Narratives on Inclusive Mobility: Public Transport Innovations for Older Adults in Europe and beyond

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Abstract. As life expectancy increases, societies need to implement strategies that support healthy ageing in place. Community mobility is a vital part of this, as older adults need access to healthcare, shops, and local amenities to maintain their health, independence, and social engagement. Aim: The COST Action BOPALIM (Building Opportunities for Participation and Accessibility through Lifelong Community Mobility) aims to create a framework to guide European and country-specific efforts related to the provision of accessible and user-friendly transport options for older adults. Method: Subtask 3.3 has collected case studies from COST Action members regarding appropriate and affordable public transport solutions under the umbrella of community mobility. These case studies were synthesised to create 5–10 vignettes, combining narrative and thematic approaches. Preliminary findings: The collected case studies address themes related to the usability, safety, and accessibility of public transport. They also explore how technological advancements can function either as additional barriers or as practical solutions for participation, often embedded within broader political issues such as cost and environmental concerns. These findings are consistent with the literature review but add a more nuanced understanding of contextual factors and personal experiences of mobility issues of older adults in Europe and beyond.

Keywords: Elderly mobility · Inclusive transport planning · Participation outside home · Walkable neighbourhood · Accessible public transport

© The Author(s) 2027
D. Esztergár-Kiss et al. (Eds.): TRAconference 2026, LNMOB, pp. 808–815, 2027.
https://doi.org/10.1007/978-3-032-37192-8_97

1 Introduction

Ensuring inclusive and equitable community mobility for older adults is an important aspect of both sustainable development and healthy ageing agendas worldwide. Community mobility is defined as "planning and moving around in the community using public or private transportation, such as driving, walking, bicycling, or accessing and riding in buses, taxi cabs, ride shares, or other transportation systems" [1]. This underscores the diverse ways older adults (typically aged 60 years and older) engage with their environments and the importance of accessible, flexible transport options.

Global policy frameworks further support this focus. The World Health Organization's Decade of Healthy Ageing (2021–2030) calls for enabling environments that promote autonomy, participation, and dignity in later life [2]. Similarly, the United Nations' Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), 10 (Reduced Inequalities), and 11 (Sustainable Cities and Communities), emphasise addressing mobility inequities across both urban and rural settings [3].

Transport systems play a vital role, especially following driving cessation, yet evidence highlights persistent barriers for older adults [4]. While universal design can enhance travel opportunities, gaps remain in practice [5, 6]. Earlier case study research highlights the importance of local context in transport service provision [6]. Specific barriers are particularly evident in rural or suburban contexts [4, 7], in affordability and fare equity [8], and in adapting to new technologies such as autonomous vehicles [9]. At the same time, there are emerging opportunities and innovations, including community transport initiatives [10] and demand-responsive services [11] that offer opportunities for locally adapted and socially-embedded solutions to help overcome barriers.

This paper reports on subtask 3.3 of a COST Action pan-European, interdisciplinary research network, CA23101 BOPALIM (Building Opportunities for Participation and Accessibility through Lifelong Community Mobility). BOPALIM aims to create a framework to guide European and country-specific efforts related to the provision of accessible and user-friendly transport options for older adults.

2 Methods

An initial literature search identified key articles, reports, and definitions to inform case study content and format. Narrative and thematic approaches, including composite narratives [12] were used. Case studies submitted by COST Action members were synthesised into 5–10 vignettes, drawing on qualitative traditions that use storytelling to integrate diverse perspectives [13]. Analysis involved thematic coding, identification of cross-cutting issues, and construction of vignettes that weave together "threads" of opportunity and "knots" of constraint. In mobility narratives, "knots" capture interwoven emotional, social, physical, and infrastructural challenges shaping older adults' mobility, while "threads" convey overarching storylines. Together, they illustrate how older adults navigate everyday constraints across local and international contexts. Interdisciplinary workshops with COST Action members supported contextualisation, reflection, and triangulation. Findings will be disseminated to wider audiences through written and creative outputs (e.g., films, exhibitions) via the COST Action website.

3 Findings

This section begins with an overview of the findings from the literature search, followed by preliminary findings from the case studies which were corroborated by the literature.

3.1 Accessibility and Universal Design

Studies consistently find that universal design and physical accessibility improvements enhance mobility opportunities; however, there are gaps in both infrastructure and service delivery. Aarhaug and Elvebakk [5] demonstrated the positive impact of universally accessible public transport in Norway, but also highlighted that to ensure inclusive community mobility, transport systems should be predictable and accessible from door-to-door. Moreover, there is a need to analyse universal design measures holistically as part of a transport system, not separately [5]. Systematic reviews show that older adults encounter multiple challenges even where physical accessibility has improved, including biased and ageist assumptions about choice of destinations that older adults wish and need to travel to [6, 14]. A commonly reported issue was that public transport was inconvenient and did not serve the destinations older adults needed [14].

3.2 Rural and Regional Challenges

Mobility inequities are especially persistent outside urban centres. Bond et al. and Verma and Taegen show that rural older adults experienced limited transport options, compounding risks of social isolation [4, 7]. This rings especially true for older adults with disabilities, especially with cognitive impairment such as dementia [15].

3.3 Equity, Affordability and Policy

Affordability is a central concern for older adults' mobility. Fare reforms and free bus programmes have improved accessibility for lower socio-economic groups in Lisbon [8] and Canadian suburbs [16]. Research shows that older adults with lower incomes are five times more likely to be affected if these free bus services are discontinued, compared to their higher-income peers [16]. Reported benefits include social interaction, financial savings, and support amid declining health, while perceived inconvenience limits uptake [16]. These findings underscore the need to embed transport policy within broader equity frameworks.

3.4 Smart Mobility and Technological Innovations

Emerging innovations, such as autonomous vehicles and app-based demand-responsive systems, offer potential benefits but also risks. Booth et al. explored older adults' experiences with shared autonomous vehicles, identifying both opportunities and trust barriers [9]. Jittrapirom et al. highlighted Dutch older adults' cautious engagement with demand-responsive transport, which was mediated by digital literacy and perceptions of reliability [11]. Golub et al. further warned that smart mobility systems risk exacerbating inequities if accessibility is not prioritised [17]. These findings underscore the need for inclusive community mobility technologies tailored to older adults.

3.5 Co-design and Participatory Approaches

Increasingly, literature underscores the importance of co-design and participatory approaches. Dabelko-Schoeny et al. demonstrated the value of community-based participatory research in mobility projects, while Ahmadi et al. emphasised integrating co-design in sensitive contexts [13, 18]. These approaches align with global initiatives [2]. A systematic review by Ravensbergen et al. identified heterogeneity in how accessibility is measured, and emphasised the need to centre the voices and experiences of older adults in public transport research developed by and for this group [6]. Ethical aspects are especially challenging if research includes people with cognitive impairment [19].

3.6 Mobility beyond Accessibility

Recent work calls for a shift from narrow accessibility frameworks to broader conceptualisations of mobility as lived experience. Fredericks et al. and Musselwhite highlight the interconnections of transport with identity, autonomy, and social participation [20, 21]. Social participation has many health benefits, but it receives little attention in health promotion and public health relative to its potential. This resonates with trends towards holistic approaches that capture the complexity of mobility in ageing societies. Hagan highlights that community transport services can act not only as mobility solutions but also as sites of social connection [10]. While Oldenburg and Brissett's concept of "third places" describes informal public spaces distinct from home (the "first place") or work (the "second place") [21] more recent perspectives emphasise the relational and socially constructed nature of these spaces. Delaisse et al. conducted an ethnography of three sites within Metro Vancouver's Francophone Minority Community (FMC) and described them as "landmarks" that made the Francophone presence visible within a predominantly Anglophone environment [22]. Their findings also demonstrate how those sites functioned as "third spaces", offering opportunities for immigrants that differed from the mainstream English-speaking community. Similarly, in the context of public transport, buses or community transport services can operate as such "third spaces," providing older adults and other community members not only with mobility but also with meaningful opportunities for social interaction, visibility, and engagement [10]. In summary, the literature shows progress in addressing older adults' mobility barriers but highlights persistent inequities, technological challenges, and the need for participatory, contextualised, narrative-based approaches grounded in older adults' public transport experiences internationally. Preliminary findings from the case studies reveal both context-specific challenges and shared "threads" across case studies:

Knots of Exclusion: The case studies highlight a range of interlinked barriers that constrain older adults' mobility in different contexts. Affordability challenges [8], the lack of transport provision in rural areas [7, 15], and fragmented coordination between services consistently emerged as obstacles to accessing mobility options [17]. Digital exclusion also proved significant in settings where "smart" mobility systems are being introduced, as not all older adults have the devices, skills, or confidence to navigate app-based booking systems [17]. Safety concerns were pronounced among older adults with lower socioeconomic status living in transport-disadvantaged areas. Participants pointed to deteriorated pedestrian infrastructure, including uneven pavements, poorly

maintained crosswalks, and inadequate sidewalks, as well as unsafe traffic conditions, such as behaviour of other road users and poor compliance with road rules, as major deterrents to walking or using mobility aids. These findings echo earlier research linking environmental hazards and poor infrastructure maintenance with reduced mobility, heightened vulnerability, and social exclusion among older adults [20].

Threads of Innovation: Alongside these challenges, the case studies revealed promising initiatives that demonstrate how inclusive community mobility can be fostered from the ground up. Community transport schemes not only addressed gaps left by mainstream services but also created valued social spaces where older adults experienced connection and belonging [10]. Co-designed services, in which older adults directly contributed to shaping routes, schedules, and service features, embedded their values and priorities into transport planning [13]. Partnerships between local authorities and community-based organisations illustrated how collaborative arrangements can extend service reach and responsiveness. These findings align with earlier research showing the potential of participatory and co-creation approaches to enhance service design, foster trust, and improve inclusivity of transport systems for older adults [13].

Narratives of Identity and Participation: The case studies underscored the symbolic and social dimensions of mobility for older adults. Public transport was described not only as a practical means of reaching essential services but also as a vehicle for sustaining independence, maintaining personal identity, and preserving community connections. Mobility was tied to feelings of autonomy, dignity, and the capacity to remain engaged in civic life. These narratives echo earlier literature on ageing-in-place, which highlights mobility as integral to older adults' ability to participate fully in their communities, maintain a sense of self, and resist isolation [23].

4 Discussion and Implications

A narrative framing positions mobility not merely as a technical issue of access but as an interwoven set of meanings and opportunities linked to autonomy, participation, and resilience. This perspective contextualises findings from Van Biljon et al.'s scoping review, which highlights external factors, such as poor infrastructure and limited or costly transport, that constrain community mobility in rural contexts [23]. However, their study reveals underrepresentation of research for rural communities and from the Global South; thus, the identification of unmet needs of those populations is compromised. Importantly, they emphasise underreporting of health equity characteristics (i.e., gender, age, disability, education, socioeconomic status, community mobility/driving), and contextual factors that impact community mobility, including those of lower-resource communities.

The diverse contextual and cultural scope of the case studies reflects the international and interdisciplinary COST Action network, including forty European countries and multiple international partner institutions and researchers. Work under subtask 3.3, including the participatory workshops, seeks to expand from mainstream populations, the Global North and urban contexts, to include population groups underrepresented in research [24], rural and lower resource contexts (e.g., disadvantaged communities, and poor socioeconomic and rural underserved areas) [4, 10, 17, 20].

4.1 Case Studies and Stories

We received initially thirty submissions from the COST Action network with fifteen narratives providing in-depth information from case studies based on research and personal experience. The submissions originate from across Europe (e.g., Western, North-eastern, and South-eastern Europe) and international contexts (e.g., South Korea, Turkey, and the United States). Themes emerging from the narratives are aligned with the literature review. Narratives reflected topics that were similar to those identified in the documented evidence of the case studies examined (e.g., cost of public transport, ticketing, uncertainty with digital transactions, real-time/accessible information, and human-centred public transport). These and other topics that appear in the narratives resonate with themes such as accessibility, usability and safety; digital confidence; equity and structural barriers; autonomy and spontaneity; and adaptive resilience. The narratives highlight disparities between rural and urban public transport, reaffirming findings from the literature and shaping how community mobility is experienced across settings.

4.2 Potential Implications

The findings have implications for policy, practice, and research, underscoring the need for multi-level interest-holder engagement. A mapping exercise identified an ecosystem of interest-holders in community mobility and showed how the vignettes can be used across research, education, and policy and practice. They inform research, support teaching, and advance cross-sector consensus and professional development.

4.3 Limitations

There are several potential limitations, including the subjectivity involved in thematic analysis and vignette construction. The synthesis of diverse cultural contexts also presents challenges in preserving nuance, and the findings may have limited applicability beyond local contexts. Additionally, the initial literature search was conducted by a small core group, which may have missed relevant sources.

5 Conclusion

Community mobility is central to autonomy, dignity, and participation for older adults in Europe and internationally. Preliminary findings reveal “knots of exclusion” alongside “threads of innovation”, with potential for interest-holder engagement across research, pedagogy, and policy. However, future work is needed to further synthesise across heterogeneous and siloed examples of innovative and good practices in inclusive transport options for older adults.

Acknowledgements. Many thanks to the BOPALiM members who have contributed to the case studies.

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Re-Generation in Transport

Proceedings of the 11th TRA Conference, 2026, Budapest, Hungary - Volume 2: Active Travel Modes, Shared Mobility Solutions, Inclusive Mobility and Mobility as a Service

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ISSN 2196-5544 ISSN 2196-5552 (electronic)
Lecture Notes in Mobility
ISBN 978-3-032-37191-1 ISBN 978-3-032-37192-8 (eBook)
https://doi.org/10.1007/978-3-032-37192-8

This work was supported by Horizon Europe Research And Innovation (101147335).

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