From ACPM

Imagining the Future to Enhance Prevention Today

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"Just the facts, ma'am," Joe Friday would intone using his signature phrase on the radio and TV series, *Dragnet*.

This is what we believe we practice: evidence-based preventive medicine (EBM) based on "just the facts." The American College of Preventive Medicine's (ACPM's) mission states that we "improve the health of individuals and populations through evidence-based health promotion, disease prevention, and system-based approaches to improving health and health care."[1]

In EBM and science as a whole, we seem to be striving for the concept that Goldenberg[2] defines as objectivity: "an epistemic virtue … that stands for an aperspectival 'view from nowhere,' certainty, and freedom from bias, values, interpretation, and prejudice. Even if objectivity cannot be achieved, it is perceived to be an ideal worth striving for."

Though there are controversies surrounding EBM regarding its definition,[3] the philosophical base,[4,5] definitions of underlying objectivity,[2] causal inferences,[6] value of magnitude of the effect of proven interventions,[7] and balance between evidence and experience in recommending clinical interventions,[8] all seem to agree that the evidence is clearly where we need to start.

Ultimately, we want to know if an intervention likely will enhance well-being for an individual or a population. To simply suggest clinical or population-based interventions without examining the effectiveness, safety, and costs of health-promoting or disease-preventing interventions, and without knowing what works and what doesn't, would be irresponsible.

Yet, even assuming we could agree on what the evidence implies for clinical or population interventions, evidence alone usually does not lead to health-promoting behaviors in individuals,[9] or prioritization of health-promoting policies by policymakers.[10] Nor is health care always on top of the list for voters.[11] We even have trouble convincing our own healthcare workers (HCWs): During the 2012–2013 influenza season, the influenza vaccination coverage was only 75.2% for all HCWs, and only 81% among hospital-based HCWs.[12]

And, as we may often lament, lack of evidence in "alternative" medicine does not prevent individuals from partaking in unproven clinical interventions or prevent policymakers from passing unwise or half-baked laws or regulations.

Why do people or policymakers avoid health-promoting behaviors or pursue unproven, and perhaps even potentially dangerous, behaviors that they believe to be beneficial?

One of many reasons is because we as prevention specialists believe that "just the facts, ma'am" is enough. In our zeal to be accurate with data, we often ignore methods that would be more effective than simply presenting the facts. We fail to incorporate into our practices lessons learned from non-medical disciplines that could help us persuade patients to increase prevention's priority in their personal lives, or in policymakers' work in resource allocation and regulation development.

Why Do We Prioritize Treatment Over Prevention?

In the U.S., we spend about 8.5% of the healthcare dollar on prevention.[13] Most of us in prevention still believe that this is a lot less than we should spend. Dee Edington, the Katherine Boucot Sturgis plenary speaker at the ACPM annual meeting in 2009, claimed that 20% of the healthcare dollar on prevention would be a better allocation. Miller and colleagues,[14] in a brilliant paper that has received little recognition in the preventive medicine community, found that the marginal benefits of prevention and treatment for cardiovascular disease (CVD) would be reached at 37% spent on known effective prevention and 63% on effective treatment, requiring a reallocation of 9% of spending from their current spending estimate of 28% of the CVD dollar on prevention.

Why this seeming over-prioritization of treatment, or neglect of prevention? As the philosopher David Hume[15] wrote, "Reason is, and ought only to be the slave of the passions." Although we may *believe* that this is (or ought to be) backwards, the reality is that modern studies in the social sciences, neurosciences, and policy decision-making disciplines ratify Hume's description of human nature. As stated in a recent *Wall Street Journal* article, "Most of us assume that when we try to solve problems, we're drawing on the logical parts of our brains. But, in fact, great strategists seem to draw on the emotional and intuitive parts of their brain much more."[16]

An appeal to the rational mind is not nearly as motivating as an appeal to the passions.[17,18] It is very

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difficult to ignite the passions for any kind of changes of habit or policy when we are not responding to immediate needs—when we don't have evidence in front of us of vivid suffering.

In a prior publication, I argued that the priority of treatment over prevention, or alleviating harm over preventing harm, is "a function of our compassion, which is animated by spatial and temporal vividness."[19] This claim is based on what Slovic et al.[20] describe as the affect heuristic:

> Representations of objects and events in people's minds are tagged to varying degrees with affect. In the process of making a judgment or decision, people consult or refer to an "affect pool" containing all the positive and negative tags consciously or unconsciously associated with the representations.… Using an overall, readily available affective impression can be far easier—more efficient—than weighing the pros and cons or retrieving from memory many relevant examples, especially when the required judgment or decision is complex or mental resources are limited.

The affect heuristic can be evoked in many ways.

Think of the infant Jessica McClure, who fell down a well in 1987. Millions of dollars of previously unallocated resources were mobilized to save her.[21] This is an example of Jonsen's[22] well-known rule of rescue.[a]

Think of James Foley and Steven Sotloff—their beheadings by Islamic State for Iraq and Syria (ISIS) in vivid video evoked outrage in the American public, mobilizing Congress to pass the bill giving authority for the Obama Administration to arm Syrian rebels. The Associated Press's take on this?

> We only respond if there's video.… Time and again, we are informed of outrages … but only grow outraged and force action when video or audio or images emerge.… "Seeing things provides more information and puts a human face on whatever the situation is, and helps people relate on a much more personal level to what's going on."[23]

Video gives us vividness, an essential ingredient to mobilizing resources.

Think of the way Americans give to charity. As recently discussed on a National Public Radio Planet Money podcast,[24] 90% of all money is given within 90 days of a disaster—a clear-cut event that is a "galvanizing moment" that focuses world attention by evoking affect tags. Slowly moving, deadly disasters like the Ebola outbreak go on without a clear, defining moment in the mind of the general public. Further, prevention requires giving to currently normal individuals or populations. Prevention occurs before suffering or disaster.

When vividness of suffering is not evident, affect tags are not evoked and the affect heuristic is not in play. Yet, we know there will be unnecessary suffering in the future because patients and policymakers are not taking health-promoting action today. How can we find ways to evoke affect tags associated with *future* suffering so patients and policymakers will take action today?

Somehow, we need to capture the imagination—get people vividly to imagine the reality of the future. This is our challenge.

This is the theme of the American College of Preventive Medicine's annual meeting to be held in Atlanta, Preventive Medicine 2015 (PM2015), February 25–28.

Making the Future Vivid Through Imagination

How might we stoke the imagination to enhance prevention today?

There are many ways we can stoke the imagination. These methods have been used by non-scientific disciplines for ages working with the needs and desires of individuals. Data, information interpretation, and EBM are still important, of course. Proposing courses of action without evidence that they are meaningful would be irresponsible, and PM2015 will continue its strong emphasis on scientifically based information skill building and dissemination. At the same time, we will explore ways that we can harness the imagination through non-science, yet evidence-based, tools by looking at ways that elicit the affect heuristic imaginatively.

To do this, we will tap experts from outside of traditional preventive medicine in some of the following disciplines:

1. **Sound business techniques.** Companies use marketing and sales methods to encourage needs fulfillment through purchasing of goods and services. They use persuasion techniques that convince the consumer or customer that their product or service is just what customers need to fulfill desires that they may not even know they had. Of course, from the preventive medicine perspective, sometimes these techniques result in encouragement of poor health habits—excessive calories intake, smoking, stress-producing anxieties, inappropriate use of medications, sedentary lifestyles, among others. And from an ethical perspective, we need to ensure against coercion or manipulation. However, these techniques can also be used to

[a]Jonsen[22] explores this rule as a deontological imperative when we also need to be considering utilitarian consequences. He asks, "Should the rule of rescue set a limit to rational calculation of the efficacy of technology? Should we force ourselves to expunge the rule of rescue from our collective moral conscience?"