The determinants of actual place of death among noncancer patients with end-stage chronic health conditions: a scoping review

Sangduan Ginggeaw 🕩 and Raeann LeBlanc

Abstract: A home is a preferred place of death by most people. Nurses play a key role in supporting end-of-life home care, yet less is known about the factors that determine home as a place of death. This scoping review describes the percentage of actual places of death and determines social factors related to home as the place of death among noncancer patients with end-stage chronic health conditions. Inclusion criteria included (1) noncancer chronic illness conditions, (2) outcomes of place of death, and (3) factors that determine home as a place of death. Sources of evidence included PubMed, CINAHL, and Web of Science databases, which were searched in May 2022, and additional searches from May 2022 to November 2023. The JBI scoping review guide (2020) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Scoping Review extension were used. Twenty-eight studies were included in this analysis. The range of percentages is varied within the same place of death among the sample. Two major constructs that determine a home as a place of death were identified: preceding factors and social capital. The results suggest that the place of death among noncancer patients with end-stage chronic health conditions should be continued to be understood. Two constructs determined home as a place of death and are considered as a fundamental to increasing equal accessibility in the initiation of palliative care services to promote home death and meet end-of-life care goals.

Keywords: home death, hospice, noncancer chronic health condition, palliative care nursing, place of death, scoping review

Received: 24 August 2023; revised manuscript accepted: 15 February 2024.

Background

Aging in place and dying at home are increasingly preferred options for people worldwide, including in the United States.¹ This trend has been evident since 2017, when dying at home surpassed dying in the hospital for the first time among Americans,² and it has continued to gain momentum, especially during and after COVID-19.³ However, despite this growing preference, a significant disparity remains between the preferred and actual place of death.⁴

The remaining varied locations of death, including nursing homes and healthcare facilities, suggest social inequity influences.^{5,6} Despite advantages, predicting disease trajectories in noncancer patients poses challenges, causing delays in palliative care, increased home care needs, and postponed hospice services. This results in a lower quality of life, higher likelihood of hospitalization for uncontrolled symptoms, and increased caregiver burden.⁷

Understanding factors influencing end-of-life outcomes in chronic noncancer patients is vital amid the rising trend of home deaths. A comprehensive understanding of individual and systemic factors is crucial for aligning preferred and actual places of death.⁸ Considering evolving factors such as personal values, healthcare policies, resources, social support, and family and professionals' attitudes is essential. Analyzing these influences helps Palliative Care & Social Practice

2024, Vol. 18: 1–13 DOI: 10.1177/ 26323524241236964

© The Author(s), 2024. Article reuse guidelines: sagepub.com/journalspermissions

Correspondence to: Sangduan Ginggeaw

Elaine Marieb College of Nursing, University of Massachusetts Amherst, 651 North Pleasant Street, Amherst, MA 01003, USA sginggeaw@umass.edu

Raeann LeBlanc

Elaine Marieb College of Nursing, University of Massachusetts Amherst, Amherst, MA, USA



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Sage and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).

comprehend end-of-life care choices, ensuring alignment with patient preferences.

The objective of this scoping review is twofold: first, to determine the distribution of places of death among individuals with noncancer terminal illnesses, and second, to identify the factors influencing home death in those with noncancer chronic health conditions. By addressing these objectives, this scoping review aims to provide a comprehensive understanding of the factors associated with home death in noncancer patients, shedding light on gaps in the current literature and informing future research and practice in end-of-life care for this patient population.

Methods

This scoping review was conducted following the Joanna Briggs Institute (JBI) methodology for scoping reviews,⁹ which aligned with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist¹⁰ (see Supplemental Material 1 for the PRISMA-ScR checklist). The scoping review process, including search strategy, inclusion and exclusion criteria, data screening, data extraction, and synthesis, was conducted and is briefly described below.

Search strategy

The search strategy aimed to find published articles in English in databases, including PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, and Google Scholar. An article search was performed using these databases for the first search in May 2022 and an additional search from May 2022 to November 2023 offering the most up-to-date research included here. The initial search started by using the keywords consisting of the terms 'determinants of health' and 'place of death' in the CINAHL database. After that, looking at the keywords in the retrieved articles, synonyms of the place of death, such as the 'site of death' and 'location of death', were added and utilized in other databases. Each synonym search term was joined with the Boolean connector 'OR', and the Boolean connector 'AND' was used to combine different terms such as 'determinants of health' AND 'place of death'. In addition, a bibliography search was performed on the included articles to identify additional relevant articles. The article publications were limited to English, and there

was no publication time-limitation period (see Supplemental Material 2 for sample terms used for the initial CINAHL Search).

Inclusion and exclusion criteria

Studies were included if place of death was the outcome variable. The participants were descendants aged 18 years or older. They had chronic health conditions such as heart failure or cardiovascular diseases, dementia, or other noncancer chronic illness. The results of these studies also included factors associated with the place of death. Articles were excluded if there were no factors correlating with death at home or if the sample did not include noncancer patients.

Selection of studies

The retrieved articles were independently screened for eligibility based on the titles and abstracts. Duplicate articles were removed. The entire text was then reviewed in detail to verify that the articles met the inclusion criteria. Subsequently, articles were selected for data extraction. Any disagreements between reviewers (SG and RGL) at each stage of the selection process were resolved through discussion. The search results and study inclusion process are reported and presented in the PRISMA-ScR flow diagram (see Figure 1).

Data extraction

Data were extracted from articles included in this scoping review by two independent reviewers using a data extraction tool developed by the reviewers, as shown in Table 1. The extracted data included specific details about the author/s, year of publication, characteristics of the participants, main factors associated with home death, and percentage of the place of death, which are vital findings relevant to the review objectives.

Results

The initial database searches retrieved 265 studies and added 4 articles from another source, and the additional search retrieved 69 studies, accounting for duplicates. Subsequently, the titles and abstracts of these 287 articles were reviewed, leading to the selection of 51 articles for a full-text examination. Ultimately, 38 of these articles met the eligibility criteria. After a comprehensive review, 28 articles were included in this analysis. The reasons for excluding articles are outlined in Figure 1 (PRISMA flow diagram).



Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram.

Publications were also categorized by the year of publication, country of origin, and noncancer chronic condition foci. In this review, there are more robust publications on this topic between 2020 and 2022, from the United States and Japan, with the highest number of publications and the primary chronic condition being noncancer (54%) (n=15), heart failure (21%) (n=6), dementia (21%) (n=6), and respiratory disease (4%) (n=1) (see Table 2).

As data provided in Table 1 demonstrate, the percentage of actual place of death for noncancer terminally ill conditions varies across different settings. The highest proportion of deaths occurred in hospitals, accounting for approximately 13.2–80.94% of cases, followed by nursing homes around 1.5–37.3% and residential care around 1.7–28.8%. Home deaths accounted for around 11.1–72.10% of cases, while hospice facilities saw a lower percentage, around 0.2–9.67%. Overall, hospitals and nursing homes were the most common places of death among people with noncancer terminally ill conditions. Yet, a significant but more variable percentage occurred at home. Hospice facilities had the lowest proportion of deaths among the reported settings.

We compiled this list of factors investigated in the study, all of which held significance in some aspect of the research. Our primary focus was to explore a wide array of factors associated with home deaths, with a priority on examining correlations rather than making predictions. For example, in certain studies, the main objective was to predict outcomes such as home deaths. Even if the final model did not yield statistical significance, we considered preliminary models that revealed meaningful relationships between specific factors and home deaths.

Based on this scoping review, several factors are associated with the home as a place of death. These factors can be categorized into two groups: individual factors, including demographics, socioeconomic status, and clinical data, and social

Palliative Care & Social Practice 18

Table 1.Data extraction (n = 28).

Authors,	Type of study	Sample	Percentage of place of death		Factors related to dying at home		Country
years		characteristics	Home	Other	Individual	Social	
Quinn <i>et al.,</i> 2020	A population- based cohort study	- 74,986 - Heart failure	23%	73.6% hospital 3.4% other	- Being female and having metastatic cancer and dementia	Receiving PC	Canada
Cohen <i>et al.</i> , 2006	Retrospective cohort study	- 55,759 - 67.2% noncancer	14.4–30.8%	- 37.7–60.6% hospital - 22.0–40.9% residential care - 0.3–1.9% other	- Being men, younger patients, obtaining a higher education, and HF diagnosed	 Living in rural/slightly urbanized municipalities Living in a private household 	Belgium
Van Spall <i>et al</i> ., 2021	Retrospective cohort study	- 396,024 - Heart failure	44.1% out of hospital	48.3% hospital	- Older patients, being female	Receiving community PC	Canada
Regier <i>et al.</i> , 2021	Cross- sectional secondary data analysis	- 472 - Cognitive impairment	33.5%	28.4% hospital 25.6% nursing home 9% hospice residence 4% other	-	- Utilized the Medicare Hospice Benefit	USA
Lei <i>et al.</i> , 2021	Secondary data analysis	- 375 - 65% noncancer	38.9%	33.1% hospital 28% nursing or hospice facility	-	Larger household size and more daughters	USA
Bell <i>et al.</i> , 2009	A population- based, longitudinal study	- 1352 - 60.3% noncancer	11.1-20.2%	- 43.1–79% hospital - 8.9–36.7% nursing home	Patients who had dementia and cancer	-	USA
Al-Kindi <i>et al.</i> , 2017	Retrospective cohort study	- 2,294,490 - Heart failure	24.4%	32.3% hospital 4.9% emergency department 28.8% residential care 5% hospice 4.5% other	Younger age, married or divorced or widowed, white, being male, high school or higher education, having cancer	- Living in western state - Year of death	USA
Chuzi <i>et al.</i> , 2020	Secondary data analysis	- 2,940,920 - Heart failure	20.6-30.7%	0.2–8.2% hospice facilities 31–44.5% medical facilities 25.7–30.8% nursing home	Being white race and female	-	USA
Quinn <i>et al</i> ., 2021	Population- based matched cohort study	- 35,087 - Terminal noncancer illness	53.3-75%	14.1–30.6% hospital 11–16.1% other	Decedents who had chronic organ failure, dementia	Receive PC	Canada
Hansen <i>et al</i> ., 2002	Observational study	- 2,317,586 - 65.8% noncancer	19.8-21.6%	- 51–53.8% hospital - 21.4–22.5% nursing home	Being male, older age	Live in western state	USA
Gisquet <i>et al.</i> , 2015	Retrospective study	- 92,283 - 78.1 noncancer	25.6-35.4%	53.7–61.9% hospital 10.9–12.5% residential care	Being married and widowed, attaining a bachelor's degree or higher, having a more predictable course of the disease, and being a farmer or self- employed	-	France

(Continued)

Table 1. (Continued)

Authors,	Type of study	Sample	Percentage of place of death		Factors related to dying at home		Country
years		characteristics	Home	Other	Individual	Social	
Gágyor et al., 2016	Retrospective cohort study	- 439 - Noncancer	52.2%	47.8% hospital or hospice	-	- Care by family members and GPs	Germany
Reich <i>et al</i> ., 2013	Retrospective analysis	- 58,732 - Multiple chronic conditions	26.6%	38.4% hospital 35.1% nursing home	Younger age, male	Living in rural areas	Switzerland
Masumoto et al., 2019	Retrospective observational study	- 119 - Noncancer	58%	40.3% hospital 1.7% long-term facility/residential care	 Death by noninfectious diseases Cognitive impairment 	 Family preference for home death Living with more than two family members 	Japan
Wales <i>et al</i> ., 2020	Retrospective chart review	- 2066 - 68% noncancer	68.8%	13.2% acute care 18% PCU/ residential hospice care	Patients in lower income quintiles	-	Canada
Kawagoe <i>et al.</i> , 2013	Historical cohort study	- 148 - 68% dementia	54.2%	25.9% hospital	- Low ADL - Preferred home death	-	Japan
Muramatsu <i>et al.</i> , 2008	Retrospective cohort study	- 3320 - 63% noncancer	40.9%	1.5% nursing home 49.5% hospital 3.1% hospice 5% other	 Older age Final illness lasting more than a month Nonethnic minority status 	 The number of living children Live in state that had home- and community- based services 	USA
Cypher and Axman, 2022	Secondary data analysis	- 385 - 76.1% noncancer	29.4%	30.6% hospitals 32.5% nursing homes 7.5% hospice residences	-	- Census location - The use of hospice	USA
Wammes <i>et al.</i> , 2021	Retrospective cohort study	- 149,638 - Dementia	12.1%	54.9% hospital 21.7% nursing home 11.3% other	Female with dementia	-	Japan
Tan <i>et al.,</i> 2019	Retrospective cohort study	- 62,951 - 63.8% noncancer	28%	NA	 Being 85 years old or older Belonging to Malay ethnicity Deaths as a result of diabetes mellitus and cerebrovascular diseases Having a documented home death preference 	- Receiving home PC	Singapore
Klinkenberg <i>et al.</i> , 2005	Population- based study	- 342 - 77.7% noncancer	35%	15% residential home 17% nursing home 32% hospital	-	 Receive both formal and informal care before death Geographical region 	Netherland
Lopez- Campos <i>et al.,</i> 2013	Observational study	- 4983 - Chronic Obstructive Pulmonary Disease	35%	57.6% hospital 0.7% other	Older age, married and widowed, female, living in rural areas, diagnosed with COPD	-	Spain

(Continued)

Table 1. (Continued)

Authors,	Type of study	Sample	Percentage of place of death		Factors related to dying at home		Country
years		characteristics	Home	Other	Individual	Social	
Talha <i>et al</i> ., 2022	Secondary data analysis	15,507 decedents with congenital heart disease	26.5%	Inpatient 41.4% Outpatient or ER 17.6% Hospice or nursing facility 7.3%	Divorced or widowed decedents	-	USA
Wammes <i>et al.</i> , 2022	An interrupted time series analysis	19,307,104 older adults decedents	12.88%	80.94% hospital 3.69% nursing home 2.29% elsewhere	-	- Revised Medical Care Act	Japan
Pham <i>et al.</i> , 2023	A secondary data analysis	1,741,131 HF decedent	28.26%	32.36%Medical facility 30.51%Nursing home 4.27%Hospice facility 4.59% Other and unknown	-	High social vulnerability index	USA
Nakanishi <i>et al.</i> , 2023	Cross- sectional	145,576 decedent with dementia 508,383 decedent with senility	8.6% 16%	59.1% hospital 25.9% nursing home 4.5% intermediate geriatric care facility 1.9% other 35.4% hospital 37.3% nursing home 8.8% intermediate geriatric care facility 1.9% other	-	Compared to deaths at home, hospital deaths were higher during the pandemic, while deaths in nursing homes, intermediate geriatric care, and other places were lower. In comparison to deaths at home, deaths in nursing homes, hospitals, intermediate geriatric care, and other locations were lower during the pandemic.	Japan
Gotanda <i>et al.</i> , 2022	Secondary data analysis	813,213 decedents with and without dementia	44.4%	20.2% acute care hospital 25.9% nursing home 9.5% inpatient hospice care unit	Dementia was less likely to die in a home or community setting or acute care hospitals compared with individuals without dementia.	-	USA
Mayan <i>et al.,</i> 2022	Secondary data analysis	993 decedents with dementia	35.8-43.28%	19.03–32.84% hospital 14.93–30.97% nursing home 5.97–9.67% hospice 1.52–4.53% other	A higher proportion of Hispanic PWD died at home compared to white and black person with dementia.	-	USA

PC, palliative care; COPD, chronic, obstructive, pulmonary, disease; ADL, activities of daily living; GPs, general practitioners; PCU, Palliative care unit; PWD, people with dementia.

Table 2. The characteristics of the selected studies (n=28).

Study's characteristics	Frequency	Percentage
Publication year		
2002	1	4
2006	1	4
2005	1	4
2008	1	4
2009	1	4
2013	3	11
2015	1	4
2016	1	4
2017	1	4
2019	2	7
2020	4	14
2021	4	14
2022	5	18
2023	2	7
Country		
USA	13	43
Canada	4	14
Japan	5	18
Switzerland	1	4
Spain	1	4
Singapore	1	4
France	1	4
Belgium	1	4
Germany	1	4
Netherland	1	4
Chronic conditions		
Noncancer (all chronic conditions except for cancer)	16	54
Heart failure (included congenital heart disease)	6	21
Dementia	6	21
Respiratory diseases (e.g. COPD)	1	4
COPD, chronic, obstructive,	pulmonary, dis	ease.

factors, which encompass resources available within the family, community, and healthcare services. The review of the literature identified the top five individual factors linked to home death (n=28). These factors include comorbidity (43%), sex (29%), age (25%), race (18%), and marital status (14%).

As for social factors, the top five contributors to home death were found to be the utilization of palliative care or hospice care at the end of life (21%), census division (14%), geographical areas (14%), and the presence of both informal and formal caregivers (e.g., family caregivers, healthcare providers) at 7%. For a comprehensive list, refer to Table 3.

Discussion

The scoping review uncovered variations in the actual place of death for individuals with noncancer-related chronic conditions. These variations are influenced by individual characteristics, existing social inequities,⁵ and disease trajectories.11 For instance, conditions like heart failure and respiratory disease exhibit intermittent declines in psychosocial well-being due to longterm physical conditions, with disease exacerbation potentially leading to sudden death in hospitals.^{12,13} In contrast, dementia often presents a gradual decline in physical and social well-being due to the progressive nature of the disease, often resulting in a hospital or nursing home death.¹⁴ Importantly, the COVID-19 pandemic is noted as a factor that widens the range of variation in the place of death.¹⁵ This identified phenomenon emphasizes a gap in palliative care services, suggesting that appropriate palliative care has the potential to reduce unplanned readmissions and allow patients to experience more comfortable deaths in their preferred locations.

We have identified various factors that determine home as an actual place of death. We propose that the desire to die at home is influenced not only by individual factors but also by social factors. These factors are likely to explain the possibility of dying at home, as patients and caregivers require social resources to support them. In other words, they rely on extensive resources and support, including family members, relatives, community, and neighborhood resources as well as resources as the result of health policies and the healthcare system. These resources play a crucial role in assisting patients and caregivers in navigating the complexities of **Table 3.** Factors associated with a home death (n = 28).

Factors*	Frequency	Percentage
Preceding factors		
Chronic conditions and comorbidity (e.g. dementia, heart failure)	12 (14, 17–26, 42)	43
Sex (female, male)	8 (14,17,19,28-31,42)	29
Age (older, younger)	7 (17,19,22-24,28,31)	25
Race (white, not minority status)	5 (19,22,24,29,43)	18
Marital status (married, widowed)	4 (19,20,23,44)	14
Education attainment (higher)	3 (17,19,20)	11
Home-death preference	2 (22,26)	7
Income (lower)	1 (32)	4
Low ADL	1 (26)	4
Self-employment	1 (20)	4
Social capital factors		
Palliative or hospice care services usage	6 (16,22,24,28,39,42)	21
Census division	4 (2, 31, 40, 42)	14
Geographical areas	4 (17,19,30,40)	14
Having more daughter/living children	2 (24,45)	7
Household size	2 (24,45)	7
Family members/GPs care	2(24,37)	7
Caregivers prefer home death	1 (21)	4
Living family members	1 (24)	4
Private household	1 (17)	4
Year of death	1 (19)	4
COVID-19 pandemic	1 (15)	4
High social vulnerability	1 (27)	4
Legislation [e.g. Medical Care Act (expanded Medicaid)]	1 (41)	4

*One study may result in more than one significant factor. ADL, activities of daily living; GPs, general practitioners.

end-of-life care, particularly as death approaches. As identified social factors, we then categorize these into themes, including preceding factors, social capital (resources/support), and the outcome (home death).

The preceding factors

The understanding of home death involves considering a range of factors that can either support or hinder this outcome. These factors encompass individual and clinical aspects, with chronic conditions and comorbidity (e.g. dementia, heart failure) being significant contributors.^{7,14,16–25,26,27} These conditions can lead to suffering and pose challenges for informal caregivers who may lack training in managing these complex problems. Despite these challenges, some patients and caregivers still prefer home death and seek external support for care at home to align with the patient's preferences.^{22,28} Demographic and socioeconomic factors also play a role in end-of-life care decisions.²⁹ For example, inconsistency is still found around the reported demographics of sex and age in this review; however, it appears more likely that males are likely to die at home than females. Older age is associated with a higher likelihood of home death.^{7,17,19,22-24,30-33} However, demographic factors of race, and single marital status can act as barriers to home death, leading to a higher likelihood of hospital deaths due to limited support.^{19,20,22–24,31,34,35} Similar findings show that socioeconomic factors of lower educational attainment and lower income are associated with a lower likelihood of a home death. This is consistent with other findings^{6,36} that suggest significant health disparities and social inequity influence place of death outcomes.

Social capital in the palliative care context is defined as the resources and support received by patients and caregivers from their social relationships at micro, meso, and macro levels.³⁷

Micro (individual) level

Related individual demographic, socioeconomic, and clinical factors play a significant role in patients' possibility to die at home. Notably, patients who have strong support from family members, live with them, and express a preference for home death are more likely to die at home.^{21,38} This scoping review highlights the importance of obtaining resources and support from family members in achieving home death. By comprehending and addressing these factors, we can enhance patients' prospects of receiving quality care at home and realizing their end-of-life preferences.

Importantly, the preferences of both the patient and the caregiver are significant. A study revealed that when caregivers expressed a preference for the patient to die at home, it positively influenced the likelihood of home death.²¹ Taking into account the preferences of both parties is vital in facilitating end-of-life care decisions and providing the necessary support.

Community level (meso level)

Community and neighborhood cohesion play a crucial role as resources and support for patients and their caregivers.³⁹ The process of dying at home demands considerable effort from both patients and their families. As a result, social

support from community resources, encompassing emotional, tangible, and informational assistance, is considered imperative.40 While a community of formal care circles with trained and private staff for specific palliative/hospice care may be available,⁴¹ its universal feasibility is not assured. Persistent challenges significantly affect the viability of home-based end-of-life care, hindering patients from receiving the necessary assistance and support in the comfort of their homes.41,42 This scoping review underscores the necessity for future research to explore community resources within the care circle for this patient population, with a particular focus on informal social networks, community cohesion, and their functions.

Macro (system/society) level

The underutilization of palliative care, a palliative care training shortage, and delays in initiating these services present significant obstacles, hindering patients and their families from obtaining optimal end-of-life care and realizing their preference for the location of death.^{7,22,24,43,44} These challenges underscore the pivotal role of health policy and medical legislation related to end-of-life care services and related support systems.45 Studies indicate that only specific regions have health policies supporting home or community palliative care.19,24,32,44 Adding to the complexity, census division and geographical differences, as revealed in this scoping review, contribute to disparities in access to palliative care services, with notable distinctions between rural and urban areas.^{17,23,33,42}

In response to these complexities, urgent steps are required to advance the implementation of early palliative and hospice care services for all. This proactive approach addresses the identified challenges and ensures equitable access to highquality end-of-life care across diverse regions and circumstances.

The *outcome*, home death, is the outcome of emphasis in this scoping review and refers to both the place of care and the place where patients ultimately die. Preceding factors come into play to achieve home death, initiating individual resources at the micro, macro, and meso levels.

Therefore, based on the multiple factors identified in this scoping review, we categorized them into two constructs and one outcome aligned with the framework of social capital for palliative



Figure 2. The model of home death: preceding factors and social capital influence on home death in noncancer patients with end-stage chronic health conditions.

care by Lewis *et al.*³⁷, as depicted in Figure 2, which presents the model of home death. This review summarizes two significant constructs associated with home as the preferred place of death for individuals with noncancer end-stage chronic health conditions. These constructs include preceding factors and social factors, with home death the outcome.

It is important to consider the variations in healthcare systems and cultural caregiving practices across world regions.²⁴ Western countries often have nursing homes and residential care facilities as options for older adults where they can receive end-of-life care. In contrast, some Asian countries like Singapore and Japan prioritize aging in place and supporting home-based care for ill individuals.²² These differences impact the availability and utilization of home-based care services, affecting the opportunities and preferences for home death in noncancer patients with end-stage chronic health conditions.

Limitations

Our scoping review had certain limitations in the search process. Although we conducted searches across multiple databases, the keywords used were broad in nature. Additionally, we did not include gray literature in our search, which could have resulted in the omission of relevant studies. Another limitation pertains to the analysis of data concerning the place of death in relation to specific chronic conditions. We observed a wide range of percentages within the same place of death, which restricts the generalizability of these findings when collectively considered. These results should be interpreted with caution given the wide range of percentage results associated with various conditions. Furthermore, our review did not establish definitive cause-and-effect relationships between the factors, further limiting our ability to draw conclusive conclusions about their relationships. It is important to acknowledge these limitations as they may impact the comprehensiveness and applicability of our review's conclusions while calling for additional research that is needed in this area of inquiry.

Conclusion

The place of death in patients with noncancer chronic health conditions is wide-ranging and influenced by various factors. While the distribution of places of death may not provide universal insights, it is a valuable starting point for understanding the patterns in different regions. It can provide insights into the effectiveness of certain policies or practices and inform best practices for end-of-life care. In addition, this will help tailoring end-of-life care strategies to the specific context of the study area. Our review did not establish clear cause-and-effect relationships between these factors, limiting our ability to draw definitive conclusions. However, it can be summarized that noncancer chronic conditions were more likely to die in healthcare facilities such as hospitals, nursing homes, and long-term care settings. When considering factors associated with home death, preceding factors (demographics and socioeconomics) and social factors emerged as significant.

These findings highlight the importance of initiating community-based palliative care early in the course of chronic health conditions. By providing timely symptom management and mobilizing palliative care and social care resources and support across the three levels (individual, community, and system), patients can be better prepared for a dignified death in their preferred setting.

It is crucial to recognize that there are still many social aspects to explore, such as examining additional resources and support, addressing specific preceding factors to ensure equitable access within the healthcare system, and promoting home death as a feasible outcome. These findings have implications for further research and practice, particularly for understanding the factors that determine the place of death in terminally ill patients with chronic conditions, with a specific focus on social factors at the meso (community) level. By delving deeper into these areas, we can enhance our understanding of how social factors influence end-of-life care decisions and develop strategies with a palliative care framework to promote home death while ensuring equal accessibility and support for all patients.

A compassionate and patient-centered approach to end-of-life care involves understanding individual clinical conditions, patient preferences, and socioeconomic and demographic variables. By tailoring interventions based on these factors and examining available resources and support, healthcare providers can enhance the quality of care and ensure that patients receive treatment in their preferred setting.

Declarations

Ethics approval and consent to participate Not applicable.

Consent for publication Not applicable.

Author contributions

Sangduan Ginggeaw: Conceptualization; Data curation; Formal analysis; Methodology; Writing – original draft.

Raeann LeBlanc: Conceptualization; Data curation; Formal analysis; Methodology; Validation; Writing – review & editing.

Acknowledgement

None.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Competing interests

The authors declare that there is no conflict of interest.

Availability of data and materials

Supplemental Material 1: PRISMA-ScR Checklist. Supplemental Material 2: Sample Search Terms in CINAHL Database.

ORCID iD

Sangduan Ginggeaw D https://orcid.org/0000-0002-7289-2162

Supplemental material

Supplemental material for this article is available online.

Reference

- Iyer AS and Brown CJ. End-of-life preferences in older US adults – bridging the 'what matters' chasm. *JAMA Netw Open* 2022;5: e2142279.
- Cross SH and Warraich HJ. Changes in the place of death in the United States. N Engl J Med 2019; 381: 2369–2370.
- 3. Edwards JK and Wohl DA. Dying at home due to coronavirus disease 2019. *Open Forum Infect Dis* 2022; 9: ofac439.
- 4. García-Sanjuán S, Fernández-Alcántara M, Clement-Carbonell V, *et al.* Levels and determinants of place-of-death congruence in palliative patients: a systematic review. *Front Psychol* 2022; 12: 807869.
- Oliviere D, Monroe B and Payne S (eds.). Death, dying, and social differences [Internet]. Oxford University Press, https://academic.oup.com/ book/10037 (2011, accessed 8 Decmber 2023).

- Davies JM, Sleeman KE, Leniz J, et al. Socioeconomic position and use of healthcare in the last year of life: a systematic review and metaanalysis. PLoS Med 2019; 16: e1002782.
- Quinn KL, Hsu AT, Smith G, et al. Association between palliative care and death at home in adults with heart failure. J Am Heart Assoc 2020; 9: e013844.
- Billingham MJ and Billingham SJ. Congruence between preferred and actual place of death according to the presence of malignant or non-malignant disease: a systematic review and meta-analysis. *BMJ Support Palliat Care* 2013; 3: 144–154.
- Peters MDJ, Marnie C, Tricco AC, et al. Updated methodological guidance for the conduct of scoping reviews. *JBI Evid Synth* 2020; 18: 2119–2126.
- Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018; 169:4 67–473.
- Murray SA, Kendall M, Mitchell G, et al. Palliative care from diagnosis to death. BMJ 2017; 356: j878.
- Cohen-Mansfield J, Skornick-Bouchbinder M and Brill S. Trajectories of end of life: a systematic review. *J Gerontol Series B* 2018; 73: 564–572.
- Seow H, O'Leary E, Perez R, et al. Access to palliative care by disease trajectory: a populationbased cohort of Ontario decedents. BMJ Open 2018; 8: e021147.
- Wammes JD, Nakanishi M, van der Steen JT, et al. Japanese national dementia plan is associated with a small shift in location of death: an interrupted time series analysis. *J Alzheimers* Dis 2021; 83: 791–797.
- Nakanishi M, Yamasaki S, Sakai M, et al. Place of death from dementia as an underlying cause during the COVID-19 pandemic in Japan: a cross-sectional study from national death certificates. *Palliat Care Soc Pract* 2023; 17: 26323524231193039.
- Quinn KL, Wegier P, Stukel TA, et al. Comparison of palliative care delivery in the last year of life between adults with terminal noncancer illness or cancer. *JAMA Netw Open* 2021; 4: e210677.
- 17. Cohen J, Bilsen J, Hooft P, *et al*. Dying at home or in an institution. *Health Policy* 2006; 78: 319–329.
- Bell CL, Davis J, Harrigan RC, et al. Factors associated with place of death for elderly Japanese-American men: the Honolulu Heart Program and Honolulu-Asia Aging Study. J Am Geriatr Soc 2009; 57: 714–718.

- Al-Kindi SG, Koniaris C, Oliveira GH, *et al.* Where patients with heart failure die: trends in location of death of patients with heart failure in the United States. *J Card Fail* 2017; 23: 713–714.
- Gisquet E, Julliard S and Geoffroy-Perez B. Do social factors affect the place of death? Analysis of home versus institutional death over 20 years. *β Public Health* 2015; 38: fdv167.
- 21. Masumoto S, Sato M, Ichinohe Y, *et al.* Factors facilitating home death in non-cancer older patients receiving home medical care. *Geriatr Gerontol Int* 2019; 19: 1231–1235.
- 22. Tan WS, Bajpai R, Low CK, *et al.* Individual, clinical and system factors associated with the place of death: a linked national database study. *PLoS One* 2019; 14: e0215566.
- López-Campos JL, Ruiz-Ramos M, Mendez C, et al. Characteristics of subjects who died of chronic obstructive pulmonary disease in Andalusia in 2010 and 2011. J Palliat Med 2013; 16: 1610–1613.
- 24. Muramatsu N, Hoyem RL, Yin H, *et al.* Place of death among older Americans: does state spending on home- and community-based services promote home death? *Med Care* 2008; 46: 829–838.
- 25. Gotanda H, Zhang JJ, Xu H, *et al.* Site of death among individuals with and without dementia in 2016–2018. *J Am Geriatr Soc* 2022; 70: 1865–1867.
- Quinn KL, Stukel T, Stall NM, *et al.* Association between palliative care and healthcare outcomes among adults with terminal non-cancer illness: population based matched cohort study. *BMJ* 2020; 370: m2257.
- 27. Talha KM, Kumar P, Ejaz A, *et al.* Where adults with congenital heart disease die: insights from the CDC-WONDER database. *Curr Probl Cardiol* 2022; 47: 101344.
- 28. Kawagoe S, Tsuda T and Doi H. Study on the factors determining home death of patients during home care: a historical cohort study at a home care support clinic. *Geriatr Gerontol Int* 2013; 13: 874–880.
- 29. Pham R, Gorodeski EZ and Al-Kindi S. Social vulnerability and location of death in heart failure in the United States. *Curr Probl Cardiol* 2023; 48: 101689.
- Van Spall HGC, Hill AD, Fu L, *et al.* Temporal trends and sex differences in intensity of healthcare at the end of life in adults with heart failure. J Am Heart Assoc 2021; 10: e018495.
- 31. Chuzi S, Molsberry R, Ogunseitan A, *et al.* Trends in place of death for cardiovascular mortality related to heart failure in the United

States from 2003 to 2017. *Cir: Heart Fail* 2020; 13: e006587.

- Hansen SM, Tolle SW and Martin DP. Factors associated with lower rates of in-hospital death. *J Palliat Med* 2002; 5: 677–685.
- Reich O, Signorell A and Busato A. Place of death and health care utilization for people in the last 6 months of life in Switzerland: a retrospective analysis using administrative data. *BMC Health Serv Res* 2013; 13: 116.
- 34. Wales J, Kurahashi AM and Husain A. The interaction of socioeconomic status with place of death: a qualitative analysis of physician experiences. *BMC Palliat Care* 2018; 17: 87.
- Mayan I, Yaffe K, James J, et al. The association between race and place of death among persons with dementia. J Pain Symptom Manage 2022; 64: e109–e114.
- 36. Neergaard MA, Brunoe AH, Skorstengaard MH, et al. What socio-economic factors determine place of death for people with life-limiting illness? A systematic review and appraisal of methodological rigour. Palliat Med 2019; 33: 900–925.
- Lewis JM, DiGiacomo M, Luckett T, et al. A social capital framework for palliative care: supporting health and well-being for people with life-limiting illness and their carers through social relations and networks. *J Pain Symptom Manage* 2013; 45: 92–103.
- Lei L, Gerlach LB, Powell VD, et al. Caregiver support and place of death among older adults. J Am Geriatr Soc 2021; 69(5): 1221–1230.

- Abel J. Compassionate communities and end-oflife care. *Clin Med* 2018; 18: 6–8.
- 40. Horsfall D. Developing compassionate communities in Australia through collective caregiving: a qualitative study exploring network-centred care and the role of the end of life sector. *Ann Palliat Med* 2018; 7(S2): S42–S51.
- Gágyor I, Himmel W, Pierau A, *et al.* Dying at home or in the hospital? An observational study in German general practice. *Eur J Gen Pract* 2016; 22: 9–15.
- Klinkenberg M, Visser G, Broese Van Groenou MI, et al. The last 3 months of life: care, transitions and the place of death of older people. *Health Soc Care Community* 2005; 13: 420–430.
- Regier NG, Cotter VT, Hansen BR, et al. Place of death for persons with and without cognitive impairment in the United States. J Am Geriatr Soc 2021; 69: 924–931.
- Cypher M and Axman LM. Determinants of location of death: a secondary analysis utilizing multinomial logistic regression. Am J Hosp Palliat Care 2022;39: 1397–1402.
- 45. Wammes JD, Nakanishi M, Van Der Steen JT, et al. The Revised Medical Care Act is associated with a decrease in hospital death for the total Japanese older adult population regardless of dementia status: an interrupted time series analysis. *PLoS One* 2022; 17: e0264624.

Visit Sage journals online journals.sagepub.com/ home/pcr

Sage journals