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Equity, Access, Resource Availability, and the Notion of Comprehensive Diabetes Care: A Narrative Review of the Current State of Affairs

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Abstract

Comprehensive diabetes care is the evidence-based standard for type 2 diabetes management, extending beyond glycaemic control to encompass cardiovascular and renal risk reduction, complication surveillance, diabetes self-management education and support, psychosocial care, culturally responsive communication, and coordinated multidisciplinary follow-up. Despite major advances in therapeutics and guideline development, delivery of comprehensive care remains inconsistent, fragmented, and inequitable. This narrative review examines the gap between guideline-recommended comprehensive diabetes care and real-world delivery, with attention to equity, access, and resource availability. Literature from the past two decades was reviewed from PubMed, Embase, Google Scholar, and professional society guidelines, and evidence indicates that many people with type 2 diabetes do not receive recommended care processes, including regular glycaemic monitoring, cardiovascular risk management, complication screening, diabetes self-management education and support, and indicated cardiorenal-protective pharmacotherapy. The gap is apparently socially patterned, as racial and ethnic minority populations, people with lower socioeconomic status, rural communities, people with limited insurance coverage, and populations in low- and middle-income countries were observed to be less likely to receive guideline-concordant care. Provider-level constraints, including time pressure, limited training, therapeutic inertia, and inadequate decision support, interact with system-level barriers such as fragmented care delivery, weak referral pathways, limited multidisciplinary team access, inadequate health information technology, and unaffordable medicines and monitoring tools, collectively reducing comprehensive diabetes care from a clinical standard to an aspiration. Closing this implementation gap requires equity-oriented health system redesign, affordable access to essential and innovative therapies, expanded diabetes education infrastructure, community-linked care models, population health management, and deliberate action on social and structural determinants of health.

Keywords: Type 2 Diabetes, Comprehensive Diabetes Care, Health Equity, Access to Care, Diabetes Self-Management Education and Support, Social Determinants of Health, Health Systems

Introduction

The management of type 2 diabetes has evolved considerably over the past two decades from glucose-centric to complication- and pathogenesis-centric, person-centred care that addresses the full spectrum of an individual's needs (Galindo *et al*, 2023; Ahmad *et al*, 2022; Liakos *et al*, 2023; Schwartz *et al*, 2024) [22, 5, 32, 42], with substantial advances in understanding the pathophysiology, development of new therapeutic agents, and the refinement of evidence-based care guidelines (Abel *et al*, 2024; Młynarska *et al*, 2025) [2, 34]. Current standards emphasize individualized glycaemic targets, cardiovascular risk reduction, renal protection, prevention and early detection of microvascular and macrovascular complications, diabetes self-management education and support (DSMES), psychosocial assessment, and coordinated care delivered by interprofessional teams (American Diabetes Association Professional Practice Committee, 2025; Powers *et al*., 2017 [38]).

This expanded model is often described as comprehensive diabetes care. In principle, comprehensive care is evidence-based, proactive, person-centered, multidisciplinary, and responsive to the medical, behavioural, psychosocial, and social needs of the person living with diabetes. However, the existence of high-quality clinical recommendations does not ensure their implementation in routine care. The central problem addressed in this review is that comprehensive diabetes care, as defined in guidelines, is frequently not the care that patients receive. The gap between recommendation and reality is well documented in treatment cascades, care process studies, medication utilization analyses, DSMES access research, and qualitative evaluations of provider and health system constraints (Canedo *et al*., 2018; Chehal *et al*., 2022; Flood *et al*., 2021; Hill-Briggs *et al*., 2020; Rushforth *et al*., 2016; Stafford *et al*., 2025; Tharakan *et al*., 2024) [11, 13, 21, 26, 41, 45, 49].

The problem is not simply one of imperfect clinical adherence. It is a structural and equity problem. The quality and comprehensiveness of diabetes care are patterned by race, ethnicity, socioeconomic status, insurance coverage, geography, health literacy, language, disability, and national health system capacity (Canedo *et al*., 2018; Hill-Briggs *et al*., 2020; Tapager *et al*., 2021; Tan *et al*., 2020; Whyte *et al*., 2019) [11, 26, 47, 48, 52]. In low- and middle-income countries (LMICs), fewer than one in ten adults with diabetes have been estimated to receive coverage for guideline-based comprehensive diabetes treatment, reflecting profound constraints in health system capacity, affordability, and continuity of care (Flood *et al*., 2021) [21]. Even in high-income settings, newer cardiorenal-protective therapies, diabetes technologies, and structured education are less accessible to the populations most likely to experience diabetes-related morbidity (Eberly *et al*., 2021; Patel *et al*., 2024; Rodriguez *et al*., 2024; Wang *et al*., 2024) [17, 36, 40, 50].

This narrative review examines the current state of comprehensive type 2 diabetes care delivery and the factors that shape the gap between guideline-recommended care and the actual care received by persons living with diabetes. It focuses on and addresses four questions. First, what constitutes comprehensive diabetes care according to contemporary recommendations? Second, what is the current state of diabetes care delivery relative to these recommendations? Third, how do equity, access, and resource availability shape the implementation gap? Fourth, what health system and policy responses are required to move comprehensive diabetes care from aspiration to routine practice?

Methods

This study is a narrative review of available evidence on recommended diabetes versus the actual care delivered to persons living with diabetes. Literature was identified and retrieved through searches of PubMed, Embase, Google Scholar, and professional society and public health websites. Search terms included type 2 diabetes, comprehensive diabetes care, diabetes care cascade, diabetes treatment coverage, health equity, racial and ethnic disparities, socioeconomic disparities, rural access, DSMES, diabetes technology, GLP-1 receptor agonists, SGLT2 inhibitors, medication affordability, social determinants of health, fragmented care, and chronic care models. Priority was given to peer-reviewed articles, including systematic reviews, consensus statements, professional guidelines, and authoritative public health reports published within the past two decades, with emphasis on recent evidence where available.

The Ideal: Recommended Components of Comprehensive Diabetes Care

Comprehensive diabetes care is best understood as a multidimensional model of chronic disease management. It integrates biomedical risk management with education, behavioural support, psychosocial care, complication surveillance, and coordination across providers and settings (Davis *et al*, 2022; Kolb, 2021) [15, 30]. The American Diabetes Association (ADA) Standards of Care recommends timely, evidence-based, collaborative treatment decisions that incorporate social determinants of health, individual preferences, comorbidities, prognosis, treatment burden, and financial considerations (American Diabetes Association Professional Practice Committee, 2025). It also emphasizes person-centered team care, patient registries, clinical decision support, proactive care planning, community involvement, quality improvement, and interprofessional collaboration (American Diabetes Association Professional Practice Committee, 2025).

Individualized Medical and Cardiometabolic Management

The clinical foundation of comprehensive care remains individualized medical management. Glycaemic targets should be personalized according to age, life expectancy, comorbidity burden, hypoglycaemia risk, functional status, patient preference, and treatment burden. For many non-pregnant adults, an HbA1c target below 7% remains appropriate, although less stringent or more stringent goals may be justified according to clinical context (American Diabetes Association Professional Practice Committee, 2025). Glycaemic management is now explicitly linked to broader cardiometabolic and renal risk management. Blood pressure control, lipid management, smoking cessation, weight management, and kidney protection are central components of care because cardiovascular disease and chronic kidney disease are major drivers of morbidity, mortality, and health system costs in type 2 diabetes (Ahmad *et al*., 2022; Galindo *et al*., 2023) [5, 22].

The therapeutic landscape has also changed. SGLT2 inhibitors and GLP-1 receptor agonists have demonstrated cardiovascular and renal benefits in appropriate populations and are recommended for patients with established or high-risk atherosclerotic cardiovascular disease, heart failure, chronic kidney disease, or obesity-related indications, independent of their glucose-lowering effects in selected clinical circumstances (American Diabetes Association Professional Practice Committee, 2025; Galindo *et al*., 2023 [22]; Liakos *et al*., 2023 [32]). Thus, comprehensive care requires not only the presence of these therapies in guidelines but equitable capacity to prescribe, finance, monitor, and sustain their use.

Preventive Care and Complication Surveillance

People with diabetes require regular assessment for retinopathy, nephropathy, neuropathy, peripheral arterial disease, cardiovascular risk factors, immunization status, oral health, and foot complications (Elsayed *et al*, 2024) [19]. Retinal screening, urine albumin and estimated glomerular filtration rate assessment, comprehensive foot examination, lipid assessment, and blood pressure monitoring are essential mechanisms for early detection and prevention of irreversible complications (American Diabetes Association Professional Practice Committee, 2025). In this respect, comprehensive care is anticipatory rather than reactive. Its quality is partly measured by whether the system identifies risk before complications become disabling.

Diabetes Self-Management Education and Support

Diabetes Self-Management Education and Support (DSMES) is an indispensable component of comprehensive care. The consensus report by Powers *et al.* (2017) [38] recommends DSMES at diagnosis, annually or when treatment targets are not met, when complicating factors develop, and when transitions in life or care occur. DSMES supports knowledge, skill acquisition, confidence, medication adherence, nutrition planning, physical activity, glucose monitoring, problem solving, risk reduction, and healthy coping. It is associated with improved glycaemic outcomes, better self-management behaviours, reduced health care utilization, and improved quality of life (Powers *et al*., 2017; Tharakan *et al*., 2024) [38, 49].

The scientific significance of DSMES lies in its recognition that diabetes outcomes are not produced by medication prescriptions alone. Daily self-management occurs outside the clinic and depends on health literacy, access to food, financial stability, family support, cultural context, mental health, and continuity of education. Therefore, comprehensive care cannot be achieved if DSMES is absent, inaccessible, unaffordable, linguistically inappropriate, or poorly integrated into clinical workflows (Davis *et al*, 2022; Tharakan *et al*, 2024) [15, 49].

Psychosocial Assessment and Behavioural Health Integration

The psychosocial dimension of diabetes care has gained increasing recognition. Diabetes distress, depression, anxiety, disordered eating, stigma, treatment burden, and fear of hypoglycaemia can compromise self-management and clinical outcomes. Person-centered care requires routine attention to these issues, referral pathways for behavioural health support, and communication that reduces blame and therapeutic nihilism (Latoo *et al*, 2026 [31]; Speight *et al*, 2024 [44]; American Diabetes Association Professional Practice Committee, 2025; Hill-Briggs *et al*., 2020 [26]). This is especially important for patients facing poverty, racism, food insecurity, housing instability, or low social support, because these conditions intensify the psychological burden of chronic disease management.

Coordinated, Team-Based, and Population-Oriented Care

Finally, comprehensive diabetes care requires coordination. The Chronic Care Model and the Patient-Centered Medical Home provide useful frameworks because they emphasize planned visits, productive interactions between informed patients and prepared care teams, clinical information systems, decision support, delivery system redesign, self-management support, and community linkages (Bojadzievski & Gabbay, 2011; Stellefson *et al*., 2013) [10, 46]. These models are particularly relevant for diabetes because the condition often coexists with hypertension, dyslipidaemia, chronic kidney disease, cardiovascular disease, obesity, depression, and social complexity. Fragmented care, short visits, weak communication between specialists and primary care, and poor handover processes undermine the possibility of comprehensive care even when individual clinicians are competent and motivated (Johnston, Cassimatis, & Hattingh, 2024; Doty *et al*, 2019) [27, 16].

The Reality: Suboptimal Delivery of Recommended Diabetes Care

Despite clear standards, diabetes care delivery remains suboptimal. The ADA 2025 Standards summarized U.S. population-level data showed that in 2015 to 2018, only 22.2% of adults with diabetes achieved combined A1C, blood pressure, and lipid targets (American Diabetes Association Professional Practice Committee, 2025). Global data similarly suggest substantial attrition across the diabetes care cascade, including diagnosis, treatment, and control (Shahrestanaki *et al*., 2024; Stafford *et al*., 2025) [43, 45]. These findings indicate that the gap is not a marginal quality issue. It is a persistent implementation deficit across multiple care domains.

Recommended Care Processes are not Consistently Delivered

Diabetes care-related process studies demonstrate that basic recommended services are inconsistently delivered. In an analysis of U.S. National Health Interview Survey data, Canedo *et al.* (2018) [11] found racial and ethnic disparities in the receipt of diabetes quality-of-care indicators, including HbA1c testing, foot examination, and influenza vaccination, even after adjustment for socioeconomic status and health care access. Similar evidence from England showed disparities in glycaemic control, monitoring, and treatment among people with type 2 diabetes, indicating that inequities persist even in health systems with broader coverage structures (Whyte *et al*., 2019) [52].

Implementation gaps are especially concerning because many recommended processes are inexpensive relative to the cost of advanced complications. Failure to perform routine foot examination can delay identification of neuropathy, vascular insufficiency, ulceration, or infection. Failure to screen for retinopathy and kidney disease can allow progression to blindness or end-stage renal disease. Failure to intensify cardiometabolic therapy in clinically indicated situations can leave patients exposed to preventable cardiovascular and renal events (Fermawi *et al*, 2023; Ketema *et al*, 2025) [20, 29].

Access to Diabetes Self-management Education and Support Remains Inadequate

Diabetes self-management education and support (DSMES) illustrates a striking contradiction between evidence and delivery. Although DSMES is strongly recommended, uptake remains low. Tharakan *et al.* (2024) [49] reported that DSMES is effective but underutilized, identifying barriers at patient, provider, and system levels. In their academic medical center case study, referral to DSMES was only 10%, and completion among referred patients was 37% (Tharakan *et al*., 2024) [49]. They also noted that nationally, only 5% to 7% of patients referred through Medicare or private insurance receive DSMES (Tharakan *et al*., 2024) [49]. The Centers for Disease Control and Prevention (CDC) has further highlighted rural access problems, reporting that many rural counties lack DSMES programs (Centers for Disease Control and Prevention, 2024) [12].

This gap has clinical and equity implications. Patients who do not receive structured education are less likely to have the knowledge, confidence, and practical support needed for sustained self-management. DSMES underuse is not only a patient-level utilization problem as it reflects weak referral systems, limited workforce capacity, reimbursement barriers, lack of awareness among clinicians and patients, scheduling friction, transportation barriers, language barriers, and insufficient culturally tailored programs (Blanchette *et al*., 2022; Tharakan *et al*., 2024) [9, 49].

Contemporary Therapies are Inequitably Utilized

The underuse of SGLT2 inhibitors and GLP-1 receptor agonists among clinically eligible patients demonstrates how innovation can widen inequity if access is uneven. Eberly *et al*. (2021) [17] found that GLP-1 receptor agonist use among commercially insured U.S. patients with type 2 diabetes increased between 2015 and 2019 but remained low overall and was lower among Asian, Black, and Hispanic patients and among those in lower-income areas. Elhussein *et al*. (2021) [18] similarly documented racial, ethnic, and socioeconomic disparities in the use of newer diabetes medications in the Look AHEAD cohort. More recent evidence from six U.S. care delivery systems showed lower dispensing of SGLT2 inhibitors among American Indian or Alaska Native, Black, and Hispanic patients compared with White patients, and lower GLP-1 receptor agonist dispensing across several minoritized groups (Rodriguez *et al*., 2024) [40]. Among older Medicare beneficiaries with type 2 diabetes and cardiorenal conditions, Wang *et al*. (2024) [50] reported lower uptake of these therapies among Black and Hispanic beneficiaries compared with White beneficiaries.

These patterns matter because these medications are not merely optional glucose-lowering agents. For selected patients, they are disease-modifying therapies with cardiovascular and renal benefits. Inequitable uptake therefore risks reinforcing disparities in the incidence of complications or comorbidities like heart failure, chronic kidney disease, cardiovascular events, and mortality (Moore *et al*, 2025; Neuen *et al*, 2024) [33, 35].

Care Fragmentation Limits Comprehensiveness

Comprehensive care depends on integration, but many health systems remain fragmented. Chehal *et al*. (2022) [13] described diabetes care in the United States as shaped by fragmented policy and delivery arrangements, while qualitative work has shown that primary care clinicians often face poor information transfer from specialists, limited time, competing acute demands, and insufficient infrastructure for proactive chronic disease management (Rushforth *et al*., 2016) [41]. Fragmentation is particularly harmful in diabetes because patients may require coordinated input from primary care, endocrinology, cardiology, nephrology, ophthalmology, podiatry, pharmacy, dietetics, behavioural health, and community support services.

When coordination fails, patients become the de facto integrators of a complex system. This expectation is inequitable. Patients with higher health literacy, financial resources, digital access, transportation, and social support are more able to navigate fragmented systems. Patients with fewer resources are more likely to experience delayed referrals, missed screenings, conflicting advice, medication discontinuity, and avoidable complications. (Ghannam *et al*, 2025; Wei *et al*, 2026) [23, 51].

Equity, Access, and Resource Availability as Determinants of the Existing Gap

The gap between recommended and actual care is socially patterned rather than randomly distributed. Equity is therefore not an accessory theme in diabetes care. Rather, it is considered central to determining whether comprehensive care is realistically available.

Racial and Ethnic Disparities

Racial and ethnic disparities in diabetes care quality have been documented across multiple settings. Canedo *et al*. (2018) [11] reported that Black, Hispanic, and Asian adults with diabetes were less likely than White adults to receive selected quality-of-care processes after adjustment for insurance, poverty, and education. Hill-Briggs *et al*. (2020) [26] emphasized that racial and ethnic minority and low-income populations experience disproportionate diabetes risk, complications, and mortality, with social determinants functioning as key intervention targets. Technology disparities have also been reported, with systematic reviews identifying inequities in continuous glucose monitoring and insulin pump utilization by race, ethnicity, and insurance status (Patel *et al*., 2024) [36].

These disparities cannot be adequately explained by individual behaviour. They reflect structural racism, unequal access to high-quality clinical environments, implicit bias, differential treatment intensification, language barriers, culturally discordant care, geographic segregation, and uneven insurance and resource distribution. A comprehensive care model that does not explicitly address these drivers may improve average outcomes while leaving inequities intact (Agarwal *et al*, 2023; Golden *et al*, 2021; Hassan *et al*, 2023) [4, 24, 25].

Socioeconomic Barriers and Medication Affordability

Socioeconomic status strongly shapes access to comprehensive diabetes care. People with lower income or educational attainment often face underinsurance, inability to afford medications and supplies, food insecurity, unstable housing, limited transportation, inflexible employment, and reduced access to safe environments for physical activity (Hill-Briggs *et al*., 2020; Woodward *et al*., 2024) [26, 53]. These conditions directly affect adherence, follow-up, nutrition, glucose monitoring, and complication prevention.

Medication affordability is a particularly important access barrier. Essential diabetes medicines, insulin, glucose monitoring supplies, and newer cardiorenal-protective therapies may be unaffordable or inconsistently available, especially for underinsured patients and populations in resource-limited settings. International evidence from the Prospective Urban Rural Epidemiology study found major variation in the availability and affordability of diabetes medicines across income settings (Chow *et al*., 2018) [14]. In LMICs, high out-of-pocket expenditure and weak supply chains can make even basic diabetes care difficult to sustain (Beran, 2015; Flood *et al*., 2021; Karachaliou *et al*., 2020) [8, 21, 28].

Geographic and Rural Disparities

Geography is another determinant of comprehensive care. Rural communities may have fewer primary care clinicians, endocrinologists, diabetes educators, dietitians, podiatrists, ophthalmologists, and behavioural health specialists. The CDC has emphasized that rural areas face specific DSMES access challenges, including geographic distance, limited program availability, transportation difficulties, and workforce constraints (Centers for Disease Control and Prevention, 2024) [12]. Telehealth can reduce some geographic barriers, but it can also introduce new inequities when patients lack broadband access, digital devices, private space, language-concordant platforms, or digital literacy (Agarwal *et al*., 2022) [3].

Geographic inequity is even more pronounced internationally. Flood *et al*. (2021) [21] found very low coverage of comprehensive diabetes treatment in 55 low-and-middle-income-countries (LMICs). Karachaliou *et al*. (2020) [28] noted that diabetes prevention and care models in low-income settings are constrained by health workforce limitations, financing gaps, poor continuity, and inadequate infrastructure. These findings demonstrate that comprehensive diabetes care is not only a clinical challenge but also a health system capacity challenge.

Resource Constraints in Clinical Practice

Providers cannot deliver comprehensive care without adequate resources. They require time, clinical decision support, referral pathways, care coordinators, pharmacists, diabetes educators, dietitians, social workers, behavioural health clinicians, electronic health records, registries, and quality improvement infrastructure. In many primary care settings, especially safety-net clinics and under-resourced practices, these supports are limited or absent. Qualitative evidence shows that clinicians experience time pressure, competing demands, gaps in training, limited confidence with complex regimens, and insufficient support for patient education and care coordination (Pati *et al*., 2021; Rushforth *et al*., 2016) [37, 41]. Scoping evidence from West Africa similarly identifies barriers to primary care diabetes management that include workforce shortages, limited equipment, inconsistent medicine availability, poor referral systems, and financing constraints (Abdul-Samed *et al*., 2025) [1].

Resource availability therefore determines whether guidelines are operationally feasible. A recommendation to provide DSMES, screen for complications, intensify therapy, address psychosocial distress, and coordinate multidisciplinary care is only meaningful if systems supply the workforce, financing, technology, and workflow capacity required to do so.

Consequences of the Implementation Gap

The consequences of the gap between recommended and actual diabetes care are clinical, economic, and ethical. Clinically, missed monitoring and delayed complication screening increase the risk of retinopathy, neuropathy, foot ulceration, amputation, chronic kidney disease progression, cardiovascular events, and premature mortality. Inadequate DSMES reduces patients' ability to manage nutrition, medication, monitoring, hypoglycaemia, sick-day rules, and problem solving. Inequitable access to SGLT2 inhibitors and GLP-1 receptor agonists may deny high-risk patients' therapies with potential cardiovascular and renal benefit.

Economically, fragmented and reactive care shifts costs downstream. Avoidable hospitalizations, emergency visits, dialysis, amputations, visual disability, and cardiovascular events are far more costly than preventive, coordinated, education-supported care. DSMES and proactive chronic care infrastructure should therefore be understood not only as quality interventions but as value-based investments (Powers *et al*., 2017; Tharakan *et al*., 2024) [38, 49].

Ethically, the current state of care raises concerns about justice. Health equity requires that avoidable and remediable differences in health and health care be reduced, especially when they arise from social, economic, environmental, or structural disadvantage (Hill-Briggs *et al*., 2020) [26]. If comprehensive diabetes care is most accessible to those who already have greater resources and least accessible to those with the highest burden of disease, the health system reproduces rather than corrects injustice.

Moving Comprehensive Diabetes Care from Aspiration to Reality

Closing the comprehensive diabetes care gap requires interventions at policy, health system, practice, community, and research levels. Guideline dissemination alone is insufficient. The problem is not lack of knowledge alone but weak implementation capacity, inequitable financing, insufficient workforce, fragmented delivery, and social barriers that make self-management unrealistic for many patients.

At the policy level, universal or near-universal access to affordable health care is foundational. Insurance coverage should include essential medicines, insulin, glucose monitoring supplies, complication screening, DSMES, nutrition therapy, behavioural health, and clinically indicated contemporary therapies. Policies that reduce out-of-pocket costs for insulin, SGLT2 inhibitors, GLP-1 receptor agonists, monitoring tools, and diabetes technologies are necessary to prevent innovation from becoming an equity hazard. In LMICs, strengthening primary care, improving procurement and supply chains, financing essential medicines, and integrating diabetes into universal health coverage are central priorities (Beran, 2015; Chow *et al*., 2018; Flood *et al*., 2021; Karachaliou *et al*., 2020) [8, 14, 21, 28].

At the health system level, organizations should implement structured chronic care models. This includes team-based care, patient registries, risk stratification, outreach for missed care processes, clinical decision support, pharmacist-supported medication optimization, integrated DSMES referral pathways, quality dashboards stratified by race and ethnicity, language, insurance status, and geography, and deliberate tracking of disparities (American Diabetes Association Professional Practice Committee, 2025; Bojadzievski & Gabbay, 2011 [10]; Stellefson *et al*., 2013 [46]). Quality improvement should not report only aggregate performance. It should measure whether improvements are equitably distributed.

At the practice level, workflows must make the right care easier to deliver. Referral to DSMES should be embedded into electronic health records, automated at key clinical moments, and supported by scheduling systems that reduce patient burden. Primary care teams should include or have reliable access to diabetes educators, dietitians, pharmacists, behavioural health clinicians, social workers, and community health workers. Clinical encounters should include structured assessment of medication affordability, food insecurity, transportation, housing instability, health literacy, language needs, and digital access, with clear pathways for response.

At the community level, partnerships with community health workers, faith-based organizations, schools, workplaces, food assistance programs, local pharmacies, and public health agencies can extend the reach of diabetes care beyond the clinic. Community-linked models are particularly important because many barriers to self-management occur in homes, neighbourhoods, workplaces, and food environments rather than in consultation rooms (Rodriguez & Aikens, 2023; Hill-Briggs *et al*., 2020) [39, 26].

At the research level, future studies should move beyond describing disparities to testing scalable equity interventions. Research should examine which combinations of policy, financing, workforce, digital, and community interventions reduce disparities in care processes, medication uptake, DSMES participation, complication rates, and patient-reported outcomes. Intersectional analyses are needed because disadvantage is often cumulative. A rural low-income patient from a minoritized racial or ethnic group may face overlapping barriers that are not captured when race, income, and geography are examined separately.

Recommendations

The evidence supports five practical recommendations. First, comprehensive diabetes care should be operationally defined as a measurable package that includes glycaemic management, cardiovascular and renal risk reduction, complication surveillance, DSMES, psychosocial care, medication access, and coordinated follow-up. Second, health systems should stratify diabetes quality metrics by race, ethnicity, language, income proxy, insurance, geography, and disability status to identify inequities that aggregate reporting conceals. Third, DSMES should be implemented as a core aspect of diabetes care, with reimbursement, staffing, telehealth capacity, and culturally responsive programming aligned accordingly. Fourth, access to contemporary cardiorenal-protective therapies and diabetes technologies should be monitored for inequity, because unequal diffusion of innovation can widen outcome gaps. Fifth, diabetes care reform should include social care integration, including screening and referral pathways for access to appropriate food, medication affordability, transportation, decent housing/shelter, and health literacy.

Conclusion

Comprehensive diabetes care is an evidence-based and ethically compelling model for improving outcomes in type 2 diabetes. However, current evidence shows that it remains incompletely implemented and inequitably distributed. Many patients do not receive recommended care processes, structured education, coordinated follow-up, or indicated contemporary therapies. These gaps are shaped by social determinants, structural inequities, geographic maldistribution of services, unaffordable medicines, inadequate workforce capacity, fragmented care systems, and insufficient support for self-management.

The central implication is that comprehensive diabetes care cannot be achieved by clinical guidelines alone. It requires health systems designed to deliver those guidelines equitably, reliably, and affordably. Moving from aspiration to reality will require policy commitment, resource investment, multidisciplinary care infrastructure, community partnership, and a deliberate shift from average quality improvement to equity-centered implementation. Until these conditions are met, comprehensive diabetes care will remain more available to those with resources who happen to be the minority, and less available to the majority of those burdened with the disease.

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