



ADVANCED INTERNATIONAL JOURNAL
OF BUSINESS, ENTREPRENEURSHIP
AND SMES
(AIJBES)

www.gaexcellence.com/aijbess



MAPPING AND OVERCOMING THE BARRIERS: AN EXPLORATORY CASE STUDY OF COMMUNICATION AND COLLABORATION AMONG CARERS IN DOMICILIARY CARE

Nancy Sinha ¹, Mohammad Alrabie ^{2*}

¹ Hertfordshire Business School, University of Hertfordshire, UK

 nancychettril8@gmail.com



<https://orcid.org/0009-0002-3503-6444>

² Hertfordshire Business School, University of Hertfordshire, UK

 m.alrabie@herts.ac.uk



<https://orcid.org/0009-0002-0324-8901>

*Corresponding Author

Article Info:

Article history:

Received date: 26.04.2026

Revised date: 24.05.2026

Accepted date: 28.06.2026

Published date: 30.06.2026

To cite this document:

Sinha, N., & Alrabie, M. (2026). Mapping And Overcoming the Barriers: An Exploratory Case Study of Communication and Collaboration Among Carers in Domiciliary Care. *Advanced International Journal of Business Entrepreneurship and SMEs*, 8 (28), 806-828.

Abstract:

This study investigates communication and collaboration challenges within domiciliary care teams, focusing on a family-run domiciliary care organisation. As the demand for domiciliary care increases and carers often work in isolation, effective communication becomes essential for ensuring the continuity, quality, and safety of care. The primary aim of this paper is to identify barriers to communication among carers, evaluate the effectiveness of existing communication tools and practices, and develop a conceptual framework to improve coordination in geographically dispersed care teams. A qualitative methodology was employed, consisting of eight semi-structured interviews with carers. Thematic analysis of the interview transcripts via NVivo revealed recurring issues, which guided the creation of causal loop diagrams to better understand the underlying dynamics of communication breakdowns. Project management measures and metrics, including risk registers and stakeholder analysis, were used to support the analysis process. The findings highlight significant barriers, including inconsistent handovers, language and cultural differences, limited interpersonal interaction, and underutilisation of digital tools. These challenges align with broader theoretical frameworks of relational coordination and communication models, reinforcing the need for structured interventions. The study concludes that standardising documentation, implementing targeted training, and fostering proactive team-building strategies are essential for overcoming these barriers. The outcomes contribute to the development of a practical conceptual framework aimed at improving team

collaboration, reducing misunderstandings, and enhancing the overall quality of care in domiciliary settings.

DOI: 10.35631/AIJBS.828051 **Keyword:**

Carers, Causal Loop Diagramming, Collaboration, Communication, Conceptual Framework, Domiciliary Care, Systems Mapping, Thematic Analysis



© The authors (2026). This is an Open Access article distributed under the terms of the Creative Commons Attribution (CC BY NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact aijbbs@gaexcellence.com.

Introduction

Current demographic developments across Europe have significantly increased interest in domiciliary care models. The proportion of the population aged 65 and over is steadily rising, leading to a projected increase in care dependency in the near future (Genet et al., 2011). Simultaneously, evolving lifestyle patterns, declining family sizes, and higher labour market participation among women have reduced the capacity for informal caregiving (Genet et al., 2011; WHO, 2008). This combination of growing demand for care services and shrinking availability of informal carers has placed considerable pressure on formal domiciliary care systems to expand their reach and improve operational efficiency.

This rising demand reinforces the need for well-coordinated, competent domiciliary care teams capable of managing the complex needs of vulnerable individuals in their homes. Effective communication within these teams is critical to ensure safety, consistency, and quality in care delivery. Failures in communication, whether due to poor documentation, unstructured handovers, or a lack of real-time updates, can lead to service fragmentation, overlooked care needs, and heightened risks for service users. Moreover, communication breakdowns also undermine carer morale, increase stress, and contribute to high turnover rates within the sector. This study focuses on a family-run domiciliary care organisation based in the United Kingdom. Established in 2021, the organisation delivers bespoke, person-centred care services to a growing service users base. Despite a strong community reputation and a value-driven mission, the provider faces familiar sector challenges: inconsistent information flow, gaps in team coordination, and a lack of structured protocols to guide daily communication between staff.

Through a case study of the organisation, the study identifies key challenges in team collaboration and explores viable, low-resource strategies for improvement. The study incorporates carers' interviews, observation, and a critical review of relevant literature to co-develop practical, scalable solutions that support better information sharing, stronger

teamwork, and ultimately, safer and more consistent care delivery. By doing so, the findings aim to inform not only the organisation's operational practice but also broader discussions on communication frameworks in community-based care environments.

Study Aim and Objectives

This study aims to identify and overcome the communication and collaboration barriers experienced by the organisation's teams. By investigating the root causes of these challenges, the study seeks to develop a comprehensive conceptual framework that enhances communication efficiency, fosters better teamwork, and ultimately improves the quality of care provided to service users in domiciliary care settings. The objectives of the study were to:

- **Examine the Nature and Impact of Communication and Collaboration Barriers:** Identify specific communication challenges faced by domiciliary carers, including language barriers, lack of standardised communication protocols, and technological limitations.
- **Evaluate Existing Communication Tools and Strategies:** Analyse current methods used by domiciliary care teams, their effectiveness, and potential areas for improvement.
- **Develop a Conceptual Framework:** Propose a structured approach that integrates effective communication strategies, digital tools, and organisational policies to enhance collaboration and reduce barriers.

Literature Review

Effective communication is crucial in ensuring coordinated efforts, accurate information sharing, and smooth transitions between care shifts. However, many care providers face ongoing challenges due to fragmented communication channels, lack of standardised protocols, language barriers, and limited integration of digital tools (Larsson et al., 2022).

Communication and Collaboration Challenges in Domiciliary Care

Domiciliary care presents unique communication and collaboration challenges compared to institutional healthcare settings. Carers typically operate independently, with limited face-to-face interaction with supervisors or colleagues, which can fragment the flow of information and coordination of tasks (Flink et al., 2012).

Pinelle and Gutwin (2002) were among the early researchers to systematically identify five critical areas where collaboration in domiciliary care environments becomes particularly strained: scheduling, information sharing, retrieving service users' history, coordinating short-term treatments, and managing long-term care plans.

In domiciliary care settings, these areas remain highly relevant. Carers often juggle multiple service users with varying needs, making efficient scheduling crucial; however, the lack of centralised real-time tools often leads to double-bookings, gaps in care, or inconsistencies in service provision. Furthermore, the challenge of information sharing is exacerbated by reliance on handwritten notes, telephone updates, and informal communication channels, increasing the likelihood of omissions and misinterpretations.

The absence of effective systems for retrieving and updating service users' histories also creates a risk of carers making decisions based on outdated or incomplete information, potentially compromising service users' safety. For example, if a medication changes or new care directive is not communicated promptly across the team, carers may inadvertently provide inappropriate care. This is particularly problematic in managing both short-term treatments, such as post-hospital discharge care, and long-term management of chronic conditions like dementia or diabetes, where continuity of information is critical (Pinelle & Gutwin, 2002).

Building upon these concerns, Larsson et al. (2022) conducted a scoping review that explored teamwork dynamics in domiciliary care nursing, noting that fragmented communication systems often cause confusion over task responsibilities and deterioration in the quality-of-service delivery. Although their review focused primarily on nursing staff, many parallels exist in domiciliary care, where carers similarly depend on care notes, sporadic phone communications, and shift handovers to maintain continuity.

The lack of structured, standardised communication protocols increases the risk of vital information being overlooked or miscommunicated, leading to a fragmented understanding of service users' needs among team members. This, in turn, can result in inconsistent care delivery and erode trust between carers, service users, and their families.

Flink et al. (2012) further highlighted that ineffective communication within domiciliary services not only affects team collaboration but also diminishes the quality of interactions with service users themselves. Delays in responding to service needs, missed visits, and overlapping responsibilities were identified as frequent issues arising from communication breakdowns. These inefficiencies are often rooted in broader organisational problems, such as the absence of real-time digital communication platforms, insufficient staffing levels, and poorly designed workflow systems.

In domiciliary settings, where care teams are geographically dispersed, the absence of timely updates, for example, regarding a service user's sudden change in condition, can cause serious disruptions to care continuity and increase the burden on already overstretched staff (Flink et al., 2012). Furthermore, research by Thome et al. (2003) emphasised that the informality of communication in community settings can sometimes discourage staff from raising concerns or escalating issues, especially in environments with unclear leadership structures. In domiciliary care, where carers often operate in isolation, the lack of immediate access to supervisory support compounds this issue, leading to unresolved conflicts, overlooked service users' risks, and a decline in staff morale.

Technology could theoretically offer solutions; however, adoption remains inconsistent. According to Lucero et al. (2019), while mobile-based care management platforms (such as digital scheduling and service users record systems) show potential to bridge information gaps, barriers such as limited digital literacy among carers, concerns over data privacy, and lack of organisational investment in technology infrastructure hamper their effectiveness in real-world domiciliary care settings.

Technological Solutions and Their Constraints

Technology offers significant opportunities to improve communication and coordination in domiciliary care. Point-of-care systems, mobile applications, and cloud-based care management platforms can enable real-time information sharing among carers, supervisors, and healthcare professionals. Pinelle and Gutwin (2002) emphasised the need for integrated systems that allow carers to update, retrieve, and share service users' information instantly to reduce delays and duplication of work.

However, they also noted that the successful deployment of such systems depends heavily on appropriate staff training and consistent system usage; aspects often neglected, particularly in smaller, independent providers such as the organisation.

The potential benefits of technological solutions are evident in Gray et al.'s (2007) pilot study, which investigated the deployment of a scalable domiciliary care system infrastructure designed to support communication and information sharing between carers. The system enabled carers to input data about service users visits directly into handheld devices, which synchronised with a central database accessible to supervisors and other carers.

The findings showed that the system improved the timeliness of information transfer and reduced errors associated with handwritten notes or delayed reporting. However, the study also highlighted several critical constraints: first, many users reported difficulties with device usability, citing small screens, complicated interfaces, and slow system responsiveness as barriers to efficiency. These technical barriers discouraged consistent use, undermining the system's potential benefits.

Moreover, Gray et al. (2007) noted that the introduction of technological systems required considerable upfront investment in both equipment and training. For smaller domiciliary care providers, where budgets are often tight, this financial burden can be prohibitive. In the case of the organisation, the costs associated with adopting and maintaining sophisticated digital systems may outweigh perceived short-term benefits, especially if turnover among staff is high and retraining becomes an ongoing expense.

Another challenge concerns staff attitudes towards technology. Research indicates that without strong leadership support and user involvement in system design and implementation, frontline carers may resist new technologies (Gray et al., 2007). This resistance can stem from fears of increased surveillance, concerns about job security, or simply discomfort with unfamiliar digital tools. In such small organisations, where carers may have long-established routines and a strong preference for face-to-face communication, the cultural shift needed to embed digital practices may be particularly difficult to achieve.

Furthermore, the absence of formal digital communication protocols often exacerbates inconsistencies in system use. Without clear guidelines on what information should be recorded, how frequently systems should be updated, and who is responsible for monitoring data quality, digital communication systems can become fragmented and unreliable (Flink et al., 2012). This issue is especially pronounced in family-run or informally structured domiciliary agencies, where professional boundaries and reporting standards may not be clearly defined.

The Necessity for a Structured Intervention by an Informed Conceptual Framework

As domiciliary care continues to expand in response to ageing populations and increased demand for community-based services, the absence of structured frameworks to support communication among carers becomes increasingly problematic. Research shows that fragmented communication in domiciliary care directly impacts the consistency and safety of care delivery (Vimalananda et al., 2015). Unlike institutional healthcare settings where standard communication protocols like SBAR and team huddles are feasible, domiciliary carers often operate in isolation with minimal real-time interaction, highlighting the unsuitability of traditional hospital-based frameworks (Manser, 2009).

Several scholars argue that effective teamwork and communication in domiciliary care require frameworks specifically designed for distributed teams (Shaw et al., 2011). Generic health communication models often assume immediate access to electronic health records (EHRs), physical meetings, or supervisory oversight, all of which are often unavailable in the domiciliary setting (Gittell, 2011). Consequently, there is a clear need for tailored strategies that acknowledge the logistical and technological limitations faced by independent carers.

Furthermore, D'Amour et al. (2005) emphasised that interprofessional collaboration frameworks developed for hospital settings fail to translate effectively to community contexts due to differences in organisational culture, autonomy levels, and information exchange pathways. In domiciliary care, communication is often asynchronous, informal, and reliant on handwritten notes or sporadic phone updates, rendering rigid institutional models ineffective.

This study addresses this gap by developing a bespoke conceptual framework for improving communication and collaboration among carers in domiciliary care, offering a flexible, low-resource model suited to the realities of home-based care environments

Key Stakeholders

This study engages a diverse range of stakeholders, both internal and external, who influence or are affected by the communication challenges in domiciliary care. Table 1 outlines key stakeholders involved in domiciliary care, detailing their roles in communication and care delivery. Stakeholders range from frontline carers, responsible for daily care, to senior management overseeing policy implementation. Additionally, external parties such as social services, GPs, and service users' families play vital roles in coordinating care. The Study's Supervisor ensures academic rigour in the research process, guiding methodology and analysis.

Table 1. Stakeholders and Their Roles

Stakeholder	Role
Domiciliary Carers	Frontline carers delivering daily care and directly experiencing communication challenges.
Supervisor	Responsible for quality assurance, staff guidance, and information flow.
Care Coordinator	Manages care schedules and staff deployment, and ensures smooth operations

Manager	Oversees strategic decisions and policy implementation.
Social Services	Refer service users and work in partnership with care providers for safeguarding and care coordination.
Service Users' GP	Plays a role in coordinating clinical care and need timely updates from the domiciliary care team.
Service Users and Families	End beneficiaries whose wellbeing is impacted by care team communication.
Study Supervisor (University)	Guides the research methodology and overall academic rigour.

(Source: Authors)

Stakeholder Analysis

Table 2 outlines key stakeholders in domiciliary care, focusing on their roles, influence, impact, and engagement strategies. Carers have a medium level of influence but high impact due to their direct involvement in daily care and communication challenges, requiring engagement through surveys, interviews, and informal feedback. Supervisors wield high influence and impact, ensuring quality control and team cohesion; they are engaged through regular check-ins and interviews.

Care Coordinators have high influence in managing care schedules and communication, with medium impact; their engagement is facilitated through process reviews and group discussions. Managers have medium influence and impact, overseeing policy, staffing, and compliance; engagement occurs through monthly briefings and results presentations. Social Services hold medium influence and impact, responsible for safeguarding and care oversight; they are engaged via formal summary reports. GPs of Service Users, with medium influence and high impact, need timely care updates and are engaged indirectly through care teams.

Service Users & Families have high influence and impact on care outcomes, engaged through feedback from carers. The Study's Supervisor has high influence and impact on the research process, ensuring academic rigour, with engagement through bi-weekly meetings, providing academic structure and progress reporting.

Table 2. Stakeholder Analysis

Stakeholder	Role/Interest	Influence	Impact	Engagement Strategy
Carers	Deliver care and experience communication gaps directly	Medium	High	Surveys, interviews, informal feedback
Supervisors	Monitor quality and ensure care team cohesion	High	High	Interviews, regular check-ins
Care Coordinators	Central to rota planning and communication	High	Medium	Process reviews, focused group discussions

Managers	Oversee staffing, policy, and compliance	Medium	Medium	Monthly briefings, results presentation
Social Services	Interface with care providers and responsible for oversight/safeguarding	Medium	Medium	Formal summary report of findings
GPs of Service Users	Play a role in coordinating clinical care and need timely updates from the domiciliary care team.	Medium	High	Indirect engagement through care teams
Service Users & Families	Directly affected by care quality and consistency	High	High	Feedback incorporated via proxy (carers insights)
Study's Supervisor	Guides academic quality and ethical conduct of the research	High	High	Weekly/bi-weekly meetings

(Source: Authors)

Methods

Study Design

This study adopts a qualitative research methodology to investigate the communication and collaboration challenges encountered by domiciliary care teams. Qualitative research is a methodological approach focused on understanding human experiences, behaviours, and social phenomena from the perspectives of participants (Creswell, 2013). This approach is particularly advantageous for studying complex interpersonal dynamics, as it enables participants to articulate their experiences and viewpoints in their own terms.

The interview data were analysed with thematic analysis using NVivo and complemented by causal mapping, a participatory technique that allows individuals to express perceived causal relationships between factors shaping their experiences within their roles (Eden & Ackermann, 2004; Jones et al., 2011), operationalised in this study through causal loop diagramming (see Analytical Approach). This methodological innovation moves beyond descriptive accounts by providing a structured yet flexible means of visualising how barriers interact in systemic ways. By aggregating individual maps into thematic patterns, the study generated insights into both the diversity and commonality of carers' experiences. Such an approach not only enriches qualitative data but also provides institutional stakeholders with tangible tools to inform decision-making. This qualitative approach supports the development of a conceptual framework that is grounded in the lived experiences of domiciliary carers. This framework offers valuable insights into the communication and collaboration challenges faced by these teams, with the potential to inform future practice and policy within the field of domiciliary care services.

Data Collection

The primary data collection methods for this study consisted of semi-structured interviews and the review of existing case studies. These methods are chosen to provide a rich, multi-faceted understanding of the communication and collaboration challenges experienced by domiciliary care teams.

Semi-structured interviews were the principal method for gathering primary data. Carers from the organisation were invited to participate in these interviews, which allowed them to share detailed narratives of their experiences, challenges, and strategies in relation to communication and collaboration.

The semi-structured format offers a balance between ensuring consistency across interviews and allowing participants the flexibility to introduce new ideas, elaborate on key issues, and offer personal insights (Kallio et al., 2016). This method is particularly suitable for exploring the subjective realities of participants, as it permits the exploration of emergent themes and the provision of in-depth accounts of personal and professional experiences.

The study also reviewed existing case studies, which complemented and contextualised the interview data, as case studies provide valuable insights into the organisational communication practices, incidents of communication breakdown, and instances of successful collaboration within the domiciliary care setting.

By examining these case studies, the study gained a broader understanding of systemic patterns, operational dynamics, and historical factors influencing communication practices within the organisation. The review of case studies enabled triangulation of the interview findings, thereby enhancing the validity and reliability of the results (Yin, 2018).

The combination of personal accounts through semi-structured interviews and the contextual depth provided by case study reviews facilitated the development of a nuanced conceptual framework that captures both the individual and systemic dimensions of communication challenges within this setting.

Table 3 below presents the profile of each participant. A total of eight participants were interviewed, seven female and one male. In terms of their roles, seven of the participants held the role of carers, and one was a care field supervisor.

The participants were recruited voluntarily via open calls for participation on the organisation's all-staff email. The interviews took place between June and July 2025, with each interview lasting for approximately 30 minutes. Prior to their participation, each participant was given a participant information form, detailing the title of the study, the purpose of the study, the length of the interview, how their data will be used, and who to contact for further information.

This allowed the participants to make informed decisions about whether or not they would like to participate. Once they agreed to participate, they signed a consent form to confirm they had read the participant information form and that they were aware the interview would be recorded. The consent form further clarified that the participants could withdraw their participation at any point.

Table 3. Participants' Profiles

Participant ID	Role	Experience (Years)	Gender
P1	Carer	1 year	F
P2	Carer	2 years	F
P3	Carer	15 months	F
P4	Carer	1 year	F
P5	Carer	2 years	M
P6	Carer	10 years	F
P7	Care Field Supervisor	15+ years	F
P8	Carer	10+ years	F

(Source: Authors)

Analytical Approach

Thematic analysis was conducted using NVivo (version 14) software to analyse the interview data. Thematic analysis was selected for this study as it provides a systematic yet flexible approach to identifying, analysing, and reporting patterns (themes) within qualitative data (Braun & Clarke, 2006; Ahmed et al., 2025). Specifically, for interview transcripts, thematic analysis offers several advantages: the ability to identify rich, detailed insights from participants; flexibility across theoretical frameworks; accessibility and transparency; and support for theory development. As this study involves in-depth interviews, thematic analysis scales well and remains effective in uncovering meaningful patterns from the data. First, the interviews recorded via MS Teams were transcribed (verbatim) and the interview transcriptions were then uploaded to the NVivo software.

The analysis focused on identifying root challenges encountered by the carers in their communication and collaboration and exploring the strategies to address those challenges. In this study, a systems thinking tool called Causal Loop Diagramming (CLD) was adopted to visualise the interrelationships between the identified variables and to support further analysis of the interactions within this complex system. CLD is part of the broader toolkit within the field of System Dynamics. It is qualitative by nature, yet it allows for conversion to quantitative modelling and simulation through Stock and Flow Diagramming (SFD), should quantitative data be available or collected, and if the nature of the causal relationships between variables is quantified. A CLD illustrates variables, in this case, factors and factor groups, and the causal relationships between them. These relationships are assigned either a positive or negative polarity, indicating the direction of influence. A key benefit of CLDs is the ability to visualise the interactions, which helps reduce complexity, enhance understanding of the system's intricacies given the number of factors involved, and clarify the relationships between variables within the context of the system under study.

In the context of this study, we limited our work to qualitative system dynamics through CLD. KumuCLD was used for the diagramming. Peffers' Design Science Research (DSR) methodology (Figure 1) was adopted for the validation of the causal relationships.

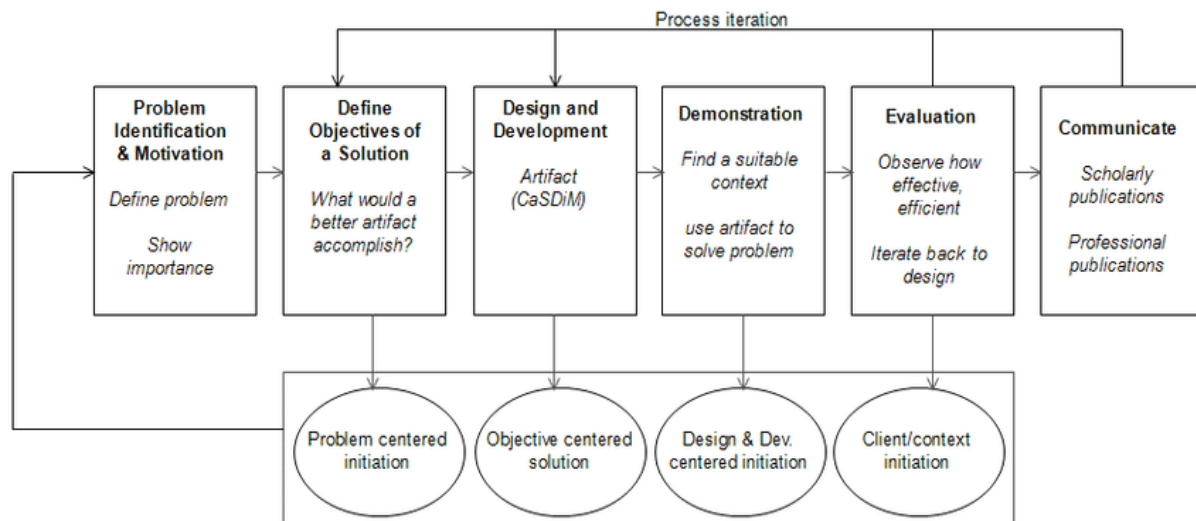


Figure 1. Peffers' Design Science Research Methodology

(Source: Heathcote, Savage, & Hosseinian-Far, 2020).

Model validation is a particularly important stage in causal loop diagramming and is necessary to ensure that the model behaviour is consistent with reality as this will increase the potential for the model to be implemented.

The participants were asked to review the feedback loops to check that they were representative of what was occurring in the real system (Morecroft, 2015; Sterman, 2000). The same validation process was applied where we shared the causal loop diagrams with the study participants.

The participants confirmed that their responses had been meticulously incorporated into the causal loop diagrams, and no further variables were required. It is worth emphasising that all eight participants with whom the causal loop diagrams were shared had also taken part in the primary interview stage, ensuring consistency of views and perceptions.

Findings

Results from the Thematic Analysis

Table 4 presents the main challenges identified in the analysis of the interview transcripts, in addition to their sub-themes, quotes from the interviewees, and their frequencies. The challenges encountered by the carers were categorised under four major themes: Organisational, Structural, Personal, and External themes. The organisational factors shaped by organisational policies, management practices, and formal systems are detailed in Table 4. These factors are directly influenced by organisational decision-making, communication infrastructures, and management strategies. They reflect how the organisation structures, facilitates, and supports communication and collaboration among staff.

The Structural Factors related to the way work is organised, roles are coordinated, and care is delivered, (see Table 4). Structural factors arise from the operational design of domiciliary care work, including workforce configuration, role allocation, and the nature of domiciliary service delivery. These elements shape interaction opportunities and communication flow independently of individual or organisational intent.

Personal factors included individual-level attributes, skills, attitudes, and behaviours. These elements are rooted in individual competencies, interpersonal skills, attitudes, and behaviours. While they may be influenced by training or experience, they primarily reflect personal capacities and dispositions that affect communication quality.

The external factors originating outside the organisation and beyond direct managerial control, (see Table 4). These elements stem from broader societal, demographic, and cultural contexts. Although organisations can respond to or accommodate them, they are not created by organisational structures or individual choices alone.

Table 4. Main Challenges Emerging from Data Analysis of the Interview Transcripts

Main Challenges	Sub-themes	Samples of quotes	%
Organisational factors	Care notes quality and format, Team meeting engagement, Team-building activities, Delayed responses on NOOA system, and Reaching carers with poor English.	“Carers should get adequate training to write care notes; a particular pattern should be followed.” “Team meetings are good, but they should be interactive, management shouldn’t be the only ones talking.” “Some carers take even a week to reply on NOOA.”	33.3
Structural factors	Isolation in domiciliary care, and Driver vs. non-driver coordination.	“We don’t see each other in domiciliary care, and it affects team building.” “Better communication is needed between drivers and non-drivers, so we know who’s coming to pick up.”	13.3
Personal factors	English proficiency gaps, Accent differences, Body language misinterpretation, Need for English improvement, Initiative in communication, Mutual respect and support.	“Different accents affect understanding each other.” “Body language can create confusion, so it should be considered when talking.” “Carers should focus on improving their English, it’s the first point of communication.” “There should be mutual understanding and unity, if you notice a mistake, correct your colleague instead of going to the manager.”	40

External factors	Cultural and language diversity, and Use of native languages.	“We have carers coming from different countries, religions, and languages, which affects communication.” “Carers shouldn’t speak in their native language at work; English should be the standard and the main mean of communication.”	13.3
------------------	---	--	------

(Source: Authors)

Causal Loop Diagram Analysis

Figure 2 presents the causal loop diagram capturing the factors identified through interviews with participants from the organisation, as this approach offers a way to explore these complex interconnections.

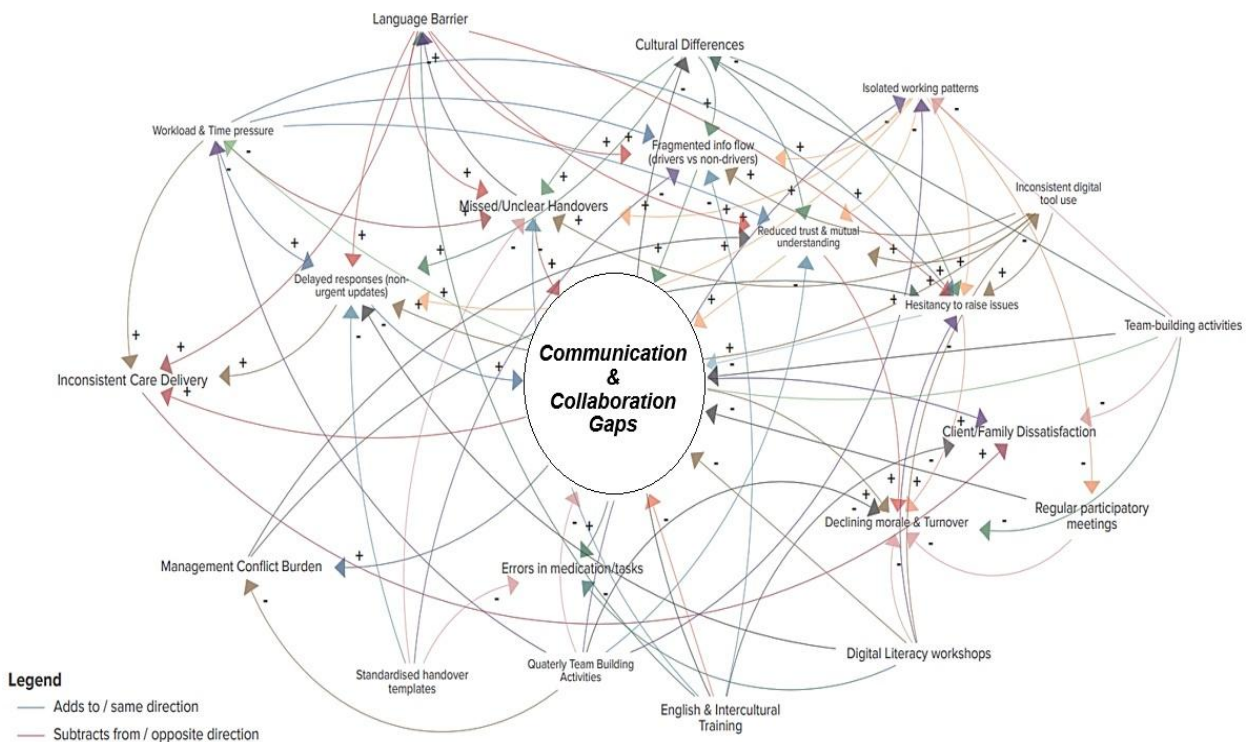


Figure 2. Causal Loop Diagramming Following the Primary Data Collection Through Interviews in the Selected Case Study Organisations

(Source: Authors)

Preliminary Causal Tracing

Causes Trees and Uses Trees are system mapping tools that are used to visually represent the factors that influence a phenomenon (these could be selected variables on a CLD or variables of interest), and the resulting effects or benefits of that phenomenon.

A Causes Tree identifies and organises the root causes, drivers, and enabling conditions that contribute to an outcome. On the other hand, a Uses Tree maps out the consequences, applications, and value that emerge once that outcome is achieved. Together, they provide a

structured and holistic view of both the inputs and impacts of a complex system, supporting strategic intervention and planning. Instances of these were used for selected variables of interest, as outlined below.

For instance, Figure 3 presents a categorised breakdown of the core drivers influencing the communication and collaboration between carers. It emphasises how both intrinsic factors (e.g. Mutual respect, Use of native language, and Accent differences) and contextual variables (e.g. Care notes quality and format, Team meeting engagement, and Reaching carers with poor English) interact. The tree structure allows a clear view of how personal, organisational, and structural domains operate in tandem, often reinforcing or mitigating each other.

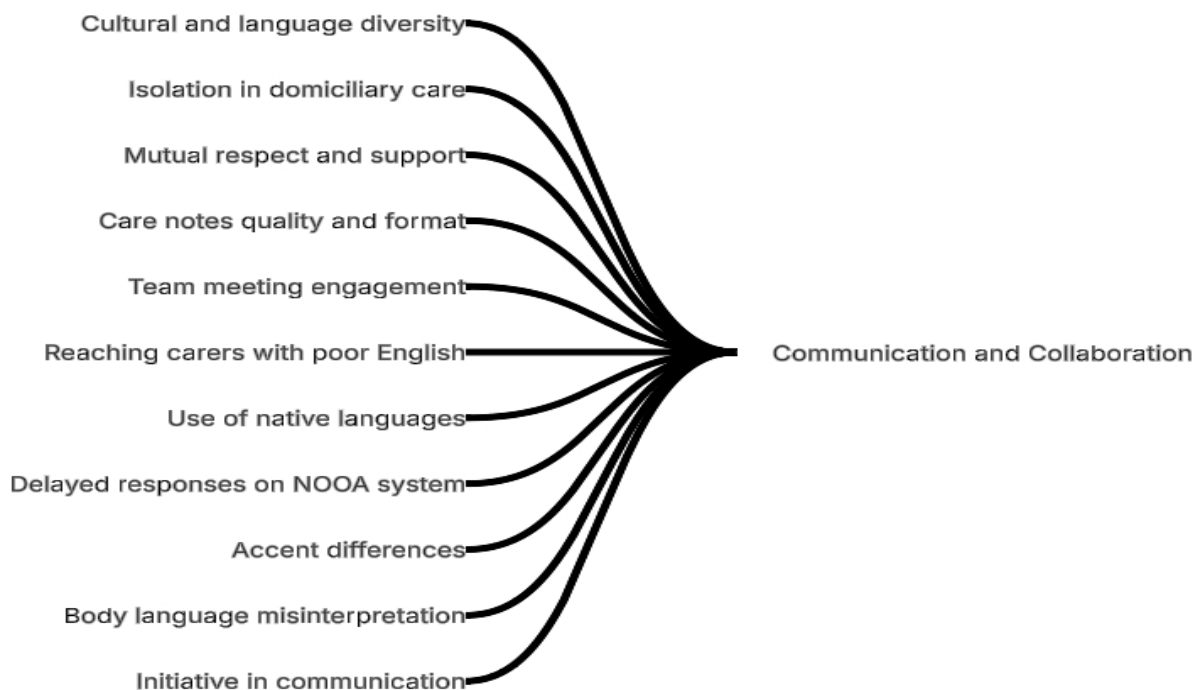


Figure 3. Causes Tree for Communication and Collaboration as A Variable of Interest
(Source: Authors)

The counterpart to the causes tree, Figure 4 visualises the outcomes and applications of communication and collaboration as a Uses tree. It illustrates how better communication and collaboration contribute to personal development through improved psychological outcomes, skill growth, and career progression, as well as how it benefits the institution through improved knowledge exchange, sense of unity and belonging, engagement and inclusivity. The inclusion of both individual benefits (e.g. wellbeing, confidence, resilience) and institutional outcomes (e.g. collaboration, impact) strengthens the value of communication and collaboration as a mutually reinforcing cycle.

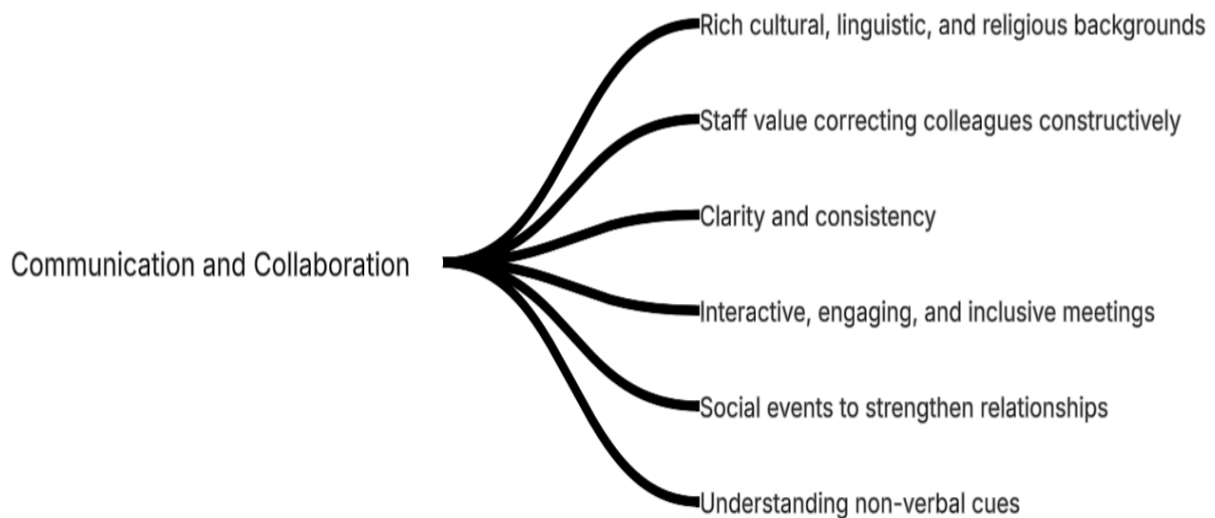


Figure 4. Uses Tree for Communication and Collaboration as a Variable of Interest
(Source: Authors)

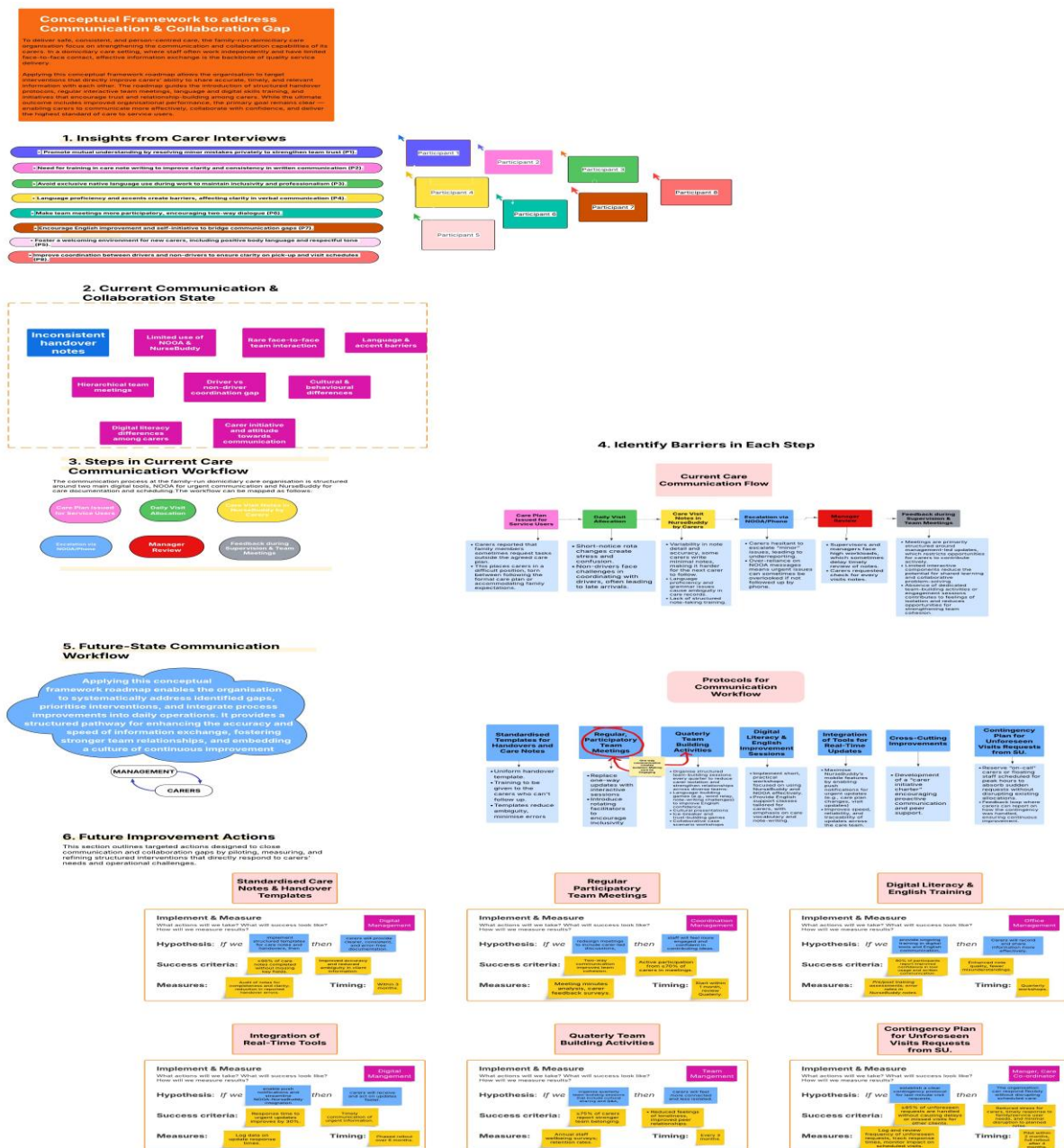
Although the diagrams do not explicitly depict feedback loops, the KumuCLD generated outputs provide dynamic relationships within the communication and collaboration system. Several reinforcing loops highlight how improvements in areas such as training and development, fragmented information flow, and institutional support can lead to increased work skills, digital literacy, motivation, confidence, and finally higher engagement; this creates positive cycles that sustain and amplify communication and collaboration over time. For instance, enhanced training improves skills and confidence, which in turn fuels further engagement and justifies continued investment in development resources such as regular meetings and digital literacy. Similarly, strong mentorship enhances motivation and output, which then encourages further collaboration and knowledge sharing. However, the model also identifies balancing loops that can constrain engagement. Increased workload and time pressure may result in burnout, which reduces time and energy available for meetings and training, thus dampening momentum. Other constraints such as workload pressure and reduced motivation can also counteract institutional efforts if not carefully managed. These feedback dynamics highlight the importance of integrated, aligned interventions that initiate engagement and sustain it over time. This necessitates intervention that mitigates systemic pressures that can limit progress.

Discussion and Findings

Effective communication is critical to high-quality care delivery, particularly within the context of domiciliary services where carers operate independently across dispersed locations. At the organisation, several communication challenges emerged during the analysis of eight semi-structured interviews with carers. These challenges are not unique to this service but reflect broader issues faced by those working in decentralised care environments. This section explores these communication challenges in more depth, triangulating the results with established communication theories to offer a deeper understanding of how structural, relational, and technological factors impact communication within domiciliary care settings.

Communication and Collaboration Framework Informed by Carers Interviews

This section presents the conceptual framework for improving communication and collaboration in domiciliary care teams, developed from the analysis of interviews with carers at the organisation. The framework aims to address the key communication challenges identified, offering a practical approach to enhancing information exchange, team cohesion, and overall care quality in a decentralised care environment.



7. Review, Monitor & Measure Progress

To make sure the new communication improvements are working, the organisation should regularly check progress using clear, simple measures that managers and carers can follow:

- **Check Care Notes** – Supervisors review a sample of NurseBuddy notes each week to make sure they are clear, complete, and professional.
- **Track Response Times** – Keep a record of how quickly office staff respond to calls or messages on NOOA when carers raise an issue.
- **Carer Feedback** – Ask carers every few months, through short surveys or informal check-ins, how well communication and teamwork are improving.
- **Training Follow-Up** – After English or digital training, managers should look for visible improvements in carers' use of NurseBuddy and confidence in communication.
- **Team Meetings & Activities** – Note attendance and participation in meetings or team-building sessions as an indicator of stronger teamwork.
- **Client and Family Feedback** – Collect regular comments from service users and their families about whether communication feels consistent and reliable.

Managers should review these points every three months and share updates with carers during meetings. If progress is slow in any area, adjustments can be made. This ensures communication keeps improving step by step, rather than slipping back into old habits. You may repeat the steps above to increase efficiency in your end-to-end value streams.

Figure 5. Communication Framework Informed by Carer Interviews

(Source: Authors)

This thematic analysis provides a comprehensive overview of communication challenges faced by carers at the organisation, linking practical observations to established communication theories. A breakdown of the key themes follows:

Inconsistent Handovers and Shared Knowledge Gaps

- Key finding: The lack of standardised handover protocols and variability in notetaking hinder the sharing of critical information. This highlights an issue of inconsistent communication, which could lead to errors, duplication of tasks, and misalignment of care.
- Theoretical link: Gittell's (2011) Relational Coordination Theory focuses on the importance of shared goals, knowledge, and mutual respect for performance. The findings suggest that communication breakdowns, particularly in the exchange of information during handovers, reduce the effectiveness of care.

Language and Cultural Barriers

- Key finding: Diverse linguistic backgrounds create mutual understanding challenges. This leads to miscommunication, especially when carers are interacting across different cultures or with service users from various linguistic groups.
- Theoretical link: The Shannon-Weaver model of communication (Shannon & Weaver, 1949) emphasises "noise" (distortions in the message), which in this context can be caused by language differences, thereby reducing clarity and accuracy in communication.

Isolation and Decentralised Work Structure

- Key finding: The decentralised nature of domiciliary care means carers often work in isolation, which weakens relationships and reduces informal knowledge exchange.
- Theoretical link: According to Kirkman et al. (2012), dispersed teams struggle with trust and the establishment of communication norms. The lack of frequent interactions among team members in domiciliary care settings means that informal communication (which fosters trust) is limited, leading to a sense of isolation described as "lonely work."

Inconsistent Communication Tools and Digital Literacy

- Key finding: The use of tools like NOOA and WhatsApp varies, often due to inconsistent training and differing levels of digital literacy, which exacerbates communication problems.
- Theoretical link: Greenhalgh et al.'s (2017) work on technology adoption suggests that simply introducing technology is not enough. A lack of process integration and standardisation in its use undermines its effectiveness. This is evident here as the use of communication tools remains inconsistent, largely due to insufficient training and support.

Impact on Care Outcomes

- Key finding: Communication breakdowns directly affect care outcomes. Missed details during handovers or unclear communication can result in care errors, delayed services, or inconsistent treatment.
- Theoretical link: The emphasis in PMBOK's (2021) guide on process standardisation in communications management highlights the importance of clear, structured, and standardised communication to avoid errors and improve outcomes, which is directly relevant to the care context presented.

Overall Implications

The analysis underscores the critical role of communication in healthcare settings, particularly in domiciliary care where carers operate in isolation. The findings highlight several areas for improvement:

- Standardising communication protocols and handover procedures to ensure consistency and clarity.
- Training carers in digital tools and fostering digital literacy to ensure that technology supports rather than hinders communication.
- Building relational ties through more frequent contact or team-building activities to strengthen mutual respect and shared goals.
- Addressing language barriers with clear, structured language support tools or translation services, and promoting cultural competence.

Conclusions

This study has highlighted that while the organisation upholds a strong commitment to compassionate, person-centred care, persistent communication challenges significantly impact the efficiency and effectiveness of its operations. The analysis of eight in-depth interviews with carers revealed a series of recurring issues, including inconsistent handovers, language and cultural barriers, varying levels of digital literacy, and limited direct interaction among carers. These operational challenges also have relational implications, affecting team cohesion, trust, and, ultimately, the quality of care provided. In response to these findings, a conceptual framework has been developed to provide the organisation with a practical, scalable model for enhancing communication in a decentralised care environment. Following the completion of this study, the framework was formally shared with the organisation owner, serving as a tool for internal improvements and contributing to broader discussions surrounding best practices in domiciliary care communication.

-
- Acknowledgements:** The authors would like to express their sincere gratitude to University of Hertfordshire for providing the necessary resources and support throughout the course of this study. Special appreciation is extended to colleagues and peers who contributed valuable insights and constructive feedback, which greatly enhanced the quality of this paper.
- Funding Statement:** No funding received throughout the course of the paper.
- Conflict of Interest Statement:** The authors declare that there is no conflict of interest regarding the publication of this paper. All authors have contributed to this work and approved the final version of the manuscript for submission to the Advanced International Journal of Business, Entrepreneurship and SMEs (AIJBES).
- Ethics Statement:** This study was conducted in accordance with ethical research standards. All procedures involving human participants were reviewed and approved by The University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee with Delegated Authority, approval number 0133-2024-Oct-SSAH. Informed consent was obtained from all participants prior to data collection. Participation was voluntary, and respondents were assured of confidentiality and anonymity. The data collected were used solely for academic purposes.
- Author Contribution Statement:** Both authors N.S. and M.A. contributed significantly and equally to the development of this manuscript. N.S. was responsible for data collection, analysis, and the drafting of the manuscript, including the literature review. M.A. supervised the study, contributed to the study's conceptualisation and methodology, and critically reviewed and edited the manuscript. Both authors N.S. and M.A. were involved in the interpretation of the results and the final approval of the manuscript. Both authors N.S. and M.A. read and approved the final version of the manuscript prior to the submission.
-

References

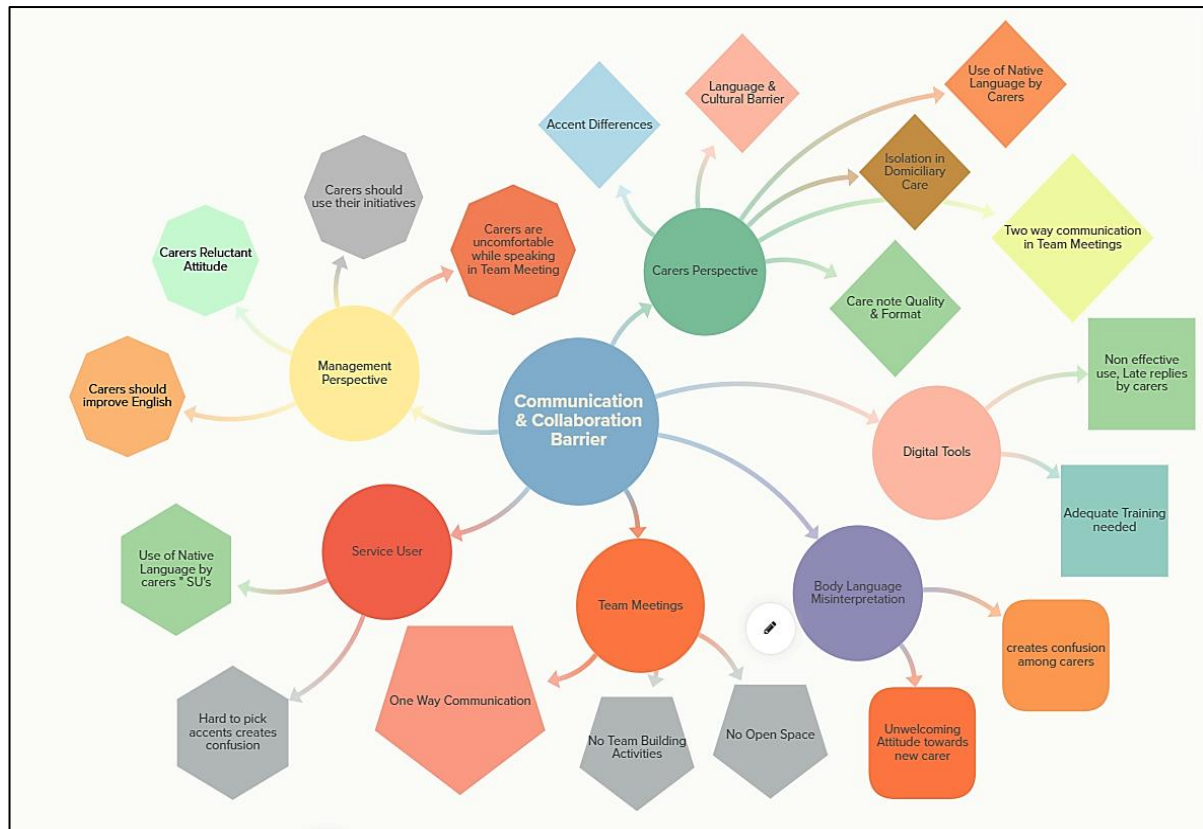
- Ahmed, S. K., Mohammed, R. A., Nashwan, A. J., Ibrahim, R. H., Abdalla, A. Q., Ameen, B. M. M., & Khedhir, R. M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine Surgery and Public Health*, 6, 100198. <https://doi.org/10.1016/j.glmedi.2025.100198>
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Creswell, J.W. (2013) Qualitative Inquiry and Research Design: Choosing Among Five Approaches. 3rd ed. Thousand Oaks, CA. *SAGE Publications*.
- D'Amour, D., Ferrada-Videla, M., San Martin Rodriguez, L., & Beaulieu, M.-D. (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care*, 19(sup1), 116–131. <https://doi.org/10.1080/13561820500082529>
- Eden, C., & Ackermann, F. (2004). Cognitive mapping expert views for policy analysis in the public sector. *European Journal of Operational Research*, 152(3), 615–630. [https://doi.org/10.1016/s0377-2217\(03\)00061-4](https://doi.org/10.1016/s0377-2217(03)00061-4)
- Flink, M., Hesselink, G., Pijnenborg, L., Wollersheim, H., Vernooij-Dassen, M., Dudzik-Urbaniak, E., Orrego, C., Toccafondi, G., Schoonhoven, L., Gademan, P. J., Johnson, J. K., Öhlén, G., Hansagi, H., Olsson, M., & Barach, P. (2012). The key actor: a qualitative study of patient participation in the handover process in Europe. *BMJ Quality & Safety*, 21(Suppl 1), i89–i96. <https://doi.org/10.1136/bmjqs-2012-001171>
- Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach. *Boston, MA: Pitman*.
- Genet, N., Boerma, W. G., Kringos, D. S., Bouman, A., Francke, A. L., Fagerström, C., Melchiorre, M. G., Greco, C., & Devillé, W. (2011). Home care in Europe: a systematic literature review. *BMC Health Services Research*, 11(1). <https://doi.org/10.1186/1472-6963-11-207>
- Gittell, J.H., (2011) 'Relational coordination: Guidelines for theory, measurement and analysis'. *Waltham, MA: Brandeis University*.
- Gray, P., McBryan, T., Hine, N., Martin, C. J., Gil, N., Wolters, M., Mayo, N., Turner, K. J., Docherty, L. S., Wang, F., & Kolberg, M. (2007). A Scalable Home Care System Infrastructure Supporting Domiciliary Care. *Stir.ac.uk*. <http://hdl.handle.net/1893/1607>
- Greenhalgh, T., Wherton, J., Papoutsis, C., Lynch, J., Hughes, G., A'Court, C., Hinder, S., Fahy, N., Procter, R., & Shaw, S. (2017). Beyond Adoption: A New Framework for Theorizing and Evaluating Nonadoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies. *Journal of Medical Internet Research*, 19(11). <https://doi.org/10.2196/jmir.8775>
- Heathcote, D., Savage, S., & Hosseinian-Far, A. (2020). Factors Affecting University Choice Behaviour in the UK Higher Education. *Education Sciences*, 10(8), 199. <https://doi.org/10.3390/educsci10080199>
- Jones, N., Ross, H., Lynam, T., Perez, P., & Leitch, A. (2011). Mental Models: An Interdisciplinary Synthesis of Theory and Methods. *Ecology and Society*, 16(1). <https://doi.org/10.5751/ES-03802-160146>
- Kallio, H., Pietilä, A.-M., Johnson, M., & Kangasniemi, M. (2016). Systematic Methodological review: Developing a Framework for a Qualitative semi-structured Interview Guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. <https://doi.org/10.1111/jan.13031>
- Kirkman, B. L., Gibson, C. B., & Kim, K. (2012). Across Borders and Technologies: Advancements in Virtual Teams Research. In S. W. J. Kozlowski (Ed.), Oxford

- Handbooks Online. Oxford University Press.
<https://doi.org/10.1093/oxfordhb/9780199928286.013.0025>
- Larsson, R., Erlingsdóttir, G., Persson, J., & Rydenfält, C. (2022). Teamwork in home care nursing: A scoping literature review. *Health & Social Care in the Community*, 30(6).
<https://doi.org/10.1111/hsc.13910>
- Lucero, R. J., Fehlberg, E. A., Patel, A. G. M., Bjarnardottir, R. I., Williams, R., Lee, K., Ansell, M., Bakken, S., Luchsinger, J. A., & Mittelman, M. (2019). The effects of information and communication technologies on informal caregivers of persons living with dementia: A systematic review. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, 5, 1–12. <https://doi.org/10.1016/j.trci.2018.11.003>
- Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*, 53(2), 143–151.
<https://doi.org/10.1111/j.1399-6576.2008.01717.x>
- Morecroft, J. D. W. (Ed.). (2015). Strategic Modelling and Business Dynamics. *John Wiley & Sons, Inc.* <https://doi.org/10.1002/9781119176831>
- Pinelle, D., & Gutwin, C. (2002). *Groupware walkthrough*. 455–462.
<https://doi.org/10.1145/503376.503458>
- PMI (Project Management Institute) (2021) A Guide to the Project Management Body of Knowledge (PMBOK® Guide). 7th edn. Newtown Square, PA: *Project Management Institute*.
- Shannon, C. E., & Weaver, W. (1949). A Mathematical Theory of Communication. *Bell System Technical Journal*, 27(4), 623–656. <https://doi.org/10.1002/j.1538-7305.1948.tb00917.x>
- Shaw, S., Rosen, R., & Rumbold, B. (2011) 'What is integrated care? An overview of integrated care in the NHS.' *Nuffield Trust*. Available at: <https://www.nuffieldtrust.org.uk/research/what-is-integrated-care>
- Sterman, J. D. (2000). Business dynamics systems thinking and modeling for a complex world. *Boston Mac Graw Hill*.
- Thome, B., Dykes, A.-K., & Hallberg, I. R. (2003). Home care with regard to definition, care recipients, content and outcome: systematic literature review. *Journal of Clinical Nursing*, 12(6), 860–872. <https://doi.org/10.1046/j.1365-2702.2003.00803.x>
- Vimalananda, V. G., Gupte, G., Seraj, S. M., Orlander, J., Berlowitz, D., Fincke, B. G., & Simon, S. R. (2015). Electronic consultations (e-consults) to improve access to specialty care: A systematic review and narrative synthesis. *Journal of Telemedicine and Telecare*, 21(6), 323–330. <https://doi.org/10.1177/1357633x15582108>
- World Health Organization (WHO) (2008). The World Health Report 2008: Primary health care – Now more than ever. *Geneva: World Health Organization*.
- Yin, R. K. (2018). Case Study Research and Applications. *SAGE Publications Inc.* <https://us.sagepub.com/en-us/nam/case-study-research-and-applications/book250150>

Appendix

Interview Questions

1. What are the primary communication and collaboration barriers faced by domiciliary care teams in their daily operations?
2. Prompts: Can you describe a recent situation where communication broke down? Are these issues more common at certain times or in specific settings? Do these barriers affect the quality of care provided?
3. How can communication and workflow efficiency be further improved in elderly care teams?
4. Prompts: Are there any technologies you think could help? What kinds of training or routines would support better collaboration?
5. Are language differences among carers or between carers and service users a common problem?
6. Prompts: How do you or others usually manage those differences? Are there specific situations where misunderstandings occur more often? Does this impact trust or safety in care delivery?
7. 4. Do you think the current methods for passing information (e.g., care notes, verbal handovers) are effective? Why or why not?
8. Prompts: Can you describe a time when the handover process helped or hindered you? Are there differences in effectiveness between written and verbal communication? How consistent is the information you receive?
9. 5. In your opinion, what would an "ideal" communication system look like for home care teams?
10. Prompts: What features or tools would it include? How would it help in day-to-day tasks or emergencies? Would it be easy for everyone to use?
11. 6. What advice would you give to management about improving communication and teamwork among carers?
12. Prompts: Are there any specific practices or changes you would recommend? What do you think management often overlooks? How would you suggest building stronger team relationships?
13. 7. Are there times when you felt unclear about your responsibilities because of poor communication?
14. Prompts: What happened in that situation? How did you resolve the confusion, if at all? Did it impact the care you provided?
15. 8. What problems do you face when trying to reach other team members or your supervisors?
16. Prompts: Are there certain times when it is harder to get a response? What channels (phone, text, app, etc.) do you typically use? Do you feel your concerns are acknowledged promptly?

Analysing Barriers in Communication of Domiciliary Care through Systems Map***Emergent Themes and Interpretation***

Theme Inconsistent Handover Processes	1:	-Carers frequently reported that written notes lacked clarity and structure, resulting in duplicated or missed tasks. - "In textual communication is supposed to be effective but sadly it is not. Carers should get adequate training to write care notes; a particular pattern should be followed." (Participant 3) -This aligns with Relational Coordination Theory (Gittell, 2002), which emphasises shared goals and mutual respect. Poor documentation undermines both, increasing operational risk.
Theme Language and Cultural Barriers	2:	-Several carers noted that differences in language proficiency and accents hindered effective communication. - "We have carers coming from different countries, religion, language which affects the communication." (Participant 1) -This reflects the Shannon–Weaver Communication Model (1949), where language differences act as "noise," reducing message clarity and accuracy.
Theme Limited Interaction and Inclusion	3:	-Due to the isolated nature of domiciliary work, carers rarely meet in person, limiting relationship-building and shared problem-solving. - "Not seeing each other in domiciliary care due to its setting affects team building." (Participant 5) -This gap also relates to Stakeholder Theory (Freeman, 1984), as participants felt excluded from contributing to decision-making during team meetings.
Theme Delayed and Ineffective Digital Communication	4:	-Several participants expressed frustration at delayed responses on digital platforms such as NOOA, with some messages taking up to a week to receive a reply. -This points to inefficiencies in workflow and the need for clear communication protocols, echoing best practices outlined in PMBOK®'s communications management process.