

Criteria Used to Evaluate Dementia Service Delivery Worldwide: Protocol for a Scoping Review

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Criteria Used to Evaluate Dementia Service Delivery Worldwide: Protocol for a Scoping Review

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Abstract

Background: The effective delivery of memory services is critical to timely diagnosis and care for people with dementia. With emerging disease-modifying treatments for Alzheimer's disease relying on early intervention, the performance of these services has become increasingly important. However, there is limited clarity on how memory clinics are evaluated in practice. Understanding existing performance measures and assessment frameworks is a necessary first step toward identifying service gaps and informing improvements. Without consistent evaluation methods, opportunities to optimise care pathways - and to ensure that patients receive timely access to new treatments - may be missed.

Objective: The objective of this scoping review is to map how memory services are evaluated worldwide, with a focus on identifying key performance indicators (KPIs), assessment frameworks, and national or regional quality standards used to assess service delivery and performance.

Methods: This protocol follows the PRISMA-ScR framework for scoping reviews. A comprehensive literature search will be conducted across four databases: PubMed, Embase, Cochrane Library, and PsycINFO. Grey literature will be identified through targeted searches of institutional websites (e.g., WHO, NHS, NICE, CMS, CADTH) and structured searches in Overton. Records will be deduplicated using Zotero and screened independently by two reviewers using Rayyan. Eligible sources must report on the evaluation of dementia-related services using performance metrics, quality indicators, or structured assessment frameworks. Data will be extracted using a predefined form and analysed narratively, with findings summarised in descriptive tables.

Results: This is a study protocol; therefore, no results are available at this stage. The completed review will describe how memory services are evaluated internationally, highlight key themes and gaps, and provide a foundation for future benchmarking and service optimisation.

Conclusions: This review will provide a comprehensive overview of how dementia services are currently assessed and identify the tools and criteria most commonly used in their evaluation. The findings will support the development of improved performance frameworks and inform future efforts to align service delivery with the timely diagnosis and treatment required for novel dementia therapies. Clinical Trial: Not applicable. This study is a scoping review.

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Original Manuscript

Title: Criteria Used to Evaluate Dementia Service Delivery Worldwide: Protocol for a Scoping Review**Introduction****Background**

Dementia services, including memory clinics, general practice, hospitals, and community care settings, play a critical role in diagnosing, treating, and managing cognitive disorders. However, there is significant global variation in how these services are evaluated. Key performance indicators (KPIs) and assessment frameworks provide a structured way to measure service delivery effectiveness, quality assurance, and adherence to best practices.

The aim of this scoping review is to map existing KPIs and frameworks used to evaluate dementia services globally. These insights will support standardisation, policy, and care improvements. This is especially timely as new, costly dementia treatments emerge, making effective service delivery crucial for successful implementation.

Objectives

- **Primary Objective:** Identify and categorize the criteria used to evaluate dementia services worldwide.
- **Secondary Objectives:**
 - Identify key performance indicators (KPIs) and assessment frameworks for assessing memory clinic performance.
 - Identify national and regional standards for assessing memory clinic performance.
 - Explore variations in dementia service evaluation methodologies across different healthcare settings and geographic regions.
 - Determine gaps in the literature related to dementia service performance assessment.

Research Question**Main Question:**

- How are dementia services evaluated worldwide?

Sub-Questions:

- What KPIs and assessment frameworks are commonly used to evaluate memory clinics and dementia services?
- How are these metrics applied across different healthcare settings (GP, memory clinics, hospitals, community care)?
- Are there regional or national differences in the evaluation criteria for dementia services?
- What are the gaps and limitations in the current literature on dementia service performance evaluation?

Methods

Eligibility Criteria

Inclusion Criteria:

- Full-text article available in English with no cut-offs in timeframe
- Study evaluates dementia service delivery using key performance indicators (KPIs) or assessment frameworks: audits, systematic review
- Regional or national standards for assessing memory clinic performance.
- Studies discussing assessment criteria and performance metrics for memory services
- Quantitative or qualitative assessment
- Published in peer-reviewed journals or reputable grey literature sources
- Healthcare settings include GP, memory clinics, hospitals, and community care.
- White papers, government reports, and healthcare institution evaluations.
- Descriptive studies on memory clinics (to understand structure and evaluation).
- Guidelines, policies, or accreditation standards
- All geographic regions, provided they contribute to the global understanding of dementia service assessment.

Exclusion Criteria:

- Non-English language studies.
- Case reports, case series, opinion pieces, editorials, and non-evidence-based commentaries, conference abstracts without sufficient methodological detail.
- Do not explicitly evaluate service delivery performance for dementia care.
- Patients < 40 years old (otherwise likely traumatic/depression/nutritional).
- Duplicate studies covered in systematic reviews unless add unique insights.
- Grey literature sources without clear methodology, credibility, or relevance to service evaluation

Information Sources

Databases to be searched:

- **Medline (via Pubmed)** – Core biomedical literature
- **Cochrane Library** – Systematic reviews and healthcare interventions
- **Embase (via Ovid)** – Strong European and pharmaceutical focus
- **PsycInfo (via Ebscohost)** – Psychological and cognitive aspects

Grey Literature:

To complement the academic database search and capture relevant evidence not formally indexed,

we will conduct a focused grey literature search. This will involve two main approaches: manually reviewing selected institutional websites and systematically searching the Overton policy document database.

Search Strategy

Search	Strategy	Overview
The search strategy will utilise sensitivity testing and iterative refinements to ensure comprehensive literature retrieval:		

1. **Sensitivity Testing:** We will experiment with alternative search strings, adjusting keyword variations, Boolean operators, and truncation to optimise retrieval. Both broader and more restrictive search criteria will be tested to ensure that all relevant studies are captured.
2. **Iterative Refinements:** Adjustments to MeSH terms, filters, and database-specific syntax will be made if benchmark studies are not retrieved. Inclusion and exclusion criteria will be refined based on preliminary search results to ensure the strategy's accuracy.
3. **Cross-Referencing Across Databases:** Final validated searches will be cross-checked across PubMed, Embase, Cochrane Library, and PsycINFO. Any inconsistencies in retrieval rates will be carefully examined to ensure consistency across platforms.
4. **Additional Search Strategies:** Ascendancy and descendancy searches (citation tracking) will not be employed, as structured database searches sufficiently cover relevant literature.

Search	Repetition	&	Expiration
Given the review's scope and timeline, the search will not be repeated. The objective is to expedite publication, and the search is designed to capture the most relevant and up-to-date studies at the time of data extraction. No additional updates or searches will be performed before publication.			

Search	Strategy	Justification
The search strategy is designed to balance comprehensiveness with feasibility, ensuring the inclusion of high-quality studies while maintaining execution efficiency. PubMed, Embase, Cochrane Library, and PsycINFO have been selected for their coverage of peer-reviewed biomedical literature. Structured access via Ovid (for Embase) and PubMed.gov (for PubMed) ensures reliable retrieval.		

Queries use Boolean operators, MeSH terms, truncation, and database-specific syntax to ensure the capture of relevant studies. The search queries have been refined to guarantee the retrieval of benchmark studies, confirming the strategy's effectiveness.

Search String for PubMed: 874 Results

("dementia service" [Title/Abstract] OR "memory clinic"[Title/Abstract])

AND

(efficien OR effective* OR quality OR optimal OR reliable OR consistent OR timely OR comprehensive OR satisfactory OR robust OR sustainable OR proficient OR innovative OR responsive OR high-performing OR precise OR accurate)*

AND

(evaluat OR assess* OR measure* OR deliver* OR assur* OR apprais* OR examin* OR review OR analy* OR survey OR estimat* OR monitor* OR quantif* OR validat*)*

AND

(framework OR KPI OR audit* OR performance* OR metric* OR outcome* OR criteri* OR standard* OR guideline* OR indicator OR target OR benchmark* OR specification OR parameter OR system OR structure OR model OR protocol OR output)*

Justification for Search String Structure:

The search string has been carefully structured to ensure a comprehensive and precise capture of relevant studies. The separation of service names, adjectives, verbs, and nouns is designed to target the core elements of evaluating dementia services. Specifically:

- Line 1: Service Names - These terms directly focus on the key services being assessed, ensuring that studies related to dementia care and memory clinics are included in the results.
- Line 2: Adjectives - These describe the significance of the evaluation, highlighting the quality and performance aspects of the services being studied. By including these terms, we can ensure that the search identifies studies where the evaluation involves a range of relevant descriptors of service effectiveness.
- Line 3: Verbs - These represent the action of measurement or assessment, which is central to the goal of the review: to understand how dementia services are evaluated. This allows for the inclusion of studies where the focus is on evaluating, measuring, or reviewing service performance.
- Line 4: Nouns - The nouns in the search string focus on specific parameters or systems that are evaluated within dementia services. This ensures that only relevant studies discussing measurable aspects of service performance (such as benchmarks, performance metrics, or evaluation criteria) are captured.

This structured approach enables us to retrieve studies that not only discuss the action of evaluating or measuring dementia services but also focus on specific parameters or criteria, while ensuring that the significance of the result is conveyed through descriptive adjectives. By carefully segmenting the terms into these categories, we maximise the relevance and precision of the results. This strategy ensures that the search string captures a broad range of studies with a focus on both the methodology of evaluation and context of performance.

Grey Literature Search Strategy:

1. Manual Search of Key Websites

A set of key government and non-profit health organisations will be manually searched. The following websites were selected based on their prominence in producing healthcare evaluation frameworks and dementia policy:

- World Health Organization (WHO)
- National Health Service (NHS, UK)
- National Institute for Health and Care Excellence (NICE, UK)
- Centres for Medicare & Medicaid Services (CMS, USA)
- Australian Department of Health
- Canadian Agency for Drugs and Technologies in Health (CADTH)
- Alzheimer's Society (UK and international branches)

On each site, the following sections will be manually explored:

- Publications
- Guidelines and clinical standards
- Policy and strategy documents
- Service evaluations and audit reports
- Research or evidence libraries

Each page or document that appears relevant based on the review's aims will be saved for screening. Documentation will include the URL, page title, website section, and date accessed, to ensure traceability. This process will be carried out consistently, by two persons, across all listed websites.

2. Structured Search Using Overton

A structured search will be conducted in Overton, a policy document database. The following search terms will be applied individually:

- "dementia" AND "performance metrics"
- "memory clinic" AND "key performance indicators"
- "dementia policy" AND outcomes
- "dementia care" AND "quality assurance"
- "dementia service" AND "assessment framework"

For each search term, the first three pages of results will be exported from Overton.

Removing Duplicate Search Results

To ensure efficiency and accuracy in the screening process, all search results will be imported into the reference management software Zotero. The built-in deduplication function of these tools will be used to automatically identify and remove duplicate entries. This method is faster and more efficient than manually identifying duplicates, which is common in Rayyan, where decisions on duplicates are made individually. The deduplication process helps save time and ensures a cleaner dataset for screening.

Once the duplicates have been removed, the deduplicated references can be exported as a RIS file and uploaded into Rayyan for screening. Rayyan's interface is specifically designed for the screening process, allowing for blinded review by two or three reviewers. It only reveals conflicts at the end of the screening process, which supports transparency and minimises bias in the selection process.

To further ensure impartiality, a third reviewer will be involved in the resolution of any disagreements, maintaining the integrity of the review process. This approach fosters transparency, reduces bias, and enhances the overall quality of the systematic review.

Screening

Process

Screening will be based on relevance to dementia service evaluation, using titles, summaries, and source credibility. All retrieved records will be logged with the source, document title, and access date. The selection of relevant studies will be conducted in three stages, progressively narrowing the dataset:

1. **Title and Abstract Screening:** All retrieved studies will undergo initial screening based on titles, abstracts, and keywords. Studies clearly unrelated will be excluded. This will be done manually by reviewers (AL, KG). Title screening will first determine study relevance, followed by abstract screening for further details on methodology and key findings. Keywords will be reviewed to help identify relevant terms. During screening, titles, abstracts, and keywords will be visible to reviewers.
2. **Full-Text Screening:** Studies passing the title and abstract stage will be assessed in full text to evaluate methodology, study population, and relevance. Studies failing to meet inclusion criteria will be excluded. Reviewers will independently assess articles, reconvening to ensure consistency. Discrepancies will be resolved through discussion.
3. **Quality and Bias Assessment:** Included studies will be appraised for quality and risk of bias using tools such as Cochrane RoB 2, Newcastle-Ottawa Scale, and GRADE criteria. Studies with high risk of bias will be excluded.

Data Extraction

For each term, the first 500 results will be exported for manual screening. Results will be filtered for relevance to dementia service evaluation based on titles, summaries, and source credibility. All retrieved records will be logged with source, document title, and access date.

A structured data extraction form will be developed to collect key information from all included records. The following fields will be extracted:

- **Author(s):** Names of the lead and co-authors or institutional authors of the source.
- **Year:** Year of publication or release of the document.
- **Location:** Country of where the evaluation took place or to which the framework applies.
- **Study Type:** Type of publication or report (e.g. audit, policy document, qualitative study, service evaluation).
- **Sample Size:** Where applicable, the number of participants, services, or units evaluated.
- **Healthcare Setting:** The primary care context (e.g., general practice, memory clinic, hospital,

community care).

- **Level of Evaluation:** The level at which the assessment is focused (e.g., patient-level, service-level, system-level).
- **Evaluation Method:** The approach used to assess performance (e.g., survey, internal audit, benchmarking, external accreditation).
- **Assessment Framework:** Any formal or informal framework used for evaluation (e.g., national standards, quality improvement models).
- **Key Performance Indicators (KPIs):** Specific metrics used to evaluate dementia service delivery (e.g., diagnostic timeliness, patient satisfaction, care coordination).
- **Frequency of Evaluation:** How often the service is evaluated (e.g., annual audit, continuous monitoring, one-time review).
- **Limitation:** Any limitations noted by the authors or reviewers regarding the evaluation process or study design.
- **Key Findings:** Summary of relevant results or conclusions related to service performance, quality, or outcomes.

Data will be extracted by at least one reviewer and verified by a second reviewer for accuracy. A calibration exercise will be conducted on a subset of sources to ensure consistency in interpretation and coding.

Data Analysis and Synthesis

- Extracted data will be synthesized using a **narrative approach**, summarising themes and trends.
- Results will be presented in **descriptive tables and figures**.
- Key themes: **Types of KPIs, regional variations, evaluation methodologies**.

Reporting and Dissemination

- The review will follow **PRISMA-ScR** guidelines.
- The scoping review will be completed within 2 months of the protocol's publication and findings will be published in a **peer-reviewed journal**.
- Results will be presented at relevant **dementia and healthcare conferences**.

Registration

- This protocol will be registered with JMIR Research Protocols