Overcoming Barriers to Physician Adoption of a Plant-Based Diet: Challenges, Evidence, and Future Prospects

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Abstract
Despite overwhelming scientific support, the adoption of plant-based diets (PBDs) by physicians remains limited due to educational gaps, cultural biases, and industry influence. At Bethsaida Hospital in Indonesia, under the leadership of Prof. Dasaad Mulijono (DM), we have broken through these barriers—merging cutting-edge artificial intelligence (AI) with lifestyle medicine to achieve what conventional therapies rarely do: reversal of atherosclerosis and a national benchmark-low restenosis rate of just 2%.

Through personalized, AI-powered dietary counselling and sustained PBD adherence, patients at our cardiology centre have experienced remission of hypertension and diabetes, dramatic weight loss, LDL-C levels of less than 30 mg/dL, and reduced dependency on medications, including insulin. Coronary plaque regression, once considered improbable, is now a clinical reality at Bethsaida.

This article calls for a global paradigm shift: it's time for the medical community to catch up with the science. To usher in a new era of evidence-based, life-saving care, we propose strategic reforms in medical education, greater physician engagement in lifestyle change, and the urgent integration of AI in nutrition counselling.

Keywords: Plant-Based Diet, Medical Education, Physician Reluctance, Artificial Intelligence, Paradigm Shift, Nutrition Counselling, Healthcare Innovation, Bethsaida Hospital, Prof. Dasaad Mulijono

1. Introduction
Chronic diseases such as cardiovascular disease, type 2 diabetes (T2D), hypertension, hyperlipidaemia, and obesity are major public health concerns, and diet plays a crucial role in both prevention and management. A PBD has been extensively studied for its benefits in reducing morbidity and mortality associated with these diseases [1-4]. However, despite compelling evidence, many doctors remain hesitant to promote PBD [5-8]. Understanding the reasons behind this reluctance is essential for improving public health outcomes and integrating PBD into mainstream medical practice.

2. Barriers to Physician Adoption of a PBD

2.1. Lack of Nutrition Education in Medical Training

oMost medical schools allocate minimal time in their curricula to nutrition, focusing primarily on pharmacological treatments.

oPhysicians often feel unprepared to provide dietary guidance and default to prescribing medications instead of lifestyle modifications.

2.2. Cultural and Personal Dietary Biases

o Physicians, like the general population, are influenced by their dietary habits and cultural norms.

o Many doctors consume animal products and may find it challenging to advocate for a diet they do not follow.

2.3. Perceived Patient Resistance and Compliance Issues

o Doctors may believe patients are unwilling or unable to make significant dietary changes, leading them to prioritize simpler, medication-based interventions.

o Misinformation about protein deficiency, nutrient inadequacy, and the palatability of PBD contributes to hesitancy.

2.4. Influence of Food and Pharmaceutical Industries

oIndustry-sponsored education and research often downplay the benefits of PBD in favour of pharmaceutical solutions.

o Financial incentives from industries linked to animal agriculture may create conflicts of interest.

2.5. Time Constraints in Clinical Practice

o Limited consultation time prevents in-depth dietary counselling, leading to a preference for quick pharmaceutical interventions.

o The lack of reimbursement for dietary counselling further discourages doctors from prioritizing nutrition discussions.

3. Solutions to Overcome These Barriers

3.1. Enhancing Medical Education on Nutrition

oIntegrate robust nutrition courses into medical school curricula.
oRequire continuing medical education (CME) credits in PBD for practicing physicians.

3.2. Promoting Physician-Led Lifestyle Changes

oEncourage doctors to adopt PBDs to improve credibility and motivation in counselling patients.

oProvide institutional support for physician wellness programs that incorporate PBD.

3.3. Developing Standardized Clinical Guidelines

o Professional organizations should issue clear guidelines emphasizing PBDs as a primary preventive and therapeutic strategy.

o Increase awareness of evidence-based resources like the American College of Lifestyle Medicine.

3.4. Utilizing AI and Robotics for Dietary Counselling

oAI-powered decision-support systems can provide personalized dietary recommendations based on patients' health conditions and

preferences.

o Robotics and AI-driven chatbots can offer real-time guidance, educational materials, and meal planning resources to support physicians and patients.

o AI can analyse large-scale nutritional research, reducing the influence of industry bias and reinforcing evidence-based dietary recommendations.

3.5. The Future Role of AI and Robotics in PBD Advocacy
With advancements in AI, future AI-driven health systems may provide unbiased, data-driven recommendations that prioritize PBDs over less effective interventions. Free from industry influence, AI algorithms could autonomously analyse clinical studies, educate physicians and patients, and streamline dietary counselling in medical practice [9-12]. Robotics may further aid in meal preparation, personalized meal planning, and real-time dietary tracking, improving adherence to PBDs [13-16]. As AI continues to evolve, it has the potential to overcome human biases and present the scientific truth about PBD in a way that is practical, personalized, and widely accepted.

4. Experience at our Cardiology Centre, Bethsaida Hospital, Indonesia
Over the past few years, we have effectively leveraged AI to disseminate educational content, provide evidence-based information on PBDs, and curate meal plans tailored for our cardiology patients. The outcomes have been auspicious, with a notable increase in patient adherence to plant-based dietary patterns and significant improvements in overall health.

At our cardiology centre, we have observed remarkable clinical benefits among our patients. Many individuals with hypertension have successfully discontinued antihypertensive medications following sustained blood pressure normalization. Overweight patients have achieved substantial weight loss, attaining a healthy BMI of 21–22. Similarly, patients with hyperlipidaemia have completed their target LDL-C levels—below 30 mg/dL—through a comprehensive intervention that integrates PBDs with high-intensity statin and ezetimibe therapy. Moreover, patients with moderate renal impairment have experienced normalization of their serum creatinine levels, while those with diabetes have demonstrated significant glycaemic control, with glycated haemoglobin (HbA1c) levels consistently below 6%. Many individuals have minimized pharmacological interventions, including insulin cessation, in numerous cases.

Most notably, our cardiology patients have exhibited the lowest restenosis rate—approximately 2%—with compelling evidence of atherosclerotic stabilization and, in many cases, regression of coronary plaque burden. Despite these remarkable clinical findings, many of our medical colleagues acknowledge these outcomes and remain reluctant to integrate lifestyle medicine into their practice.

To address this gap, we aim to make extensive contributions to the scientific literature, with the aspiration that future generations of clinicians will adopt and disseminate this paradigm-shifting approach. By advancing the integration of lifestyle medicine into mainstream clinical practice, we aim to enhance the standard of patient care and contribute to the mitigation and eventual eradication of chronic diseases [17-19].

5. Conclusion
Despite overwhelming evidence supporting PBDs, many physicians remain reluctant to embrace them due to gaps in education, cultural biases, perceived patient challenges, industry influence, and time constraints. Addressing these barriers requires systemic changes in medical education, the development of improved clinical guidelines, and the integration of AI-driven tools for dietary counselling. The rise of AI and robotics in healthcare holds promise for a future where evidence-based nutrition can be communicated more effectively, ultimately leading to improved public health outcomes. By leveraging technology and education, the medical community can bridge the gap between science and practice, ensuring that PBD becomes a mainstream pillar of preventive medicine.

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