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(REVIEW ARTICLE)

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Literature review: Collaborative management of diabetes through integrated family medicine and dental care

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Abstract

Abstract Diabetes mellitus is a chronic condition that affects multiple organ systems, including the oral cavity. A growing body of evidence emphasizes the bidirectional relationship between diabetes and periodontal disease. Integrated care models involving family physicians and dental professionals have shown promise in improving patient outcomes. This literature review explores the collaborative management of diabetes through the integration of family medicine and dental care, analyzing key studies, outcomes, and proposed models of interdisciplinary care.

Keywords: management; Diabetes; Integrated; Family Medicine; Dental care

1. Introduction

Diabetes is a leading global health concern with significant implications for systemic and oral health. Family physicians often serve as the first point of contact for diabetes management, yet oral health complications are frequently under-recognized. Conversely, dental professionals may detect oral signs indicative of poorly controlled diabetes. The intersection of these disciplines presents a unique opportunity for integrated care models that enhance early detection, improve glycemic control, and reduce complications.

2. Literature Review

- The global burden of diabetes and its rising prevalence has been well-documented, with over 537 million adults affected worldwide [1].
- Periodontal disease has been identified as both a complication and a potential risk factor for poor glycemic control [2,3].
- Evidence supports the bidirectional relationship between diabetes and periodontitis, emphasizing the need for interprofessional collaboration [4,5].
- Family physicians typically manage diabetes through lifestyle interventions, pharmacotherapy, and regular monitoring, but often lack training in oral health screening [6].
- Dental professionals can play a crucial role in screening for diabetes by recognizing early signs such as gingival inflammation and oral infections [7,8].
- Studies show that periodontal therapy can result in a significant reduction in HbA1c levels, supporting the importance of integrated care [9,10].
- Integrated models, such as the Patient-Centered Medical Home (PCMH), have shown success in chronic disease management, including diabetes [11].

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- The inclusion of dental professionals in primary care teams has demonstrated improved outcomes in pilot programs [12,13].
- Barriers to integration include lack of communication between providers, insurance limitations, and professional silos [14].
- Successful models emphasize interprofessional education, shared electronic health records (EHRs), and patient-centered approaches [15,16].

3. Discussion

The integration of dental and medical care is particularly vital for patients with chronic conditions like diabetes. Oral health is often a neglected component of chronic disease management. Studies highlight that effective periodontal treatment contributes to improved glycemic control [9]. Family physicians, while central in managing diabetes, are rarely involved in oral health assessments, leading to missed opportunities for early detection [6].

The literature indicates that collaborative models can improve outcomes. For instance, shared EHR systems allow both dental and medical providers to access patient information, facilitating timely referrals and coordinated care [15]. Interprofessional education programs that train both family physicians and dentists in collaborative care models have shown to reduce silos and foster better communication [16].

Barriers remain, especially regarding reimbursement models that do not incentivize interdisciplinary work. Patients may also face logistical challenges in accessing both medical and dental care, particularly in low-resource settings [14]. However, the potential benefits—including reduced healthcare costs, improved glycemic control, and enhanced quality of life—warrant efforts to overcome these obstacles [13].

4. Results

4.1. The reviewed literature indicates

- A consistent link between periodontal disease and poor glycemic control [4,9].
- Positive outcomes in HbA1c reduction following periodontal treatment [10].
- Enhanced patient outcomes in integrated care models [12].
- Improved communication and care coordination in practices using shared EHRs [15].
- Professional education as a key driver in promoting collaborative practice [16].

5. Conclusion

The collaborative management of diabetes through integrated family medicine and dental care offers a promising approach to addressing the multifaceted needs of diabetic patients. While challenges persist, the benefits of improved glycemic control and overall patient health justify the implementation of interdisciplinary care models. Future healthcare systems should prioritize interprofessional collaboration, education, and policy changes to support integrated chronic disease management.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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