

# Healthy People 2010: Diabetes

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Beginning in 1979, the then Department of Health, Education, and Welfare issued a document titled "Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention" (1). With the release in 1990 of Healthy People (HP) 2000, the process of establishing health directions for the nation, as well as the increased variety of topics addressed, both signified expanded considerations about the future health of the U.S. (1). Within HP 2000, diabetes was included in a chapter titled "Diabetes and Other Chronic Disabling Conditions" (2). Initially, 4 diabetes objectives were addressed, including prevalence, mortality, complications, and patient education. During a "mid-course review" of HP 2000 in 1995, a fifth specific diabetes objective—screening for diabetic retinopathy—was added (3). The addition of this objective was important not only because of its clinical relevance to diabetes (4), but also because it was the first process indicator in the diabetes chapter (compared to objectives reflecting end-stage diabetes complications, such as mortality and lower-extremity amputations).

For content areas within HP 2000, periodic reviews with the Department of Health and Human Services occurred that were formal, intense, and public. These reviews addressed issues such as data availability, trends in targets, program efforts to achieve objectives, and pending challenges. The proceedings of these reviews were published as a statement of the extant status of a particular content area within HP 2000.

"HP 2010: Understanding and Improving Health" was released in January 2000 (5). This review will briefly describe HP 2010; the diabetes focus area within HP 2010; indications of progress for diabetes

within HP 2010; and challenges that remain for the greater diabetes community.

## Healthy People 2010

HP 2010 was noteworthy from several perspectives (1). First, because of a commitment to ensure broad participation, as well as to expand the scientific and programmatic content of the document, the process of establishing HP 2010 was both lengthy (lasting >4 years) and iterative, with multiple opportunities for public comment and advice with multiple regional hearings, focus groups, and establishment of mechanisms for written and electronic communications. Further, although various federal agencies had lead responsibilities for HP 2010, broadly representative work-groups actively participated in the evolution of each content area. Second, because of the consultative process, 2 overarching goals for HP 2010 were established for all focus areas: increasing quality and years of healthy life, and eliminating health disparities (1). The inclusion of these goals represented an awareness of the importance of adding "life to one's years" (6) as well as the need to specifically address the unacceptability of health disparities within various populations in the U.S. (7). Third, a common structure was established for each focus area, which required the following: 1) delineation of important factors that would affect the future status of a particular condition, e.g., aging, access to care, and scientific discovery; and 2) the essential need for a clear grounding of science supporting all objectives as well as the targets for each objective. Fourth, existing and/or needed surveillance systems were specifically identified to track objectives. Fifth, expansion of data analyses occurred to

reflect the need to examine important components of our society, e.g., differences in status by age, sex, race/ethnicity, and education. (As part of this effort, a very broad view of health was accepted, recognizing that in addition to traditional medical perspectives, relevant cultural, societal, and community factors impacting on overall health status needed to be considered [8].) Sixth, in addition to objectives measuring terminal events, e.g., mortality, both process and intermediate outcomes indicators were included, e.g., screening for blood lipids, reductions in blood pressure, etc. Seventh, for each focus area, important related objectives from other focus areas were specified. And eighth, 10 leading health indicators, such as physical activity, mental health, and access to health care, were selected in HP 2010 (1) to facilitate an aggregate view of important behavioral and health system challenges for the nation.

Thus, although HP 2010 is certainly a lengthier document than previous iterations, it reflects an effort to fully involve the public during its creation, and substantially expands the health areas addressed with 1) greater consistency among the focus areas, and 2) more explicit attention to the importance of data systems to track progress.

## Diabetes in HP 2010

For the diabetes community, HP 2010 represents progress when compared with HP 2000. Efforts to establish a diabetes focus area were codirected by the Centers for Disease Control and Prevention and the National Institutes of Health with input from a diabetes working group and the community through the various public-input mechanisms described above. As with all focus areas of HP 2010, diabetes has been organized into the following sections: goal; overview, including issues, trends, disparities, and opportunities; progress toward HP 2000 objectives; HP 2010 objectives; related objectives from other focus areas; terminology; and references.

The number of diabetes objectives has been expanded from 5 in HP 2000 to 17 within HP 2010 (Table 1). For each of these objectives, further data analyses will occur (or an additional surveillance system will be established). Further, a single target (consistent with the overall goal of eliminating

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**Abbreviations:** GDM, gestational diabetes mellitus; HP, Healthy People.

A table elsewhere in this issue shows conventional and Système International (SI) units and conversion factors for many substances.

**Table 1—The 17 objectives within HP 2010: diabetes**

Number	Objective
5-1	Diabetes Education
5-2	Prevent Diabetes
5-3	Reduce Diabetes
5-4	Diagnosis of Diabetes
5-5	Diabetes Deaths
5-6	Diabetes-Related Deaths
5-7	Cardiovascular Deaths in Persons With Diabetes
5-8	Gestational Diabetes Mellitus
5-9	Foot Ulcers
5-10	Lower-Extremity Amputations
5-11	Annual Urinary Microalbumin Measurement
5-12	Annual Glycosylated Hemoglobin Measurement
5-13	Annual Dilated Eye Examination
5-14	Annual Foot Examination
5-15	Annual Dental Examination
5-16	Aspirin Therapy
5-17	Self-Blood Glucose Monitoring

Goal: Through prevention programs, to reduce the disease and economic burden of diabetes, and improve the quality of life for all persons who have or are at risk for diabetes.

health disparities) has been specified. Finally, a stated method of target setting, status by sex, age, etc., and the surveillance system that will be used (or developed) to track the objective, are all delineated.

**Does HP 2010 Represent Progress for the Diabetes Community?**

The diabetes focus area of HP 2010 reflects the accumulation in knowledge about diabetes occurring during the last decade. Certainly, the explosion in understanding as a result of diabetes research, both about diabetes per se (9,10) as well as disturbing gaps in diabetes management (11), has allowed a more cogent and comprehensive description of the present and future challenges of diabetes (12). In addition, the inclusion of 17 specific diabetes objectives, as well as delineation of important related objectives, facilitates a broader and more meaningful view of the complexities of diabetes. Further, process and outcome indicators—both intermediate and long-term—as well as references to “structural issues,” e.g., focus areas that address systems of care (13), have received greater emphasis within HP 2010. The addition of process objectives in the diabetes focus area permits decisions about progress without having to depend solely

on incidence or prevalence of end-stage complications, e.g., blindness and end-stage renal disease (14–16). Similarly, the inclusion of new objectives, e.g., oral health examinations (17,18), or reduced mortality from cardiovascular disease in people with diabetes (19,20), not only reflect new science understanding during the last 10 years, but also opportunities for greater preventative care for individuals with diabetes.

Improved surveillance systems, especially those documenting ethnic and racial disparities in various health indicators (21,22), should facilitate a better understanding of the public health burden of diabetes for the entire nation. Finally, the expansion of the diabetes focus area within HP 2010 can serve as a better template for state or local judgments concerning not only which diabetes objectives could be included in their own strategies, but also how to use state-based (23) and more local (24) surveillance systems.

**Remaining Challenges for the Diabetes Community**

Several challenges remain. It will be noted that some existing or potential diabetes objectives are not located specifically in the diabetes focus area (or in some cases, anywhere within HP 2010). As described above, a few objectives very relevant to diabetes are found in other focus areas within HP 2010, e.g., treatment of diabetic kidney disease (focus area 4: Chronic Kidney Disease), and impairment due to diabetic retinopathy (focus area 28: Vision and Hearing) (1). A general policy of HP 2010, given the scope and magnitude of the document, was to prohibit duplication of objectives. These few objectives very relevant to diabetes are now specified at the end of the diabetes focus area, but reviewing them will require some extra effort on the part of the reader. Some potential objectives relevant to diabetes are not listed anywhere in HP 2010. For example, there is no objective specifically addressing the issue of how frequently screening for gestational diabetes mellitus (GDM) does (or should) occur (25). Similarly, no objective addressing congenital malformations associated with diabetes is contained within HP 2010. Although these issues are obviously important, the absence of any present or future (within 5 years) reliable population-based surveillance system by policy precluded such objectives. For those diabetes objectives for which data have not yet been fully analyzed or for which data systems are expected to exist

within 5 years, the designation—“developmental”—has been applied (e.g., reducing the prevalence of GDM).

Identifying resources to better use and/or expand existing data systems, as well as developing and implementing new surveillance mechanisms, will be a major challenge for the diabetes community, in part because surveillance systems, though recognized as important, are often not provided adequate resources for establishment and maintenance (26). This challenge is particularly relevant to the second overall goal of HP 2010: the elimination of health disparities. Achieving this goal will require, in part, oversampling of populations at particular risk for diabetes and associated complications and/or establishing additional surveillance systems specifically targeted to these communities.

Finally, HP 2010 in general, and the diabetes focus area specifically, does not contain concrete and specific program recommendations about how to achieve the targets listed for each objective. For many individuals and organizations interested primarily in improving the quality of the lives of people with diabetes, the absence of these program recommendations, or “best practices,” will necessitate additional work to arrive at program directions that will move the nation toward stated targets. This may seem like an overwhelming task, especially in that there are now 17 objectives in the diabetes focus area that are intentionally not listed in any priority order. However, the decisions about what to do, and discussions about how to move forward, must be made by the various components of the diabetes community if we are to establish effective and coordinated prevention programs.

**Conclusions**

The process of establishing HP 2010 and the document itself represent important efforts for the nation in that a more comprehensive and scientifically based set of recommendations has been established that can serve as a blueprint for future health challenges needing to be addressed. For the diabetes community, realities of the condition itself—both its magnitude and scientific understandings—have facilitated a greater recognition of the importance of diabetes, as well as a broader perspective of diabetes as reflected by the increase in the number of diabetes objectives. Although some aspects of the burden of diabetes are not yet included, HP 2010 represents progress for diabetes. This diabetes focus

area, as well as all focus areas within HP 2010, will not remain static. Through periodic public reviews of each focus area, continued advancement in science, as well as a major "mid-course review" for all of HP 2010 in 2005, opportunities to expand and improve the diabetes focus area lie ahead.

For more information about Healthy People 2010 or to access Healthy People 2010 documents online, visit <http://www.health.gov/healthypeople> or call 1-800-367-4725.

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