

Clinical Screening for Kidney Disease in Patients with Hypertension and Diabetes in the HIPERDIA Program in the Brazilian Amazon: A Systematic Review

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REVIEW TITLE AND BASIC DETAILS

Review title

Clinical Screening for Kidney Disease in Patients with Hypertension and Diabetes in the HIPERDIA Program in the Brazilian Amazon: A Systematic Review

Condition or domain being studied

Kidney disease; Hypertension; Diabetes Mellitus; Screening Procedure

Rationale for the review

The World Health Organization (WHO) recommends the implementation of surveillance for chronic non-communicable diseases, focusing on the risk factors that predict the most common of them, Chronic Kidney Disease (CKD). In this context, epidemiological studies point to this event as one of the greatest public health challenges of this century, considering its economic and social implications, which affect individuals and families, as well as health services and national productivity.

In this sense, it is believed that screening and monitoring Kidney Disease (KD) in Primary Health Care (PHC) are important actions, as it is at this point that the epidemiological chain of the disease is broken, with all the benefits that are not achieved with secondary care and even less so with tertiary care. Thus, the present study is relevant, since it may generate indicators on the trends of kidney disease in patients with hypertension and diabetes, a fact that may

guide public policies for the control and early treatment of CKD in the Amazonian context, favoring a better prognosis for the patient.

Review objectives

This review aims to evaluate the clinical aspects of renal function in patients with hypertension and diabetes treated in primary care.

It aims to: identify the age group and sex with the highest prevalence of chronic kidney disease (CKD) in patients treated by the HIPERDIA program; identify instruments used for early detection of CKD; and correlate CKD with the occurrence of death in patients with hypertension and diabetes.

Keywords

Hypertension; Diabetes; Kidney function; Laboratory tests; Creatinine; Glomerular filtration rate; Early diagnosis

Country

Brazil

ELIGIBILITY CRITERIA

Population

Included

Inclusion Criteria:

Studies addressing patients with hypertension and diabetes who are users of the Brazilian Unified Health System (SUS) and participants in the HIPERDIA program; Studies describing kidney disease in patients with hypertension and diabetes; Primary studies with quantitative methodology will be selected. Studies published in indexed databases and freely available in Portuguese, English, and Spanish, published within the last 10 years.

Excluded

Exclusion Criteria:

Studies addressing chronic kidney disease (CKD) resulting from clinical conditions other than hypertension and diabetes; Inconclusive and/or incomplete studies;

Intervention(s) or exposure(s)

Included

Screening Procedure; Renal Function Monitoring; Laboratory procedure

P (Population): Patients with hypertension and diabetes treated in primary care in the municipality of Santarém, Pará.

I (Intervention): Clinical screening and monitoring of renal function using laboratory tests (creatinine, Glomerular Filtration Rate and urinalysis) and SCORED questionnaire.

C (Comparison): Comparison between different age groups, sex, and time since diagnosis of hypertension and diabetes.

O (Outcome): Prevalence of kidney disease, classification of kidney disease stages, identification of associated risk factors.

Excluded

Studies that address chronic kidney disease (CKD) arising from clinical conditions other than hypertension and diabetes;

Inconclusive and/or incomplete studies.

Comparator(s) or control(s)

This review does not have any comparators

Study design

Only nonrandomized study types will be included.

Context

The study focuses on evaluating the clinical aspects of renal function in patients with hypertension and diabetes treated in primary care. This review aims to highlight the age group and sex with the highest prevalence of CKD in patients treated by the HIPERDIA program; Identify instruments used for early detection of CKD; Correlate CKD with the occurrence of death in patients with hypertension and diabetes;

Studies from the last five years will be searched in the databases National Library of Medicine and National Institutes of Health – PUBMED, Scopus, Latin American and Caribbean Literature in Health Sciences – LILACS and Scielo.

TIMELINE OF THE REVIEW

Date of first submission to PROSPERO

26 February 2026

Review timeline

Start date: 25 February 2026. End date: 26 March 2026.

Date of registration in PROSPERO

27 February 2026

AVAILABILITY OF FULL PROTOCOL

Availability of full protocol

A full protocol has been written but is not available because:

A complete review protocol is being drafted, but it is not yet finalized. It will be sent as soon as it is completed.

SEARCHING AND SCREENING

Search for unpublished studies

Only published studies will be sought.

Main bibliographic databases that will be searched

The main databases to be searched are *LILACS - Latin American and Caribbean Health Sciences Literature*, *PubMed* and *Scopus*.

Search language restrictions

The review will only include studies published in English and Portuguese.

Search date restrictions

There are no search date restrictions.

Other methods of identifying studies

No other methods will be used.

Link to search strategy

A full search strategy is available in the full protocol as described in the *Availability of full protocol* section

Selection process

Studies will be screened independently by at least two people (or person/machine combination) with a process to resolve differences.

Other relevant information about searching and screening

None

DATA COLLECTION PROCESS

Data extraction from published articles and reports

Data will be extracted independently by at least two people (or person/machine combination) with a process to resolve differences.

Authors will not be contacted for further information.

Study risk of bias or quality assessment

Risk of bias will be assessed using:

The review will assess the study design, sample size, population characteristics, data collection methods, and the validity of the measured outcomes. To formally assess the risk of bias, the review will use the Critical Appraisal Skills Program (CASP) checklist.

Data will be assessed independently by at least two people (or person/machine combination) with a process to resolve differences.

Additional information will **not** be sought from study investigators if required information is unclear or unavailable in the study publications/reports.

Reporting bias assessment

The review will assess the validity of the measured outcomes. To formally assess the risk of bias, the review will use the Critical Appraisal Skills Program (CASP) checklist, a widely recognized tool for evaluating the quality of various study designs.

Certainty assessment

The review will assess several key characteristics of the included studies to evaluate their quality and potential risk of bias. These characteristics include the outcomes measured.

To formally assess the risk of bias, the review will use the Critical Appraisal Skills Program (CASP) checklist, a widely recognized tool for evaluating the quality of various study designs. The CASP tool will be applied to each study to assess methodological rigor, including the

reliability of the results. Each study will be ranked based on these assessments, and the results will be systematically documented.

OUTCOMES TO BE ANALYSED

Main outcomes

It is believed that screening and monitoring Kidney Disease (KD) in Primary Health Care (PHC) are important actions, as this is where the epidemiological chain of the disease is broken, with all the benefits that are not achieved with secondary care, and even less so with tertiary care. Therefore, this study is relevant because it can generate indicators on trends in kidney disease in patients with hypertension and diabetes, which can guide public policies for the control and early treatment of CKD in the Amazonian context, favoring a better prognosis for the patient.

Additional outcomes

There are no additional outcomes.

PLANNED DATA SYNTHESIS

Strategy for data synthesis

"hypertension" OR "diabetes" OR "hypertensive patients" OR "diabetic patients" OR "hypertensive patients" OR "diabetic patients") AND ("Santarém" OR "Pará" OR "Amazon" OR "Northern Region of Brazil" OR "Amazonian community" OR "renal function monitoring" OR "laboratory tests" OR "urine test" OR "blood tests" OR "creatinine" OR "glomerular filtration rate" OR "GFR" OR "UA" OR "urine sediment analysis" OR "SCORE questionnaire" OR "early diagnosis" OR "prevention of kidney disease" OR "Health Management" OR "control of chronic diseases" OR "primary health care interventions" OR "prevention strategies") AND ("prevalence of kidney disease" OR "incidence of kidney disease" OR "stages of kidney disease" OR "progression of kidney disease" OR "risk factors") OR "impact on kidney function" OR "morbidity" OR "mortality" OR "quality of life" OR "treatment adherence" OR "kidney complications" OR "need for renal replacement therapy"

CURRENT REVIEW STAGE

Stage of the review at this submission

Review stage	Started	Completed
Pilot work		
Formal searching/study identification		
Screening search results against inclusion criteria		
Data extraction or receipt of IPD		
Risk of bias/quality assessment		
Data synthesis		

Review status

The review is currently planned or ongoing.

Publication of review results

Results of the review will be published in English.

REVIEW AFFILIATION, FUNDING AND PEER REVIEW

Review team members

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No conflict of interest declared.

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No conflict of interest declared.

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No conflict of interest declared.

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No conflict of interest declared.

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No conflict of interest declared.

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Funding source

Review has no funding and no agreed support from an academic institution and is done in authors' own time.

Peer review

There has been no peer review of this planned review.

ADDITIONAL INFORMATION

Review conflict of interest

Declared individual interests are recorded under team member details.. No additional interests are recorded for this review.

Medical Subject Headings

Kidney; Diabetes Mellitus; Hypertension; Renal Insufficiency, Chronic; Glomerular Filtration Rate; Primary Health Care; Risk Factors; Urinalysis; Creatinine

SIMILAR REVIEWS

Check for similar records already in PROSPERO

PROSPERO identified a number of existing PROSPERO records that were similar to this one (last check made on 25 February 2026). These are shown below along with the reasons given by that the review team for the reviews being different and/or proceeding.

- Prevalence and influencing factors of Chronic Kidney Disease-Associated Pruritus in Peritoneal Dialysis Patients: A Meta-Analysis [published 13 January 2026] [CRD420261285273]. The review was judged **not to be similar**
- A systematic review on the prevalence, prevention, and management of chronic kidney disease among patients with hypertension and diabetes [published 17 January 2023] [CRD42023390047]. The review was judged **not to be similar**
- Risk factors for acute kidney injury in adult patients with COVID-19: a systematic review and meta-analysis [published 27 September 2021] [CRD42021282233]. The review was judged **not to be similar**

PROSPERO version history

- [Version 1.0, published 27 Feb 2026](#)

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