

## Review Article

# Nutrition policy in the U.S.: 50 years in review

Eileen Kennedy DSc RD

Dean, Friedman School of Nutrition Science and Policy, Tufts University

The world of nutrition has changed dramatically over the past 100 years. This presentation provides an analysis of how the lessons learned from prior nutrition interventions and public policies can be translated to address the current nutrition issues of populations globally. The formulation and implementation of nutrition policies is complex. Prior emphasis in US nutrition policies was in addressing problems of nutrient deficiencies and under consumption. While these problems still exist, worldwide problems related to dietary patterns and chronic diseases are emerging as more common. There are few "success" stories for interventions aimed at the prevention of diet related chronic diseases, particularly in urban areas. Newer paradigms for nutrition interventions, including public-private sector collaborations are presented. In addition, examples of effective, enabling policies are discussed.

**Key Words: Nutrition, Interventions, Chronic Disease, Policies.**

## INTRODUCTION

*The Nations Nutrition* is a recent publication which reviews the history of nutrition policy past and present, with an emphasis on the lessons learned for policy formulation and implementation in the future.<sup>1</sup> What is clear is that dramatic changes in nutrition policies and programs have occurred over the past fifty years in the United States. This paper reviews and analyzes some of the major achievements and summarizes challenges in programs and policies that still exist.

## FIFTY YEARS IN REVIEW

The 1969 White House Conference on Food, Nutrition and Health was a seminal event for nutrition in the United States.<sup>2</sup> This conference brought together leaders in nutrition research, policy officials, advocates and program implementers. The conference itself was opened with a welcoming from then President Richard Nixon. More importantly, an action oriented agenda emerged from the White House Conference which influenced nutrition policy in the U.S. for the next two to three decades.

As a result of the White House Conference, the Food Stamp Program and School Lunch Program expanded nationwide; the recommendation that supplemental feeding of high risk pregnant women and their infants led to the creation of the Women, Infants and Children Supplemental Food Program (later renamed Supplemental Nutrition Program); the School Breakfast Program and Expanded Food and Nutrition Education Program were created. In addition, the early seeds for the Dietary Goals and Dietary Guidelines for Americans emerged from this Conference.

The collective response and advances from the range of public and private sector activities in health, food, nutrition, agriculture and economic growth in the U.S. produced significant gains from the late 1960's to the 1980's.<sup>1</sup> The gap in nutrient intake between low income and other income groups narrowed. Under nutrition as measured by low

weight for age and stunting improved for all "at risk" groups. Indeed, the U.S. achieved the Healthy People 2000 goals for reduced under nutrition earlier than projected.

The nutritional profile of low income and vulnerable groups has changed over the past fifty years. While the classical problems of nutrient deficits and under nutrition still exist, albeit to a lesser extent, diet/chronic disease problems have become more common, on average, in the U.S. Often termed the *Double Burden of Disease*, hunger and food insecurity exist side-by-side with overweight, obesity, heart disease, hypertension, and certain forms of cancer. The challenge for governments now is to identify newer paradigms that address both under nutrition and over nutrition in the population.

## NUTRITION POLICY: BEYOND THE EARLY YEARS

The word policy is often bandied about in the literature. In this paper, we assume that public policy predisposes a domain of life that is not private and not purely an individual.<sup>3</sup> The three areas of this discussion focus on: What government does? Why they do it? What difference do the actions make?

In May 2000 President Clinton convened a National Nutrition Summit. Similar to the 1969 White House Conference, the summit brought together approximately 2000 individuals from academia, government and the private sector. A core principle that emerged from this conference was that food security was the foundation of good health and good nutrition. What belies this statement is a very

**Corresponding Author:** Dr. Eileen Kennedy, Dean, Friedman School of Nutrition Science and Policy, Tufts University, Boston, MA

Tel: 617 636 3702; Fax 617 636 3794

Email: Eileen.kennedy@tufts.edu

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volatile history surrounding food security issues in the U.S.

A 1984 Presidential Task Force<sup>4</sup> was unable to reach any agreement on whether and to what extent food insecurity and hunger existed in the U.S. A number of Task Force members emphasized the need to differentiate clinically defined hunger and food insecurity from that due to poverty. "To many people hunger means more than just symptoms that can be diagnosed by a physician, it bespeaks the existence of a social, not a medical problem; a situation in which someone cannot obtain an adequate amount of food, even if the shortage is not prolonged enough to cause health problems."<sup>4</sup>

The 1984 Task Force report was a watershed event in that it sparked serious, scientific research on how to define and measure food insecurity and hunger in the U.S. Research that was conducted in the U.S. for the first time developed semi quantitative indicators in low income households that measured the continuum from food security to food insecurity to food insecurity with hunger<sup>5,6</sup> The American Institute of Nutrition for the first time developed a science-based definition of hunger and food insecurity.<sup>7</sup> In 1990, the National Nutrition Monitoring and Related Research Act called for a standardized method for defining and measuring "food insecurity." Partially as result of this legislation, USDA created a food security module, implemented annually, which is a simple, easy to analyze, qualitative measure of hunger and food insecurity. Research has demonstrated that this food security measure correlates with other measures of poor nutritional status.<sup>8</sup>

### FOOD STAMP PROGRAM

The Food Stamp Program (FSP) is a key part of the U.S. nutrition safety net. The FSP was established with the goal of improving the food purchasing power and, in turn, dietary patterns of low income households. An extensive body of research from the 1970's to 1980's documents that participation in the FSP was associated with increased food spending, and improved diet quality.<sup>9,10</sup> The effects of stamps on food purchases and dietary patterns are greater than an equivalent amount of cash.<sup>11</sup> However as already indicated the nutritional profile of the target population has changed; problems of energy and nutrient imbalances are more of a problem than energy deficits and nutrient deficiencies.

The changing nutrition profile of vulnerable individuals and groups has prompted a lot of discussion about the current and future role of nutrition programs in the U.S. While evidence exist to indicate that the programs as originally implemented – Food Stamps being one – have achieved many of their stated objectives,<sup>12</sup> there is less documentation on nutrition interventions that have prevented diet/chronic diseases related problems. In summer 2006, the National Governors Association (NGA) endeavored to ascertain how the FSP could be revamped to address both food insecurity/hunger while simultaneously tackling problems such as overweight and obesity.<sup>12</sup>

Two over arching themes emerged. First an enabling policy environment is needed combined with newer paradigms or interventions which promote healthy lifestyles. With regard to the FSP, there are three types of access

which are important in enhancing the health and nutritional benefits of program participation: financial, geographic and information.

The Thrifty Food Plan (TFP) is the lowest cost food plan developed by the U.S. Department of Agriculture and serves as the basis for establishing benefits for households in the FSP. Research results indicate that although food stamp households have a higher nutrient intake per dollar spent, at the level of spending of the TFP, most households, whether receiving food stamps or not, do not achieve a nutritionally adequate diet. Indeed in the United States, at all income levels, most households do not have diets which meet the Dietary Guidelines food patterns.<sup>13</sup>

Low income households perceive that "nutritious" foods cost more.<sup>12</sup> Income, price and convenience have been consistently shown to be the major determinants of food choices. Therefore, if the Food Stamp Program could reward healthy eating by providing increased price incentives to purchase and consume more fruits and vegetables, there could be a potentially significant impact on diet quality and nutritional status. One suggestion is to enhance the purchasing power of food stamps that are used to buy fruits and vegetables. For example, the value of one dollar's worth of stamp would equal two dollars, if used to purchase fruits and vegetables. This concept called "green stamps" has been advocated by the NGA.<sup>12</sup>

Geographic access is also a challenge for rural households (distance, lack of large retail markets) as well as some urban households (low income areas with fewer large supermarkets). Innovations have occurred throughout the U.S. which should be tested on a wider scale. For example, in parts of the state of Pennsylvania, a food financing initiative was implemented to increase the number of grocery stores in under served areas. Similarly, in California, farmers markets selling produce were targeted to low income urban and rural areas. Thus in both Pennsylvania and California, geographic access was increased.

All households, including food stamp households, need more information access – knowledge and skills to select more healthful diets. Nutrition education activities aligned with the FSP have increased dramatically over the past two decades. But, a synthesis of well over two hundred studies, indicates that many of the nutrition education efforts as they have been implemented have failed to achieve their desired objectives.<sup>14</sup> These data suggest that innovations in nutrition education and promotion are needed.

The evaluation literature on nutrition education provides some clear, consistent findings on the elements of success. First, nutrition education programs which target specific behaviors are more likely to be effective than are those with vague objectives.<sup>14</sup> A concrete example is the advice to "reduce total fat intake in the diet." This is a general statement and not a consumer behavior. Rather, a targeted behavior would entail advice like "bring an apple to work" or "take the skin off chicken before eating." There also appears to be a dose/response to the amount of change that can be expected. One encounter with an individual is unlikely to be a sufficient amount of time in which to change dietary patterns.<sup>14</sup>

## NUTRITION FOR A LIFETIME

The results from a vast literature suggests that access to nutritious foods alone will not, by itself, resolve the complex issues of diet/chronic disease, including overweight and obesity.<sup>1</sup> This emerging area of translational research is in the early stages. However, from the limited, peer reviewed literature<sup>14</sup> it appears that success will depend on approaches that are multi faceted and involve public-private partnerships.

One example of this new type of paradigm has recently been published. An intervention called, "Shape Up Somerville" (SUS) was implemented in a ethnically/racially diverse city – Somerville, MA – with a large percentage of low income households.<sup>15</sup> SUS is described as an environmental change intervention whose goal was to decrease overweight in children in first through third grades. A high proportion of households in the city of Somerville also participate in the FSP. The intervention included a combination of before, during and after school components; public- private partnerships involving schools, restaurants, parents and community involvement were included in SUS. To date, this is one of the few environmental change interventions which have demonstrated effectiveness in decreasing childhood overweight.

## CONCLUSIONS

Clearly more applied research is needed to tackle the changing problems of nutrition, not just in the United States but worldwide. Given the impact on morbidity and mortality of unhealthy lifestyles, government officials are seeking new directions both from a policy and programmatic perspective. There is now the opportunity to advance the nutrition agenda. Some elements for successful policy have been identified, which if corroborated from additional research, highlight some exciting, new directions. Ultimately successful policies and programs will need to be science-based. However, increasingly the term "Beyond Discovery" is being used to delineate the clear imperative to translate the results from basic science into action. The modern nutrition problems are complex. Given this complexity, it is unlikely that a single solution for diet/chronic diseases will be identified.

## AUTHOR DISCLOSURES

Eileen Kennedy, no conflicts of interest.

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