

Unveiling the clinical and epidemiological scenario of deaths among elderly people registered in a public hospital in the Lower Amazon region.

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Citation

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REVIEW TITLE AND BASIC DETAILS

Review title

Unveiling the clinical and epidemiological scenario of deaths among elderly people registered in a public hospital in the Lower Amazon region.

Condition or domain being studied

Death; Elderly; Surveillance; Chronic Disease; Health Care Utilization

The study focuses on the clinical and epidemiological profile of deaths among elderly patients treated in public medium-complexity hospitals in the Baixo Amazonas region, Northern Brazil. Brazil's population aging, driven by declining fertility and infant mortality rates, has increased the elderly proportion and the burden of chronic noncommunicable diseases, yet the North lags in demographic and epidemiological transitions, with high mortality from infectious causes and external injuries amid social inequalities. This integrative review will analyze the most affected age groups and sexes, correlate pre-existing chronic diseases with fatal outcomes, assess hospitalization duration, and identify main causes of death. Studies from the last five years will be searched in PubMed, Scopus, Web of Science, and Google Scholar using Boolean terms on elderly hospitalizations, morbidity, and mortality in the region. Findings aim to inform health professionals and policymakers for comprehensive geriatric care policies, reducing preventable deaths and fostering research on aging in vulnerable Amazonian contexts.

Rationale for the review

Gerontology studies aging, encompassing its biological, psychological, and social structural characteristics in the population. Social Determinants of Health (SDH), defined as social, economic, cultural, ethnic/racial, psychological, and behavioral factors, influence health problems and risks in the population. Population aging occurs amid high poverty incidence, inequality, and uneven social development, impacting the elderly, their families, and society as a whole.

Brazil's demographic transition, per IBGE (2022), shows a high percentage of people in higher age groups via the latest Census, due to declining fertility, falling birth rates, and infant mortality. In this Brazilian epidemiological transition, the outlook is an endemic of chronic noncommunicable diseases (DCNs) and consequent rise in elderly mortality. The North region is the least advanced in both demographic and epidemiological transitions, presenting the highest mortality indicators from communicable diseases compared to other regions; it also has the highest proportions of deaths from external causes and the lowest elderly population shares, evidencing its incipient position.

Given these data, there is a need for a new social paradigm for the elderly, with political structure (citizenship), economic (lifelong pension), and social (protection systems, security, care, education, leisure). Thus, this study is relevant, as profiling the clinical characteristics of deaths among the elderly provides a comprehensive view of their health problems, care quality, rights assurance, generating information on this issue and equipping health professionals and managers for decision-making and directing efficient public policies for this vulnerable and hitherto neglected population, especially in the Baixo Amazonas region.

Review objectives

The general objective of this study is to analyze the clinical characteristics and determinants of deaths among elderly patients assisted in public medium-complexity healthcare services in the Baixo Amazonas region. Specifically, it seeks to highlight the age group and sex with the highest frequency of deaths among the elderly; correlate pre-existing chronic diseases with the progression to death; demonstrate the length of hospitalization and clinical evolution of patients; and list the main diagnoses as causes of death.

Keywords

Clinical epidemiology; Deaths; Elderly patients; Amazon region

Country

Brazil

ELIGIBILITY CRITERIA

Population

Included

This review focuses on identifying the clinical characteristics and determinants of death in elderly patients receiving care in medium-complexity public health services in the Lower Amazon region, Brazil.

The review will include studies that specifically address clinical characteristics of death in elderly individuals (≥ 65 years) treated by the public health system.

Excluded

Studies will be excluded if they do not specifically focus data on causes of death or determining factors, or that do not refer to the Lower Amazon Region. The review will also exclude studies that do not offer full-text access or are published outside the specified timeframe of 2020 to 2026.

Intervention(s) or exposure(s)

Included

The review examines the clinical characteristics and determinants of death in elderly patients assisted in medium-complexity public health services in the Lower Amazon region, Brazil.

These exposures include clinical characteristics of death, including pre-existing chronic diseases, length of hospital stay, quality of care, and invasive procedures.

The review includes studies that provide empirical data on how clinical and epidemiological factors impact deaths in the elderly.

Studies will be excluded if they do not focus on the specified factors or if they do not present relevant data linking these determinants to death outcomes in the elderly.

Excluded

Studies will be excluded if they do not focus on the specified factors or if they do not present relevant data linking these determinants to death outcomes in the elderly.

Comparator(s) or control(s)

This review does not have any comparators

Study design

Only nonrandomized study types will be included.

Included

The review will include various study designs to explore the clinical and epidemiological characteristics of deaths in older adults in the Lower Amazon Region, Brazil.

Observational studies, such as cohort, case-control, and cross-sectional studies, as well as qualitative research, will be included. Systematic reviews and meta-analyses that provide empirical data on the relationship between social determinants and deaths in older adults are also eligible.

Excluded

The review will exclude studies that do not offer primary data, such as editorials, commentaries, and narrative reviews. Randomized controlled trials (RCTs) will be excluded unless they specifically address social determinants related to deaths in older adults. Studies published outside the period of 2020 to 2026 or without free access to the full text will also be excluded.

Context

This review will analyze the clinical characteristics and determinants of death in elderly patients assisted in medium-complexity public health services in the Lower Amazon region.

TIMELINE OF THE REVIEW

Date of first submission to PROSPERO

26 February 2026

Review timeline

Start date: 26 February 2026. End date: 25 April 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 *PubMed* and *Scopus*.

Other important or specialist databases that will be searched

Web of Science

Search language restrictions

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

Search date restrictions

Databases will be searched for articles published from 1 January 2020 and before by 31 January 2026.

Other methods of identifying studies

Other studies will be identified by: *looking through all the articles that cite the papers included in the review ("snowballing" or forward citation searching).*

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

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

Risk of bias due to missing results will not be assessed

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 Programme (CASP) checklist, a widely recognized tool for assessing 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. This thorough evaluation ensures that the review's conclusions are based on high-quality evidence, providing reliable information on the clinical characteristics and determinants of death in elderly patients assisted in medium-complexity public health services in the Lower Amazon region.

OUTCOMES TO BE ANALYSED

Main outcomes

It is expected that the research results will generate indicators that will provide professionals and managers in health with the tools to build public policies aimed at the comprehensive care of the geriatric population, enabling better survival and consequently reducing mortality rates.

It is also intended to encourage new scientific production (and publication of scientific articles in indexed journals) on this topic, providing more evidence on how to care for the geriatric population, since only from epidemiological data can we care for our elderly with dignity.

Additional outcomes

It is expected that the theme will be further developed in undergraduate theses, postgraduate studies, medical residencies, and scientific initiation projects..

PLANNED DATA SYNTHESIS

Strategy for data synthesis

P (Population): Elderly people served by the public health system in the Lower Amazon Region.

I (Intervention): Analysis of clinical characteristics of death, including pre-existing chronic diseases, length of hospital stay, quality of care, and invasive procedures.

C (Comparison): (Optional) Comparison between different age groups, sexes, or types of chronic diseases.

O (Outcome): Prevalence of death, main causes of death, determinants of death outcomes, indicators for health policies.

((("elderly" OR "geriatric patients" OR "hospitalized elderly" OR "frail elderly" OR "vulnerable elderly" OR "elderly population" OR "patients with multimorbidity") AND ("Lower Amazon Region" OR "Amazon" OR "Pará" OR "Santarém")) AND ("clinical characteristics" OR "chronic diseases" OR "morbidity" OR "length of stay" OR "quality of care" OR "health care" OR "invasive treatments" OR "palliative care" OR "diagnosis of chronic diseases" OR "management of chronic diseases" OR "hospital interventions" OR "clinical monitoring" OR "geriatric assessment" OR "hospitalization" OR "end-of-life care")) AND ("death" OR "causes of death" OR "risk factors" OR "clinical evolution" OR "health indicators" OR "policies of health" OR "quality of life" OR "hospital mortality" OR "geriatric mortality" OR "health outcomes" OR "death prevention" OR "death analysis" OR "clinical prognosis" OR "impact on public health"))).

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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Review affiliation

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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

Cause of Death; Aged; Hospital Mortality; Hospitals, Public; Risk Factors; Chronic Disease; Vulnerable Populations; Morbidity; Quality of Health Care; Geriatrics; Geriatric Assessment; Quality of Life; Public Health

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.

- The Impact of Healthcare Innovation in Nursing Care for Chronic Disease in the Elderly: A Systematic Review and Meta-analysis [published 21 December 2024] [CRD42024626493]. The review was judged **not to be similar**
- The Impact of Coordinated Care Management Programs for the Elderly in Public and Private Health Services in Brazil.The Impact of Coordinated Care Management Programs for the Elderly in Public and Private Health Services in Brazil. [published 16 November 2024] [CRD42024611135]. The review was judged **not to be similar**
- Impact of Social Determinants of Health on Head and Neck Cancer in Quilombola Communities in Western Pará: Systematic Review. [published 28 August 2024] [CRD42024580917]. The review was judged **not to be similar**

PROSPERO version history

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

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