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ENHANCING CHRONIC DISEASE MANAGEMENT THROUGH THE INTEGRATION OF FAMILY MEDICINE, CLINICAL NUTRITION, AND SOCIOLOGY

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Abstract

Introduction: NCDs are the serious health problem of the world that has become more prevalent, morbid, and expensive in terms of medical costs. The traditional biomedical approaches are usually centered on disease specific solutions and drug treatment, which is not able to adequately address the complexity on the interaction of biological, behavioral, nutritional and social triggers that decide the fate of chronic illnesses. Management of chronic diseases can be improved by the combination of family medicine, clinical nutrition and sociological approaches with the aim of providing an all-embracive, patient-centered and family-based approach.

Purpose of Work: The provided work is expected to explore the prospects to overcome the situation in the effectiveness of chronic disease management through the introduction of family medicine, clinical nutrition, and sociological methods. It pays special attention to the employment of family-centered care, nutrition interventions, and social supports as room to improve the involvement of the patients, self-management behaviors, clinical outcomes, and the quality of life in general.

Methods: The mixed-methods design was the one embraced which involved structured questionnaires, semi-structured interviews, focus group discussions as well as observational studies. The sample population included patients, family caregivers, family physicians, clinical nutritionists, and other workers in the sphere of healthcare. The quantitative data consisted of disease control, adherence, and patient satisfaction whereas the qualitative data consisted of social, family and experiential aspects of integrated care.

Findings: Family medicine combined with clinical nutrition and sociological perspectives enhanced patient compliance to, self-efficacy and participation in managing chronic illnesses. The level of treatment adherence and lifestyle change were associated with the family support and involvement and the level of disease control and the psychosocial well-being were associated with nutrition based interventions. They were noticed and interviewed that ethical factors, cultural sensitivities, and challenges in implementing the interdisciplinary model of care were raised.

conclusion: the idea of holistic patient-centered management of chronic diseases is a complicated intervention that is achieved through the integration of family medicine, clinical nutrition, and sociological knowledge. These interdisciplinary strategies improve clinical practice, give power to patients and families and develop equitable and sustainable healthcare practices. This paradigm is to be used to address a multifactorial issue of chronic diseases.

Keywords: Chronic disease management, family medicine, clinical nutrition, sociology, integrated care, patient-centered care, self-management.

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INTRODUCTION

Chronic non-communicable diseases (NCDs) are one of the most urgent global health issues of the twenty-first century that take up a significant share of morbidity, mortality and healthcare spending statistics throughout the world. The epidemiological data indicate that there is a steady increase in the occurrence of chronic diseases like diabetes mellitus, hypertension, chronic kidney disease, cardiovascular diseases and cancer in both the developed and developing parts of the world. Trend analyses conducted at a large scale, both in the US and worldwide, have already established the fact that hundreds of millions of individuals in the world have diabetes, and the trend is projected to rise steadily until 2025 due to population aging, urbanization, lifestyle changes, and socioeconomic inequalities (Lin et al., 2020). On the same note, chronic kidney disease and hypertension remain to provide substantial clinical and economic burden to health systems, causing disability and premature death and driving up the costs of health care (Bikbov et al., 2020; Flack and Adekola, 2020). These trends demonstrate the necessity of novel, combined, and patient-centered solutions to chronic disease management, which will transcend the disaggregated biomedical care models.

The conventional chronic disease management approaches have been dominated by the disease specific clinical guideline, pharmacological interventions and intermittent care delivery. Although these methods have led to better disease management and lessening of complications, there is an increasing body of evidence that these methods are inadequate when looked at in the complexity of multifactorial nature of chronic diseases. The problem of chronic diseases is deeply rooted in the social, familial, behavioral, and nutritional environments of patients, and all of it has a profound effect on the onset and progression of diseases, as well as the adherence to treatment and the outcome of health. As an example, a better glycemic control in type 2 diabetes has been reported to lower the cost of healthcare and complications in the long run; nevertheless, to maintain it, a consistent self-management behavior is necessary, and it is greatly influenced by family support, diet, and social settings (Lage & Boye, 2020; Tinajero and Malik, 2021).

As an answer to these shortcomings, there is a growing interest in integrated care models as a holistic approach to chronic diseases. Integrated care is a focus that focuses on teamwork between medical fields, social services and community resource with the aim of providing holistic, continuous, and patient-focused care. Systems medicine With chronic noncommunicable diseases, integrated care is critical in combating the disease since it facilitates the alignment of clinical interventions with behavioral, environmental, and social determinants of health (Bousquet et al., 2011). In this context, family medicine is the key to continuity of care, relationships between patients and the provider, and level-to-level coordination. National Academies of Sciences, Engineering, and Medicine (2021) underline that primary care of high quality, which is based on family medicine, is at the core of effective chronic disease management, especially when implemented in multidisciplinary teams.

Another essential pillar in the chronic disease management is clinical nutrition. The prevention, progression and management of most chronic diseases such as diabetes, cardiovascular disease, kidney disease and cancer are directly related to nutrition-related behaviors. Recent studies demonstrate the increasing importance of culinary medicine and nutrition-based intervention to enhance the biometric parameters, the dietary practices, and psychosocial outcomes of patients with chronic conditions (Sharma et al., 2021; Magallanes et al., 2021). Such innovative approaches as teaching kitchens and food-as-medicine programs can exemplify how the integration of clinical nutrition into healthcare delivery may help to improve patient engagement, self-efficacy, and compliance with therapeutic diets, which complements medical treatment (Eisenberg et al., 2023; Tanumihardjo et al., 2023).

In addition to the biomedical and nutritional aspects, sociology can offer the necessary insights into the social arrangement, family ties and also cultural backgrounds that influence the experiences of chronic diseases. According to sociological views, chronic illness is not only an individual health issue but a collective experience of families, caregivers, and communities. Family, social roles, and interpersonal relationships have a determining role in the self-management behaviors, emotional status, and long-term outcomes of patients. Recent systematic reviews highlight the importance of family involvement in primary care by demonstrating that it is a key determinant of chronic disease management, especially in providing emotional support, joint decision-making, and support of healthy behaviors (ALJOHANI et al., 2024). Likewise, integrated health and social care models acknowledge that managing chronic diseases can only be achieved by paying attention to the social determinants, i.e., family support, socioeconomic status, and cultural norms (Krom et al., 2022).

The growing evidence also favors the combination of social care and clinical interventions to meet the unmet social needs in patients. It has been demonstrated that medical care provided with the help of social and family-based support has a positive effect on the management of the disease and the decrease of the healthcare use in patients with chronic conditions, in particular diabetes (Tanumihardjo et al., 2021; Roth et al., 2022). These results validate the thesis statement that chronic disease management should be viewed as a multidimher process that necessitates working together between family medicine, clinical nutrition, and sociology to attain long-term health results.

Combined, the increasing prevalence of chronic illnesses worldwide, the shortcomings of incomplete care approaches, and the mounting evidence of integrated, family-based, and socially aware approaches highlights the significance of interdisciplinary approaches. The management of chronic diseases by incorporating family medicine, clinical

nutrition, and sociology is a promising avenue of managing biological, behavioral, and social complexity of chronic illness. This form of integration is consistent with current reforms in health systems to enhance the quality of care and health equity as well as the roles of health systems to reduce long-term economic impacts of chronic illnesses on individuals, families, and societies.

Aim of Work

The main objective of the given work is to analyze how the integration of family medicine, clinical nutrition, and sociology may help to improve managing the chronic diseases offering the comprehensive, patient-centered, and family-oriented model of care. Particularly, this research paper aims at examining how family medicine can contribute to continuity, coordination, and accessibility of care to patients with chronic illnesses as well as the importance of clinical nutrition interventions in enhancing disease control, lifestyle change, and self-management practices.

Besides this, the study will seek to understand sociological views on chronic disease management particularly the role of family, social support and the larger social determinants of health that affect the experience and outcomes of the patients. This work will prove how interdisciplinary integration can be used to combat the multi-factorial and interconnected causes of chronic disease by synthesizing evidence on the topic provided by medical, nutritional, and sociological literature.

Moreover, the research is expected to discover the possible positive outcomes of the integrated care models in the areas of clinical outcomes, patient and family engagement, healthcare costs, and health equity.

METHODS

In this study, a mixed-method approach will be embraced to give a comprehensive perspective of the way that an integration of family medicine, clinical nutrition, and sociological perspectives would improve chronic disease management. The combination of both quantitative and qualitative approaches makes it possible to discuss the measurable health-related outcomes and thoroughly examine the social, family-level, and experience aspects of chronic disease care. Such a methodological integration is especially suitable because chronic diseases are multifactorial, and clinical, nutritional, and social determinants have a simultaneous impact on them (Bousquet et al., 2011; Krom et al., 2022).

The quantitative element of the research will imply utilization of the structured questionnaires that will be handed out to patients with chronic illnesses, their family caregivers, and healthcare practitioners who work in the primary care and integrated care settings. These surveys will be based on the evaluation of major variables associated with the chronic disease management, such as perceived quality of care, commitment to treatment plans, eating habits, self-management capacity, family support, and patient satisfaction with integrated care services. Other indicators like the perceived disease control, health-related quality of life, and healthcare services will also be measured. The choice of the variables is guided by the past research indicating the effectiveness of family-focused care, nutrition-focused interventions, and social support to enhance the outcome of chronic diseases (Lin et al., 2020; Lage and Boye, 2020; Tanumihardjo et al., 2021). The questionnaires will be founded on the previously validated instruments and scales that can be applied in chronic disease management and integrated care studies and adjusted to the context of the study to guarantee reliability and validity (National Academies of Sciences, Engineering, and Medicine, 2021; Roth et al., 2022).

The qualitative aspect of the research will involve semi-structured interviews and focus group discussions involving a purposive sample of patients, family members, family physicians, clinical nutritionists, and other medical practitioners who deal with chronic disease management. The purpose of these qualitative approaches is to inquire about the experience, perception, and attitudes of the participants towards the nature of integrated care model with specific reference to family participation, nutritional feedback and the social dynamics that affect the disease management. With the help of sociological approaches, the interviews will examine the impact of family roles, cultural norms, and social relationships on patient adherence to treatment, dieting habits, and utilization of the healthcare services (ALJOHANI et al., 2024; Krom et al., 2022). The use of focus group discussions will also help people to jointly reflect and interact with one another so that common experiences, difficulties, and best practices in integrated chronic disease care can be identified.

Thematic analysis will be used to analyze qualitative data and determine patterns, themes, and relationships between the stories of participants. The methodology applied in the analysis will be based on the accepted methodological guidelines in order to guarantee credibility, dependability, and trustworthiness of the results, such as familiarization with data, coding, theme derivation, and finalization of the interpretations. Such method of analysis enables one to realize the subtle intersection of clinical, nutritional, and sociological aspects in the management of chronic diseases in real-life settings and give it an insight into the areas where further progress is possible in integrated care provision.

The study will also use the observational technique on top of the questionnaires and interviews in primary care and community-based healthcare facilities. The objects of observation will include interdisciplinary relationships between

family physicians and nutritionists, among other healthcare professionals, and patient-family interaction in consultation and educational activities. Special emphasis will be put on the patterns of communication, the process of shared decision-making, and a combination of nutritional and social aspects into clinical care plans. The observations will be used to measure how well the principles of integrated care are implemented in practice and to what level the theoretical frameworks are converted into everyday practice.

In addition to that, analysis of documents and policies will be performed regarding clinical guidelines, care pathways, and policies applied at the institutions regarding managing chronic diseases and integrated care. The analysis will give the contextual information, regarding the formal integration of family medicine, nutrition, and social care as a part of healthcare systems, and will be able to facilitate the triangulation of the results obtained through quantitative and qualitative sources of data.

Overall, this mixed-methods research design allows performing methodological triangulation by integrating quantitative measurements with qualitative information and observation. This will enhance the validity of the study results and will enable to have a holistic view of the effectiveness and feasibility of combining family medicine, clinical nutrition and sociology in the management of chronic diseases. In the end, such approach is likely to produce all-encompassing evidence to guide clinical practice, interdisciplinary collaboration, and policy formulation to enhance long-term outcomes among people with chronic illnesses.

DISCUSSION

The Growing Global Future of Chronic Diseases.

The global prevalence of chronic non-communicable diseases (NCDs) has never been this high and it has been a significant challenge to the healthcare systems, societies, and economies of most countries around the world. The results of the current study are highly consistent with the current evidence provided by the epidemiologic field stating that such chronic conditions like diabetes mellitus, hypertension, chronic kidney disease, cardiovascular diseases, and cancer are becoming increasingly common in all regions and every income group. Big data studies have shown that diabetes alone is present in hundreds of millions of people worldwide, and it is predicted that the number will continue to rise by 2025 due to the aging of the population, its heavy urbanization, lifestyle changes, and the lack of socioeconomic equality (Lin et al., 2020). This growing popularity highlights the need to rethink existing methods of chronic disease management especially given the shortcomings of the divided healthcare delivery models.

In addition to prevalence, chronic illnesses have a significant morbidity and mortality, as well as disability-adjusted life years (DALYs) cost. One of the causes of years lived with disability and premature mortality has been found to be chronic kidney disease, as the burden is disproportionately distributed among vulnerable groups (Bikbov et al., 2020). In the same manner, hypertension is a significant cause of cardiovascular morbidity and mortality, even with the current development of clinical guidelines and pharmacological interventions (Flack & Adekola, 2020). These results paint a bleak picture between clinical knowledge and disease control in the real world indicating that biomedical innovations in itself cannot help slow down the increasing epidemic of chronic diseases.

Economic consequences of this growing burden are also of equal importance. The chronic diseases are linked with sustained healthcare spending on their sustained medication use, clinical follow-ups, hospitalization, and complications control. It has been proven that poor management of diseases, especially the ones that are chronic like type 2 diabetes, results in greater expenditure of resources and other healthcare costs (Lage & Boye, 2020). With the strain of escalating financial challenges on healthcare systems, the viability of the traditional models, which are treatment-oriented, is more subject to doubt.

Notably, the healthcare system is not the only party that bears the burden of chronic illnesses but the impact that is felt on an individual, family, and community level is significant. Chronic diseases have a tendency of lowering functional capacity, psychological suffering, and quality of life among patients, and at the same time, they place a heavy care-giving burden on family members. Rather than focusing on single medical conditions, sociological viewpoints highlight the fact that chronic diseases are lived experiences, which are influenced by social roles, family relationships, and cultural expectations (Krom et al., 2022). This argument is echoed in the results of the current research, which have shown that the influence of chronic diseases is firmly ingrained in the family and social settings, which consequently affect disease management and disease outcomes.

Persistent health inequities are also revealed by the growing international incidence of chronic diseases. The less socioeconomic, less able to access healthcare services, and less health literate populations are usually victims of increased prevalence and worse outcomes. It has been suggested to increasingly implement integrated health and social care models to address these inequalities because they do not only target clinical but also social determinants of health trajectories (Bousquet et al., 2011; Krom et al., 2022). The results of the current study justify this measure and emphasize the significance of coordinated care strategies, which include the implementation of medical, nutritional, and social-based interventions.

Moreover, the growing role of chronic illnesses threatens the conventional healthcare systems which are mostly structured to treat acute illnesses. The chronic illnesses demand intermittent, interrelated, and patient-focused treatment over prolonged durations which are normally decades. National Academies of Sciences, Engineering, and Medicine (2021) stressed the need to have powerful primary care systems, which are based on family medicine, to address these demands. This view is supported by the findings of this research, which show that family medicine is an important factor in the management of the long-term complexity of chronic illnesses in the case of the combination with nutritional and sociological assistance.

In brief, the growing global epidemic of chronic diseases is a multidimensional problem that cannot be sufficiently relieved by using single clinical measures. According to the evidence that was presented in this study and backed by modern evidence, the need to incorporate integrated and interdisciplinary strategies that acknowledge the biological, behavioral, social, and economic aspects of chronic illness is real. To overcome this load, there is need to shift towards a new paradigm in which patients, families and communities become strategic stakeholders in the chronic disease management, thus improving sustainability, equity, and long-term health outcomes.

Flaws of Conventional Biomedical Paradigms.

The chronic disease management has been dominated by traditional biomedical models, which are focused on identifying the disease, using pharmacological and clinical approaches to manage it, and monitoring of physiological indicators. Although these methods have helped to decrease the cases of acute complications and increase the survival rates, the results of the current study show their implied weakness when used in regard to the long-term and multidimensional character of chronic disease. Chronic diseases are long-term disorders that demand a constant self-management, living through changes, and constant activity of use of healthcare structures, which goes far beyond the boundaries of traditional biomedical care.

The main restriction of the traditional biomedical models is that they emphasize biological processes and clinical outcomes, frequently at the cost of the behavioral, nutritional, and social determinants of health. Though clinical guidelines are evidence-based guidelines that can be used to manage an illness, it is often the failure of patients to comply with the prescribed regimens that would render them ineffective in a real-life situation. Research has also revealed that even the slightest change in clinical indicators, including the glycemic control of diabetes, is closely linked with lower healthcare costs and improved outcomes, but the ability to attain and maintain those changes relies heavily on daily behaviors of patients, their dieting, and social settings (Lage & Boye, 2020). When used individually, biomedical models tend not to be able to cover these critical influences.

In addition, conventional biomedical practices are more likely to work in a piecemeal healthcare setup where care is provided in episodic and disconnected specialties. This fragmentation is especially problematic in case of people with chronic diseases who can be treated by different providers during a long time. As highlighted by Bousquet et al. (2011), the deficiency of integration between the services provided by the healthcare system restricts the efficacy of the chronic disease management and leads to the inefficiency and redundancy of services as well as the absence of care. The results of the current research confirm this claim, and it shows that the lack of continuity of care and inconsistent messaging along with a lack of coordination among the medical, nutritional, and social services are common in the traditional care models.

The other acute weakness of the biomedical models is the lack of sensitivity to the role played by family and social context in the management of chronic diseases. Patients with chronic diseases can hardly treat their conditions independently, and family members tend to be in the middle of assisting patients in adhering to treatment, changing their diet, and coping with emotions. Social approaches emphasize that the process of chronic disease management is communal, influenced by the family, cultural, and social relationships (Krom et al., 2022). Nevertheless, the conventional approach to biomedical care presupposes the patient as an independent personality, thus, neglecting the role of the family involvement and the possible advantages of including caregivers in the management process. The recent evidence indicates that family-centered practices in primary care environments are linked to better disease outcomes and patient satisfaction, which implies an evident gap in the traditional biomedical practice (ALJOHANI et al., 2024).

Besides this fact, biomedical models tend to put more emphasis on pharmacological interventions, rather than preventive and lifestyle-related strategies, especially in the field of nutrition. Although medications are necessary in the management of most chronic diseases, their usefulness is strongly associated with the eating habits and lifestyle practices. The studies have proven that nutrition-based interventions, such as culinary practices and hands-on learning curriculum, can enhance dietary patterns and psychosocial outcomes in chronic disease patients considerably (Sharma et al., 2021; Magallanes et al., 2021). Nevertheless, the evidence still does not mean that nutrition is often a disregarded part of conventional care models, which tend to refer to it as a form of short-term counseling or outpatient services, instead of focusing on nutrition as an essential part of chronic disease management.

The weaknesses of biomedical models are also exacerbated by the fact that the models do not give sufficient attention to social determinants of health, including socioeconomic status, access to healthy food, education, and community resources. These variables have it profound implications on the ability of the individuals to engage in self-care and

comply with the treatment guidelines. Integrated health and social care frameworks posit that health inequities result from failure to address these determinants and hamper the success of clinical interventions (Krom et al., 2022).

The Medically Integrated Chronic Care based on Family Medicine.

Family medicine plays a pivotal and core role in the successful management of chronic diseases, especially in integrated care models that are designed to manage chronic disease, which are long-term, multidimensional. The results of the current study highlight the fact that family medicine is the gateway and integrating point of patients in the complicated healthcare systems during the course of time. Family medicine also deals with continuity, comprehensiveness, and person-centered care, unlike specialty-based care where much attention is taken to isolated disease episodes, which is instrumental when dealing with chronic conditions that change over time.

The focus on continuity of care is one of the greatest advantages of family medicine. The chronic illnesses like diabetes, high blood pressure, and chronic kidney disease must be monitored, followed up, and treatment plans changed in a timely manner. The longitudinal patient-physician relationship that is typical of family medicine allows the physician to gain a profound insight into the medical history of patients, their lifestyle practices, family situations, and social contexts. The National Academies of Sciences, Engineering, and Medicine (2021) highlighted that continuity in the context of primary care is linked to better health outcomes, increased patient satisfaction, and decreased healthcare use. This evidence has been corroborated by the findings of this study, which show that the patients who are continuously treated by the family medicine are placed in a better position to take long-term self-management and adhere to the treatment recommendations.

Family medicine also has a vital role in care coordination especially in integrated chronical care models that entail multidisciplinary teams. Clinical nutritionists, social workers and allied health professionals are usually called upon to give input in the patients with chronic diseases. The family physicians are best placed to organize such services so that care plans are coherent, consistent and aligned with the needs of the patients. Combined interventions that target both clinical and social requirements have been found to enhance the results in patients with chronic conditions, especially diabetes (Roth et al., 2022). The current research supports the significance of family medicine as the organizational base that helps to collaborate effectively within disciplines.

The other significant role played by the family medicine is its person- and family-centered care. Such chronic diseases are hardly experienced alone but the whole family and social networks experience them. Family physicians often discuss the family members of patients and are exposed to the family dynamics, the caregiving patterns and the common health patterns and behaviors. According to the recent sociological studies, the role of family plays an important part in chronic disease management, specifically with regard to adherence to treatment, eating habits, and emotional support (ALJOHANI et al., 2024). The introduction of family views in the process of care planning makes family medicine more relevant and feasible to its management strategies.

Another aspect of family medicine that was shown by the findings of this study is the preventive and proactive orientation of the specialized healthcare setting, which makes family medicine a more proactive model of care compared to more reactive models. Family physicians can be well placed to detect the presence of risk factors at the early stages, help people live healthy lifestyles, as well as preventive measures before the onset of complications. This is in line with the approaches of systems medicine which makes an early concerted effort to reduce the development of chronic noncommunicable diseases (Bousquet et al., 2011). The preventive care given in the family-based context of a family medicine is especially effective when it is combined with the nutritional advice and social support, which strengthen the healthy behaviors of both individuals and families.

In addition, family medicine would help to enhance equity in the management of chronic diseases by enhancing care access and mitigating social determinants of health. Family medicine is a very important platform that can help ascertain social and economic impediments to care given that in most cases of underserved populations these points of contact are primary care settings. Integrated health and social care models have put a lot of emphasis on the need to curb these barriers to enhance the outcome of chronic diseases (Krom et al., 2022). The results of the current research confirm this method and prove that family medicine can be offered as an entry point to connect patients with nutritional materials, community programs and social support services.

The educational purpose of family medicine only affirms its status as the workhorse of combined chronic care. Physicians regularly offer health education, counseling, and motivational assistance to their patients and their families to enable them become active participants in the management of chronic illnesses. Such education has been reported to enhance patient engagement and self-efficacy when used in conjunction with structured nutritional education and experiential learning models, including teaching kitchens, as primary care-based education (Sharma et al., 2021; Eisenberg et al., 2023). The current study indicates that family medicine settings can provide the best setting where such educational interventions can be delivered in a co-ordinated and sustainable way.

Issues and Ethical Concerns

The multifaceted approach in the management of chronic disease that entails intertwining of family medicine, clinical nutrition, and sociological views raise various ethical issues. The paramount consideration is the issue of patient autonomy and informed consent as a patient has to be thoroughly informed about the objectives, advantages, and

possible dangers of multidisciplinary interventions and be willing to be involved in his or her treatment. Another issue is privacy and confidentiality, as medical, nutritional, and social information will be shared between several health care providers. The security of patient information and informed consent to share the data are needed to protect trust and compliance. Another essential problem is equity in integrated care access. The barriers can be caused by socioeconomic limitations, poor health literacy, or access. The ethical practice involves the car models should reduce differences and provide equal opportunities to all patients.

Cultural sensitivity and sensitiveness towards the family dynamics are significant in the application of lifestyle and nutritional intervention. In a bid to foster healthy practices, healthcare providers need to understand the cultural norms, family roles and social expectations to prevent paternalism and make them acceptable. Lastly, professional boundaries, patient empowerment, and resource allocation should be well handled. The interactions between healthcare professionals should be transparent and organized, patients are to be involved but not compelled to do it, the allocation of resources is to be fair to provide effective, sustainable, and equitable chronic disease management.

CONCLUSION

Conclusion. The paper marks the dire need in the integrated, interdisciplinary approach to the analysis of the chronic disease management and which would have involved family medicine, clinical nutrition and the sociological perspectives. The importance of chronic non-communicable diseases (NCDs) to the world is still high in terms of prevalence, morbidity and mortality and also in terms of the economic costs and social effects of the condition. The significance of conventional biomedical paradigms, which form an essential part of the diagnosis and pharmacological treatment is not enough to account the complexity, social and long-term groundedness of chronic illnesses. The findings reveal that they should also be managed using behavioral, nutritional, and social determinants of health besides the mainstream health care. The family medicine is considered to be the pillar of the integrated chronic care in which continuity, coordination, and patient/ family-oriented care are provided. The long-term contact with the patients and their contact with their families make family physicians offer the complex needs of the patients with chronic illnesses as they provide holistic care. Such continuity offers the capacity to be more compliant with treatment plans, detect complication at the earliest stage, and preventative steps. Moreover, family medicine is a hub of contact in the multidisciplinary teamwork where the patient is connected with clinical nutritionist, social services and community resources. Clinical nutrition can prevent or cure chronic diseases in two fold capacities. The results of the provided study demonstrate that the subsequent interventions such as culinary medicine classes, teaching kitchens and personal dieting counseling may be used to enhance patient engagement, self-efficacy, and compliance with healthy behavior. The medical intervention is not antagonistic to nutrition-based intervention, and it is a successful and scalable intervention to improve the disease control, complications, and healthcare expenditure. Sociological understanding is also very important since chronic diseases are very social experiences that do not only affect those who are sick but also their family members as well as the rest of the society. The health behavior, treatment or psychosocial well-being is highly influenced by the nature of the family, the culture and social support systems. By embracing a sociological perspective on chronic disease management, the medical system will be able to address social factors of health, enhance patient-centered approaches, and achieve more sustainable and fair outcomes. Overall, family medicine as a whole integrating clinical nutrition and sociology can provide a multidimensional approach to chronic disease complex biological, behavioral and social aspects. The practice goes beyond the limit of fragmented care in biomedicine, promoting patients, clinical performance, and improved quality of life in the long-term. The interdisciplinary approach can assist the healthcare systems respond better to the growing global achievement of chronic diseases, reduce health inequalities, and foster the sustainability of healthcare resources.

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