Prevention: A Century of Change

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In the early part of the 20th century, a periodic health exam for prevention purposes became widespread. The notion of seeing your doctor on a regular basis, as a checkup, somehow gained acceptance during an era when most still believed "if it ain't broken, don't fix it."

The American Medical Association (AMA) endorsed this prevention exam mindset in 1922, in part because life insurance policyholders who had this exam had a decrease in mortality: a classic example of selection bias.

Two Canadians, Frame and Carlson, wrote one of the first critical reviews of a component of prevention—screening—in 1975.[1] What followed, in the form of a Canadian Task Force on the Periodic Health Exam (1979) and, a decade later, a U.S. Preventive Task Force on the Periodic Health Exam (1989), was a flurry of analysis about the quality and quantity of information and recommendations that many thought were common sense. It turned out that common sense was heavy on common and light on sense. Many efforts that seemed so logical (e.g., screen for any malignancy) either lacked a sufficiently adequate test or resulted in early

identification that did not lead to better outcomes.

The AMA withdrew its formal support for the annual physical exam in 1983.

Today, the notion of forestalling the development or progression of diabetes and its attendant complications continues to rightly consume the reflections and efforts of scientists and clinicians. And consume the clinician it does. With every new study, there seems to be more that we should prevent. In addition, what used to be called "treatment" is sometimes referred to as "secondary prevention" or "tertiary prevention," perhaps because prevention efforts carry an aura of rightness. Screen for eye, foot, and renal pathology. Look for depression. Immunize. Not to mention monitor and modify a number of numbers so as to avoid micro- and macrovascular complications. And this is all, for a primary care physician, within the context of caring for the breadth of issues that have nothing to do with diabetes. Given the number of recommendations today, prevention efforts in 2007, unlike 1907, should be considered in a broader context that is, unfortunately, heretofore undefined.

In this issue of *Clinical Diabetes*, we see more calls for prevention. William Schaffner, MD; Susan J. Rehm, MD; and I (p. 145) write about a component of what is unequivocally one of the most significant advances in medical care during the past century: immunization. Few efforts within medicine have yielded so much return as the contributions of our infectious disease colleagues and their collaborators during the past century. This timely call to give attention to an effective method to decrease influenza rates in diabetes, an unnecessarily effective killer, is welcome.

Although infections used to be the leading killer a century ago, chronic conditions dominate today. George D. Harris, MD, MS, and Russell D. White, MD (p. 126), call attention to the deadliest killer in diabetes: cardiovascular disease. Here, both the promise and peril of prevention are highlighted. Clearly, we need to give attention to both the determinants of cardiovascular insult as well as a more careful attention to anatomical and functional assessment. The former (blood pressure, cholesterol, and glycemic control, among others) are well defined as to their contributions and the effectiveness of efforts to modify them. The latter is largely undefined notwithstanding many well-intended efforts. Harris and White write about the role of a widely available method to screen cardiovascular status: exercise stress testing. Although this method has been available for decades, it is frustrating to read how little progress we have made in better defining the role for this widely used prevention tool. And this is during an era when diabetes continues to be a major risk factor for cardiovascular mortality, especially in women.[2]

Finally, Robert M. Anderson, EdD, and Rebecca Patrias, MD (p. 141), argue for a different type of screening—the self-care behaviors and attitudes that are upstream from the outcomes that make the headlines. This line of work is clearly important even as we continue to evaluate rigorous methods to assess and standardize the measurement of certain behaviors and attitudes and also further assess the effectiveness of this screening approach.

I suspect that prevention efforts will always have inherent appeal. Given the extraordinary number of well-supported recommendations currently available,[3] the bar for incorporating recommendations into practice has been raised considerably during the past 100 years.

REFERENCES

[1]Frame PS, Carlson SJ: A critical review of periodic health screening using specific screening criteria. Part 2: Selected endocrine, metabolic and gastrointestinal diseases. *J Fam Pract* 2:123–129, 1975

[2]Gregg EW, Gu Q, Cheng YJ, Narayan KM, Cowie CC: Mortality trends in men and women with diabetes. *Ann Intern Med* 147:149–155, 2007

[3]Yarnall KS, Pollak KI, Ostbye T, Krause KM, Michener JL: Primary care: is there enough time for prevention? *Am J Public Health* 93:635–641, 2003