacking that the percentage so affected and the magnitude and duration of the change that resulted from counseling were sufficient to have significant impact on disease burden.

But can any harm come from physicians recommending to their patients that they eat properly or not smoke? Even if proof of efficacy is lacking, shouldn't counseling be recommended anyway, on the basis that at least some will benefit and no harm will be done? The task force agrees that harms from behavioral counseling were minimal and found little or no evidence of such harm. And, in most cases, it gives a qualified recommendation in favor of counseling on the rationale that we can infer that benefit is likely even if we do not have evidence, and that the harms we have not measured are likely to be small. It is important nonetheless to note that counseling can have negative consequences for the health of the public.

The first harm is opportunity cost. To the extent that behavioral counseling is ineffective (either because it is of no benefit or is misdirected to those who do not stand to benefit), it is a waste of resources—time that a physician might better spend on more useful actions or money that society might direct to other activities.

A second form of harm that can come from counseling occurs when the counseling is incorrectly done or improperly received or applied. Literature on this is again lacking, but an anecdote makes the point. I once treated an elderly Haitian woman who had recently come to the U.S. and who did not speak English. Through an interpreter, I gave her dietary counseling regarding her high cholesterol level. Three months later I received a call from the emergency room. She was being admitted to the hospital for dehydration and malnutrition. Respectful of my authority, but unable to figure out what she should and shouldn't eat, she had given up most eating and drinking completely, making herself quite ill as a result. In this case, harm was, indeed, done.

Even when counseling is “successfully” administered and patients understand and follow the directives, a third harm may come to those who do change behavior at no benefit to themselves. This harm may be nothing more than forgone pleasure—but presumably the need to actively change behavior on advice of the physician means a new pattern of behavior that is less preferred by the individual making the change. If the benefit of the behavior change is small and accrues only to a small number, is it worth the negatively perceived change that a much larger number of people must make?

There is scant literature documenting this kind of harm, but another anecdote may make the point. For many years, I delivered wine to my mother, who lived in elderly housing. She also ate whatever she wanted, having decided that the quality of her remaining years was more important than the quantity. Both she and I frequently heard her octogenarian neighbors who, on seeing her with a glass of wine or with a pat of butter on her bread, would complain bitterly how their physicians had forbidden them such pleasures and how jealous they were. Did these elders truly benefit from, or were they harmed by, their physicians’ advice?

Collectively, these concerns about behavioral counseling do not mean we should refrain from doing it. They do, however, point to the ethical obligation to consider the potential harms and well as benefits of any intervention and to conduct counseling as we should any other intervention: when there is evidence of benefit, when the benefit outweighs the harm, and when we can do it in such a way as to minimize the risks of harm.

### **Behavioral Counseling and Broader Ethical Concerns**

There is a final, and more serious, ethical dilemma in physician behavioral counseling, and it flows from the historic tensions and competition that developed between medicine and public health, described briefly above. Public health research into chronic disease and behavior change over the past half century has made clear that behavior is most effectively changed not by education or counseling, but by altering the conditions in which the behavior occurs, so that people can make the change more easily [21]. This is true in every society and with every behavior studied. I can touch on only a few examples of this phenomenon here.

It has been hypothesized that twentieth century Americans keep themselves cleaner than their ancestors, not because they are taught to be cleaner, but because they have access to heated water systems and easy-to-clean cotton clothing that earlier generations did not have [22]. Raising the price of cigarettes and regulating exposure to secondhand smoke have had much more powerful effects on smoking rates than has physician counseling or even community-based education [23, 24]. Diets are heavily influenced by culture and by what is available, familiar, and affordable, with perceived quality or healthfulness playing a much smaller role [25, 26]. People walk more when their communities are designed for walking. Public health interventions directed at such social determinants have been shown to have significant effects.

This does not by itself mean we should not do individual counseling. There is no need for either-or, so can we not simply pursue both public health and clinical approaches? What, then, is the ethical dilemma?

While we can and probably should do both, we as a society have drastically underinvested in public health efforts at changing the conditions in which people behave. We are a profoundly individualistic society that lives comfortably with the idea that we each determine our own health, and to the extent that it is subject to external control, that control comes almost exclusively from our physicians and from our access to health care. These are myths and are demonstrably not true. At their worst, they lead to a blame-the-victim mentality and lack of coordinated or group intervention [27-29].

This brings us back to the ethical concerns with physician counseling. There is a hint of paternalism in the notion that patients need physicians to speak to them about the harm caused by smoking, diet, lack of exercise, and excessive use of alcohol or drugs. The relationship between knowledge and behavior change is exceedingly complex, but we have learned that knowledge alone does not change behavior [30, 31]. While physician counseling might increase patients' motivation, patients may be motivated but still incapable of making the suggested changes. The root causes of many health behaviors of concern for many people are deeply embedded in the culture and lifestyle of our society, and using a counseling model that assumes exclusively individual control, autonomy, and responsibility for these behaviors can mean that patients feel hectored instead of helped by the advice. The negative emotional response may create yet another form of potential harm: that done to the patient-physician relationship that may in turn adversely impact adherence to physicians' advice on more pressing clinical matters or disinclination to see a physician at all.

The medical profession has both claimed for itself and been granted by society the role of health expert, and both passively and at times actively the profession has accepted that role and perpetuated the myths that individuals control their health destinies and that individual counseling is the one and only method by which behavior is changed. It is in this setting of shared delusion between the public and the medical profession as to the sources of health and well-being that behavioral counseling by physicians poses an ethical problem. To the extent that the reliance on behavioral counseling as the primary mechanism of behavior change perpetuates these beliefs, in some sense it crowds out the far more promising potential of public health modalities to change behavior and improve health.

If behavioral counseling were done properly, with adequate attention to risks as well as benefits, and if the medical profession were fully involved and invested in making sure that counseling was only part of the effort to improve health behaviors to a degree commensurate with its relative efficacy, there would be no ethical dilemma. But this is not the world as it is. So while we should encourage good practice and the

use of effective clinical preventive strategies including behavioral counseling, let us do so with understanding of its historic roots, its limitations, and its ethical challenges. And let us consider how to construct systems—environmental, social, and political—in which healthy behavioral choices are the easiest and most natural choice to make, and so they are made and acted upon.

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