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ASSESSING THE HEALTH OBJECTIVES OF THE NATION*

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ASSESSING THE HEALTH OBJECTIVES FOR THE NATION: RELEVANCE AND RESULTS

> Throughout 1985 the U.S. Public Health Service conducted a review of the progress achieved thus far toward the 226 disease prevention and health promotion objectives for the year 1990 that had been adopted in 1980. The results of this review provide cause for optimism about the health of the Nation (1). ... It provides much cause for pride that we have done so well (2)
>
> .... the new administration faces a range of serious health problems.... These include the needs of 37 million uninsured Americans..., an escalating AIDS epidemic and the need of increasing numbers of elderly for long-term-care insurance (3). As the year 1990 approaches, it is evident that the rate of progress in improving maternal and child health objectives has been so slow that many of the child health objectives established as goals for that year by the U.S.Surgeon General in 1979... will not be met (4).

Such divergent views of the 1990 health objectives of the nation and progress in obtaining them generate curiosity if not a compelling need to better understand the paradox. The University of Chicago's Center for Health Administration Studies undertook two previous reviews of health status and health services utilization in the nation in the mid-1980's (5,6) using the framework of the U.S. Public Health Service (7). Now, at the end of the decade we will assess the 1990 objectives in terms of their structure and content as well as measurement of their attainment. Our purpose is to try to shed some more light on the mixed reviews of the health of the nation. We will also compare the 1990 objectives with the emerging Year 2000 Objectives for the Nation and attempt to identify what modifications in the process of formulating and the content of the objectives themselves have taken place (8).

This assessment of the relevance and results of the health objectives for the nation is both premature and opportune. It is premature in the sense that all the data are not yet available to determine if the objectives for 1990 are reached. Further, the year 2000 objectives are in draft form only and will be

subject to some revision. However, what better time is there to assess where we have been and where we are going according to these ten year plans for the Nation's health than as we actually enter the new decade. Certainly, the relevance of the 1990 objectives can now be assessed. Enough of the results from the past decade are in to give us a fairly good idea of the Nation's health status as the last decade of the 20th century begins and the objectives for the year 2000,while not finalized, are sufficiently developed to give us a reasonable estimate of their final form and content.

Relevance of the 1990 Objectives

The first Surgeon General's report on health promotion and disease prevention (Healthy People) was published in 1979. It outlined a national strategy for achieving improvements in the Nation's health, documented accomplishments in prevention, identified major health problems, and set forth broad national goals for reducing death and disability. Specifically, five national goals were presented for each of five major stages of life:

> To continue to improve infant health, and, by 1990, to reduce infant mortality by at least 35 percent, to fewer than 9 deaths per 1,000 live births.
>
> To improve child health, foster optimal childhood development, and, by 1990, reduce deaths among children ages 1 to 14 years by at least 20 percent, to fewer than 34 per 100,000.
>
> To improve the health and health habits of adolescents and young adults, and, by 1990, to reduce deaths among people ages 15 to 24 by at least 20 percent, to fewer than 93 per 100,000.
>
> To improve the health of adults, and, by 1990, to reduce deaths among people ages 25 to 64 by at least 25 percent, to fewer than 400 per 100,000.

To improve the health and quality of life for older adults and, by 1990, to reduce the average annual number of days of restricted activity due to acute and chronic conditions by 20 percent, to fewer than 30 days per year for people aged 65 and older.

In 1980, the U.S. Public Health Service identified 15 priority areas as keys to the achievement of the five national goals. The 15 areas (which were divided into three categories: preventive health services for individuals,health protection (environmental control) for population groups, and health promotion (life style modification) for population groups) were published in Promoting Health/Preventing Disease: Objectives for the Nation. They include:

Preventive Health Services for Individuals

High Blood Pressure Control
Family Planning
Pregnancy and Infant Health
Immunization
Sexually Transmitted Diseases

Health Protection for Population Groups

Toxic Agent and Radiation Control
Occupational Safety and Health
Accident Prevention and Injury Control
Fluoridation and Dental Health
Surveillance and Control of Infectious Diseases

Health Promotion for Population Groups

Smoking and Health
Misuse of Alcohol and Drugs
Nutrition
Physical Fitness and Exercise
Control of Stress and Violent Behavior

To develop the specific health objectives for each of the 15 areas, U.S. Public Health service agencies such as National Institutes of Health and Centers for Disease Control wrote background papers. Next, a conference including 167 experts from outside the government used the background papers to develop

feasible objectives in each of the 15 areas using a consensus process. The objectives were divided into outcome measures of health status and reduced risk and means to improve these outcomes including public and professional awareness, services and protection, and surveillance and protection. The participants were also asked to identify the assumptions behind each objective in terms of resources needed and anticipated changes in technology or norms.

The results of the conference were published in the Federal Register and were also circulated to more than 2000 groups and individuals for review and comment. Revisions were made and the final health objectives were published in Promoting Health/Preventing Disease: Objectives for the Nation (9).

Although the objectives were published in a U.S.Government document, the authors of The 1990 Health Objectives for the Nation: A Midcourse Review (also published by the Public Health Service) argue that they do not constitute a Federal plan but are intended "to serve as a challenge to both public and private sectors". Further they observe that the objectives were composed through arbitration and consensus using the state of knowledge at the time they were developed -- "Hence, some are imperfect statements of the actual potential involved"(10). Implementation plans were developed by a lead Federal agency for each of the 15 priority areas and published in a special supplement of Public Health Reports in 1983 (11).

The complex process to develop, and multiple purposes to be served by the 1990 objectives led to a large and varied product consisting of 226 health objectives. A review of the objectives indicates that they may be roughly divided into at least three varieties concerned with: 1) what should be; 2) what could be; and 3) what will be.

The first variety "what should be" is a wish based on deeply held values

which is very unlikely to be attained given probable resources, technology, and norms. Such objectives are not very useful for prediction and of questionable use for planning. They might serve as a challenge to bring about an intervention causing movement toward an objective, even if the objective is not totally achievable.

The second variety (what could be) are potentially achievable but not without new programs of interventions. They help to provide quantifiable dimensions to policy goals.

The third variety (what will be) are predictions of the future assuming no major interventions or other unexpected changes in the environment. They are useful for understanding and preparing to deal with future states.

Of course, no objective can be placed with certainty in one of the above classes or another. However, knowledge of trends, the process by which the objective was formed, and political realities will help to give them a tentative classification. At the end of the relevant time period it is much clearer in what category the objective belonged. What is most confusing is a mixture of types of objectives with no clear delineation of the most likely category for each objective.

Key to establishing the relevance the 1990 objectives is to understand why the particular objectives were selected. One basis for selection appears to be that improvement was possible or likely. This is reasonable but can bias the picture of the Nation's health. The expectation that AIDS or Alzheimer's disease (neither of which was included in the 1990 objectives), for example,will not diminish during the time under consideration should not be the basis for excluding these conditions from the objectives. Objectives can be to stabilize or retard the growth of negative trends. Further, for the purposes of

monitoring the overall health of the Nation, such conditions need to be included to get a complete picture and to plan for necessary services and personnel.

Another reasonable criteria for selection of objectives is whether or not they are measurable. If there is no baseline measurement it is impossible to measure progress. Further, there is no opportunity to separate out the impact of an intervention from secular trends or what might have happened in the absence of special interventions. If, in addition, no measurements are available at the end of the planning period, there is little point in including the objective at all. It is possible that the objective can be to develop measures of an important phenomena but such objectives must be clearly distinguished from measurable ones. A major problem with the 1990 objectives is that a large number of them -- 59 or more than one-quarter (26 percent) -- were not measurable.

Politics and ideologies may also play a role in the selection of national objectives. Whether they should or not is debatable. It is certainly important to recognize their roles. For example, the one and only 1990 objective concerning abortion (e.g., "By 1990, the proportion of abortions performed in the second trimester of pregnancy should be reduced to 6 percent, thereby reducing the death-to-case rate for legal abortion in the United States to 0.5 per 100,000") was dropped because of political and ideological reasons.

Perhaps one of the most important criticism of the 1990 objectives is that no objectives concerning AIDS were ever included despite the fact that the disease was "The Public Health Service's number one priority." Although an objective concerning Legionnaires' disease (e.g., "By 1990,the annual incidence of legionellosis should be reduced to 17 per 100,000 population), was added to

the 1990 objectives, none were added for the much deadlier disease, AIDS. The Reagan administration and the Public Health Service because of political and ideological reasons were very slow to react to the AIDS epidemic, fund needed research, and establish educational programs. According to Shilts (12):

> The bitter truth was that AIDS did not just happen to America -- it was allowed to happen by an array of institutions, all of which failed to perform their appropriate tasks to safeguard the public health. This failure of the system leaves a legacy of unnecessary suffering that will haunt the Western world for decades to come.
>
> There was no excuse, in this country and in this time, for the spread of a deadly new epidemic. For this was a time in which the United States boasted the world's most sophisticated medicine and the world's most extensive public health system, geared to eliminate such pestilence from our national life.

It is ironic that in the 1970's the U.S. Public Health Service over-reacted to the perceived threat of a possible Swine Flu epidemic but in the 1980's virtually ignored AIDS at the beginning of its epidemic.

One selection criteria which was explicitly excluded from the 1990 objectives was any ranking by priorities. "No effort has been made to establish priorities among the 15 areas, or even among the various objectives within any given area" (13). The justification is that priority setting is best left to state and local health agencies. Also arriving at consensus about priorities would certainly be a difficult task. Still, priorities must ultimately be assigned for resource allocation purposes and some of these decisions are certainly made at the national level.

Results in Reaching the 1990 Health Objectives

Those who view the results in reaching the 1990 health objectives for the nation as primarily negative do so from a number of comparative perspectives.

First, not enough of the objectives are being attained and the rate of progress is too slow. This, for example, is the general conclusion of the Children's Defense Fund in their review of the results for infants and children (14).

Second, discrepancies between minorities and the rest of the population are too great. Continuing higher rates of infant and disease specific mortality for minorities as well as excessive incidence and prevalence of various diseases and impairments for these groups are pointed to by numerous critics as evidence of the poor state of the nations health (15).

Third, we are not doing as well in infant mortality and life expectancy at birth as some countries with similar or even lower standards of living (16).

Lastly, we are not doing as well as we should given the large amount of money spent on health in the United States.While the U.S. spends more of its Gross Domestic Product on health than any other western industrialized country (17).More than thirty million people remain uninsured (18) and consumers and providers view their health care system as in a state of crisis (19).

Let us now turn to a review of the results concerning the national health objectives for 1990. The data presented in this section are primarily from A Midcourse Review which provides information on results in attaining the 1990 objectives primarily through 1985 (20). While we were forced to recode the data to obtain specific results for each of 226 objectives, our intent was to replicate the judgments made by the authors of A Midcourse Review. In general, judgments about reaching the 1990 objectives were made on basis of data available from 1979 to 1985 and extrapolations of trends to the likely situation in 1990. In some instances current or probable interventions were also taken

into account in the projections. We have updated the 1985 results of some of the objectives using data from parts of a draft of Prevention Profile 1989 (21). This profile provides available trend data. Updated information for all of the objectives were not available at the time this paper was written. The most current data included for some objectives are 1987-88. In other instances, there is nothing new since the Midcourse Review. Prevention Profile 1989 does not provide explicit judgments about the final results for each objective for 1990. We have provided our own best judgment based on available information about whether the objective has been achieved, is on track, is unlikely to be achieved or there is no data to make a judgment.

Before turning to the results for specific objectives, we will first assess the extent to which the five general goals for specific age groups have been accomplished using the most current available data (22). It appears doubtful that an infant mortality rate of 9 per 1000 live births will be reached by 1990. The rate for 1987 was 10.1. The goal of 34 deaths per 100,000 population for children 1 to 14 was already reached in 1987 (the rate was 33.3). The goal for young adults 15 to 24 is a death rate 93 per 100,000. The 1987 rate for young adults was 99.4. Because of the instability of this rate in recent years, it is questionable as to whether the 1990 goal will be attained. Given current trends, it appears likely that the goal of 400 deaths per 100,000 for adults 25 to 64 will be attained. Finally, it appears likely that the original goal of no more than 30 restricted activity days per person per year will be attained. However, bed days has now been suggested as a more sensitive measure of the older persons incapacity (23). It is unlikely that the new goal of 12 bed days per person will be reached by 1990 (it was 14 days per person in 1987). Table 1 provides a general overview of the extent to which the specific 1990 objectives

were attained by 1985 (24). Thirteen percent of the objectives had already been attained and another 35% were judged to "be on track". That leaves more than one-half of the objectives judged "unlikely to be achieved" (27%) or no data available to judge attainment (26%). We do not believe that this is a particularly strong report card for the 1990 national objectives to have the majority in these latter two categories.

The large proportion of unattained objectives, assuming a valid prediction, can resul t from a number of situations. Some may simply be overly ambitious and unrealistic--these are the "should be" variety. One possible example is the objective that the maternal mortality rate should not exceed 5 per 100,000 live births for any racial or ethnic group. The rate for blacks in 1978 was 25. It was reduced to 14.2 in 1987--while representing a substantial reduction it is still almost three times the goal for 1990 (25). Other objectives not obtained may have been generated with the expectations of successful interventions not realized--these are the "could be" variety. Examples here might include the objectives for pregnancy and infant health to reduce birth rates for girls 15 to 17 years old. Actually, the rates have been quite constant over the past decade (26).

There are also multiple reasons for the more than one quarter of the objectives for which no judgments are made because there are "no data". In some areas such as toxic agent and radiation control, unmeasured objectives reflect new priorities and advanced knowledge of the late 1970's for which there was simply no national baseline data (27). Other objectives are unmeasurable largely because of the way they are formulated. Some are unmeasurable because they refer to multiple groups with data available for some but not others. For example, a public awareness objective is that at least 75% of men and women 14

years of age and over should be able to describe accurately the various contraceptive methods (28). Data are available for females but not males. Other include multiple objectives and are stated in such general fashion as to be virtually unmeasurable. Such a general objective is, "By 1990 virtually all women who gave birth should have appropriately attended, safe delivery, provided in ways acceptable to them and their families" (29).

Table 1 further divides the objectives into major areas and types. The proportion of achieved and on track objectives is similar for preventive services, health protection and health promotion objectives. The area of preventive services has a relatively large proportion (39%) of objectives considered unlikely to be achieved and health protection has proportionately more objectives with no data (35%). Among the five types of objectives, risk reduction shows the largest proportion of objectives unlikely to be achieved (39%) while awareness and service improvement objectives are most likely to have no data.

Table 2 shows achievements according to the more specific categories of objectives. Among the preventive service categories, high blood pressure control objectives and immunization objectives were most likely to be achieved or on track. Conversely, the family planning and pregnancy and infant health objectives were more often judged as unlikely to be achieved by 1990. The health protection objectives concerning accident prevention and injury control as well as surveillance and control of infectious diseases were most likely to be achieved or on track. However, 80% of the toxic agent and radiation control objectives had no data to allow judgment. Finally, the health promotion objectives about smoking were achieved or on track in 71% of the cases. But, the physical fitness and exercise objectives were unlikely to be achieved

almost two-thirds of the time.

Assessment of the proportion of objectives achieved is greatly influenced by the proportion of the objectives that were actually measured. Graph 1 provides a sense of the variation in proportion of objectives measured for each of the fifteen categories. It shows that few of the toxic agent and radiation control objectives were actually measured. In contrast, for all the other objectives--more than three-fifths up to 100% (for high blood pressure)--were measured.

Graph 2, then, gives a picture of the proportion of measured objectives achieved--that is excluding from the denominator those objectives for which no measurements were possible. It illustrates the relatively small proportions of measured objectives in family planning, pregnancy and health and physical fitness objectives that were achieved. It also shows that while few of the toxic agent and radiation control measures may have been measured, those with relevant data were achieved. Measured objectives concerning infectious diseases and smoking were also mostly achieved.

The authors of the 1990 objectives avoid prioritizing among the categories of objectives or among particular objectives within a category (30). However, with so many objectives it is certainly tempting to look at level of achievement among a subset of the objectives considered to be of particular importance. In Table 3 we consider only the type of objective dealing with the ultimate outcome--improvement of health status. Further, Table 3 includes only measured objectives. It shows that there were a total of 47 measured objectives concerning health status and 32, or 68%, of them were achieved or on track. It shows that most of the health protection measured objectives concerning health status were achieved or on track (85%) compared to 67% of the health promotion

objectives and less than one-half (47%) of the preventive services objectives. The measured health objectives concerning pregnancy and infant health were achieved or on track in only one of seven instances (14%).

Finally, Table 4 provides some idea of how the status of objectives might change as we get closer to the end of 1990. We were able to gather updated information on the 37 objectives dealing with high blood pressure control, family planning and pregnancy and infant health (31). A comparison of the status of the 37 objectives according to the available information in 1985 with the status according to the most recent information which may be as recent as 1987 or 1988 shows some changes. The number of achieved objectives increases, as might be expected, from 4 to 8 while the number "on track" decreases from 9 to 6. Somewhat less expected is the finding that the number of objectives judged unlikely to be achieved decreases from 19 to 16 and the number where it appears we have insufficient data to judge actually increases from 5 to 7.

Let us consider some of the reasons for these latter changes. One high blood pressure control objective concerning the labeling of sodium content in process foods was not achieved in 1985, but in 1986 a new Food and Drug Administration regulation went in to effect causing the percent of processed food to be labeled for sodium content to exceed the 50% objective (32). In the family planning area, A Midcourse Review judged it likely that the discrepancy in the proportion of unplanned births according to income level might be reduced by 50% between 1976 and 1990 and thus reach the planned objective (33). In fact, new data in Prevention Profile 1989 suggest the objective is unlikely to be achieved (34). A number of pregnancy and infant health objectives which were judged unlikely on the basis of 1985 information have been achieved or appear likely to be achieved on the basis of more recent information including a rate

of RhHND of below 1.3 per 1,000 births and implementation of a system for comprehensive assessment of the impact of prenatal factors on child development. Finally, we changed the status of objectives in the pregnancy and infant health category to "no data" where it was unclear as to whether the available data measured the objective (36).

These comparisons of the results from the Midcourse Review with updated results suggest that the final status of some objectives are likely to change when the final results are published in 1991. However, it appears that for the majority of objectives the data available in this paper are sufficient to provide a sound basis for judging whether or not the objective will be achieved by the end of 1990.

Changes in the Year 2000 Objectives

The approach taken in developing the year 2000 objectives parallels the 1990 objectives in comprehensiveness of issues but is broader in terms of scope of participation. While the 1990 objectives were viewed by the federal government as joint for local government and private sources as well, the extent to which they were known,accepted, and utilized by all parties is not known. One report concerning the impact of the objectives on state activities suggests universal awareness by the states but limited planning based on the objectives and fewer related state implementation programs (37). Efforts to more actively involve local government, private agencies and persons in creating the year 2000 objectives have probably been undertaken to increase acceptance of the new objectives.

As a first step, the Assistant Secretary for Health invited over 200

national organizations and all state and territorial health departments to join the U.S. Public Health Service in a national consortium. In addition, the U.S. Public Health Service and the Institute of Medicine jointly convened a series of regional meetings across the country. The Public Health Service steering committee used input and expert review of over 7,000 individuals and groups to define 21 priority areas. Since 1988, work groups organized by the PHS "lead agency" for each priority area developed new objectives in a draft document published for public review and comment. Final drafts will be published in mid-1990 as a new Public Health Service report on health promotion and disease prevention. Developing the year 2000 objectives is designed to be more a "bottom up" process compared to a "top down" process for the 1990 objectives (38). Of course, it is too early to determine whether it will have the intended effects.

The year 2000 objectives expand as well as revise the 1990 objectives. The expansion has both positive and potentially negative features. One possible problem is simply the number of objectives which is 339 in the draft report compared to 226 for 1990. To deal explicitly with each objective and the relationships among them is an enormous task. Those responsible for drafting objectives realize this and are attempting to reduce the volume in the final report (39).

Additional priority areas added in the year 2000 objectives include HIV infection, cancer and other chronic conditions, and the vitality and independence of older people. This expanded focus on the major plague of recent time (AIDS) and the growing problems of chronicity created by an aging population and the increasing ability of medical science to keep people alive but not necessarily maintain their quality of life is not only appropriate but

necessary. The 1990 objectives focused on health people and primary prevention. Clearly to deal with the total health of the nation the objectives should recognize and set goals including chronic illness and secondary and tertiary prevention. The year 2000 objectives do this by including as two of the five broad national goals: 1) reduced disability caused by chronic conditions to a prevalence of no more than six percent of all people; and 2) increase years of "healthy life" to at least 65 years. While this is a step in the right direction, we do not believe it goes far enough. The objectives should recognize that 14 percent of the non-institutionalized population has activity limitation resulting from chronic conditions (40). Further, over one and one-half million persons live in nursing homes and personal care homes (41). Surely in developing health priorities and goals for the nation we should go beyond seeking to reduce the incidence of chronicity but also recognize the prevalence of chronicity in our society. The health services sector contributes to the increasing prevalence of chronicity by prolonging people's lives. Our national objectives should include explicit plans to improve or maintain the quality of those lives and recognize where degeneration is inevitable that legitimate objectives can be to retard the rate of that degeneration.

The year 2000 objectives focus more attention on issues of equity than did those for 1990 by emphasizing needs of population groups that are at risk for premature death,disease or disability. This emphasis is recognized in one of five major goals for the nation which is to decrease the disparity in life expectancy between white and minority populations to no more than four years. While such objectives are certainly in keeping with widely help values concerning equity in health and health services delivery, attainment of outcomes may be particularly difficult due to the broad array of environmental, life

style, health services which may interact to produce the discrepancies.

The year 2000 objectives include the initial three priority areas of the 1990 objectives: health promotion,health protection and preventive services but have added a fourth priority - system improvement. This priority includes objectives concerning health education, preventive services, surveillance and data systems. We recognize the need for including such objectives in a national plan in our earlier efforts to assess the health status of the nation using the 1990 objectives (42, 43). However, we do not feel that the objectives go far enough since they mainly focus on preventive services. While prevention is the ideal, our health care system will continue to serve acute and chronically ill people. Our national objectives should incorporate the informational, service and financing needs for this major sector. Joint consideration of these issues of secondary and tertiary prevention along with primary prevention and the links between them appear to be the most effective ways to monitor and plan in each area.

The year 2000 approach includes more explicit criteria for developing appropriate objectives than did the 1990 process. Such criteria can be most useful in attempting to create useful objectives. According to these criteria the year 2000 objectives should: be realistic; be understandable to a broad audience; include both outcomes and methods to achieve them; be quantifiable; be linked to the 1990 objectives; be compatible with goals already adopted by health organizations; not simply be determined by the availability of data; and involve the concerns and support of professionals, advocates and consumers as well as state and local health departments. Each criterion appears sensible and relevant in its own right. Compatibility with all other criteria can sometimes be a problem. For example, trying to incorporate input from many divergent

interest groups and construct only realistic objectives is a precarious balancing act. Or, how can objectives be free from data constraints and at the same time be measurable? Authors of the year 2000 objectives claim to have dealt with the latter problem by requiring that all objectives must be measurable "in principle". For the majority of objectives some baseline data are available. For many objectives, however, baseline data are not available (to the credit of the authors and contrary to some 1990 objectives -- these objectives are stated in a measurable way, that is not dependent on knowledge of the baseline situation). When baseline data are not available, the authors claim, data to measure achievement of the stated target <u>can</u> be obtained either through existing data or new surveys. The difference between judgments that data can be obtained and actually obtaining it may cause significant problems for a number of objectives.

We criticized the 1990 objectives for not always clearly distinguishing between what "could be," "should be" and "will be." Are the emerging year 2000 objectives better in this respect? The authors of the current objectives attempt to deal more frontally with the problem. To judge feasibility, they note that "simple statistical trend analyses" are presented for a number of objectives." They assume, "In most cases, projecting the line beyond the last observed point gives a rough indication of what value might be achieved by the year 2000 if no further action is taken". For starters, this seems to be a reasonable approach. Still, straight linear extrapolations can be quite misleading as in the case of projecting remaining years of life for older persons for the 1970's and 1980's based on death rates in the 1960's and earlier years. Since older persons started living longer, the extrapolations led to considerable underestimates. The authors go on to indicate that a "challenge"

has generally been created as the proposed target has been set to be more favorable than the projected value. The feasibility of the incremental action or intervention needed to attain the more favorable value is certainly not always clear. Further, the authors rightly point out that in some cases even maintaining the current value will require substantial effort. So, while clarifying steps have been taken with the year 2000 objectives we are still sometimes left with the question whether the objectives tell us what could be, what should be, or what will be.

Conclusion

In sum, we believe the crafting and assessment of the year 1990 objectives has been a monumental and generally useful exercise. The relevance of the objectives has sometimes been limited by the complexity of the process to develop them and confusion about their purpose and the assumptions behind them. The preliminary results suggest that for the majority of areas considered some improvement is taking place--for example in high blood pressure control prevention of injury, smoking reduction, occupational safety and dental health. There are important exceptions in other areas such as pregnancy and infant health, family planning, nutrition, fitness and violent behavior. Also there are major concerns about the rate of change and our inability to measure important subjects. It appears that the lessons learned from the objectives will improve the relevance of the year 2000 objectives although many problems remain. Whether we will observe the targeted improvement in the results for the year 2000 objectives remain an open question.

Notes

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25. Op. cit. Prevention Profile, 65.

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27. Op. cit. A Midcourse Review, 91.

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29. Ibid., 53.

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31. Op. cit., Prevention Profile.

32. Ibid., 53. Op. cit. A Midcourse Review, 21-22.

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40. P. F. Adams and A. M. Harding, Current Estimates from the National Health Interview Survey, United States, 1988. National Center for Health Statistics. Vital Health Statistics (10 (173) 1989):108.

41. Op. cit. Health United States, 1988, 124.

42. Op. cit., Andersen, 1986.

43. Op. cit., Andersen, 1987.

Table 1

Achievement of the 1990 Objectives of the Nation
(Status 1985)

Objective	Number of Objectives	Percent			
		Achieved	On Track	Unlikely to Achieve	No Data
Total	226	13%	35%	27%	26%
By Major Area					
Preventive Services	66	14%	32%	39%	15%
Health Protection	82	12%	35%	18%	35%
Health Promotion	78	15%	36%	24%	24%
By Type of Objective					
Improvement of Health Status	58	24%	31%	26%	19%
Risk Reduction	46	2%	33%	39%	26%
Public and Professional Awareness	38	8%	37%	18%	37%
Improvement of Services	51	16%	25%	24%	35%
Improvement of Surveillance and Evaluation	33	12%	55%	24%	9%

Table 2

Achievement of 1990 Objectives of the Nation
by the Fifteen Categories of Objectives
(Status 1985)

Category	Number of Objectives	Percent		
		Achieved or on Track	Unlikely to Achieve	No Data
Total	226	48%	27%	26%
Preventive Services				
1. High Blood Pressure Control	9	69%	33%	0%
2. Family Planning	8	33%	57%	11%
3. Pregnancy and Infant Health	15	21%	58%	21%
4. Immunization	17	67%	28%	6%
5. Sexually transmitted Disease	7	45%	18%	36%
Health Protection				
6. Toxic Agent and Radiation Control	20	20%	0%	80%
7. Occupational Safety & Health	16	40%	40%	20%
8. Accident Prevention and Injury Control	15	71%	18%	12%
9. Fluoridation & Dental Health	8	42%	25%	33%
10. Surveillance and Control of Infectious Diseases	10	69%	8%	23%
Health Promotion				
11. Smoking and Health	13	71%	6%	24%
12. Misuse of Alcohol & Drugs	15	58%	21%	21%
13. Nutrition	11	35%	29%	35%
14. Physical Fitness & Exercise	10	27%	64%	9%
15. Control of Stress & Violent Behavior	10	57%	14%	29%

Table 3

Proportion of Measurable 1990 Health Status Objectives Achieved by the Categories of Objectives (Status 1985)

Category*	Total Number Of Objectives	Objectives Achieved or on Track	
		Number	Percent
Total	47	32	68%
Preventive Services	19	9	47%
1. High Blood Pressure Control	1	0	0%
3. Pregnancy and Infant Health	7	1	14%
4. Immigration	8	5	63%
5. Sexually Transmitted Disease	3	3	100%
Health Protection	20	17	85%
6. Toxic Agent & Radiation Control	1	1	100%
7. Occupational Safety and Health	4	4	100%
8. Accident Prevention and Injury Control	8	7	87%
9. Fluoridation & Dental Health	3	2	67%
10. Surveillance & Control of Infectious Disease	4	3	75%
Health Promotion	9	6	67%
12. Misuse of Alcohol & Drugs	4	4	100%
13. Nutrition	1	0	0%
15. Control of Stress & Violent Behavior	3	2	67%

*Categories 2 (Family Planning), 11 (Smoking and Health) and 14 Physical Fitness and Exercise include no measured health status objectives.

Table 4

An Update on the Status of Objectives in Three Preventive Service Categories

Category & Status	Number of Objectives	Status of Objectives			
		Achieved	On Track	Unlikely to Achieve	No Data
High Blood Pressure Control	9				
1985 Status		2	4	3	0
Current Status		4	3	2	0
Family Planning	9				
1985 Status		2	1	5	1
Current Status		2	0	6	1
Pregnancy & Infant Health	19				
1985 Status		0	4	11	4
Current Status		2	3	8	6
Total	37				
1985 Status		4	9	19	5
Current Status		8	6	16	7