










Quality Indicators for Evaluating Home Healthcare Services: A Scoping Review

Toktam Kianian ¹ , Hanieh Gholamnejad ² , Maryam Rassouli ^{3,4} , Farzaneh Farzadnia ¹ , Farzaneh Bagheriyeh ⁵ , Nasrin Kheibar ⁶ , Soolmaz Moosavi ^{7,*} 

¹ Nursing and Midwifery Care Research Center, Health Management Research Institute, Department of Community Health and Geriatric Nursing, School of Nursing and Midwifery, Iran University of Medical Sciences, Tehran, Iran

² Department of Medical Surgical Nursing, School of Nursing and Midwifery, Iran University of Medical Sciences, Tehran, Iran

³ Cancer Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

⁴ School of Nursing, College of Health Sciences, University of Nizwa, Nizwa, Sultanate of Oman, Oman

⁵ Department of Medical Surgical Nursing, School of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran

⁶ Community Health Nursing, Behbahan University of Medical Sciences, Behbahan, Khuzestan, Iran

⁷ Department of Medical Surgical Nursing, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran

DOI: [10.22037/anm.v34i1.48362](https://doi.org/10.22037/anm.v34i1.48362)

*Corresponding author: Soolmaz Moosvi, Department of Medical Surgical Nursing, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran. E-mail: moosavi.soolmaz@sbm.ac.ir

Submitted: 13 Mar 2025

Accepted: 27 Jul 2025

Published: 15 Oct 2025

Keywords:

Home Health Care
Evaluation
Quality Indicators
Nursing
Scoping Review

© 2025. Advances in Nursing and Midwifery

How to cite:

Kianian T, Gholamnejad H, Kheibar N, Farzadnia F, Bagheriyeh F, Rassouli M. et al. Quality Indicators for Evaluating Home Healthcare Services: A Scoping Review. *Adv Nurs Midwifery*.

2025;34(1):8-22.

doi: [10.22037/anm.v34i1.48362](https://doi.org/10.22037/anm.v34i1.48362)

Abstract

Introduction: The elderly population's doubling, the prevalence of chronic diseases, and the increase in the number of deaths constitute the current and the future image of global health. The increase in the demand for Home Health Care (HHC) has attracted the attention of not only governments, but also economic enterprises for the development of HHC centers. This study aims to investigate and collect HHC quality evaluation indicators in the existing studies through conducting a scoping review study.

Methods: This study is a scoping review that investigates the extent of the research conducted in the field of HHC quality indicators and written based on the PRISMA-ScR Checklist. The inclusion criteria consisted of the study's being written either in English or in Farsi, the study's focusing on the structure and process of HHC monitoring or the results regarding HHC quality monitoring. Therefore, descriptive, multi methods and mix methods studies were included in the study. The search was conducted on studies that were published between January 1, 2000 to March 31, 2022. The data extracted from the included studies were re-examined by all the authors. The quality of extracted review studies was checked with PRISMA checklist, qualitative studies with COREQ and descriptive studies with STROBE checklist.

Results: Out of 4977 extracted publications, 37 were finally included in the present study. Based on the findings of the included studies, HHC quality evaluation indicators were classified into three areas: structure (Appropriate physical space, equipment, and sufficient facilities- Effective document management system- Supply, and development of workforce), process (Patient-Centered Approach-Establishing safety and reliability- Efficient and timely support -Continuous Quality Improvement) and outcome (Functional Indicators-Clinical Indicators-Social indicators).

Conclusions: This scoping review identified a comprehensive set of quality indicators for evaluating Home Healthcare (HHC), categorized into structure, process, and outcome domains. Common indicators include hospital readmission rates, unplanned emergency visits, functional status, symptom management, and patient satisfaction. Tools such as RAI-HC and OASIS are widely used for standardized assessment. The Efficiency Index (EI) helps compare service quality across HHC providers and informs policy decisions. Additionally, local, culturally-sensitive tools -especially for regions with religious considerations- should be developed and psychometrically validated. Ensuring appropriate infrastructure, effective documentation, and skilled workforce is also essential for quality care.

INTRODUCTION

The doubling of the elderly population by 2050, the growth of about 50% of cancers by 2040, and the attribution of about 75% of the number of deaths to chronic diseases constitute the current and future picture of global health [1-4]

The demand for care is increasing [5-7], placing significant pressure on health systems. These pressures include a shortage of the healthcare workforce [8], rising healthcare expenditures [9], hospital overcrowding [10], declines in the quality and continuity of care [11], and delays in service delivery [12]. Additionally, the growing burden of chronic diseases and an aging population further exacerbate the strain on existing infrastructures and resources [13]. These factors underscore the urgent need for alternative care models, such as Home Health Care (HHC), to reduce institutional burden and support the sustainability of care delivery. Moreover, the rising cost of hospital care and the complex consequences associated with an aging population have further complicated service provision [1, 14]. In response to these challenges, many health systems have been compelled to revise their policies [1], redirecting resources and increasing investments in community-based initiatives such as HHC services and their promotion [15]. For instance, countries including the United States, Canada, the United Kingdom, Australia, and the Netherlands have adopted national strategies aimed at reinforcing home-based care models to decrease hospital reliance, reduce healthcare costs, and enhance patient-centered outcomes [16-20].

This is done with the aim of reducing the cost of care, increasing the quality of care, improving the experience of clients, reducing costly and often unnecessary visits to the hospital, and responding to people's preferences [21, 22], as most of the elderly and the individuals in need of care prefer to receive care and die at "their own home" [23-25].

The increase in the demands for HHC has not only attracted the attention of governments, but also the attention of economic enterprises leading to the rapid development of HHC Agencies aimed to help Clients maintain and improve the quality of life by combining a profitable business models with meaningful care opportunities [15, 26]. This rising demand is driven by several key factors, including population aging, which has resulted in a growing need for in-home services among the elderly [27]); the increasing prevalence of chronic diseases such as diabetes, cardiovascular, and respiratory conditions, which require continuous and long-term care [28]; and policy shifts aimed at reducing hospital stays and overall healthcare costs, promoting the transition of services from institutional settings to home-based care [29]. Furthermore, many patients and families express a clear preference for receiving care in the familiar and comfortable environment of their own

homes [30]. In parallel, technological advancements, such as telemedicine and portable medical devices, have made it increasingly feasible to deliver safe and effective care outside of traditional facilities [31]. Given these trends, monitoring the quality of services provided by HHC agencies has become an increasingly important priority to ensure both patient safety and service effectiveness.

The increase in the demand for Home Health Care (HHC) has not only attracted the attention of governments, but also that of economic enterprises, leading to the rapid development of HHC agencies aimed at helping clients maintain and improve their quality of life by combining profitable business models with meaningful care opportunities.

Monitoring the quality of services provided by HHC Agencies is crucial for ensuring patients receive high-quality care. This process is essential for identifying areas for improvement and sustaining quality improvement efforts. Overcoming barriers and challenges to quality monitoring, such as the lack of a universal definition of "quality" and the complexity of quality measures, is critical for enhancing healthcare quality [32]. Regular monitoring and visits by home health professionals can help prevent hospitalization, with high-quality HHC agencies offering exceptional care to give patients the best chance of achieving their desired outcomes [33]. Quality measurement and supervision in HHC, particularly through indicators, play a vital role in maintaining high standards of care delivery. They help establish expected standards, set personal objectives, and ensure staff provide high-quality care and support, ultimately improving the quality of care provided [34]. This approach has been associated with improved patient outcomes, better management of chronic conditions, and an overall increase in the quality of care delivery, benefiting patients receiving HHCs [35].

In addition, the prerequisite for quality measurement and evaluation is defining specific requirements for care [36]. Quality indicators (QIs) are used to measure, monitor, and evaluate the quality of health care. Quality indicators can identify the quality of care and help determine priorities for quality improvement [37]. In addition to these QIs, to improve the delivery of HHC, it is essential to compare the quality of care and provide useful information to policymakers, funders, and health care providers as a common measurement and evaluation framework, as QIs enable having national or international standards [38, 39]. Since the structure of HHC is influenced by government service structures, regulations, economic status, and the available workforce [40], evaluation will not be done in the same way in different countries, and will be affected by the goals pursued, the approaches adopted, management

styles, the applied scales and tools, the structure and the process of evaluation, application, and the results obtained [41].

In the realm of HHC, countries are progressing at varying stages of development. Some nations like Algeria, South Africa, and the Central African Republic are in the initial phases of establishing and expanding their HHC systems [42], while others have achieved significant advancements. The European Economic and Social Committee (EESC) report highlights diverse models of regulating live-in care worker employment in countries such as Italy, the United Kingdom, Germany, and Poland [43]. Quality evaluation indicators in HHC vary based on the system's development conditions. In Switzerland, experts and HHC nurses assessed the appropriateness of Resident Assessment Instrument-Home Care (RAI-HC) Quality Indicators (QIs) to measure service quality. In the USA, a range of indicators like Medicare Spending per Beneficiary (MSPB-PAC), Home Care Quality Indicators (HCQIs), and Potentially Avoidable Event (PAE) measures are utilized (Agencies for Medicare & Medicaid Services). In the case of Iran, although the Ministry of Health and Medical Education has taken steps to develop and expand home health care services in recent years, standardized and nationally validated quality indicators remain limited. Some pilot projects and academic initiatives have explored the localization or partial adaptation of international tools, such as the Resident Assessment Instrument (RAI), yet no comprehensive national framework has been implemented to date [44, 45]. As such, integrating global experiences and adapting them to Iran's cultural and structural healthcare context is essential to establishing effective quality measurement systems in HHC. This study aims to conduct a scoping review to gather HHC quality evaluation indicators from existing studies. The goal is to standardize local indicators for the sensitive issue of HHC using global experiences, enabling countries with less developed home care systems to select suitable indicators.

METHODS

Study Design

This study is a scoping review aimed at mapping and synthesizing the existing research on quality indicators in Home Health Care (HHC). The purpose was to provide a comprehensive overview of the scope and nature of the evidence in this field. The methodology was guided by the PRISMA-ScR checklist to ensure methodological rigor and transparency [46].

Eligibility Criteria

Studies were eligible for inclusion if they met the following criteria:

Published in either English or Farsi;

Focused on the structure, process, or outcomes related to monitoring the quality of HHC services;

Employing descriptive, mixed-methods, or multi-method approaches.

Studies published between 2000 and 2022 were considered. Articles that primarily addressed service delivery modalities or related regulatory frameworks without focusing on quality indicators were excluded.

Search Strategy

A comprehensive three-stage search strategy was implemented to identify relevant literature published between January 1, 2000, and March 31, 2022.

Stage 1: Preliminary limited search was conducted in PubMed and Google Scholar to identify key terms and relevant articles. Keywords and phrases from titles and abstracts were analyzed to develop an exhaustive search syntax.

Stage 2: Using the refined keywords, systematic searches were performed across multiple electronic databases, including PubMed, Scopus, Embase, Web of Science, Google Scholar, Magiran, SID, and the Academic Jihad database.

Stage 3: Reference lists of all included articles were manually screened to identify additional studies not captured in the electronic searches.

The Syntax Used for Systematic Search in PubMed Database

PubMed

((("Administrative Technique" [tiab] OR Supervision [tiab] OR Process Measures [tiab] OR Peer Reviews [tiab] OR Quality Indicators [tiab] OR Assessment [tiab] OR Health Metric [tiab] OR Observation [tiab] OR Accreditations [tiab] OR Performance Appraisal [tiab] OR Health Global Trigger Tool [tiab] OR Healthcare Global Trigger Tool [tiab] OR Employee Nurses Performance Evaluation [tiab] OR Family Planning Personnel Evaluation [tiab] OR Healthcare Quality Assurance [tiab]) AND (Nonprofessional Home Care [tiab] OR Nursing Home [tiab] OR Home Care Service [tiab] OR Domiciliary Care [tiab] OR Home Health Care [tiab] OR Home Care Nursing [tiab] Home Health Care Nursing [tiab]))

Data Extraction and Management

Two independent researchers screened the studies based on the titles and the abstracts of the articles. Two independent reviewers conducted the screening of titles and abstracts to determine eligibility based on predefined inclusion and exclusion criteria. This dual independent screening aimed to minimize selection bias and increase reliability. Any disagreements were resolved through discussion, and when consensus was not achieved, a third reviewer adjudicated. Full texts of potentially relevant studies were then retrieved and

independently assessed by the same reviewers. Articles were classified as 'included,' 'excluded,' or 'uncertain.' In cases of uncertainty or disagreement, consensus was sought through discussion, with involvement of a third reviewer as necessary.

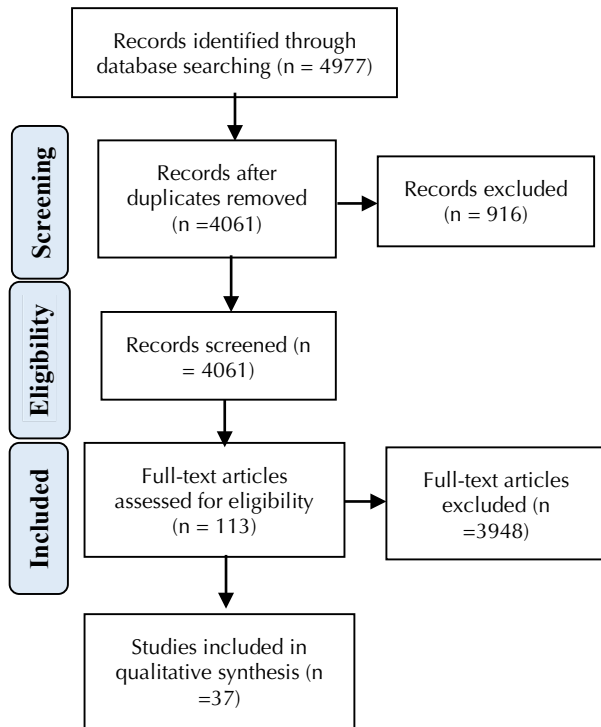


Figure 1. The flowchart of searching studies in databases based on

Data extraction was performed using a structured form to capture study characteristics (including author, publication year, journal, geographic location, study objectives, design, type, sample size), participants'

demographics (age, gender), and detailed information on identified quality indicators and authors' recommendations.

Quality Assessment

Although scoping reviews do not typically appraise study quality, to enhance rigor, the included studies were assessed using standardized tools appropriate to their design: PRISMA checklist for review studies, COREQ for qualitative studies, and STROBE checklist for descriptive studies. All extracted data and quality assessments were cross-checked by all authors to ensure accuracy and consistency.

RESULTS

The Description of Studies

Out of 4977 extracted studies, 153 studies were obtained from Web of Science, 1397 from Scopus, 1057 from Embase, 2247 from PubMed, and 127 studies from Google Scholar. In the first step, duplicate articles (916 studies) were eliminated. In the second step, 2965 studies were excluded due to having different titles and objectives. In the third step, the abstracts of the studies were reviewed and 983 studies were eliminated, and 113 studies were excluded after reviewing the full texts of the studies due to the inappropriateness of the content. Finally, 37 studies were included in the study (Figure 1). The 37 studies included had been conducted from 1990 to 2022. Nearly half of these studies had been conducted between 2010 and 2020. The largest number of the studies belonged to the USA (n=13). The number of the authors varied from 1 to 9. Out of the 37 articles included in the study, in terms of methodology, 20 had been done quantitatively and the rest had used review qualitative and mixed methods (Table 1).

Table 1. The Table of Studies

Authors	Country	Study type/objective	Findings
(Guthrie et al., 2022) [47]	Canada	- Multi method The development of community-based palliative care quality indicators using InterRAI data	The 22 identified indicators include prevalence, falls, severe or excruciating daily pain, the pain which cannot be controlled by medication, the absence of pain relief, constipation, the shortness of breath at the time of rest and activity, no improvement in shortness of breath, stasis/pressure ulcer, pseudo-delirium syndrome, nausea or vomiting, fatigue, sleep problems, self-reported poor health, bad mood, failure to improve bad mood, a decrease in social activities, loneliness, caregiver distress, neurological complaints, the desire to die, emergency visit, hospital re-admission
(Foong et al., 2022) [48]	Australia	- Review; Identification and evaluation of the set of HHC quality indicators	Three sets of HHC quality indicators include: A-Functional indicators: ADL and its changes, mobility at home and the related disorders, cognitive function and its changes, communication and its changes B-Clinical indicators: urinary incontinence and its changes, skin injuries and wounds, falls, weight loss, dehydration, mood changes, pain and the level of controlling it. C- Social indicators: Loneliness and distress, interaction and social participation, not leaving home and getting used to this situation, having control over daily life, personal hygiene and comfort, cleanliness and comfort of the residence place, safety, neglect or abuse, employment and the dignity of the patient
Schwenke et al., 2022) [49]	The USA	- Descriptive; Examining the type and the perceived impact of the actions taken by HHC personnel and the manner of evaluating the actions taken	The questionnaire includes questions regarding care evaluation: How have the care measures been evaluated? What has been the most important consequence of the actions? Has needs assessment been improved by taking these actions? Have the consequences of actions been described in your organization? How have consequences been described?
(Tate et al., 2022) [50]	Canada	- Descriptive; Defining the criteria for evaluating the quality of care for the entire transition process from LTC to ED	Quality indicators in the domain of safety: determining the care requirements based on the received information, sufficient reporting about the LTC settings, the documentation of the care recipient's allergies and medication list, the reason for being transferred to the emergency department and the summary of the care received in the emergency department, the documented cognitive status and

			<p>mobility. Quality indicators in the domain of timeliness: the amount of time spent from the time of diagnosing the need for emergency care to the presence of the emergency team at the destination, the amount of time spent from when the patient returns from the treatment center to re-evaluation. Quality indicators in the domain of care recipient-centeredness: access to aid tools and advanced measures, a do-not-resuscitate (DNR) order. Being informed of the reason for transfer, trying to contact relatives if necessary. Quality indicators in the domain of effectiveness: not needing to be transferred to the emergency room in the last 7 days, 1-4 visits by the doctor in the last 7 days, changes in the cognitive status after returning from the treatment center, new skin ulcers after returning from the treatment center. Quality indicators in the domain of efficiency: the type of the vehicle used to transfer the care-recipient to the treatment center, the number of the personnel required for transferring the care-recipient to the treatment center</p>
(Zhang et al., 2022) [51]	China	- Descriptive; developing qualitative indicators based on Maslow's hierarchy of needs, to care for the elderly with disabilities in long-term care centers	Evaluation based on Maslow's pyramid: 1. Physiological needs: nutritional care, health care, excretory care, ambulatory care, sleep care Rehabilitation care. 2. Safety needs: the observation of the changing conditions, drug safety, preventing daily risk factors, pressure ulcers prevention and care, lung infection prevention and care, referral care. 3. The sense of belonging and need for love: emotional care, mental care. 4. Self-esteem needs: respectful care, hospice care. 5. Cognitive needs: learning needs. 6. Aesthetic needs: the care related to tidiness and grooming needs. 7. Self-actualization needs: recreational activities
(Todd, 2022) [52]	The USA	- Descriptive; Introducing the HCBS quality assessment set (Home and Community-Based Services) As a collection of quality assessment for home and community-based services	Criteria for person-centered care, initial and ongoing assessment - care planning, communication between health care providers and patients, and reliability in service delivery
(Poldrugovac et al., 2022) [53]	Canada	- Descriptive; Performance indicators of long-term care centers	Performance indicators include: A- General indicators: 1- improved or worsened ADL, 2- using antipsychotic drugs without diagnosis, 3- Falls, 4- major depression, 5- stable or aggravated pain complaints, 6- pressure ulcers' worsening B-Specific indicators: 1- worsened or improved urinary incontinence, 2- worsened or improved patient communication, 3- worsened or improved motor status, 4- Feeding with a feeding tube, 5- unexplainable weight loss
(Sinn et al., 2022) [54]	Canada	- Descriptive; Examining HHC assessment models and service delivery before and during the COVID-19 pandemic	HHC assessment principles include: 1- Supporting individual patient care and monitoring at the level of the system. 2-Using standardized assessment models. 3- Focusing on meeting the patient's basic needs
(Geng et al., 2020) [55]	The USA	- Descriptive; Investigating the growth and the evolution of home health institutions market and comparing their qualitative performance	Quality indicators in investigating the performance of home health institutions include: Process criteria: educating the patient or caregivers, timely visit by the doctor. Outcome measures: mobility progress, bathing independently, the number of readmissions. Potentially avoidable events: need for urgent and unplanned emergency care without hospitalization
(Wagner et al., 2020b) [56]	Switzerland	- Multi method. The assessment of RAI-HC instrument quality indicators for measuring the quality of HHC	Eighteen appropriate indicators include: daily pain services, skin ulcers, pain progression, obstruction, inadequate pain control, informal caregivers' distress, dehydration, oral problems, inconsistent medication use, hospitalization and emergency care, mobility problems and the absence of aid tools, bladder control, social isolation along with distress, impaired mobility at home, delirium, reduced independence, need for rehabilitation, the lack of treatment, misbehavior, and negligence
Johannessen et al., 2019) [57]	Norway	- Qualitative; revision and modification of nursing homes and HHC quality and safety management intervention guideline	A collaborative approach involving the stakeholders towards designing leadership intervention in order to improve quality and safety in nursing homes and HHC. Collaborative approach, adapting the intervention to its context and daily performance.
(Harman et al., 2019) [58]	Canada	- Descriptive; Codifying HHC quality control indicators in the seriously ill individuals over 65	The seven indicators obtained include: Prevalence of falls, prevalence of disturbing or severe daily pain, prevalence of caregiver distress, prevalence of bad mood including sadness and anger, prevalence of inadequate medications for pain control, prevalence of social isolation, and prevalence of constipation
(Tang et al., 2018) [59]	China	- Qualitative; Developing a comprehensive system of quality indicators for home care	Structure (allocating home care personnel, home care rules and regulations, home care settings/environment, equipment for home care visit), process (assessment before taking home care measures, homecare-related technologies, disinfection and isolation, health counseling and training at home, rehabilitation nursing for patients at home, basic nursing for patients at home, palliative care for patients at home), quality of outcome (patients' outcomes at home such as the percentage of implementing follow-ups, the incidence or the number of patients with new pressure ulcers, the incidence or the number of patients with falls, etc.)
(Heany et al., 2018) [60]	The USA	- Mixed Methods Field study. Checking the ability of Michigan Home Visiting Quality Assurance System (MHVQAS) to monitor the quality of implementing home visit services	The eight domains of this tool: 1. the domain of recruitment and registration, 2. workload of home visitors and supervisors, 3. assessment of family needs and services referrals, 4. the amount and the duration of use, 5. families, 6. home visit content, 7. the qualification and the supervision of the staff, 8. job burnout and financial turnover
(Smith et al., 2017) [61]	The USA	- Mixed method; The patient's experience and quality indicators of the process of care in home health care agencies: the factors associated with high quality performance	Evaluation criteria: receiving timely help or guidance from the agency in cases of need, providing professional care by knowledgeable and up-to-date personnel, the personnel's gentle and respectful behavior, good communication and active listening on the part of the caregivers, education regarding the type of care and the services received, perceptible explanations when needed, the caregivers' discussing medications, pain and home safety, providing information on how to set/decorate the house, checking all the patient's prescription and non-prescription medications, and pain training, examining, and control. The Outcome and Assessment Information Set (OASIS) of the Process Measures. Early initiation of care, vaccination, short-term periods of heart failure symptom management, diabetic foot care and patient education, pain assessment and interventions, depression assessment, medication education, ambulatory fall risk assessment, and pressure ulcer prevention

(Scaccabarozzi et al., 2017) [62]	Italy	- Descriptive; Assessing the quality of palliative care at home	The dimensions under study include: hiring specialist physicians and nurses, providing 24-hour services during the week, providing mental support, training, timely actions, examining the caregivers' training needs before starting service provision
(Shafir et al., 2016) [63]	The USA	- Qualitative; Assessing the patient and the caregiver's perceptions of what constitutes quality Home Based Primary Care (HBPC)	Important themes in assessing the quality of home-based health services include: Access to care and caregivers (easy access, in the least time, at the least cost, and continuously), Qualified caregivers (with interpersonal and technical skills), Coordinated care (with other providers, care settings, and medical equipment agencies), Patient assessment towards achieving the set goals/Goal Attainment
(Cook and Horrocks, 2016) [64]	England	- Descriptive; Investigating quality priorities in end-of-life care	End-of-life CQUIN indicators for community health nurses include: early identification of the individuals approaching their end-of-life stage, planning for advanced care in advance, and coordination and collaboration between the services involved in end-of-life care. End-of-life care: organizing care, organizational issues, clinical effectiveness, long-term care, dementia, pressure ulcers, safety, hospitalization and discharge, falls, addiction, elderly care, and the patient and the family's experiences of care
(Leff et al., 2015) [65]	The USA	Field Setting up a national network of primary and palliative home-based medical care	The framework for the care quality of the national network includes ten domains of care quality, thirty-two standards, and twenty quality indicators. The domains include: assessment, care coordination, safety, quality of life, care provider's competency, goal attainment, education, access, the patient and the caregiver's experience, cost, or cost-effective care.
(Foebel et al., 2015) [66]	Germany-Italy-Denmark-Holland-Finland-Czech Republic	- Descriptive; The assessment of the quality of HHC services for the vulnerable elderly people	The 23 items of Home Care Quality Indicators (HCQI): Functional quality indicators: IADL and its changes, ADL and its changes, communication and its changes, cognitive function changes. Clinical quality indicators: weight loss, falls, pain, mood changes, urinary control. Clinical, social, and service quality indicators: influenza vaccine, caregivers' persistent distress, emergency care
Woitha et al., 2015 [67]	25 European countries	- Descriptive; Examining HHC Quality Indicators	Four scales: care equipment and continuity, structured documents in the medical record, training and assessment of the personnel, the availability of prescribed drugs
Mofina & Guthrie, 2014 [68]	Canada	- Descriptive; HHC Quality Indicators	HHC quality indicators include: Daily life/rehabilitation activities, Instrumental Activities of Daily Living (IADL), health promotion, communication disorders, visual function, using alcohol and hazardous beverages, cognitive, behavior, depression and anxiety, abusing the elderly, social functioning, cardio-respiratory, dehydration, falls, nutrition, oral and dental hygiene, pain, pressure ulcers, skin and feet conditions, the patient's adherence, drug management, palliative care. Preventive health care measures: immunization and screening, psychiatric medications, reduction of formal services, environmental assessment, bowel management, urinary incontinence, and indwelling urinary catheter
(Luckett et al., 2014) [69]	Spain	- Descriptive; the measurement indicators of Palliative care quality	Education regarding palliative care, communications, and ethical issues. Improving patients and families' access, continuous care and intensity of HHC with a preventive care planning approach. Identifying (golden standards framework), recording and improving the care of terminally ill patients with different illnesses except cancer. Development and evaluation of specialist nurses' experiences and a medical reference for palliative care in primary care teams. Improving teamwork among doctors, nurses, and other professionals. Developing bereavement plans. Communication with specialized palliative care services
(Morris et al., 2013) [70]	The USA	Description of HHC InterRAI quality indicators	Home care quality indicators: functional (instrumental activities of daily life, daily life activities, cognitive, communication). clinical (urinary incontinence, falls, weight loss, injuries and wounds, mood, pain, daily pain intensity, uncontrolled pain), social (caregivers' distress, loneliness and distress, loneliness and getting used to this situation), Utilization (the absence of flu vaccination/hospitals, emergency department and urgent care)
Winters-Van Der Meer et al., 2013) [71]	Holland	- Descriptive; analyzing the procedure of Investigating care quality indicators in long-term care centers	Professional indicators of home care: pressure ulcers, malnutrition, falls, medical incidents, using antidepressants, the care recipients' level of vaccination, the prevalence of incontinence, the care recipients with catheters, problem making behavior, physical limitations, depression. Care recipient-related Indicators: care and assessment plan, shared decision-making, attitudes, information, telephone access, body care, meals, competency and safety, physical limitations, comfort, atmosphere, housing and privacy, activities, autonomy, mental well-being, safe living environment, the reliability of providers, access to personnel, integrated care
(Gressel, 2013) [72]	The USA	Designing a model for ranking the quality of home care	1. Managing daily activities: mobility, bathing, etc. 2. Pain management and symptom treatment. 3. Treatment of ulcers: examination and prevention of pressure ulcers. 4. Injury prevention: medical education, fall prevention, vaccination. 5. Prevention of unplanned hospital care: readmission
(Blais et al., 2013) [73]	Canada	- Retrospective cohort; assessment of adverse events among Home care clients	The most common injuries and complications: falls; ulcer infection; psychosocial, behavioral, or mental health issues; and the adverse consequences of medication errors
(Aletas et al., 2010) [74]	Greece	The exploratory analysis of development and the psychometric evaluation, a tool for measuring the level of satisfaction with HHC and nursing homes	Three scales of socio-economic changes, the staff's skills and attitudes, and the appropriateness of service. Socio-economic changes: encouraging initiative, improving the financial status through the services provided, improving social performance through companionship. The staff's skills and attitudes: rushing to leave where they provide home care, avoiding answering patients' questions, creating tension with the caregivers. Appropriateness of services: the staff's unwillingness of to provide the required care, patients' trust in caregivers. Service planning: insufficient frequency of visits, appropriateness of scheduled days and hours of visits
(Gershon et al., 2008) [75]	The USA	- Descriptive; Unsafe conditions of home care	Inappropriate health conditions, untidy home, cigarette smoke, noticing cockroaches, insecurity, violence, aggressive pets
Dalby and Hirdes, 2008) [76]	Canada	- Descriptive; Determining the relationship between institutions'	The indicators for assessing the quality of home care: Inadequate meals, dehydration, the lack of medication check by the physician, mobility issues and the lack of aid tools, ADL potential /rehabilitation and the lack of treatment, falls,

		characteristics and the quality of home care	social isolation, delirium, bad mood, daily bothering/severe pain, inadequate pain control, neglect or abuse, the absence of flu vaccination, hospitalization, failure to improve/the occurrence of bladder incontinence, skin ulcers, ADL impairment, mobility impairment at home, cognitive function, communication difficulties
(Smith et al., 2007) [77]	The USA	- Descriptive; Identifying the indicators of the quality of primary home care	Quality Indicators: constipation, continuity and coordination of care, dementia, depression, diabetes mellitus, end-of-life care, falls, hearing impairment, heart failure, blood pressure, insomnia, ischemic heart disease, malnutrition, drug management, arthritis, osteoporosis, pain management, pneumonia and influenza, pressure ulcers, screening and prevention, stroke and atrial fibrillation, urinary incontinence, visual impairment
(Wang et al., 2007) [78]	Taiwan	- Qualitative; Determining the indicators of the quality of care provided by long-term care institutions	Tangible items: up-to-date equipment and facilities, visually attractive physical facilities, neat clothes of employees, the appearance of the organization's physical facilities in accordance with the type of services provided. Reliability: the organization's dependability in fulfilling its obligations, a compassionate and reassuring attitude towards the residents with disabilities, keeping record and files meticulously. Responsiveness: announcing the type of services that can be provided by the organization, contacting the residents in need of help immediately, high motivation of employees to provide services and care, answering the questions raised by the family members. Guarantee: reliable staff, treating the residents respectfully along with passion and intimacy, the staff's being equipped with sufficient knowledge and skills. Empathy: providing care for all clients, providing care for the residents based on their different needs, respecting the rights and the dignity of the residents, the staff's having awareness of the residents' individual needs
(Dalby et al., 2005) [79]	Canada	Preparing risk adjustment models to assess the quality of care	The 19 Home Care Quality Indicators (HCQIs) are divided into two general categories of prevalence and incidence indicators. Prevalence: Inadequate meals, weight loss, dehydration, lack of mobility aids, falls, social isolation, delusions, bad mood, disabling or severe daily pain, inadequate pain control, neglect/abuse, injuries, and hospitalization. Incidence: Lack of recovery/ bladder incontinence, lack of recovery /occurrence of skin ulcers, lack of recovery / a reduction in ADL, lack of recovery / mobility impairment at home, failure to recover/ cognitive impairment, lack of recovery / communication difficulties
(Fortinsky and Madigan, 2004) [80]	The USA	Home health care quality indicators	Improvement in cleaning, improvement in dressing, improvement in bathing, improvement in using the toilet, mobility improvement, improvement in movement, improvement in eating, improvement in preparing light meals, improvement in doing house chores, improvement in shopping, improvement in using the telephone, improvement in oral medication management, grooming, improvement in speech or talking, improvement in the pain interfering with activities, improvement in the number of surgical wounds, improvement in the condition of surgical wounds, improvement in the shortness of breath, improvement in urinary infection, improvement in urinary incontinence, improvement in intestinal incontinence, improving the frequency of behavioral problems, improving cognitive function, improving the level of confusion, improving the level of anxiety
(Roback and Herzog, 2003) [81]	Sweden	- Review; home care quality assessment guidelines	Maintaining the patient's safety, paying attention to the desires and the needs of the patient and his/her family, Patient education, patient satisfaction with the care process, means of communication with the patient, strong support
(Smith Higuchi et al., 2002) [82]	Canada	- Descriptive; Challenges in home care practice: a decision-making perspective	(a) Challenges arising while developing client-centered care plans, (b) challenges arising from the HHC practice environment, (c) challenges related to building trust in clinical decision-making, and (d) ethical challenges of decision-making. Competencies required for HHC skills include: (a) performance management, (b) knowledge-skill maintenance, (c) written documentation, (d) home health care knowledge, (e) communication, (f) nursing process, and (g) customer-family management
(Phillips et al., 1990) [83]	The USA	- Descriptive; Developing a tool to measure the quality of care at home	QUALCARE scale has 6 domains: physical, medical management, psychosocial, environmental, human rights, and financial

Based on the findings of the included studies, HHC quality indicators were classified under 3 categories: structure, process, and outcome of providing HHC, which will be described in detail (Figure 2). The first group of data concerns the structure of HHC agencies, which has been discussed in several studies. Based on available research, key structural indicators of quality care at home include appropriate physical space, equipment, sufficient facilities, an effective document management system, and the supply and development of the workforce. These indicators cover the physical space of the agency and the alignment of its appearance with the type of services provided [78]. The agency should provide up-to-date equipment needed to provide HHC [59, 67, 78], clients should have access to prescription drugs as soon as possible [48], and having an independent vehicle to transport patients to the hospital, if necessary, is another structural feature [50].

Additionally, the agency should maintain sufficient documentation regarding the rules and regulations and ensure that customers have easy access to them [59-66]. The agency must keep patient records and files very carefully [78]. Providing and maintaining sufficient, qualified, and expert personnel [59, 62, 63, 71], and investing in workforce training are crucial steps toward developing human resources. Additionally, designing uniforms for the organization's personnel can enhance employee safety [78].

Beyond these, several other structural components have been emphasized in the literature. These include the reliability and responsiveness of the organization, demonstrated through consistent service provision, respectful and empathetic communication, and quick response to client needs [78]. Agencies are also encouraged to implement standardized assessment models to ensure consistent and high-quality service

delivery [54]. Moreover, continuity of care and having a structured documentation system are crucial in facilitating effective service tracking and evaluation [67]. Supervising staff performance and managing their workload are further structural considerations, aimed at maintaining service quality and preventing burnout [60]. The physical environment of home care settings should also meet basic hygiene and safety standards and be free of environmental hazards to ensure suitability for care delivery [75]. Another essential element is the presence of professional and well-trained personnel who demonstrate both technical expertise and respectful interaction with clients [61]. Finally, fostering coordinated care with other healthcare providers and service organizations is fundamental in creating an integrated and supportive care system [63].

The second part of the data relates to the process of providing HHC, which is broader than the other two parts and includes more indicators. The process of providing care at home encompasses a Patient-Centered Approach, Establishing Safety and Reliability, Efficient and Timely Support, and Continuous Quality Improvement. The Patient-Centered Approach includes assessing the patient's living environment for health and safety conditions [61, 68, 71, 75], preparing home arrangements based on the patient's condition, ensuring the timely start of care [61], and the gentle and polite behavior of the staff with the patient and family [61, 78]. It also involves establishing good communication and active listening by the staff [61-65, 67, 69, 70, 72], answering questions raised by the family [48], joint decision-making with the family [71], and providing necessary training regarding the services and care provided [55, 59, 61, 62, 65, 72, 81]. In addition, the process requires sensitivity to individual patient preferences and cultural considerations, respecting their dignity and autonomy throughout the care process [63, 78].

To establish safety and reliability, it is essential to implement infection control protocols [51, 59], administer vaccinations [67, 76], and record accurate nursing reports [50, 60, 74, 82]. Additionally, all prescription and non-prescription drugs taken by the patient [50, 51, 56, 68, 76, 77, 80, 84], as well as any drug allergies, must be documented in the patient's medication list [50]. Safety processes also include risk prevention measures such as pressure ulcer care, fall prevention, and preventing hospital readmissions [51, 59, 72, 76].

Process indicators include the organization's provision of efficient and timely support during care, such as providing 24-hour telephone services throughout the week and ensuring timely care [50, 62, 63], and access to medication at the right time [58, 67]. Equally important is the agency's ability to provide rehabilitation, palliative, and emotional support services

when needed, as well as timely referral to other services [51, 59, 63, 64].

Continuous Quality Improvement involves the continuous assessment of the patient regarding problems and care needs [52, 59, 63], as well as periodic visits to the patient's home by agency managers [74]. Regular monitoring of service outcomes, follow-ups, documentation of avoidable incidents such as emergency visits and falls, and the use of standardized care plans also contribute to ongoing process optimization [59, 70, 72].

The indices of HHC outcomes are classified into functional, clinical, and social indicators. Functional indicators are related to the ability of the agency and its personnel to manage the patient's problems. These indicators primarily focus on changes in the patient's ability to perform activities of daily living [68] and alterations in the patient's cognitive function [50, 51, 68]. They also include improvements in the patient's ability to perform instrumental activities such as dressing, bathing, grooming, toileting, using the telephone, preparing meals, and shopping [80]. Furthermore, increased independence in mobility and enhanced speech or communication skills are considered essential functional outcomes [80].

Clinical indicators include: the intensity of the patient's pain after receiving care at home [56, 58, 61, 62, 76, 77, 79, 80]; occurrence of new pressure ulcers and the healing process of old ulcers [47, 51, 61, 64, 72]; providing nutrition based on the patient's needs [51, 53]; occurrence of excretory disorders such as constipation, urinary incontinence, urinary infection [47, 53, 58, 68, 70, 77, 80]; occurrence of patient falls [47, 53, 58, 59, 61, 64, 68, 70-73, 77, 79]; the patient's sleep problems [47, 51, 77]; changes in the patient's mood [47, 48, 58, 66, 70, 76, 79]; medication errors occurred [73]; unexplained weight loss of the patient [48, 53, 66, 70, 79]; occurrence of dehydration [48, 56, 68, 76, 79]; exacerbation of delusions [50, 76, 79]; patient fatigue [47]; lack of improvement in shortness of breath [47, 68, 80]; oral and dental problems [56, 58]; and hospital readmission rate [55, 56, 64, 72, 76, 79].

Other clinical outcomes involve the management of chronic conditions such as diabetes, dementia, heart failure, hypertension, ischemic heart disease, stroke, pneumonia, and arthritis, which reflect the broader impact of HHC on long-term disease control [77]. In addition, proper medication management, including reduced inappropriate use of antipsychotics and improved adherence, are considered important outcome measures [53, 67, 76].

Finally, social indicators include public health, i.e., the patient's personal hygiene [47, 51, 68]; the patient's oral and dental hygiene [56, 68]; cleanliness and comfort of the place of residence, the patient's loneliness and distress, neglecting or abusing the patient [66, 68, 70]; and encouraging the patient to communicate [48, 52,

[61, 69, 81-83]. Improved social participation, such as the patient's interaction with caregivers, family members, and community members, is another important social outcome [48, 52, 61, 69, 81-83]. Additionally, indicators such as the caregiver's

emotional well-being and reduced caregiver distress reflect the extended impact of HHC services beyond the patient [47, 56, 66, 70]. Patient satisfaction, perception of safety, and perceived quality of life are also considered essential social outcomes in several studies [63, 81, 83].

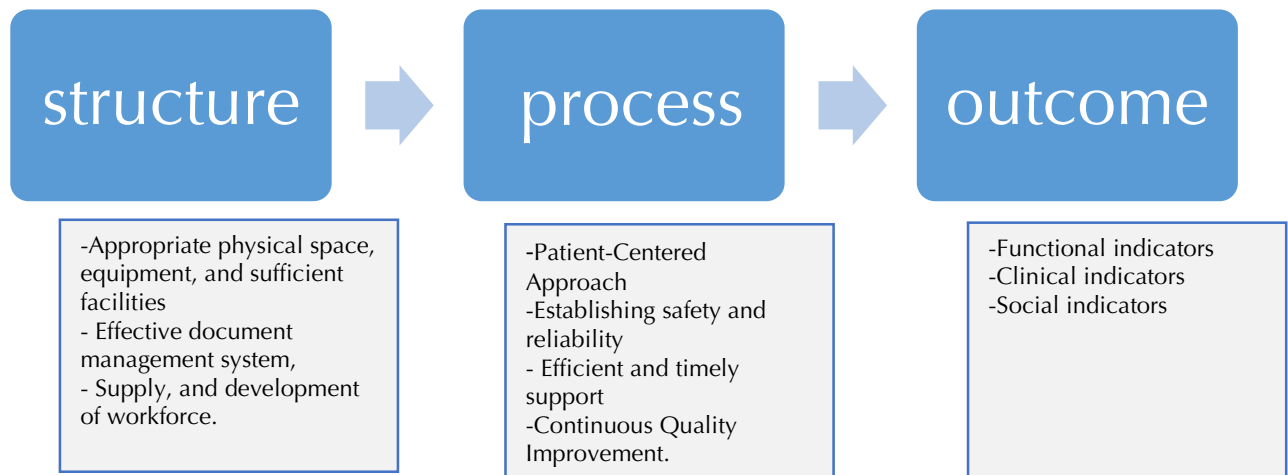


Figure 2: Quality Indicators Map for Home Health Care

DISCUSSION

This scoping review systematically examined the existing literature related to Home Health Care (HHC) quality indicators, revealing three interconnected domains: structure, process, and outcome. These domains align with Donabedian's foundational model for health care quality assessment, which conceptualizes quality through organizational structures, care processes, and resultant outcomes [84, 85]. The interplay among these domains suggests that improvements in one dimension are contingent on and influence others, emphasizing a holistic approach to HHC quality enhancement [86].

Structure Domain

The structural aspects of HHC primarily encompass organizational resources, physical environments, policies, and workforce qualifications. Foong et al. (2022) emphasize that structural indicators include not only the quantity and adequacy of facilities and equipment but also critical factors such as staff qualifications and resource allocation, which directly influence care capacity [48]. This concurs with findings by Donabedian (1988), who highlighted that structural adequacy forms the foundation upon which effective processes depend [85].

Notably, Tang et al. (2018) identified a significant gap in existing HHC quality measurement tools, which often underrepresent structural dimensions despite evidence that elements like sufficient qualified

personnel, regulations, and environmental factors are indispensable for optimal care delivery [59]. The structural indicators of health care Agencies affect the care processes, which, in turn, affect the patient's health outcomes. This is supported by Woitha et al. (2015), who asserted that structural indicators act as a catalyst for quality improvement initiatives, with deficiencies potentially jeopardizing care standards [67].

In comparison to institutional healthcare settings, HHC environments present unique challenges, such as non-standardized physical spaces that may increase risks for both caregivers and patients [87]. This underscores the necessity for tailored structural indicators in HHC that account for environmental variability, as also noted by Jajszczok et al. (2023) in emphasizing context-specific quality benchmarks [15].

Literature review showed that one of the important indicators in the field of structure is the accurate storage and maintenance of patient records and histories. Organizations need access to advanced information technology, mobile technology, and electronic health records (EHR) in order to address the increasing demand for all types of HHCs [88]. The safe use of these equipment requires financial support and expert staff [87, 89]. Because HHC equipment and environment are different from those of hospitals and health providers must provide a completely different type of services [86]. According to the Swedish Work Environment Authority, if proper training is provided for health workers, in addition to increased patient safety, care providers' burnout will also decrease [90].

On the other hand, care measures and activities can be monitored, recorded, and reported to ensure the correct and safe implementation of HHCs [91]. Therefore, it is important for HHC organizations to have somewhere to store the information describing the diagnosis, problems, interventions and results of patients in order to predict the outcomes in addition to data storage, as well as predicting adverse outcomes, such as hospitalization and mortality [92]. Based on literature review, developing rules and regulations for HHC was one of the other items in the structure. Tang et al (2018) have reported HHC rules and regulations as one of the most important indicators in evaluating the quality of HHC, and experts assigned the highest weight to this item. Experts believed that correct rules and regulations are a key prerequisite for quality HHC [59]. Sufficient and up-to-date medical equipment and facilities in HHC Agencies are other important indicators in the field of structure. In every HHC Agencies, a basic and major prerequisite is the presence of adequate equipment, appropriate to the type of the service provided to patients. In addition, the effectiveness and safety of all the equipment used for healthcare recipients must be guaranteed [48]. Another noteworthy point in the structural area is maintaining the right nurse-to-patient ratio in an HHC organization, which can be affected by the lack of nurses' participation or the organizations' refusal to recruit nurses due to budget restrictions, and may lower the productivity and quality of care and patient satisfaction [89]. Wang et al (2007) believed that care provision under the pressure of limited budgets and a small number of caregivers causes an excessive need for non-professional caregivers [78]. On the other hand, fair salaries for nurses proportionate to the type/length of the visit, patient accuracy, and the workload related to different situations are among structural factors that affect the quality of care [91]. Therefore, it can be said that a good working setting for HHCs facilitates the optimization of patient outcomes and reduces the use of expensive hospital and institutional care [61]. Moreover, recent research by Lee et al. (2020) highlights that adequate staffing ratios in HHC are associated with reduced hospital readmissions and improved patient satisfaction, reinforcing the critical nature of structural investment [93].

Process Domain

According to the literature, the indicators of process quality show what care or interventions the HHC organization provides in order to achieve the best outcomes for the majority of patients [48]. Smith et al (2017) proposed that applying a patient-centered approach with observing clients' basic and moral rights in regard with safety, using health services, and receiving adequate information and awareness guarantees quality during the HHC process, and stated that care providers

with limited resources possibly focus on fewer areas [61]. In this regard, Scaccabarozzi et al (2017) stated that, in order to improve the quality, the organization should have a clear roadmap, in addition to having trained employees, multiple supports, and medication supply [94]. Moreover, it should evaluate the environment in which the service is provided, preparing it for the provision of a timely and safe care, based on patient's needs [50]. It seems that the organizational performance in addressing clients' rights is one of the basic principles of quality care, which can result in desirable outcomes such as patient satisfaction and achieving the expected results.

Literature review shows that in order to examine the performance and quality of the services provided by agencies, the presence of an efficient and timely support system is required. In this regard, Scaccabarozzi et al suggested that agencies should be able to respond timely and appropriately to the requests and needs of their clients and employees in the time of need [94]. It seems to increase timely response to the needs and challenges of clients and health providers at and also clients' satisfaction and their trust in agencies. In this regard, in the study of Schwenke et al (2023), receiving support from colleagues was considered an important factor in creating a sense of support and security among HHC nurses [49]. It seems that HHC organization's support for nurses will make them feel more supported [95], gain more self-confidence, and take more responsibility through reflective practice [96].

Another process indicator of quality continuous quality improvement in order to meet the client's needs. Inaccurate assessments increase the risk of overlooking important health changes, and missed services may lead to gaps in care, increasing the burden on patients and families [54]. In this regard, CMS reports that HHC organizations should be able to address the needs of clients and families through a correct and comprehensive assessment, and update/revise care plans to ensure the quality of their services [97]. To this end, in the development of quality indicators for HHC, Tang et al, in addition to assigning the highest weight to the quality of the process, suggested that careful assessment is mandatory for ensuring the quality and safety of HHCs [59]. In the study by Heany et al (2018), it was also stated that monitoring the HHC process in different dimensions, in a documented and evidence-based manner, can help organizations and governments detect the necessary policies, supportive measures, and technical assistance, and provide opportunities for quality improvement projects at the national level [60].

Outcome domain

The outcome domain reflects the ultimate impact of HHC on patients and communities, encompassing clinical results, patient satisfaction, and economic considerations. Jukic Peladic et al. (2023) emphasized that analyzing outcomes alongside costs enables

identification of service gaps and inefficiencies, informing strategic improvements [98]. The literature predominantly focuses on clinical outcomes, such as functional status and prevention of complications, underscoring the importance of outcome indicators in assessing care effectiveness [48, 70]. However, Jajszczok et al. (2023) noted the relative neglect of patient experience and financial satisfaction in current quality assessments, advocating for their inclusion to capture a comprehensive picture of HHC impact [15]. This multidimensional evaluation approach resonates with Donabedian's assertion that quality is best judged by outcomes that matter to patients and society [66]. The iterative process of outcome assessment allows for timely modifications of care plans, reflecting organizational responsiveness and respect for client needs [54]. This feedback loop is critical for continuous improvement and aligns with patient-centered care principles increasingly prioritized in healthcare quality frameworks [99].

Strengths and Weaknesses

The studies conducted in the field of quality evaluation of HHCs have sporadically referred to quality assessment criteria in general. In this study, efforts have been done to provide a framework for the evaluation of HHCs. Our evaluation indicators comprehensively consider all the aspects affecting the quality of care. However, having a set of quality indicators does not guarantee their use in practice, but requires a structured implementation plan to determine whether quality indicators provide appropriate criteria for quality assessment or not.

Limitations

This study has some methodological considerations worth noting. Although a comprehensive search strategy was employed across multiple databases, it is still possible that some relevant studies were missed due to differences in terminology or indexing. To enhance transparency, search strategies are provided as supplementary material. In addition, only English-language articles were included, which may have excluded relevant literature published in other languages; however, this decision was made to ensure consistent quality in reporting and interpretation. Finally, as a scoping review, the primary aim was to map the breadth of available evidence.

CONCLUSION

This scoping review identified a comprehensive set of key indicators for evaluating the quality of Home Health Care (HHC) services. Utilizing these indicators as a framework enables organizations providing HHC services to quantitatively and qualitatively assess and compare their performance. Furthermore, it offers valuable guidance for policymakers and health planners

to manage and develop the HHC sector in a transparent, safe, and goal-oriented manner.

Implications of the Findings

The findings of this study have several practical applications in the management and improvement of home health care services. Firstly, the identified indicators can assist organizations in systematically evaluating and enhancing their performance. Secondly, policymakers and health planners can use these indicators to establish appropriate standards and exercise more effective oversight of service providers. Moreover, designing locally adapted assessment tools that consider cultural and religious sensitivities—especially in communities with specific cultural contexts—can improve the accuracy and reliability of data collection and quality evaluation, thereby minimizing potential errors. Finally, given the complexity and volume of these indicators, leveraging advanced technologies, particularly artificial intelligence, can facilitate data collection and analysis processes, reducing the workload on organizations and evaluators.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the authors of the original studies whose findings were included in this review for their valuable contributions to the advancement of knowledge in this field.

ETHICAL CONSIDERATIONS

This study was approved by the Research Ethics Committee of Iran University of Medical Sciences (Approval No. IRI.IUMS.REC.1401.1008). All procedures were conducted in accordance with the ethical standards of the responsible committee and with the principles of the Declaration of Helsinki. As this research was a scoping review of published literature, no direct involvement of human participants occurred and informed consent was not required.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

FUNDING

There is no fund.

AUTHORS' CONTRIBUTIONS

The study was conceived and designed by TK and HGH. Data collection was performed by SM and HGH. Data analysis was conducted by HGH, SM, and NKH. FF, FB, and MR contributed substantially to drafting the manuscript. All authors participated in critical revision of the manuscript, approved the final version, and agree to be accountable for all aspects of the work.

REFERENCES

- United Nations Population Fund (UNFPA). Social policies catalogue on population ageing: A rapid scoping review. Bangkok: UNFPA Asia and the Pacific Regional Office 2020 [updated 2025; cited 2025]. Available from: <https://asiapacific.unfpa.org/en/publications/social-policies-catalogue-population-ageing>.
- World Health Organization. Noncommunicable diseases Geneva: WHO 2023 [updated 2023; cited 2025]. Available from: <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>.
- Global Cancer Observatory (GCO). Cancer fact sheets. Lyon: International Agency for Research on Cancer 2020 [updated 2020; cited 2025]. Available from: <https://gco.iarc.fr/today/fact-sheets-cancers> (<https://gco.iarc.fr/today/fact-sheets-cancers>).
- Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin*. 2021;71(3):209-49. doi: 10.3322/caac.21660 pmid: 33538338
- Perez-Francisco DH, Duarte-Climents G, Del Rosario-Melian JM, Gomez-Salgado J, Romero-Martin M, Sanchez-Gomez MB. Influence of Workload on Primary Care Nurses' Health and Burnout, Patients' Safety, and Quality of Care: Integrative Review. *Healthcare (Basel)*. 2020;8(1). doi: 10.3390/healthcare8010012 pmid: 31947761
- Scales K. It Is Time to Resolve the Direct Care Workforce Crisis in Long-Term Care. *Gerontologist*. 2021;61(4):497-504. doi: 10.1093/geront/gnaa116 pmid: 32853357
- Donaghy E, Atherton H, Hammersley V, McNeilly H, Bikker A, Robbins L, et al. Acceptability, benefits, and challenges of video consulting: a qualitative study in primary care. *Br J Gen Pract*. 2019;69(686):e586-e94. doi: 10.3399/bjgp19X704141 pmid: 31160368
- World Health Organization. State of the world's nursing 2020: Investing in education, jobs and leadership. Geneva: WHO; 2020 [updated 2020; cited 2025]. Available from: <https://www.who.int/publications/i/item/9789240003279>.
- Cylus J, Papanicolas J, Smith PC. Health system efficiency: How to make measurement matter for policy and management Copenhagen: WHO Regional Office for Europe; 2016 [updated 2020; cited 2025]. Available from: <https://www.euro.who.int/en/publications/abstracts/health-system-efficiency-how-to-make-measurement-matter-for-policy-and-management-2016>.
- Morley C, Unwin M, Peterson GM, Stankovich J, Kinsman L. Emergency department crowding: A systematic review of causes, consequences and solutions. *PLoS One*. 2018;13(8):e0203316. doi: 10.1371/journal.pone.0203316 pmid: 30161242
- Schoen C, Osborn R, How SK, Doty MM, Peugh J. In chronic condition: experiences of patients with complex health care needs, in eight countries, 2008. *Health Aff (Millwood)*. 2009;28(1):sw1-16. doi: 10.1377/hlthaff.28.1.w1 pmid: 19008253
- Rotstein DL, Alter DA. Where does the waiting list begin? A short review of the dynamics and organization of modern waiting lists. *Soc Sci Med*. 2006;62(12):3157-60. doi: 10.1016/j.socscimed.2005.11.030 pmid: 16377045
- Beard JR, Officer AM, Cassels AK. The World Report on Ageing and Health. *Gerontologist*. 2016;56 Suppl 2:S163-6. doi: 10.1093/geront/gnw037 pmid: 26994257
- Martin AB, Hartman M, Lassman D, Catlin A, National Health Expenditure Accounts T. National Health Care Spending In 2019: Steady Growth For The Fourth Consecutive Year. *Health Aff (Millwood)*. 2021;40(1):14-24. doi: 10.1377/hlthaff.2020.02022 pmid: 33326300
- Jajszczyk M, Eastwood CA, Quan H, Scott LD, Gutscher A, Zhao R. Health System Quality and Performance Indicators for Evaluating Home Care Programming: A Scoping Review. *Home Health Care Management & Practice*. 2023;35(4):299-309. doi: 10.1177/10848223231170019
- Centers for Medicare & Medicaid Services (CMS). Home health value-based purchasing model. 2020.
- Health Canada. Home and community care policy framework. 2019.
- Alderwick H, Dixon J. The NHS long term plan. *BMJ*. 2019;364:l84. doi: 10.1136/bmj.l84 pmid: 30617185
- Australian Government Department of Health. Aged care reform and home care packages program. 2021.
- Kroneman M, Boerma W, van den Berg M, Groenewegen P, de Jong J, van Ginneken E. Netherlands: Health System Review. *Health Syst Transit*. 2016;18(2):1-240. pmid: 27467715
- Health Canada Government of Canada (HC GoC). Working together to improve health care in Canada: overview 2023 [updated 2025; cited 2025]. Available from: <https://www.canada.ca/en/health-canada/corporate/transparency/health-agreements/shared-health-priorities.html>.
- Harris-Kojetin L, Sengupta M, Park-Lee E, Valverde R. Long-Term Care Services in the United States: 2013 Overview. *Vital Health Stat 3*. 2013(37):1-107. pmid: 26158640
- Portorani A, Dehghan M, Mangolian Shahrbabaki P. Death at home: Iranian nurses', cancer patients', and family caregivers' attitudes. *Death Stud*. 2022;46(5):1123-7. doi: 10.1080/07481187.2020.1795748 pmid: 32713329
- Rao SR, Gupta M, Salins N. The Concept of Respite in Palliative Care: Definitions and Discussions. *Curr Oncol Rep*. 2021;23(2):25. doi: 10.1007/s11912-021-01015-z pmid: 33559761
- Lehnert T, Heuchert MAX, Hussain K, KÖNig H-H. Stated preferences for long-term care: a literature review. *Ageing and Society*. 2018;39(9):1873-913. doi: 10.1017/s0144686x18000314
- Wagner A, Schaffert R, Mockli N, Zuniga F, Dratva J. Home care quality indicators based on the Resident Assessment Instrument-Home Care (RAI-HC): a systematic review. *BMC Health Serv Res*. 2020;20(1):366. doi: 10.1186/s12913-020-05238-x pmid: 32349757
- World Health Organization. Decade of healthy ageing: baseline report. Geneva: World Health Organization; 2021.
- Landers S, Madigan E, Leff B, Rosati RJ, McCann BA, Hornbake R, et al. The Future of Home Health Care: A Strategic Framework for Optimizing Value. *Home Health Care Manag Pract*. 2016;28(4):262-78. doi: 10.1177/1084822316666368 pmid: 27746670
- Leff B. Acute? care at home. The health and cost effects of substituting home care for inpatient acute care: a review of the evidence. *J Am Geriatr Soc*. 2001;49(8):1123-5. doi: 10.1046/j.1532-5415.2001.49219.x pmid: 11555078
- Reinhard SC, Levine C, Samis S. Home alone: Family caregivers providing complex chronic care: AARP Public Policy Institute Washington, DC; 2012.
- Totten AM, Womack DM, Eden KB, McDonagh MS, Griffin JC, Grusing S, et al. Telehealth: Mapping the Evidence for Patient Outcomes From Systematic Reviews. Rockville (MD): Agency for Healthcare Research and Quality (US)2016. www.ncbi.nlm.nih.gov/pubmed/27536752
- Agweyu A, Hill K, Diaz T, Jackson D, Hailu BG, Muzigaba M. Regular measurement is essential but insufficient to improve quality of healthcare. *BMJ*. 2023;380:e073412. doi: 10.1136/bmj-2022-073412 pmid: 36914202
- Soldado-Matoses MS, Caplliure-Llopias J, Barrios C. Effectiveness of a home health monitoring and education program for complex chronic patients, led by primary care nurses. *Front Public Health*. 2023;11:1281980. doi: 10.3389/fpubh.2023.1281980 pmid: 38026405
- Ma G, Hou J, Peng S, Liu Y, Shi Z, Fan Y, et al. Construction of Internet +home Care Quality Supervision Indicators in China Based on the Delphi Method. *Risk Manag Healthc Policy*.

- 2022;15:1325-41. doi: 10.2147/RMHP.S368592 pmid: 35855767
35. Rothwell C, Kehoe A, Farook SF, Illing J. Enablers and barriers to effective clinical supervision in the workplace: a rapid evidence review. *BMJ Open*. 2021;11(9):e052929. doi: 10.1136/bmjopen-2021-052929 pmid: 34588261
 36. Wehner K, Schwinger A, Buscher A. [Quality in home care: Review of relevant structural-, process- and outcome-related aspects of care]. *Z Evid Fortbild Qual Gesundheitswes*. 2021;167:15-24. doi: 10.1016/j.zefq.2021.09.003 pmid: 34782253
 37. Mainz J. Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*. 2003;15(6):523-30. doi: 10.1093/intqhc/mzg081
 38. Lovaglio PG. Benchmarking strategies for measuring the quality of healthcare: problems and prospects. *ScientificWorldJournal*. 2012;2012:606154. doi: 10.1100/2012/606154 pmid: 22666140
 39. Canadian Institutes of Health Research (CIHR). CIHR Strategic Plan 2021-2031 2021 [updated 2021; cited 2025]. Available from: <https://cihr-irsc.gc.ca/e/52334.html> (<https://cihr-irsc.gc.ca/e/52334.html>)
 40. Sanerma P, Miettinen S, Paavilainen E, Astedt-Kurki P. A client-centered approach in home care for older persons - an integrative review. *Scand J Prim Health Care*. 2020;38(4):369-80. doi: 10.1080/02813432.2020.1841517 pmid: 33201752
 41. Amalberti R. Quality of Care as Perceived by Patients—PROMs and PREMs Indicators: Panorama of Experiences in Other Countries and Main Lessons Learned France [Online Report] Haute Autorite de Sante. 2021.
 42. Aantjes C, Quinlan T, Bunders J. Integration of community home based care programmes within national primary health care revitalisation strategies in Ethiopia, Malawi, South-Africa and Zambia: a comparative assessment. *Global Health*. 2014;10:85. doi: 10.1186/s12992-014-0085-5 pmid: 25499098
 43. Rogalewski A, Florek K. The future of live-in care work in Europe. 2018.
 44. Ebrahimzadeh F, Farhadi A, Khalafi M. Challenges and strategies for the development of home health care in Iran: a qualitative study. *Iran J Nurs Midwifery Res*. 2021;26(3):234-40.
 45. Ghaffari F, Mohammadi E, Ahmadi F. A comprehensive model for home health care in Iran. *Int J Community Based Nurs Midwifery* 2014;2(4):248-56.
 46. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169(7):467-73. doi: 10.7326/M18-0850 pmid: 30178033
 47. Guthrie DM, Williams N, Beach C, Buzath E, Cohen J, Declercq A, et al. A multi-stage process to develop quality indicators for community-based palliative care using interRAI data. *PLoS One*. 2022;17(4):e0266569. doi: 10.1371/journal.pone.0266569 pmid: 35390091
 48. Foong HY, Siette J, Jorgensen M. Quality indicators for home- and community-based aged care: A critical literature review to inform policy directions. *Australas J Ageing*. 2022;41(3):383-95. doi: 10.1111/ajag.13103 pmid: 35781753
 49. Schwenke M, van Dorst J, Zwakhalen S, de Jong JD, Brabers AEM, Bleijenberg N. Measures to improve patient needs assessments and reduce practice variation in Dutch home care organizations. *Nurs Open*. 2023;10(5):3052-63. doi: 10.1002/nop2.1552 pmid: 36504333
 50. Tate K, McLane P, Reid C, Rowe BH, Cummings G, Estabrooks CA, et al. Assessing quality of older persons' emergency transitions between long-term and acute care settings: a proof-of-concept study. *BMJ Open Qual*. 2022;11(1). doi: 10.1136/bmjopen-2021-001639 pmid: 35264332
 51. Zhang T, Liu Y, Wang Y, Li C, Yang X, Tian L, et al. Quality indicators for the care of older adults with disabilities in long-term care facilities based on Maslow's hierarchy of needs. *Int J Nurs Sci*. 2022;9(4):453-9. doi: 10.1016/j.ijnss.2022.09.012 pmid: 36285078
 52. Todd B. NewsCAP: CMS releases first home-and community-based services quality measure set. LIPPINCOTT WILLIAMS & WILKINS TWO COMMERCE SQ, 2001 MARKET ST, PHILADELPHIA ...; 2022.
 53. Poldrugovac M, Amuah JE, Wei-Randall H, Sidhom P, Morris K, Allin S, et al. Public Reporting of Performance Indicators in Long-Term Care in Canada: Does it Make a Difference? *Can J Aging*. 2022;41(4):565-76. doi: 10.1017/S0714980821000714 pmid: 35403595
 54. Sinn CJ, Sultan H, Turcotte LA, McArthur C, Hirdes JP. Patterns of home care assessment and service provision before and during the COVID-19 pandemic in Ontario, Canada. *PLoS One*. 2022;17(3):e0266160. doi: 10.1371/journal.pone.0266160 pmid: 35353856
 55. Geng F, Mansouri S, Stevenson DG, Grabowski DC. Evolution of the home health care market: The expansion and quality performance of multi-agency chains. *Health Serv Res*. 2020;55 Suppl 3(Suppl 3):1073-84. doi: 10.1111/1475-6773.13597 pmid: 33284527
 56. Wagner A, Zuniga F, Ruesch P, Schaffert R, Dratva J, Group HCDR. Selecting home care quality indicators based on the Resident Assessment Instrument-Home Care (RAI-HC) for Switzerland: A public health and healthcare providers' perspective. *PLoS One*. 2020;15(12):e0244577. doi: 10.1371/journal.pone.0244577 pmid: 33378348
 57. Johannessen T, Ree E, Stromme T, Aase I, Bal R, Wiig S. Designing and pilot testing of a leadership intervention to improve quality and safety in nursing homes and home care (the SAFE-LEAD intervention). *BMJ Open*. 2019;9(6):e027790. doi: 10.1136/bmjopen-2018-027790 pmid: 31213451
 58. Harman LE, Guthrie DM, Cohen J, Declercq A, Fisher K, Goodridge D, et al. Potential quality indicators for seriously ill home care clients: a cross-sectional analysis using Resident Assessment Instrument for Home Care (RAI-HC) data for Ontario. *BMC Palliat Care*. 2019;18(1):3. doi: 10.1186/s12904-018-0389-y pmid: 30626374
 59. Tang X, Chen X, Pang Y, Zhou L. The development of quality indicators for home care in China. *Int J Qual Health Care*. 2018;30(3):208-18. doi: 10.1093/intqhc/mzx202 pmid: 29385451
 60. Heany J, Torres J, Zagar C, Kostelec T. Monitoring Quality Across Home Visiting Models: A Field Test of Michigan's Home Visiting Quality Assurance System. *Maternal and Child Health Journal*. 2018;22(S1):13-21. doi: 10.1007/s10995-018-2538-6
 61. Smith LM, Anderson WL, Lines LM, Pronier C, Thornburg V, Butler JP, et al. Patient experience and process measures of quality of care at home health agencies: Factors associated with high performance. *Home Health Care Serv Q*. 2017;36(1):29-45. doi: 10.1080/01621424.2017.1320698 pmid: 28448222
 62. Scaccabarozzi G, Lovaglio PG, Limonta F, Floriani M, Pellegrini G. Quality assessment of palliative home care in Italy. *J Eval Clin Pract*. 2017;23(4):725-33. doi: 10.1111/jep.12704 pmid: 28176419
 63. Shafir A, Garrigues SK, Schenker Y, Leff B, Neil J, Ritchie C. Homebound Patient and Caregiver Perceptions of Quality of Care in Home-Based Primary Care: A Qualitative Study. *J Am Geriatr Soc*. 2016;64(8):1622-7. doi: 10.1111/jgs.14244 pmid: 27384919
 64. Cook J, Horrocks S. Community nursing quality indicators for end-of-life care in England: identification, preparation, and coordination. *Br J Community Nurs*. 2016;21(3):118-23. doi: 10.12968/bjcn.2016.21.3.118 pmid: 26940613
 65. Leff B, Carlson CM, Saliba D, Ritchie C. The invisible homebound: setting quality-of-care standards for home-based

- primary and palliative care. *Health Aff (Millwood)*. 2015;34(1):21-9. doi: 10.1377/hlthaff.2014.1008 pmid: 25561640
66. Foebel AD, van Hout HP, van der Roest HG, Topinkova E, Garms-Homolova V, Frijters D, et al. Quality of care in European home care programs using the second generation interRAI Home Care Quality Indicators (HCQIs). *BMC Geriatr*. 2015;15:148. doi: 10.1186/s12877-015-0146-5 pmid: 26572734
 67. Woitha K, Hasselaar J, van Beek K, Ahmed N, Jaspers B, Hendriks JC, et al. Testing feasibility and reliability of a set of quality indicators to evaluate the organization of palliative care across Europe: a pilot study in 25 countries. *Palliat Med*. 2015;29(2):157-63. doi: 10.1177/0269216314562100 pmid: 25634899
 68. Mofina AM, Guthrie DM. A comparison of home care quality indicator rates in two Canadian provinces. *BMC Health Serv Res*. 2014;14:37. doi: 10.1186/1472-6963-14-37 pmid: 24460732
 69. Luckett T, Phillips J, Agar M, Viridun C, Green A, Davidson PM. Elements of effective palliative care models: a rapid review. *BMC Health Serv Res*. 2014;14:136. doi: 10.1186/1472-6963-14-136 pmid: 24670065
 70. Morris JN, Fries BE, Frijters D, Hirdes JP, Steel RK. interRAI home care quality indicators. *BMC Geriatr*. 2013;13:127. doi: 10.1186/1471-2318-13-127 pmid: 24245920
 71. Winters-Van Der Meer S, Kool RB, Klazinga NS, Huijsman R. Are the Dutch long-term care organizations getting better? A trend study of quality indicators between 2007 and 2009 and the patterns of regional influences on performance. *Int J Qual Health Care*. 2013;25(5):505-14. doi: 10.1093/intqhc/mzt061 pmid: 23962991
 72. Gressel JW. Development of a quality ranking model for home health care providers. *Health Mark Q*. 2013;30(3):246-62. doi: 10.1080/07359683.2013.814503 pmid: 23924223
 73. Blais R, Sears NA, Doran D, Baker GR, Macdonald M, Mitchell L, et al. Assessing adverse events among home care clients in three Canadian provinces using chart review. *BMJ Qual Saf*. 2013;22(12):989-97. doi: 10.1136/bmjqs-2013-002039 pmid: 23828878
 74. Aletras VH, Kostarelis A, Tsitouridou M, Niakas D, Nicolaou A. Development and preliminary validation of a questionnaire to measure satisfaction with home care in Greece: an exploratory factor analysis of polychoric correlations. *BMC Health Serv Res*. 2010;10:189. doi: 10.1186/1472-6963-10-189 pmid: 20602759
 75. Gershon R, Pogorzelska M, Qureshi KA, Stone PW, Canton AN, Samar SM, et al. Home Health Care Patients and Safety Hazards in the Home: Preliminary Findings. In: Henriksen K, Battles JB, Keyes MA, Grady ML, editors. *Advances in Patient Safety: New Directions and Alternative Approaches (Vol 1: Assessment)*. Advances in Patient Safety. Rockville (MD)2008. www.ncbi.nlm.nih.gov/pubmed/21249859
 76. Dalby DM, Hirdes JP. The relationship between agency characteristics and quality of home care. *Home Health Care Serv Q*. 2008;27(1):59-74. doi: 10.1300/J027v27n01_04 pmid: 18510199
 77. Smith KL, Soriano TA, Boal J. Brief communication: National quality-of-care standards in home-based primary care. *Ann Intern Med*. 2007;146(3):188-92. doi: 10.7326/0003-4819-146-3-200702060-00008 pmid: 17283350
 78. Wang WL, Chang HJ, Liu AC, Chen YW. Research into care quality criteria for long-term care institutions. *J Nurs Res*. 2007;15(4):255-64. doi: 10.1097/01.jnr.0000387622.95306.43 pmid: 18080970
 79. Dalby DM, Hirdes JP, Fries BE. Risk adjustment methods for Home Care Quality Indicators (HCQIs) based on the minimum data set for home care. *BMC Health Serv Res*. 2005;5(1):7. doi: 10.1186/1472-6963-5-7 pmid: 15656901
 80. Fortinsky RH, Madigan EA. Data, information, and quality indicators for home healthcare: rapid implementation, what's next? *J Healthc Qual*. 2004;26(3):44-51. doi: 10.1111/j.1945-1474.2004.tb00495.x pmid: 15162633
 81. Roback K, Herzog A. Home informatics in healthcare: assessment guidelines to keep up quality of care and avoid adverse effects. *Technol Health Care*. 2003;11(3):195-206. pmid: 12775936
 82. Higuchi KA, Christensen A, Terpstra J. Challenges in home care practice: a decision-making perspective. *J Community Health Nurs*. 2002;19(4):225-36. doi: 10.1207/S15327655JCHN1904_03 pmid: 12494743
 83. Phillips LR, Morrison EF, Chae YM. The QUALCARE Scale: developing an instrument to measure quality of home care. *Int J Nurs Stud*. 1990;27(1):61-75. doi: 10.1016/0020-7489(90)90024-d pmid: 2312236
 84. Hirdes JP, Fries BE, Morris JN, Ikegami N, Zimmerman D, Dalby DM, et al. Home care quality indicators (HCQIs) based on the MDS-HC. *Gerontologist*. 2004;44(5):665-79. doi: 10.1093/geront/44.5.665 pmid: 15498842
 85. Donabedian A. The Quality of Care. *Jama*. 1988;260(12). doi: 10.1001/jama.1988.03410120089033
 86. Arah OA, Klazinga NS, Delnoij DM, ten Asbroek AH, Custers T. Conceptual frameworks for health systems performance: a quest for effectiveness, quality, and improvement. *Int J Qual Health Care*. 2003;15(5):377-98. doi: 10.1093/intqhc/mzg049 pmid: 14527982
 87. McBride SE, Beer JM, Mitzner TL, Rogers WA. Challenges for Home Health Care Providers: A Needs Assessment. *Phys Occup Ther Geriatr*. 2011;29(1):5-22. doi: 10.3109/02703181.2011.552170 pmid: 31178613
 88. Auefuea S, Pronsawatthai P, Sillabutra J, Soontornpipit P. Designed Model of Supporting System for Healthcare Facilities: Home-based Supportive Service. 2019 7th International Electrical Engineering Congress (iEECON)2019. p. 1-4.
 89. Jarrin O, Flynn L, Lake ET, Aiken LH. Home health agency work environments and hospitalizations. *Med Care*. 2014;52(10):877-83. doi: 10.1097/MLR.0000000000000188 pmid: 25215647
 90. Wählin C, Nilsing Strid E. Safe patient handling. Interventions in the working environment for employees in healthcare [in Swedish: kunskapssammanställning 2019:6 Säkrare personflyttningar Åtgärder i arbetsmiljön för medarbetare inom hälso- och sjukvård samt omsorg]. 2019 [updated 2025; cited 2025]. Available from: <https://www.av.se/globalassets/filer/publikationer/kunskapssammanstallningar/sakrارة-personforflyttningar-rap-2019-6.pdf>.
 91. Asmirajanti M, Hamid AYS, Hariyati RTS. Nursing care activities based on documentation. *BMC Nurs*. 2019;18(Suppl 1):32. doi: 10.1186/s12912-019-0352-0 pmid: 31427894
 92. Hobensack M, Song J, Scharp D, Bowles KH, Topaz M. Machine learning applied to electronic health record data in home healthcare: A scoping review. *Int J Med Inform*. 2023;170:104978. doi: 10.1016/j.ijmedinf.2022.104978 pmid: 36592572
 93. Cho E, Kim IS, Lee TW, Kim GS, Lee H, Min D. Effects of registered nurse staffing on quality of care and resident outcomes in nursing homes. *Geriatr Nurs*. 2020;41(6):685-91. doi: 10.1016/j.gerinurse.2020.04.001 pmid: 32386999
 94. Scaccabarozzi G, Lovaglio PG, Limonta F, Peruselli C, Bellentani M, Crippa M. Monitoring the Italian Home Palliative Care Services. *Healthcare (Basel)*. 2019;7(1). doi: 10.3390/healthcare7010004 pmid: 30609722
 95. Sundgren MKM, Dawber C, Millier PM, Medoro L. Reflective practice groups and nurse professional quality of life. *Australian Journal of Advanced Nursing*. 2021;38(4). doi: 10.37464/2020.384.355
 96. Howard V, Eddy-Imishue GK. Factors influencing adequate and effective clinical supervision for inpatient mental health nurses' personal and professional development: An integrative

- review. *J Psychiatr Ment Health Nurs*. 2020;27(5):640-56. doi: 10.1111/jpm.12604 pmid: 31981445
97. CMS. Home and Community-Based Services Quality Measure Set. Department of Health & Human Services: Centers for Medicare & Medicaid Services. 2022.
98. Jukic Peladic N, Orlandoni P. Development of Quality Indicators for Geriatric Home Enteral Nutrition (HEN) Services. *Nutrients*. 2023;15(14). doi: 10.3390/nu15143119 pmid: 37513537
99. America CoQoHCi. Crossing the quality chasm: a new health system for the 21st century: National Academies Press; 2001.