

Health Equity “Treatment” for the Root Causes of Obesity

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Abstract: *Obesity in America is the result of inadequate public policies. The failure of biomedical approaches to the prevention and/or treatment of obesity reflects the social and environmental determination of this epidemic. Health-Equity, an emerging model for health that integrates the principles and practice of social justice, social capital, human rights and health-equity ethics, is a strategy and blueprint for restructuring our approach to health and wellness that is relevant to the prevention and treatment of obesity. A health system model is presented that facilitates the identification of the root causes of obesity and their mitigation using the principles and practice of Health Equity. Unless and until we deal with the root social and environmental causes of obesity, we will do little to impact it and its health consequences.*

Introduction

Hunger and obesity result from inadequate public policies with staggering consequences in the United States (US).¹⁻⁷ Yet, the medical profession continues to try to “manage” its way out of both. It should come as no surprise that we have been less than successful in doing so.⁸⁻¹⁴ Millions of people go hungry every day in communities throughout the country.¹⁵ Nearly 20% of children and more than a third of adults are overweight or obese.²⁻⁴ Nutritional deficiencies manifest themselves across the life trajectory—from babies born premature and small for gestational age to the demography of death due to diabetes, heart disease, stroke and other nutrition and obesity related diseases. This disconnect between pathophysiology and practice is a primary reason the life expectancy in the US is 41st in the world.¹⁶

If we are to succeed in our efforts to improve the health and well-being of Americans by mitigating nutritionally related morbidity and mortality, we will need to move the focus for our efforts from the biomedical to the political and from intervention to prevention. We will need to move from the superficial to seek and understand the root causes of nutritionally related disease and death in the US. We must deal with issues of race and racism, culture, economic exploitation, capitalism, globalization, and a host of other non-biomedical factors. We will need to replace our biomedical model with interventions that can moderate the social and environmental determinants of obesity. Health Equity, an emerging model for health that integrates the principles and practice of social justice, social capital, human rights and health-equity ethics is presented in this manuscript as a strategy and blueprint for restructuring our approach to health and wellness.¹⁷

The medical profession has succeeded in taking a leadership role in catalyzing paradigm shifts in the past. International Physicians for the Prevention of Nuclear War (IPPNW) reframed the dialog on nuclear war from the political to the

medical, and in so doing had a significant impact on the movement for nuclear disarmament. The IPPNW subsequently won the Nobel Peace Prize for their work. (See www.ippnew.org) More recently, physicians have participated in changing attitudes and public policy toward smoking, with dramatic results.

We can impact the pandemic of childhood and adult obesity, but we need to do so now. The following case study related to obesity and diabetes presents a root cause analysis of the proximal factors causing this pandemic. This analysis reflects our growing understanding of the importance of social and environmental determinants to our health and well-being during a lifetime and the relevance of health equity to medicine and public health.¹⁸⁻²⁷

Background

Over the past half century there have been significant transitions in the demography and epidemiology of health in the US. After the large scale immigration of the late 19th and early 20th centuries, major American demographic changes were characterized primarily by population shifts within the US, in-particular the migration of Blacks from the South to the North. Subsequent to those migrations, there has been a large influx of Spanish speaking people. The majority of people in many states are now minorities (other than non-Hispanic Whites), and there is an increasing heterogeneity to our population.²⁸ In addition, there is a growing understanding of the impact of social and environmental determinants on health,²²⁻²⁷ and a parallel growth in our understanding of the “rooting” of adult morbidities in children’s health.¹⁹⁻²¹

These demographic and epidemiological shifts have had a profound impact on the health and well-being of children and the adults they will become. In order to respond to these transitions, the venue for the practice of pediatrics and medicine must include the community; and the parameters of practice must expand to include advocacy at the clinical, community and state/federal levels, and policy development.

Health System Framework

Our health systems in the Western World are conceptualized as linear processes. Our model for health starts with underlying determinants that result in morbidities. We subsequently measure these morbidities as a set of indicators. In response to these indicators, we implement our interventions that may or may not actually relate to the proximal underlying determinants. There is frequently a disconnect between the determinants of health and our interventions; and as a result, we often do not generate the outcomes anticipated from our interventions. Such a “Health Services Model”

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would be Determinants → Morbidities → Indicators → X → Interventions → X → Outcomes. In our traditional approach to medicine and pediatrics, we have generally limited ourselves to a biomedical model that narrowly defines our understanding of the determinants of health, and subsequently, the indicators and interventions that we have used to respond to morbidities.

Using obesity as an example, *Figure 1* presents our classical biomedical approach to this health issue. In this biomedical model, obesity and diabetes are conceptualized as a result of increased calorie consumption, food choice and genetics. We measure a set of indicators that relate specifically to these determinants, e.g., weight, incidence and complications of diabetes, health disparities, etc. Subsequently, we generate a set of interventions that respond to these determinants and indicators. In this model, that reflects our current interventions in medicine and pediatrics: we focus primarily on diet, education, exercise, surgery and the removal of vending machines from schools and the workplace. To date, we have had very little success in preventing and/or treating obesity and its related morbidities.¹⁰⁻¹³

The reason we have failed is that obesity and diabetes are not primarily biomedical disorders, but rather are rooted in socio-economic, political, environmental and cultural determinants. *Figure 2* presents an emerging model for re-conceptualizing childhood obesity and Type 2 diabetes in this framework. This model translates socio-economic, political, environmental and cultural determinants into a contemporary context that provides the opportunity for a relevant response. Although the determinants and indicators

would differ, the process would be as relevant to adults as it is to children. The challenge for medicine and pediatrics, as presented in *Figure 2*, is to transform our interventions to respond to the non-biomedical determinants of obesity and its adverse outcomes - response that is not in the traditional purview of medicine or pediatrics.

Attention to this Millennial Model of obesity and diabetes will demand a fundamental change in our approaches to prevention and intervention.²⁹ It is not productive to educate patients and families about diets and quality food consumption when they do not have access to and cannot afford such food.³⁰ To counsel parents and children about exercise, when there are too few places to do so and it is too dangerous to be outside, may actually be counterproductive.³¹⁻³³ To depend on schools alone for physical activity, health education and quality meals, especially when they have developed other priorities at the expense of health, is beyond contemporary reality.³⁴

Advocacy

The focus must now move from clinical care to advocacy if we are to succeed in preventing and treating the health consequences of obesity. Advocacy can be conceptualized on 3 levels - clinical, community, and public policy. *Table 1* (p. 39) presents an example of the different levels of advocacy using the indicators in *Figure 2*.

Physicians have a critical role to play at all three levels of advocacy. At the clinical level, how do we counsel parents who are working multiple jobs about the need to decrease the consumption of outside meals and to supervise meals

Figure 1 Health Services Model/Obesity and Diabetes

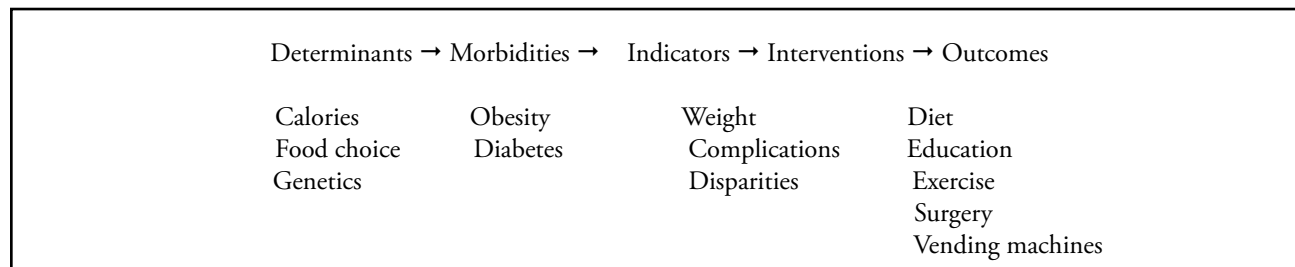


Figure 2 Health Services System/Millennial Model

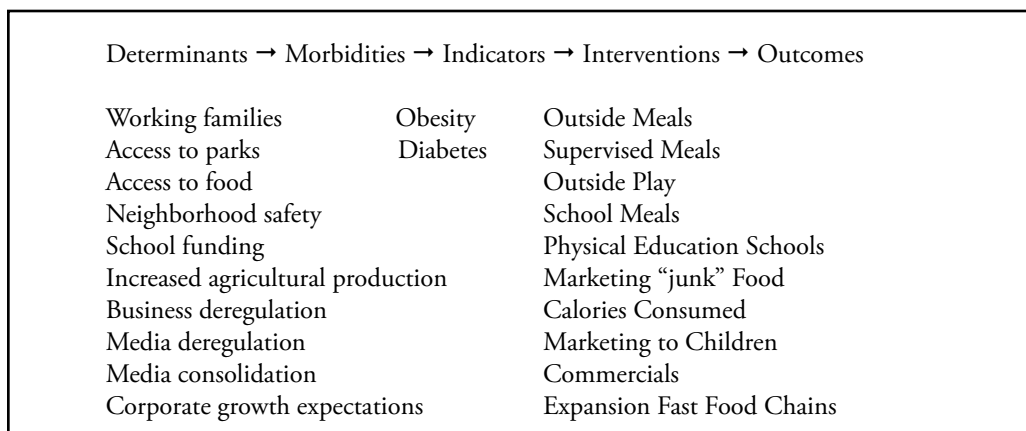


Table 1 Three Levels of Advocacy

Outside Meals Supervised Meals Outside Play Calories Consumed	Clinical
School Meals Physical Education Schools Access to food	Community
Marketing “junk” food Commercials Expansion Food Chains	Public Policy

and portion size, when they are working and frequently not home? How do we address the need for children to exercise, when parents are afraid to allow their children to be outside alone, are not home when their children return from school, and can't afford to “buy” structured recreation? These are the clinical issues that need resolution before we can address issues related to “diet” and food choice.

At the community level of advocacy, we must understand that in most urban communities, 40-50% of students are on the free and reduced price lunch program.^{35,36} The quality of school meals matters to these children. The need for nutrition for optimal learning matters as well, yet many schools opt not to participate in the free and reduced price breakfast program.³⁷ Despite all the data supporting the positive impact of exercise on learning, federal and state education policies have driven physical education from virtually all school curricula.³⁴ We can lecture, counsel, implore and demand that families feed their children healthy food, but the reality is that there are huge disparities in geographic and financial access to such food.³⁰

At the policy level, policies that span the continuum from the Women, Infants and Children (WIC) program and American farm polices, to those involving transnational corporations define the availability and quality of food.³⁸ Media regulations, and in particular its deregulation, determine how much influence business and industry have on our children. Tax and development policies further define where supermarkets are located and what food costs. The demands for corporate profits drive the expansion of “fast” food, mega-sized meals, and the abuse of cheap, underpaid labor without benefits (mostly young people from low income and minority communities). For low income families of working parents, these issues are of profound importance, and thus, must be of equal importance to pediatrics and pediatricians.

Structuring our Response - Health Equity

If we as a profession are to respond to the root causes of obesity and its adverse health outcomes, we must reframe medicine and pediatrics to engage the relevant principles and tools of Health Equity - *social justice and human rights* - as the platform for our practice. The principles and practice of

Health Equity will need to complement those of biomedical medicine if we are to succeed in the prevention and intervention of obesity and its consequences.

With respect to social justice, *Table 2* presents a number of the critical issues we must address. Social justice refers to the fair distribution of resources. Resource distribution results from public and private sector policy decisions at all levels of society. The best interests of communities, and in particular children, must be considered by all individuals and institutions when decisions are made that impact them.

With respect to human rights, multiple conventions and treaties, including the UN Convention on the Rights of the Child, can provide a framework for our response.³⁹ Using the articles of this Convention as an example, we can ask ourselves the following questions:

- Are the best interests of the child served by the extensive advertising of fast foods focused specifically on children?
- Are the menus for school meals developed in the best interests of children?
- Is there access to appropriate information to allow children and families to make rational choices about nutrition?
- Is an adequate standard of living ensured by a system that provides insufficient food security for a significant portion of our nation's children?
- Is there equity in geographic access to quality food sources in poor and minority communities?
- Are the price differentials for food between poor and more affluent communities equitable?

Table 2 Social Justice Issues Related to Childhood Obesity

Education
Elimination of Social Supports
Environment/Environmental Justice
Gender Discrimination
Globalization
Housing
Income and Wealth Distribution
Income Inequality
Internationalization of Capital
Neighborhoods and Land Use
Poverty
Privatization and Deregulation (National & International markets)
Racism
Tax Policies
Transportation
Workplace Conditions

- Does the system ensure financial support equivalent to the purchase requirements of families for food?
- Do children have access to the recreational resources they need to provide the physical activities required to remain healthy?
- Does the need for poor children to work, at the expense of time spent in developmentally appropriate recreation and educational pursuits, contribute to poor health outcomes?
- Is there access to the health services required to prevent or treat obesity?

Responses to these questions and consideration of potential determinants for obesity and Type 2 diabetes lead to a set of Health Equity interventions and indicators that could result in improved health outcomes for children:

- Restrictions on advertising for “fast food” and other high fat foods with low nutritional values could be implemented, similar to the restrictions on tobacco advertising.
- Schools could be required to provide nutritional meals.
- The density of food stores and average cost of food items could be monitored to ensure equitable access to food among communities.
- Tax and other economic incentives could be provided to food store chains by local government to encourage strategic location of food stores and ensure equitable geographic access to food.
- Local government could also prohibit non-competitive “price gouging” in poor and minority communities that often have access to only small convenience stores and/or single food chain stores.
- The density of parks and recreational facilities, the amount of tax dollars used to support sports and recreational programs, etc. could be increased to ensure access to developmentally appropriate and necessary physical activity for all children.
- Percentage of adolescents employed and weekly hours of employment could be monitored, and analyzed in relation to school performance, graduation rates and health status.

Conclusions

Physicians have an important role to play at all levels of clinical practice and advocacy to improve the health of communities and reduce health disparities. As clinicians, we can work with patients and their families to identify and intervene in the root social and environmental determinants of their health and well being. We can work with communities to provide expanded access to needed services. As influential members of communities, we can influence the media and decision-makers to advocate for changes in the environments in which people live. In respect of children and adults, physicians can ensure they are the recipients of their rights as defined in United Nations human rights documents.

To succeed in improving the health of all children and the adults they will become, the root social and environmental determinants of health must be confronted and mitigated. The principles and practice of Health Equity, social justice and human rights provide the perspective, knowledge, tools, skills and strategies to reorient physicians and change our practices to confront the pandemic of childhood and adult obesity.

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