

RISK STRATIFICATION IN DIABETES MELLITUS: AN INTEGRATIVE REVIEW

Mageany Barbosa dos Rêis¹, Suyanne Freire de Macêdo²

Mailson Fontes de Carvalho³, Raniel Bezerra da Costa⁴

Edina Araújo Rodrigues Oliveira⁵

Highlights: (1) Simple tools are efficient predictors of DM2 complications. (2) Risk stratification improves longitudinal DM2 care. (3) Integration between levels improves management and prevention of DM2.

PRE-PROOF

(as accepted)

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¹ Universidade Federal do Piauí. Picos/PI, Brasil. <https://orcid.org/0000-0003-3632-9820>

² Universidade Federal do Piauí. Picos/PI, Brasil. <https://orcid.org/0000-0002-1450-8628>

³ Universidade Federal do Piauí. Picos/PI, Brasil. <https://orcid.org/0000-0003-0110-7136>

⁴ Universidade Federal do Piauí. Picos/PI, Brasil. <https://orcid.org/0009-0000-6415-8948>

⁵ Universidade Federal do Piauí. Picos/PI, Brasil. <https://orcid.org/0000-0002-6352-4202>

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ABSTRACT

Objective: To summarize the methods, instruments, and measurements used for risk stratification in adults with type 2 diabetes mellitus (DM2), highlighting its applicability in different levels of health care. **Method:** integrative review of literature conducted in eight national and international databases, including studies published from 2016 to 2025. After the application of thorough eligibility and analysis criteria, 52 studies formed the final sample. **Results:** The findings were organized in four main categories: composed indices for risk stratification; scales and multidimensional scores; anthropometric and routine lab indicators; and advanced diagnostic methods. Evidence has shown that simple, accessible, low cost tools, such as anthropometric measures, glycated hemoglobin, and clinical scores have a significant predictive capability for DM2 complications, especially for Primary Health Care. More complex methods were relevant for confirming the diagnosis and refining the stratification into secondary and tertiary levels. **Conclusion:** The rational integration of simple instruments and specialized technologies can help provide an earlier care that is more efficient and longitudinal to those with DM2, improving the organization of care and preventing further complications. **Keywords:** Diabetes mellitus; risk factors; primary health care.

Introduction

Diabetes mellitus type 2 (DM2) is a multifactorial condition that is characterized, from a pathophysiological standpoint, by endogenous insulin resistance and the progressive disorder of pancreatic β -cells. Factors that are widely consolidated in the clinical history of the disease include inappropriate diets, sedentary lifestyle, smoking, and previous comorbidities, such as metabolic syndrome and obesity, which have a central role in the emergence and progression of the issue¹.

Data from the International Diabetes Federation (IDF)², 2025 edition, state that more than 90% of all cases of diabetes in the world are of DM2. Estimates suggest that 589 million adults, from 20 to 79 years old, live with this disease - a prevalence of 1 for every 9 individuals. From 2021 to 2025, the number of new cases increased in 52 million, showing a significant upward trend. Nearly 635 million adults have some degree of glucose intolerance and associated risk factors that can lead to the advancement of the clinical course. Another important element to highlight is the late diagnosis or lack of awareness about it. Nearly 43% of adults with DM2

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do not know they have the condition, which shows gaps in the process of surveillance, tracking, and health prevention. Brazil is the 6th country with the highest number of cases of the disease, with 16.6 million adults - a 6% increase in the last survey. Also, the country shows an enormous number of people with no diabetes or pre-diabetes diagnosis, which compromises appropriate management policies.

It is essential to understand global inequality in the struggle against diabetes mellitus. Estimates suggest that 81% of people with diabetes live in low-to-medium income countries, contexts in which there are limits to the access to health services, structural shortcomings, and poor socioeconomic conditions that worsen vulnerabilities and make appropriate disease management harder. In this setting, social determinants, health inequality, and phenomena such as food deserts and swamps have a direct influence on the occurrence, control, and progression of diabetes, leading to populations with different levels of risk and needs for care³.

Considering this complexity, risk stratification becomes strategic to organize care and prevent complications related to diabetes mellitus. Nonetheless, many of the tools available are mostly preventive, used to identify the risk for diabetes, while others are focused on specific outcomes, especially related to cardiovascular issues, with no broader consideration of how to follow up those who are living with the condition⁴. This can limit the standardization of clinical evaluation and the early identification of health issues, especially in primary health care, since workers in the field often must follow up patients according to heterogeneous clinical reports and practical experiences⁵.

Although recent studies sought to integrate and validate simple tools for risk stratification in the management of diabetes mellitus, knowledge about these strategies is still too dispersed in literature. In the practice of health services, especially in contexts with too high a demand for health care and work overload, the search, analysis, and application of the evidence becomes challenging. This context reiterates the need for accessible, objective instruments that are applicable within a clinical routine and can support timely and improved decisions during the follow-up of those with diabetes mellitus⁶.

Therefore, this integrative review seeks to summarize the methods, instruments, and measures used in the risk stratification of adults with diabetes mellitus, gathering all evidence that may support clinical decision-making and the organization of care in different levels of

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health care, but especially in primary care, in order to improve longitudinal monitoring and the prevention of complications.

Methods

Design, period, and place of study

This is an integrative literature review, whose goal is to summarize, broadly and systematically, previous knowledge about a certain topic in a concrete methodological trajectory, gathering evidence from studies with different designs in order to provide a deep understanding about a phenomenon of interest⁷. This study was developed according to the methodological assumptions of Souza, Silva, and Carvalho⁸, who divide the analytical trajectory of integrative reviews into six interconnected stages: elaboration of the guiding question, search and sampling in literature, data collection, critical analysis of the studies included, and results discussion.

The guiding question was created according to the mnemonic device PCC (Population, Concept, and Context). The population was people with diabetes mellitus type 2; the concept was the methods and tools used for risk stratification; and the context was health care. Thus, the following research question was determined: Which methods and tools are used for risk stratification in people with diabetes mellitus type 2?

For the bibliographic survey, the following databases were consulted in December 2025: PubMed, Latin American and Caribbean Health Sciences Literature, (Lilacs), through the Virtual Health Library (VHL), Web of Science, CINAHL, SCOPUS, ScienceDirect, EMBASE, and the Cochrane Library. The descriptors selected in the databases Health Science Descriptors (DeCS) and Medical Subject Headings (MeSH) were "adult", "risk stratification", and "diabetes mellitus type 2". They were combined using the Boolean operators AND and OR. This strategy to find studies, characterized as expansive, does not compromise the results of the review. To ensure that the strategy is effective, we adapted the terms to the main language in the databases, English in most cases. The terms were also controlled using MESH. The multicentric and multilingual approach of this process stands out for the recovery of studies that are relevant to this research. The syntax of the descriptors is described in Table 1.

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Table 1 - Search syntax of articles in the databases, Picos, Piauí, Brazil, 2025.

Sources	Syntax
Pubmed	Adult AND Stratification risk AND Diabetes
Web of Science	mellitus type 2
CINAHL	
SCOPUS	
EMBASE	
COCHRANE LIBRARY	Adulto AND Estratificação de risco AND
	Diabetes mellitus tipo 2
	(Adult) AND (Stratification risk) AND
Lilacs	(‘Diabetes mellitus type 2’ OR ‘Diabetes
	type 2’)
Science Direct	

Source: Elaborated by the authors.

The study included articles whose text was available in full and were published in Portuguese, English, and Spanish, as long as they answered the guiding question and presented risk stratification criteria that were appropriate, improved, or alternative to those that already existed. After a search for studies made in the last 5 years found too few in accordance with the criteria, the period was expanded to 10 years.

We excluded articles that did not have available links or complete data, editorials, preprints, studies about type 1 diabetes that did not use risk stratification criteria applicable to DM2, and studies that treated a different theme, in addition to narrative, systematic, integrative, or scoping reviews, since the scope of the present review included only primary studies. We also excluded studies whose main goal was creating or optimizing predictive or technological models based on machine learning or artificial intelligence. These approaches, despite significant, do not result from validated risk stratification clinical instruments in most cases, and are not easy to apply to actual care practice, since they produce mathematical models that depend on specific databases or use data from other sources to feed into their probabilistic

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functionality. Therefore, we do highlight the relevance of these technologies in the management of diabetes mellitus type 2 and other complications, but it must be noted that these tools extrapolated the limits of this review.

Selection was conducted in two stages, with the aid of the Rayyan.Ai management tool, which, in addition to helping with duplicate exclusion, supported the identification, triage, and complete analysis of the data, in addition. First, titles and abstracts were read carefully. Those that were not in accordance with the topic were excluded. Then, pre-selected articles were read in full, leading to their inclusion or definitive exclusion according to established criteria.

Regarding data extraction, it was conducted according to an adapted form of the data collection instrument for integrative reviews made available by Souza, Silva, and Carvalho⁸, which includes the following pieces of information: title, author, publication data, objective, population, sample, methodological design, and outcomes. This process was conducted independently by two researchers. A consensus meeting was conducted to ensure that the data found was reliable.

The methodological quality of the studies included was evaluated using the Mixed Methods Appraisal Tool (MMAT), version 2018⁹, an instrument developed for the critical evaluation of empirical studies in reviews that cover different methodological designs. The MMAT supports the appraisal of five categories of study design: qualitative research, randomized clinical trials, non-randomized studies, quantitative descriptive studies, and mixed methods studies. To do so, it considers specific criteria for each of these categories, including the description of the types of study that fit into each.

For this research, considering the predominance of non-randomized, quantitative, and descriptive studies, we applied the criteria corresponding to categories 3 (non-randomized quantitative studies) and 4 (quantitative descriptive studies) of the MMAT, according to the design of each study. The criteria for category 3 included: (3.1.) Are the participants representative of the target population? (3.2.) Are measurements appropriate regarding both the outcome and intervention (or exposure)? (3.3.) Are there complete outcome data? (3.4.) Are the confounders accounted for in the design and analysis? (3.5.) During the study period, is the intervention administered (or exposure occurred) as intended? For category 4: (4.1.) Is the sampling strategy relevant to address the research question? (4.2.) Is the sample representative of the target population? (4.3.) Are the measurements appropriate? (4.4.) Is the risk of

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nonresponse bias low? (4.5.) Is the statistical analysis appropriate to answer the research question?

The evaluation was conducted independently by two reviewers, with any disagreements solved via consensus in a joint meeting. For each criterion, the answer "Yes", "No", or "Can't tell" was given, according to the recommendations of the authors of the instrument. No aggregate numerical score was attributed to the studies, seeing as the developers of the MMAT discourage this practice, suggesting instead a detailed presentation of the classification of each criteria. Thus, the quality of the studies was appraised according to their general methodological quality and classified as high, moderate-high, and moderate, according to its consistency and the number of criteria it was in line with. The classification was conducted via deep reading and joint deliberation in case of disagreement.

The results of the methodological quality appraisal were systematized in a table (Table 1), which summarizes whether or not each MMAT criterion was respected and what was the general classification of each study was, as recommended by literature, to ensure transparency and the reproducibility of the process.

Data analysis was conducted depending on the approach, which could be thematic and narrative, or deductive. At first, the results of each of the 52 articles in the review were read carefully, so the reviewers could get acquainted with the data and identify recurring patterns. Then, the findings were coded and analyzed from a broad perspective, in order to condense and identify categories, subcategories, and central concepts relative to different types of risk stratification employed in the studies. This analytical trajectory allowed identifying four main categories that summarize the different types of risk stratification tools described by literature: (1) composite indices for risk stratification; (2) multidimensional scales and scores; (3) routine anthropometric and lab indicators; and (4) advanced diagnostic methods. The findings were organized and discussed as a whole.

Results

The initial search found 2,483 records in the databases PUBMED (n=684), LILACS (n=4), Web of Science (n=237), CINAHL (n=241), SCOPUS (1,284), Science Direct (n=28), EMBASE (n=4), and the Cochrane library (n=1). After removing duplicates (n=852), 1,631 records were selected for triage. In this stage, 1,216 documents were excluded, as they did not

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discuss DM2 (n=712) or risk stratification (n=311), were proposed technologies (n=82), discussed pre-diabetes (n=74), were literature reviews (n=26), new treatments for diabetes (n=5), editorials (n=2), were in a language not included in this study (n=1), or were incomplete (n=1). Thus, 415 were left for a complete analysis. From these, 52 articles composed the final sample of this paper, while the others were discarded due to the following inconsistencies: did not discuss DM2 (n=33), did not discuss risk stratification (n=255), discussed only pre-diabetes (n=19), were proposed technologies (n=17), required payment (n=29), the link to the text was unavailable (n=3), or indicated new treatments (n=5). This search mechanism is detailed in Figure 1.

As for the chronological profile, the works in the sample were developed in different periods, namely 2016 (01), 2018 (03), 2019 (02), 2020 (02), 2021 (03), 2022 (06), 2023 (01), 2024 (09), and 2025 (25).

Regarding methodological designs, retrospective cohort studies (14) were the most common, among a group that also included cross-sectional base procedures (13), prospective cohorts (8), cross-sectional and retrospective studies (4), retrospective case-controls (3), retrospective studies (3), one ambispective cohort study, one multimetric cohort, one performance analysis, one observational, cross-sectional, and multimetric study, and one cross-sectional, analytical, observational study.

The classification of the scientific evidence level of the studies was conducted according to the hierarchy proposed by the Oxford Centre for Evidence-Based Medicine, adapted for integrative reviews, as described by Dantas *et al.*¹⁰, considering the methodological design of each investigation included in the review. This system organizes the evidence according to the capacity of each study design to answer clinical questions, making it possible to appraise the methodological robustness of their findings and support their critical interpretation.

Most studies were classified as having a 2B level (A1, A2, A4, A6, A7, A8, A11, A12, A14, A16, A17, A18, A21, A22, A24, A28, A29, A33, A35, A37, A38, A40, A42, and A45). These were mostly comprised of individual cohort studies, which are considered to be evidence of moderate quality that can establish consistent time associations between risk factors and clinical outcomes. The second most common level of evidence was 3B (A3, A5, A9, A10, A13, A15, A19, A20, A23, A25, A26, A27, A31, A32, A34, A36, A39, A41, A43, A44, A46, A47, A48, A49, A50, A51, A52). In most cases, these were individual case-control studies, which

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are moderate evidence, but are more susceptible to biases, especially selection and memory biases. There was also one study classified as belonging to level 4 (A30). This was an observational descriptive study, classified as having a weaker strength due to how limited it is in its ability to establish causal relationships. The level of evidence of no study was classified as 1A, 1B, 1C, 2A, 2C, 3A, or 5. These findings show that the review comprised mostly analytical observational cohort studies, whose methodological quality was moderate. This means that the evidence summarized was consistent, despite the fact that there are no studies with the highest levels of scientific evidence.

The analysis of the results enabled us to find the main methods of risk stratification for adults with type 2 diabetes. The findings were summarized in 4 categories, and we also assessed the viability of applying them at the primary, secondary, and tertiary levels of primary care. The papers were summarized and structured in Table 3, in which they were detailed according to their respective categories, making it possible to compare the main methods used and described in literature to stratify risk in diabetes mellitus type 2 (DM2).

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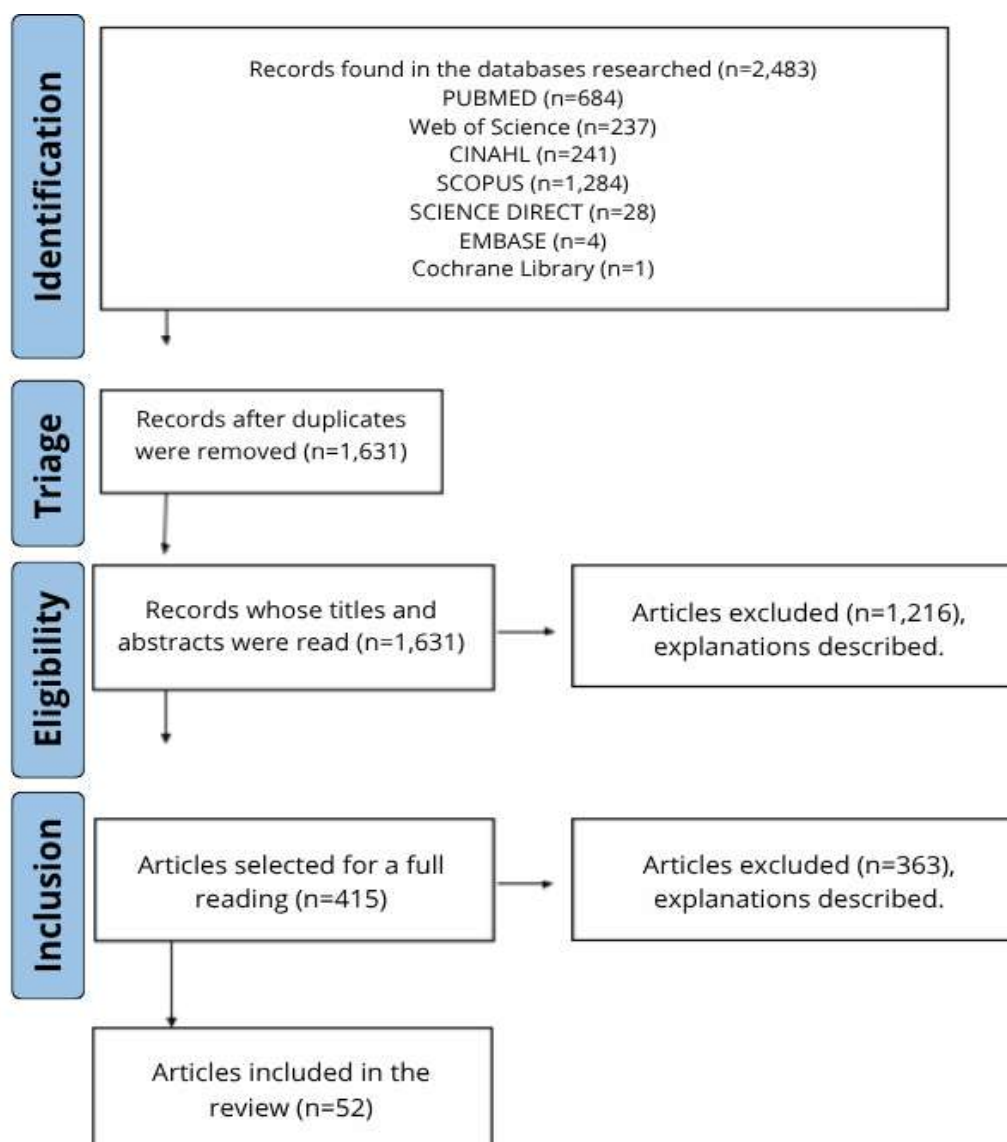


Figure 1 - Flowchart of search mechanisms

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1. Composed indices for risk stratification

This category was composed by 15 pieces of research (A1, A2, A4, A6, A9, A14, A17, A18, A23, A25, A29, A33, A35, A36, A45) that helped build it. These approaches integrated the use of fasting glycemia or continuous glucose monitoring, glycemic variability through HbA1c or the previous method, biological stress biomarkers, inflammatory markers, and hematologic data, refining the understanding of a professional about the metabolic damage observed. The evidence shown in most studies indicates that the use of these indices is better than the analysis of variables in isolation.

One of its main advantages is its multivariate predictive capability, which was extremely effective in signaling future macro- and microvascular complications. Although these methods are seldom used in the context of risk stratification analysis, they are simple and effective measures to understand the evolution of the health of DM2 patients.

2. Scales and multidimensional evaluation scores

In 15 of the studies analyzed (A3, A12, A15, A16, A19, A21, A27, A28, A32, A34, A37, A38, A39, A41, A49), several clinical scores and international scales were used for the risk stratification of DM2 patients. These simplified methods facilitate the early identification of complications and help refer patients to specialists in a fast and scientifically based manner. Among these, the Danish Diabetes Risk Score stands out, a dynamic scale used in primary care that has an important role in stratification.

3. Routine anthropometric indicators and laboratory parameters

14 of the articles found described anthropometric measures and accessible laboratory parameters (A5, A7, A24, A26, A30, A31, A42, A43, A46, A47, A48, A50, A51, A52). It was found that global efforts were made to include diagnostic and prognostic tools that were feasible, especially in primary care, seeing as this level of care is the one that serves most users with DM2. These models include innovative approaches that, although based on simplified data, have a high predictive ability and reproductive viability in contexts of low technological density.

4. Advanced and high complexity diagnostic methods

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High-density exams were detailed in 8 studies (A8, A10, A11, A13, A20, A22, A40, A44). These efforts highlighted modern methods for the detection of clinical complications in the target audience of this article, given their high predictive capabilities and good specificity and sensitivity. Nonetheless, these methods are restricted to sectors in secondary and tertiary care, as a result of which they are important final receptors in the risk stratification that starts in primary care.

Discussion

The studies included in this review show that, despite the broad scientific production about risk stratification in DM2, the main approaches are still those focused on isolated markers or specific complications, with little integration between the different clinical factors that coexist in this population. This fragmentation is particularly relevant considering the complexity of DM2, which is a multifactorial and systemic condition, integrating metabolic, cardiovascular, renal, behavioral, and psychosocial components.

The most recent institutional directives describe diagnostic trajectories, pharmacological and non-pharmacological therapeutic strategies, and longitudinal care recommendations. Nonetheless, these directives are still limited in regard to their ability to incorporate unified stratification instruments capable of classifying individuals at different levels of risk by using a single tool that is applicable across different levels of health care. This gap tends to favor health care practices that are based on subjective assessments and can be influenced by the individual experience of the professional and the interpretation of clinical, demographic, and psychosocial characteristics, which thus contribute to heterogeneous conduct and inequality in timely referrals¹¹.

In this context, some tools described in the literature emerge as potential allies in the organization of care in DM2, especially in the context of public health systems. These include the study by Munch¹², whose model, the Danish Diabetes Risk Score, stood out for being the most aligned with the practical needs of clinical follow-up and risk stratification in the routine of the services. This instrument provides a broad and operational evaluation, which is especially applicable to Danish primary care, given that it translates clinical criteria into feasible measures, such as arterial pressure measurement, neuropathy and nephropathy assessments, and the investigation of cardiovascular priors. Furthermore, its color classification of three different

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levels guides clinical management and the level of complexity of care, reducing uncertainty in professional decision-making.

Although it is yet to be culturally incorporated to the Brazilian context, this instrument is economically and operationally viable, especially in underfunded settings. In accordance with this perspective, recent studies have invested in developing clinical nomograms, that is, low-cost visual tools that integrate clinical and laboratory variables that are widely available, such as creatinine, arterial pressure, and glycated hemoglobin, with satisfactory performance in the risk prediction of individuals with DM2¹³.

Going in a different direction, Akerkar¹⁴ and Primalia¹⁵ used consolidated recommendations based on the directives of the International Working Group on the Diabetic Foot, showing how useful it is as an instrument for defining the stage of risk. Still, there were some differences between them in regard to how often the assessments should be performed, which reiterates the need for contextual adaptation to these scales.

It is worth noting that the studies analyzed have a unique aspect associated with the interface between risk stratification and cultural practices, which include religiosity, which is one of the oldest forms of human expression. The historical aspect shows how religions, over time, were important for explaining phenomena through metaphysics and understanding dilemmas, functioning as pillars in the search for spiritual comfort. In the context of chronic disease, they help patients deal with their complications, although some ritualistic practices can be prevented in certain circumstances¹⁶. Among the main dilemmas faced by those with DM2, religious fasting is an important clinical issue, given the potential risk for hyperglycemia and hypoglycemia.

The Ramadan, in particular, is one of the main practices of the Islamic faith and can be a significant symbolic element excluded from the life of individuals with diabetes. In this regard, the tool International Diabetes Federation – Diabetes and Ramadan (IDF-DAR) stands out as a successful initiative, as it allows the safe stratification of metabolic risk during fasting, bridging the gap between clinical care and the preservation of one's culture. Even if its application outside this specific context often goes unexplored, the tool shows how risk stratification can be used not only to avoid adverse effects, but also to promote culturally sensible care¹⁷.

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Among the instruments analyzed, the Diabetes Complication Severity Index (DCSI), adapted by Hu and Lin¹⁸, systematizes the identification of the main DM2 complications via simple and accessible diagnostic methods. Furthermore, mathematical indices and anthropometric measures have an important role in the expansion of the ability to stratify risk, given how easy they are to obtain and their scalability. Classic measurements, such as waist circumference, are being complemented by new indicators, including the waist-to-calf ratio, neck circumference, visceral adiposity indexes, glycemic metrics derived from HbA1c and continuous glucose monitoring, and composite indices such as the TyG-BMI. In addition, markers related to one's inflammatory and nutritional state enable a more integrated and holistic assessment of the DM2 patient¹⁹⁻²¹.

The studies analyzed show that these tools are consistently associated with the reduction of adverse events, as they take one's clinical look beyond glycemia. Considering, simultaneously, lipidic, inflammatory, and glycemic variability factors is an important conceptual advance. Nevertheless, these methods are not well disseminated in clinical practice, especially those that depend on mathematical calculations, which are often perceived as time-consuming. The incorporation of these metrics in automated predictive models, therefore, is a promising strategy for their effective integration into health systems.

Another relevant finding is associated with the analysis of the QRS-T angle of electrocardiograms as a simple and widely available tool to identify the risk of sudden death and cardiometabolic complications in individuals with DM2. The study by Garcia²², derived from the SURDIAGENE cohort, expands the prognostic potential of an exam that is already commonly used, reiterating its strategic value in different health care contexts.

Up to this point, the discussion prioritized instruments with low technological complexity, which are compatible with the reality of primary care, as that is the main entryway into the system and the place for their longitudinal follow-up. High-complexity technologies, however, are less accessible, being used as tools to be applied at a later point to confirm and refine the initial definition of stages. Exams such as carotid intima-media thickness (CIMT), tomographies for the assessment of eye and liver damage, as well as the cardiothoracic ratio as found by a thorax radiography are essential for a deeper understanding of the metabolic systemic commitment in DM2²³⁻²⁶.

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The adoption of more complex technology should not be seen as the starting point, but as the logical development of a process of stratification that starts in primary care. The systematic use of clinical, anthropometric, metabolic, and inflammatory indices that are easy to find allows primary care to predict risk early and give good referrals for the secondary and tertiary levels, reducing indiscriminate requests for high-cost exams. In this care pathway, the tools described in this paragraph and in Table 2 start to be added selectively, which increases their clinical effectiveness. This structured communication between levels of care helps define DM2 stages in a broader and more precise manner, with high-complexity findings not only confirming the risk identified earlier, but also providing feedback on longitudinal clinical conduct in primary care, thus promoting integrated, fast, and effective care²⁷.

Although there are many instruments for the stratification of risk in DM2, there are still challenges related to the fragmentation of their use and the limited integration between primary care and specialized care. In this regard, DM2 care requires progressive stratification models that can articulate the simple and scalable tools in the PHC with the higher-complexity tools in specialized services.

More than developing new indices or metrics, it is necessary to structure health care pathways that incorporate these tools in a rational, contextualized, and equitable manner, helping them translate into better clinical outcomes and care coordination. Adopting evidence-based instruments in line with the main international measurements used can help improve the care provided to those with DM2, especially in public health systems guided by the principles of integral and longitudinal care.

Study limitations

The scarcity of national studies about the topic was an issue found by the authors, as it restricted the analysis to evidence that is mostly international. Although Brazil is a developing country, its health system is uniquely organized, with universal and free health care, making it difficult to directly transpose models of stratification that were conceived in health systems that are mostly private or mixed. This structural disparity limits closer comparisons and requires one to be careful when extrapolating our findings into Brazilian reality, especially regarding technological availability, care pathways, and funding capabilities.

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Another limitation is due to our methodological strategy, which deliberately excluded high-complexity predictive technology based on advanced mathematical models, artificial intelligence, or the analysis of large volumes of data. Although this decision was motivated by the search of tools that were applicable, scalable, and feasible in low-to-medium technological density, it may have excluded tools with good predictive performance, especially those used in reference centers and health systems with greater computational power. Thus, this study privileges clinical and organizational applicability to the detriment of technological modernity, which must be understood as a limitation.

Conclusion

This integrative review is innovative as its focus is not the traditional diagnostic and therapeutic criteria, but a dimension that is seldom explored in clinical practice: the systematized staging of risk, based on reliable and scientifically proven instruments.

Our findings show a significant shortcoming, since health workers, despite being well-trained to diagnose and treat DM2, often do not have structured tools that can help the early identification of trajectories of risk and the timely referral to other levels of care. In this regard, the instruments described in this review have the potential to increase the effectiveness of multiprofessional teams, helping increase the efficiency and integration of longitudinal management and organization.

The limited national scientific production on the topic also stands out. This is particularly harmful in a country that has a universal and single health system, such as Brazil. Most international studies impose restrictions on the direct applicability of these tools, especially due to the lack of transcultural adaptation and local validation processes. Although some instruments, such as the Danish model applied to primary care, have promising characteristics, their full incorporation into the national context is still conditioned on additional methodological efforts, which means that further research is required in the search for integral care for these patients.

Furthermore, not only does this study summarize information, but it also provides consistent theoretical-practical support to professionals who work at different levels of care, with a special relevance for primary health care. The findings regarding lab indices, anthropometric measures, and easy-to-apply clinical scales show that strategies for risk

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stratification can be easy to implement using methods already incorporated into the routine of care, such as foot evaluation and the monitoring of glycated hemoglobin. These results reiterate that the path to improve the quality of DM2 care is not necessarily the indiscriminate increase of complex technologies, but the rational integration of simple instruments that are scalable and clinically relevant.

Thus, this review suggests that further research is needed, especially in the national context, to validate, adapt to our culture, and integrate these tools in scalable care models. The improvement of risk stratification strategies is an essential step to consolidate earlier, equal, and effective care to people with type 2 diabetes mellitus, which also requires including these approaches in the Single Health System.

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Mageany Barbosa dos Rêis:	Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Data presentation design, Writing of the original draft, and Writing - review and editing.
Suyanne Freire de Macêdo:	Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Data presentation design, Writing of the original draft, and Writing - review and editing.
Mailson Fontes de Carvalho:	Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Data presentation design, Writing of the original draft, and Writing - review and editing.
Raniel Bezerra da Costa:	Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Data presentation design, Writing of the original draft, and Writing - review and editing.
Edina Araújo Rodrigues Oliveira:	Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Data presentation design, Writing of the original draft, and Writing - review and editing.
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Corresponding author: Raniel Bezerra da Costa

Universidade Federal do Piauí

Campus Senador Helvidio Nunes de Barros

Rua Cícero Duarte, nº 905, Bairro Junco, Picos - PI, Brasil. CEP: 64.607-670

raelcosta@ufpi.edu.br**Editor:** Lílían Corrêa Costa Beber. Ph.D

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