A Homegrown Solution: Plant-based Diets and Urban Bioethics

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INTRODUCTION

As a nation, we are in an urban health care crisis: our most vulnerable citizens face a lack of access to care, inequality in quality of care, and often do not have the means—monetary, temporal, or educational—to fully follow the care plans of their physicians. Chronic disease runs rampant and uncontrolled throughout the poorest areas of our major cities. Patients are routinely prescribed lifestyle modifications that are too elaborate or difficult to maintain over time, leading to higher rates of complications from chronic disease and, ultimately, a higher mortality rate. Each month researchers debate the merits of different antihypertensive regimens and the newest diabetes medication, but we lag behind sorely in a comprehensive, sustainable lifestyle change that can help to alleviate many of the diseases affecting the urban poor. In response to these challenges, I ask for the medical establishment to consider prescribing a diet with a higher ratio of unprocessed plant-based foods (like fresh fruits and vegetables, legumes, and seeds), for the benefit of the patient, through improved health; the community, through decreased economic cost to society; and the planet, by encouraging environmental sustainability.

ANALYSIS

As a dietary system, vegetarianism has increased in prevalence and popularity over the last few decades in America. Simply put, vegetarian diets are broadly defined by abstaining from dietary intake of meat and foods which result in the death of the animal. However, the system has numerous variations, ranging from limited consumption of milk and eggs (which do not result in the death of the animal) to others that completely avoid any animal derived products, known as veganism (and to be clear, any reference to vegetarianism refers to this spectrum of diets, not only those who don't eat animal products which result in the death of the animal). Research on vegetarianism points towards health benefits to those who follow it — there are notable decreases in mortality among vegetarians when compared to meat eaters, and consumption of a diet with a higher ratio of unprocessed plant-based foods has shown decreases in coronary artery disease and hypertension.[1234]

Furthermore, the vegetarian/plant-based diet avoids costly sources of protein, like seafood and meat, in favor of more reasonably priced proteins, like beans, making it more affordable for the average consumer. Patients are often instructed to "eat more lean meats," like chicken or fish, but these products are relatively expensive and require time for preparation. Too often it seems the magnitude of the lifestyle interventions we recommend are poorly designed when keeping an impoverished urban population in mind: a group that simply does not have the resources, be it time or money, to implement these changes. Economically, a diet

higher in plant-based foods is sustainable at the macro and micro level. Pound for pound, beans and lentils, though not as protein dense, are more affordable than chicken or beef, and can require significantly less preparation from store to plate. Many herbs and vegetables, like tomatoes and green beans, can be grown at home, and can even be adapted to grow in urban environments. At the macro level, ending global hunger with a diet including American rates of meat consumption would require more land for livestock than we have available. Moving towards a more plant-based diet frees up land for production of grains and other crops that could be more easily mobilized to feed those in need.

Furthermore, the environmental impact of meat consumption is staggering relative to the modest amount of resulting product. We have seen a higher rate of atmospheric greenhouse gases proportional to increases in global meat production – as much as 14.5% of human-caused emissions come from livestock.[5] Indeed, livestock production accounts for 70% of freshwater use and 93% of its depletion.[6] Currently in California, a severe drought has led to governmental restrictions on residential water consumption— those in relative affluence will have the means to mitigate and side-step the inconveniences, but those in poverty are forced to live with the burden of a decreased water supply. The health benefits of a diet with a higher amount of plant-based foods for the individual have been mentioned earlier, but I'd like to focus on the benefit of plant-based nutrition from the perspective of the community and the ethical tenet of justice. Protein, as an essential nutrient, should be accessible to the majority of the population. Beans, legumes, and nuts are more accessible sources of protein at a population level, and are less environmentally taxing. Physicians and healthcare professionals should encourage patients to include a greater amount of plant-based foods in their diet, while decreasing meat consumption. The USDA has made great strides in encouraging plant-based protein sources in their 2010 Dietary Guidelines via MyPlate.gov, offering portion sizes/equivalents for plant-based proteins, as well as having a portion of the site dedicated to vegetarian diets.[7] The website has a series of printable guides, which healthcare providers could offer to their patients to simplify making these choices. This shift in dietary policy would not be easy to complete, but with advocates from healthcare backgrounds engaging the community and pushing for change I believe this is a feasible goal. By suggesting that patients consume plant-based proteins rather than meat ones, we can ensure that those with less access to meat have a similarly healthy and equivalent alternative.

Physicians and other healthcare professionals should serve as community advocates and encourage their local representatives to support urban farming projects. The cultivation of high-protein plant products is a simpler operation to initiate in an urban environment; it's easier to develop a community garden than a community cow pasture. Urban farming of fruits and vegetables is a rising practice in many cities throughout the United States, with successes in multiple sites and many benefits on top of provision of fresh food for the community. Engaging the community to implement an urban farming program can create a sustainable source of the foods necessary for a diet with more unprocessed plant-based foods, while also improving community health. In some cases, it may also be possible to use a larger scale urban farm, possibly in an industrial area or similar location, as a source of jobs. The intervention is scalable based on need, from a simple home garden or a community plot to a large-scale farm if the space is available. We could expect to see several direct benefits from greater numbers of community/urban farming projects. There would be a decrease in urban blight through development of empty lots and repurposing of abandoned dwellings, an increase in the availability of fresh food in neighborhoods that otherwise lack access to healthy and affordable food, and urban communities would experience a sense of agency in their health.

Last, I'd encourage members of the healthcare community to implement these changes in their home institutions. Improving the health of patients and community through sustainable food and decreased meat consumption are not foreign concepts among health systems. For example, Kaiser Permanente offers a regular farmer's market held on its hospital campus, allowing patients to take the medical dietary advice offered and put it into practice.[8] They also have made efforts to increase the amount of their food spending on sustainable agriculture, supporting good nutrition and local economies. A pilot study of four San Francisco hospitals looked for the effects of decreased meat procurement and increased usage of sustainable meat. Researchers found

reductions in costs and greenhouse gas emissions over the study period.[9] Overall, healthcare professionals at any level within an organization can encourage healthier diets with fresh foods and a higher ratio of plant-based foods in communities that lack access.

While I fully advocate for these reforms, how we implement these changes is just as important as the changes themselves. For example, this system is not meant to be a two-tiered dietary system based on socioeconomic status, where the underprivileged are encouraged to avoid meat while still promoting it for those with the means to purchase it. Obviously, that would be a gross violation of the justice principle. Nor do I intend it as a blanket policy; all dietary recommendations should take the health of the patient into perspective first and foremost. I intend this to be a solution applicable and scalable to all populations, but I believe the most significant benefits would be observed among poor urban populations.

CONCLUSION

My hope is that in the coming years physicians will see the positive effects of prescribing a diet with a higher ratio of fresh, plant-based foods, and offer it as a more sustainable and affordable lifestyle intervention for patients, especially in urban communities. It is a substantial shift in our current thinking and policy that would certainly require a significant amount of support to implement, but the payoff for individuals, the community, and the environment would be well-worth the effort.

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