Health policy 165 (2026) 105541

Contents lists available at ScienceDirect

Health policy

journal homepage: www.elsevier.com/locate/healthpol

Community health workers: a comparative assessment of capacities of a global policy approach in selected European health systems

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ARTICLE INFO

Keywords:
Community health workers
Health and care workforce
Community health systems
European health systems
Global south
Cross-country comparison

ABSTRACT

Background: Interest in community health workers (CHWs) and the benefits for health systems are growing globally, but research is focused on low- and middle-income countries and high-income Anglo-American countries.
Objective: This comparative assessment focuses on community health systems and health and care workers as advocates and boundary spanners, aiming to connect global evidence to high-income European countries and assessing the capacities for transformative change.
Methods: A qualitative comparative approach and case study design were chosen, aligning global expertise of the CHW pioneers, Brazil and South Africa, and selected European countries: Denmark, Germany, Netherlands, Portugal, Romania, UK/England. Case studies were collected in April/May 2025, drawing on country experts and secondary sources; thematic analysis was performed following an explorative interactive consensus-based procedure.
Results: European countries create diverse occupational pathways into health systems that move beyond primary healthcare, clinical tasks, and CHWs as defined globally. Promising capacities emerge if occupational programs are interconnected with health system reform, community-based social and care services, the establishment of a regulated multi-professional community-centred group, and strengthening of public health and social support services. No country uses these capacities effectively.
Conclusions: Community-centred health and care workers need greater attention in Europe to drive health system transformations and global policy learning.

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https://doi.org/10.1016/j.healthpol.2025.105541
Received 22 August 2025; Received in revised form 24 November 2025; Accepted 7 December 2025
Available online 8 December 2025

1. What is already known about the topic? Community health workers (CHWs) are a rapidly growing occupational segment and an innovative policy approach that may support health systems and workforce resilience, including equity and access for vulnerable groups, strengthening health promotion, and connecting health and social care. However, evidence is primarily drawn from the global South, while systematic information is missing for high-income European countries.

2. What does this study add to the literature? Our study aligns global CHW programs and community-centred workforce efforts in Europe, exploring transformative capacities in diverse health system contexts. The results provide evidence on the capacities of global CHW programs in European high-income countries, highlighting strong context-dependency and more diverse community-centred health and care workforce policy and implementation paths in European countries.

3. What are the policy implications? Policymakers should pay greater attention to community health systems and the transformative capacities of diverse occupational groups. Key conditions include a community-centred approach that aligns occupational programs and health system reform, the development of a regulated multi-professional community-centred health and care workforce, effective governance and appropriate and sustainable funding for research and implementation, and global policy learning including innovations in the global South.

Background

Community health workers (CHWs) are a rapidly growing occupational group that contribute to resilient health systems and population health, [1] yet most evidence of their benefits comes from low- and middle-income countries (LMICs) in the Global South [1–16]. Information on high-income countries is available from the United States (US) and other Anglo-American countries, [17–19] including the United Kingdom (UK), [20–22] but CHWs do not seem to play a major role in Europe, especially in the European Union (EU) Member States. This is surprising, because Europe's health systems are facing multiple crises and the CHW programs come with promising solutions to help reduce effects of health and care workforce (HCWF) shortages, [23–25] improve equity and social inclusion, and build bridges between fragmented welfare systems and healthcare sectors.

This makes Europe an interesting field for exploring the transformative capacities of CHWs comparatively in health system contexts. However, research evidence and policy do not travel easily across the globe. This is especially true, if highly diverse and context-specific CHW programs originating from the global South [1,4] meet with various economically advanced high-income European health and welfare systems. A South-to-North innovation path has still to be built and a common terminology of community-centred occupational groups that holds across LMICs and Europe to be developed.

Who are CHWs and what are they doing?

In many countries considered in the global literature, CHWs are part of the formal health labour market, accounting for about four million workers globally, [1] yet no uniform standardised occupational classification exists, and in some countries large proportions of CHWs are 'not formally employed but actively engaged' in service provision [4, Table 5]. Various definitions have been developed, including from the International Labour Office [26] and WHO [1,2,12], and a taxonomy for comparison from an international CHW expert group [4] The term 'CHW' serves as an umbrella for a wide range of health and care workers (HCWs) who work in and for the community, for instance, frontline public health workers, [27] cross cultural health brokers, [18] specialised social workers and health assistants, to name only a few, as well as lay members of the community [1]. The existing definitions are broad, but exclude regulated health professions who may be specialised as community care providers, like physicians, dentists, pharmacists, and nurses.

Education of CHWs ranges from short training courses on the job without formal certificates to university degrees and professional specialty training [1,4,28,29]. CHWs are mostly integrated in primary care systems, [1,4,14] but can be found in all sectors and organisations that provide health, care and social services to the community. They may work in multi-disciplinary teams or independently in people's homes.

Tasks and competencies are defined by the health system and/or the community that CHWs serve. Variation is high, but the tasks mostly refer to the needs of specific population groups – ethnic minorities or migrants, people living in socially deprived or hard to access remote/rural areas, mothers and young children, older people, people with chronic diseases – and basic public health tasks, such as health promotion, infection prevention and control, HIV/AIDS prevention and care, information on family planning and sexual health, and violence prevention, but also vaccination and support for clinical tasks [1,4,30]. Across context-specific tasks similar goals have been identified, including 'delivering diagnostic, treatment or clinical care; encouraging uptake of health services; providing health education and behaviour change motivation; data collection and record-keeping; improving relationships between health system functionaries and community members; and providing psychosocial support'. [1, executive summary] The COVID-19 pandemic strengthened infection control and surveillance tasks [31].

Women account for the vast majority of CHWs reaching even up to 100 percent in some settings, making the occupational field deeply gendered [5]. Exact data are lacking, but WHO [14] highlights that CHW programs may improve women's labour market participation and gender equality in some settings (see also [32]). However, critical reflection is needed. Like nurses and other frontline workers, CHWs lack stakeholder powers and face high levels of stress, low salaries, poor work conditions and career changes, and sexual discrimination, harassment and violence [33,34]. Gender-based threats are usually higher in lower-level occupational groups [8,35–37].

Alongside gender, the advocacy role of CHWs in building community health systems emerges as strong linkage between diverse programs globally [4,38,39]. From a system perspective, the CHW programs respond to population needs and close a gap in existing health services. The effectiveness and 'the role played by CHWs depends on their ability to be the link between formal health services and the community'. [40, p1507] From an actor-centred perspective, the individual CHWs 'intervene to create "bridges" between vulnerable populations and mainstream health and social services and promote health and wellbeing', [18, website] are trusted members of the community and 'serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery' [27] (see also [1]).

Advocacy for community-centred service provision and for vulnerable populations emerges as a common denominator of CHWs, [1] supporting key global health goals of 'Health for All' and the Sustainable Development Goals (SDGs) [41]. This has motivated novel approaches that put 'community health systems' [39] centre stage and assess CHWs through this lens [1,4,46,39,40,42].

How can CHW programs be implemented effectively?

CHWs play an important role in primary healthcare (PHC) and public health services, [3,4] in supporting socially diverse communities and underprivileged/vulnerable groups, [6,41] during major public health crises such as the COVID-19 pandemic [9,31,43], and in addressing the global HCWF crisis and labour market shortages [10]. However, CHW programs face many challenges and need institutional support to achieve their capacities [3,11,40,44,45].

Macro-level conditions that foster effective implementation and long-term effectiveness of CHW-based policies include investment in education, renumeration and integration of CHWs, [15] robust planning, coordination, and multisectoral partnerships, [46] strong health sector leadership from national to local levels, active support from local government and partnerships with community organisations [42]. Ensuring appropriate remuneration and workers' rights, [47] alongside increased and sustained funding are also critical to strengthening CHW programs [10,48]. On the organisational level, performance assessment is key for continually innovating, upgrading, and improving CHW programs [49]. On the level of professions (used in a broad sense, not limited to a formal status), professionalisation and career paths, [1–3, 28,50] and attention to the individual needs of CHWs [51] are important conditions.

Major challenges and potentially negative effects of CHW programs arise from a cumulation of health system and policy failures in planning, funding, implementation and governance, including, for instance, 'poor coordination and failed partnerships' [46] and 'inadequate support for supervisors' of frontline CHWs [52]. Lack of appropriate funding and poor education and training of CHWs emerge as key problems; some countries still use trained CHWs or lay persons to substitute qualified and more expensive HCWs, [3,4] creating risks for quality and safety of patient care.

CHW programs are also affected by wider policy problems. First, a lack of labour market data and appropriate methodological tools, standardised performance indicators, occupational classification schemes and competencies frameworks for CHWs hamper evidence-based practice and policymaking [3,4]. Diversity and complexity of CHW programs may reinforce the challenges, but key problems are lack of investment in research and integrated labour market monitoring, capable to include a new multi-professional group.

Second, the gendered hierarchy of healthcare and labour markets pushes CHWs to the bottom or even outside the formal labour market, threatening fair salaries, worker rights and professionalisation [43]. Gender-responsive and transformative approaches that consider the intersectionality of gender and ethnicity/race [34,53] are an important condition of effective CHW programs [5,8,32,35,43].

Third, governance is the guide for policy and stakeholder arrangements, [54] yet health systems and professions are not well prepared for the governance of CHWs and their role as community advocates and boundary spanners. Infrastructures and regulatory architectures lack effective multi-level, inter-/transsectoral and multiprofessional governance mechanisms that CHW programs would need to flourish. As policy actors, CHWs are usually excluded from major regulatory bodies and have limited formalised stakeholder powers. As frontline workers, micro-level power politics – the 'government on the bottom' [55] – might open some opportunities, but CHWs are more vulnerable than other HCWs to crises, such as the COVID-19 pandemic [8,9].

Finally, politics play an important role in policy implementation and CHWs seem to be more vulnerable than other HCWs to political interests and government agendas [3,39]. Brazil under the past radical-right President Bolsonaro provides an alarming example [9]. Growing power of radical-right populist parties and movements in the global North – fuelled by the second Trump presidency in the US – threaten national health systems and global health, [56,57] calling for greater attention to CHWs as a most vulnerable HCWF group. Radical-right politics are coupled with strong antifeminist and racist attacks against women and ethnic minorities, threatening those who build the backbone of CHWs the most.

What is known about CHWs in European health systems?

In the WHO European Region, CHWs account for only 0.01 million out of 4 million globally [15, Figure 2]. Research on health system inclusion covers only eight of the 53 countries in the region, yet the findings, particularly the 'variability in terms used to describe CHWs', the 'social embeddedness of CHWs in the communities they serve', and their 'educational, navigational, and supportive' roles, closely mirror global evidence [58, abstract]. However, CHW education and training are not systematically assessed in Europe and it is unclear which groups are included in research.

Information is overall poor and data scattered, as it is mainly taken from small-scale projects, reviews, or statistical modelling, and it is limited to specific user groups, regions and system conditions. All studies found some benefits, in particular, for primary care, [59] health programmes in underserved areas, [60] survivors of sexual violence, [61] and HIV and other services related to sexually transmitted diseases [62]. Country cases from EU Member States report major benefits for culturally competent home care [63] and people living in economically vulnerable conditions in Belgium [64], for contact tracing among immigrants with tuberculosis in Barcelona/Spain, [65] culturally sensitive care for elder immigrants in the Netherlands, [66] sexual health of homeless people in Paris/France, [67] and health promotion in Valencia/Spain [68]. Research into CHWs in EU countries seem to be most advanced in Belgium, [69,70] but limited to an EU-funded pilot project.

Some more information is available from the UK, especially England, reflecting the generally greater attention given to CHWs in Anglo-American health systems. Existing studies found benefits for a wide range of services and user groups, for instance, health promotion in deprived areas, [71] cancer care, [72] patients with type 2 diabetes [73] and support for pandemic prevention and COVID-19 services [20].

Very little attention has been paid to CHWs in relation to HCWF shortages and the workforce crisis. A modelling study for England concludes that a 'scaled up CHW workforce integrated in primary care may be a valuable policy alternative', but information on feasibility and impact in the National Health Service (NHS) is missing [59]. Romania reports benefits of CHW online training courses to support COVID-19 care [74]. Yet no systematic assessment of CHWs during the COVID-19 pandemic is available, although many European countries used novel approaches beyond established HCW groups to mobilise ad-hoc resources [75].

Very few EU studies refer to global evidence. The Belgian CHW pilot program seeks to explore what can be learned from LMICs, especially from innovative CHW models in primary care in Brazil and South Africa [64,76], also considering community-centred and feminist/gender transformative approaches [70]. Some authors mention Brazil as a blueprint for CHW pilot programs in England/UK [21,22].

Aims and objectives

This comparative study connects global evidence on CHWs and community-centred health system approaches to high-income European countries, aiming to assess the capacities for transformative change. First, by shifting the analysis from occupational categories to viewing these actors as advocates of community-centred health systems and as boundary spanners within fragmented system contexts, we open new opportunities to assess how this emerging multiprofessional group is implemented and supported across diverse health systems. Second, our research explores the conditions that enable the benefits that arise from implementing community-centred workforce policies in different health system contexts, thereby supporting the implementation of two priority health goals for the WHO European region. Third, the findings add novel evidence from high-income European countries to the global CHW debate, highlighting opportunities for policy learning from South to North while also acknowledging existing challenges.

Methods

A qualitative comparative approach and case study design [77] were chosen, aligning global expertise and selected high-income European countries. Importantly, we use comparison in an explorative manner as a tool to connect a global CHW debate based on LMICs to diverse

European high-income countries. Elsewhere, we discussed in more detail the need to broaden the focus of comparative health policy and expand its methodology to include approaches that make greater use of exploratory, qualitative research, arguing that such approaches can enhance responsiveness of comparative health policy to governments' societal performance [77].

Our sample focuses on the EU and the UK, encompassing high-income European countries. The selected countries vary significantly in terms of their wider health system conditions and the HCWF (Table 1). Upward occupational boundaries and inclusion of middle- and higher middle-level professions may be more fluid than in global terminology, [1,4] reflecting higher education levels in Europe. Against this backdrop, we have chosen a pragmatic and respectful solution that does not conflict existing professional categories or global terminology, [1,4,26] while allowing for empirical assessment of emerging groups. We use the term 'community-centred HCWs (C-HCWs)' for our comparative analysis, reserving 'CHWs' exclusively for Brazil, South Africa, and the global debate. Notably, this is a working definition emerging from our analysis, and no attempt to create a new terminology, which would be too early and need more research and debate.

Our conceptual approach and methodology are motivated by global research, in particular, from the WHO and Alliance for Health Policy and Systems Research [1,2,4,14,16,78] and in Europe from the European Health Systems and Policy Monitor network and HCWF and primary care research [79–82]. We refer to health systems and multi-level governance theories – defined as a set of processes by which decisions are made and implemented [54] – and consider professions and street-level bureaucracy approaches [55,79,83]. 'Street level bureaucrats' theory refers to the role and capacities of frontline workers to affect policy implementation bottom-up without formalised governance powers [55]. 'Transformative' approaches [79] refer to occupational programs that are likely to enhance changes (e.g., new professional group) that may drive community health systems, while 'adaptive' approaches describe efforts within existing institutional structures.

Country case design

Brazil and South Africa were selected as the two pioneers of more advanced CHW programs integrated in the formal labour market, which are shaping the WHO debate [1,6,15,40] and informing efforts in Europe [21,22,64,76]. For the purpose of our study, the two countries serve as a proxy for the global CHW debate. In Europe, six high-income countries were selected, comprising five EU countries – Denmark, Germany, Netherlands, Portugal, and Romania – and England in the UK. The sample (Table 1) considers a variety of health and social systems, economic and workforce conditions, and geographic diversity [84–89]. England takes a double role, representing both a European country and a contributor to the Anglo-American CHW debate. Romania is a borderline case between high- and middle-income countries, but currently listed as high-income country.

Instrument development, data collection and analysis

The development of context-sensitive instruments for assessing C-HCWs across LMICs and high-income European countries was informed by qualitative comparative methodology [77,80,81] and research evidence (see background section). We applied an interactive and consensus-based procedure to align global and European approaches and balance context-sensitivity and sufficiently standardised tools. We started our country specific data collection (supplementary online material, Tables S1–S8) with reference to 'CHWs', but specified this global term for the diverse European occupational groups as 'C-HCWs' in the process of comparative analysis to acknowledge existing differences in relation to the global terminology.

First, a standardised matrix was developed to collect basic health system and HCWF data and prepare country health system profiles, including qualitative and statistical indicators (Table 1). Second, an expanded topic guide was created comprising the following major items (Tables S1-S8, supplementary online material): health system/institutions; policy, politics and governance; organisation (service provision, user groups); work conditions, occupation (labour market position, gender composition); education/professionalisation; and additionally, free text information on specific conditions (e.g., legal frameworks, policies).

Data were collected during April/May 2025. A first version of the country case material was reviewed and revised by the lead authors to identify gaps and queries and improve coherence across the cases. The feedback and review process were split into two steps. First, information from the standardised matrix was summarised in a cross-country comparative table (Table 1), revised and agreed by all authors.

Second, the country sheets were revised by the respective country experts, remaining queries clarified via email or video calls, and a final version agreed with the lead authors. This comprehensive qualitative material (supplementary online material, Tables S1-S8) builds the 'core' of the comparative analysis. Four tables were developed to structure the analysis, addressing system integration, governance/policy/politics, organisation/work, and education/professional development. The findings and additional comments were sent to the co-authors for review and written comments, followed by an online author workshop to jointly discuss major findings and explore next steps.

An advanced comparative analysis was prepared, discussed among the lead (first and last) authors, and shared with all authors for review and comments. During the analysis, the term C-CHWs emerged as an umbrella to identify capacities for community health systems, considering policy and implementation patterns (supplementary online material, country patterns). The procedure was repeated until sufficient information and agreement was achieved.

Results

The comparative analysis shows high variation and diversity of C-HCWs in Europe, confirming global findings, but also brings specific European patterns and windows of opportunity for community-centred system transformations into perspective.

System integration

The integration of C-HCWs in PHC systems, typical for CHWs in LMICs (Hodgins et al., 2025), is also found in Europe, but here it co-exists with newer and more diverse patterns, including stronger linkages to the social care sector (Table 2). It must be considered that the governance and organisation of PHC systems vary strongly in Europe, also affecting the inclusion of public health and community-centred approaches [81,90].

In Brazil and South Africa, CHW programs are strongly integrated in PHC. In Brazil, CHWs are the gatekeepers of the entire health system, which is grounded in a community-based structure, whereas South Africa's two-tiered public-private health system limits them to a less prominent role. PHC integration is also indicative in Romania. In the three countries, C-HCW services make up a relevant part of the system, aiming to strengthen community-centred care, public health, and access for vulnerable populations, including a wider range of needs and people living in underserved areas. In England, PHC integration and service goals are similar, but combined with community care integration; however, the contribution to services is still limited due to the pilot stage. In Portugal, community nurses are part of PHC and the NHS, but their specific contribution to service provision is not formally defined and may be weaker.

In Germany, the pilots and programs are integrated partly in PHC and partly in the public health system. The contribution of C-HCWs as providers varies strongly between the federal States, but is currently very small and limited, mainly targeting older people and underserved

Table 1
Health system and health and care workforce characteristics.

Categories	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK, England
Health system/ governance	Unified Health System (SUS); federative state & municipalities governance & little corporatism; decentralised	District Health System with strong public-private sector separation; district governance & little corporatism; decentralised	NHS with multi-level network governance; strongly decentralised	SHI with joint self-governance and & corporatism; decentralised	SHI with regulated competition; increasingly decentralised	NHS with public & professional corporatism; partly decentralised	SHI with some state regulation & corporatism; partly decentralised	NHS with state regulation; centralised but an element of decentralisation
Healthcare finance	Taxes, with mandatory contribution of 15–22 % of municipal, state, federal budgets, some OOP	Two-tiered: state-funded/ taxes & private payment/ private health insurance (16 % of wealthier population), high OOP	National and local-level taxes; OOP not relevant	Mainly SHI employer-employee contributions, some private insurance, some taxes, little OOP	Private health insurance with tax-based compensation, some OOP; municipal taxes for community care	Mainly taxes with some voluntary private insurance & high OOP	Mainly SHI employer-employee contributions with large groups exempted from SHI fund & OOP	Mainly taxes, little OOP
Access to services, UHC Service Coverage Index[#]	UHC Index: 80; proportion of uninsured: small; services: relevant barriers	UHC Index: 71; proportion of uninsured: relevant; services: strong public-private inequity & barriers	UHC Index: 85; proportion of uninsured: neglectable; services: accessible	UHC Index: 86; proportion of uninsured: neglectable; services: accessible	UHC Index: 86; proportion of uninsured: neglectable; services: accessible	UHC Index: 84; proportion of uninsured neglectable; services: some economic barriers	UHC Index: 71; proportion of uninsured: relevant; services: some economic barriers	UHC Index: 88; proportion of uninsured: neglectable; services: some barriers due to workforce shortages
Welfare state tradition/ social (care) services	Moderate, aiming for Scandinavian universalist welfare state, but not fully implemented	Weak welfare state, underfunded, understaffed	Strong, reflecting Scandinavian universalist welfare state model	Strong for all sectors, reflecting Bismarckian model but some decline	Strong but increasingly shifting to 'participation society'/citizens to use their own networks before using services	Moderate, reflecting Southern EU welfare state with strong familialism	Moderate, reflecting Eastern European welfare state with new SHI model	Relatively strong reflecting Beveridge model, but declining in recent decades & social care relatively weak
Community-based health and care services	Strong, part of PHC	High variation	Strong, part of PHC; services are based on PHC & municipalities	Relatively weak, not connected to PHC	Strong for both healthcare and social support, increasing relevance	Strong, part of PHC; range of services coordinated through NHS	Weak	Strong
Family-based / informal care provision	Strong, part of PHC	Strong, large amounts of informal care	Formally limited, but probably increasing due to cuts	Strong, partly included in SHI and reimbursed	Increasingly strong, driven by shifting policy priorities	Strong, part of the health system & rooted in cultural traditions	Strong	Relevant for social care, especially for older people
Informal health & care labour market	Strong	Strong	Formally limited, but probably increasing due to cuts	Strong for care at home	Strong	Strong	Strong	Relevant, 8 % of the population receive informal care, estimated
Total population[*]	214,8 million	60,6 million	5,9 million	83,8 million	17,7 million	10,4 million	19 million	67,3 million
Total health expenditure, % GDP[*]	9.6	8.3	9.4	11.8	10.1	10.0	5.9	10.9
Health & social work, % total civilian employment[*]	n/a, estimated 6 million employees	n/a	18.87	14.95	16.86	8.94	5.29	12.67
Total health & social employment, density[*]	n/a	n/a	95.58	75.9	91.28	41.78	21.43	61.85
Physician density [*]	2.15	0.80 (0.37 public sector)	4.5	4.53	3.92	5.72	3.66	3.19
GP/primary care physician density[*]	n/a	n/a	0.8	1.05	1.83	3.03	0.8	0.8
Nurse density[*]	5.3	1.03 (0.16 public sector)	10.36	11.98	11.38	7.52	8.17	8.57
Personal care workers[*]	n/a	n/a	15.49	8.04	14.67	3.79	4.01	17.85

(*continued on next page*)

Table 1 (*continued*)

Categories	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK, England
Physician: nurse ratio[§]	1: 2.30	1: 1.27	1: 2.30	1: 2.63	1: 2.94	1: 1.32	1: 2.23	1: 2.56

Source: authors' own table, based on public statistics and expert information.

[*] OECD, 2023 or nearest year, for all countries except: Brazil: total health & social work/ % total civilian employment, CNES, 2024; South Africa: physician/nurse density public sector, Ndlovu et al., 2024; for information on sources and methods, see OECD, 2024, and national statistics.

Workforce data refer to: per 1000 population head counts; practising physicians, nurses, personal care workers, except for Portugal where data refer to 'licensed physicians' and 'professionally active nurses'.

GP/primary care physicians refer to 'specialised GPs and other generalists (non-specialist) physicians'; nurses refer to 'professional nurses and associate professional nurses'.

[§] own calculations, based on OECD*, head counts of physicians and nurses, practising; for Portugal: licensed physicians, professionally active nurses.

[#] Brazil and South Africa: WHO, 2024; European countries: WHO Europe, 2022; note: the sources significantly differ in the estimated index; the international WHO data base sees the selected European countries on the same level (80; Romania 78), while the WHO Europe estimations are more differentiated.

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Abbreviations:

GDP – Gross Domestic Product
n/a – data not available
NHS – National Health Service
OOP – Out-of-Pocket Payment
PHC – Primary Health Care
SHI – Social Health Insurance
UHC – Universal Health Care
UK – United Kingdom.

Table 2
Community-centred health and care workers (C-HCWs): system integration.

Categories	Global South		Europe					
	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK/England
Overview								
Formalised occupation & part of the HCWF	Yes	Mostly, depends on local context, not fully formalised	No, but some C-HCWs in pilots & projects	No, but C-HCWs in pilots & projects	No, but multi-professional C-HCW groups	No, but C-HCW nurse specialties	Partly, multi-professional C-HCWs (called CBHWs)	Partly, C-HCWs (called CHWW) mainly still in pilot stage
Regulation of CHWs & related services	National law defines work, tasks, salaries & education	National policy on Ward-based Outreach Teams, poorly implemented	N/a, regional/ local pilots & projects	N/a, regional pilots & projects as part of SHI, Federal State decisions	Social Support Act, not SHI	Part of NHS system	Government Decision 2019 defines three CBHW groups	Pilots, defined by NHS/ PHC & community care
Finance	Nationally, part of health system	Variable, government & donors	N/a, variety of sources	N/a, variety, funded mostly via Federal States, communities, SHI sectors	National & local taxes via Social Support Act, not SHI funds	Part of NHS	Nationally, MoH	Variety, ICBs, local authorities, NAPC, charity & voluntary organisations
Formally integrated in PHC	Yes	Formally at policy level, but implementation depends on local context	No, but pilots & projects in PHC	No, but pilots & projects in PHC	No	Yes	Yes, but not structurally	No, mainly still in pilot stage
Located in-between health & social sector	Yes	Sometimes, local variety	No, but variety and links	No, but variety and links	Yes	Yes	Yes	Some links
Gate-keeping function of CHWs	Yes	No	No, but variety	No	No	No	No	No
Serve vulnerable groups.	Yes	Yes	Yes	Yes, but very limited	Yes	Yes	Yes	Yes
Promote equity & support SDGs	Yes	Partly, depends on local context	In principle, but too early	Partly, but too early	Yes	Yes	Yes	Yes

Source: authors' own table, based on country case studies (Supplementary Material, Table S1 – Table S8).
Abbreviations.
CHW: Community health worker.
C-HCW: Community-centred health and care worker.
CBHW: Community-based health worker.
CHWW: Community health and wellbeing workers.
HCW: Health and care worker.
HCWF: Health and care workforce.
ICB: Integrated Care Board.
MoH: Ministry of Health.
N/a: Not applicable.
NAPC: National Association of Primary Care.
NGO: Non-government organisation.
NHS: National Health Service.
PHC: Primary health care.
RHM: Roma Health Mediators.
SA: South Africa.
SHI: Social Health Insurance.
UK: United Kingdom.

remote/rural areas. This might be extended to other groups, if the public health angle gets stronger. The Netherlands have separated C-HCWs from PHC and established linkages with various welfare systems and programs. The services include a wide range of population groups with specific needs, but the overall contribution is still limited and partly in pilot stage. Denmark might eventually go in a similar direction and expand on their strong welfare institutions and community services rather than on PHC, but no policy or formalised programs exist and it is too early to identify an approach.

Across the different approaches, appropriate funding of the C-HCW programs, and more generally sustainable health system budgets and economies, are key conditions that determine implementation and capacities. The constraints are weaker in Germany, the Netherlands and Denmark where health system resources (both economic and human resources) are significantly higher, but an early stage of the programs makes systemic transformations hardly predictable.

Governance, policy and politics

In Brazil and South Africa, the programs are closely linked to health reform and aiming at an expansion and improved formalisation of CHWs, yet they are hampered or blocked by institutional conditions, especially lack of funding and mandatory education standards (Table 3). These challenges seem to be strongest in South Africa, but variation is very high in both countries, because local institutions, political interests and governance arrangements define implementation paths.

The mostly pilot program in England is part of wider policy efforts in the NHS to improve access to healthcare and health outcomes for

Table 3
Community-centred health and care workers (C-HCWs): governance, policy and politics.

Categories	Global South		Europe					
	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK/England
Governance, policy & politics								
Governance	Decentralised through municipalities & NGOs implementing national law; strong variety & lack of control	Partly through national CHW policy framework & labour legislation with some decentralisation; fragmentation, strong variety & lack of control	Limited to pilots & projects, decentralised, high variation, dynamic developments	Limited to pilots & projects, decentralised through Federal State level governance & PHC regional implementation, high variation, dynamic developments	Decentralised through municipalities & community care as tier of health system, but separated from SHI system; national & local monitoring units	Part of NHS governance, centralised, no specific framework for CHWs	Centralised MoH decisions implemented by local authorities, coordinated by County Public Health Directorates; professional law & clinical governance	Currently no specific governance arrangements, decentralised implementation through NHS Integrated Care Board, Primary Care Network or Council
Stakeholder role in HCWF policy	No formal role, but influence as relevant HCWF group	No	No	No	No	No, but specialised nurses are part of NHS	No formal role, largely marginalised	No
CHW stakeholder representation & association	Strong national lobbying association but no self-regulatory professional capacities	Increasingly organised in different unions	No	No, but formally through professional associations	No, but through unions & partly through various professional associations	No, but part of Nurses Association	Formally by Nurses & Midwifery Associations but weak influence; Romani NGOs	No
Inclusion in public statistics	Yes; 260,00 CHWs	Variable, around 45,000 CHWs	No	No	No	No	Partly, 1941 Community Nurses, 476 RHMs	Not yet, more than 100 CHWWs & more planned
Labour market monitoring	Partly, data depend on municipalities, no national monitoring	Variable across provinces	No	No, few scattered regional data	No	No	Partly, for the different groups	Not yet
Policy	Salary increase & minimum wage guarantee, but lack of funding and austerity measures; no coherent strategy	National policy on Ward-based Outreach Teams closely linked to PHC is currently under review; but no coherent strategy on funding & formalisation	No national strategy, policy focuses on welfare services & civil society engagement; some overlaps with community & PHC but weak & not mentioned in reform strategy	No national strategy, highly decentralised & diverse C-HCW models, focus on better access for older people to PHC & nursing, reduce costs & HCWF shortage	Part of policy reform to prevent healthcare use/ reduce costs & mitigate HCWF shortages; key role in new policy discourse on 'participation society' & 'stay longer at home'	Absent & term not used, but nurse-based community-related services are part of NHS and governed within this framework	No specific policy focus on C-HCWs but regulation by MoH & part of community care and PHC policy	No specific policy focus, as mainly in pilot stage, but seen as important to help tackle social determinants of health and improve access to NHS services
Politics	Support of MoH & social movements but budget cuts & poor resources; countervailing professional (physicians, nurses) & market interests (employers/ communities, private insurances)	Some support from government, Unions, NGOs, community organisation & internationally, but strong discrepancy between supportive discourse and lagging practice	Overall lack of interest, large scale use of C-HCWs would require relevant structural changes in health system	Little interest but recently new dynamics; support of regional SHI stakeholders, Federal State Governments, Green Party, Social Democrats, Nurse Association	Support of MoH, healthcare organisation & researchers in C-HCW groups to facilitate system & societal transformations from welfare state to enabled people & de-medicalisation	N/a, there is no public debate and awareness of C-HCWs; nurse-led community-like services are well established and not subject to reform or debate	Some support of MoH & County Public Health Directorates	Some support from central government, GP practices in deprived areas, National Association of Primary Care, some universities
Major barriers to CHW-supportive policy implementation	Lack of funding & budget cuts, decentralisation, professional & market interests	Lack of funding, underresourced health system, weak formalisation & education, partly informal labour market	Lack of interest, structural barriers of welfare state system	Lack of interest, structural barriers of federalist & fragmented welfare state system	Not known but budget cuts by the government may create risks	Lack of debate, unclear benefit & structural barriers due to established C-HCW-like nurse services	Lack of funding & support	Securing sustainable funding for establishing C-HCW (CHWW) services
Public opinion	Under-valued group	Some perception as 'second-rate HCWs for the poor'	Under-valued group, absent from public debate	Under-valued group, mostly absent from public debate	Unclear	Unclear	Under-valued group, partly negative media comments	Unclear, still mainly in pilot
Research	Yes, but under-researched	Yes, substantial research	No, some pilot reports	No, some pilot reports	Growing interest	Some research	Under-researched	Evaluations of pilots

Source: authors' own table, based on country case studies (Supplementary Material, Table S1 – Table S8).
Abbreviations, see Table 2.

vulnerable groups. It connects sectors, responds to shortages, and establishes regulation and formalised education of a lower-to-middle level professional segment. Governance may vary locally, but the C-HCW schemes are integrated in existing regulatory frameworks of the NHS and community care, operating within a defined pilot framework and often subject to regular evaluation and performance measures. Similar to England, the Romanian C-HCWs are linked to policy efforts to improve PHC, public health and equity, especially supporting the Roma population. However, governance is more coherent. Implementation follows centralised Government decisions and employment/professional law of the two groups that form the C-HCW profession, and the establishment of Roma Health Mediators as one of the C-HCW groups is also linked to EU programs.

In Germany, several pilots and programs exist that are operating within two regulatory frameworks: organisationally diverse PHC governed by decentralised multi-stakeholder Social Health Insurance (SHI) networks and a national-level SHI framework, and public health services governed through national frameworks with strong federal State and community-level variation. Different approaches on C-HCWs and community-centred care are competing and data is scattered. The debate is increasingly subject to interest-driven politics of political parties and the nursing association, favouring a nurse-based community care specialisation and a middle- to higher-middle-level professional group. The new political interest is currently not translating into adequate action and future pathways are hardly predictable.

In the Netherlands, C-HCW-related policies are integrated in wider welfare and health policy reforms and mainly driven by the promises to reduce costs for the welfare system, enable people to stay longer at their home, and support vulnerable populations and equality. C-HCW governance and stakeholder arrangements are diverse, but integrated in a system of social care and public health programs. The cost-reduction promises drive government support and motivate other SHI stakeholders, but implementation of C-HCW policy and capacities for a community health system are currently not clear.

In Portugal no public debate and specific C-HCW policy exist, but community care services are part of NHS regulatory frameworks for nurses. There is neither explicit support nor resistance, but overall limited NHS funding provides a major barrier for an expansion of specialised community nurses. In Denmark, like in Portugal, there is little interest or controversy on C-HCWs and no specific governance arrangements exist, but the professional groups emerging from the pilots are positioned and governed within an established comprehensive framework of strongly community-based welfare institutions, including funding.

Across countries, the governance of C-HCW programs is embedded in wider health policy and welfare systems, mirroring country and system specific strengths and weaknesses, including economic resources and political powers. However, the health system and welfare types do not easily predict C-HCW policy. For instance, community-centred systems, like in Denmark and Brazil and also in the Netherlands, have developed diverse policy approaches to C-HCW programs; the same applies to the NHS systems in England and Portugal.

Organisation and work

The organisation and work (Table 4) are mainly defined by the employer organisation (public, private, etc.) and specific programs and tasks, shaped by diverse community and user needs and ad-hoc work arrangements. Employers are often public sector organisations, but also all types of Non-governmental Organisations (NGOs), private offices (e.g., in PHC), or service users. C-HCWs may be employees or self-employed, work in large or small teams or on their own, in an office or in peoples' homes, with or without other types of professionals. Variation is generally very high, and in this regard, our sample mirrors global evidence. An estimated high proportion of women and minority groups marks another strong similarity globally, yet reliable data is missing.

Differences exist in relation to the formalisation of work and employment, including salaries. In Brazil and South Africa, CHWs must live in the community they serve, while in the selected European countries this is common practice but not mandatory. In Brazil, the Government has introduced mandatory salaries for CHWs, yet the implementation has to be balanced with economic interests and feasibility. Progress is slower in South Africa, but efforts are also focused on CHWs as a group, and their organisation in unions is on the increase. Salaries are more strongly regulated in Europe, while differences exist in the target groups. Romania and England, like Brazil, have introduced defined salary levels for C-HCWs; in Portugal nurse professional law applies; in Germany, the Netherlands and Denmark diverse professional and employment laws of the respective C-HCW groups are in place.

Across countries, the organisation and work of C-HCWs is primarily defined by national employment law, worker rights and micro-level conditions. A lack of C-HCW-specific regulatory frameworks creates high flexibility and puts especially low-qualified groups at risks, hampering professionalisation and capacities for community health systems.

Education and professionalisation

Efforts to scale-up of C-HCW education can be observed in all countries, targeting lower- to middle-level professional segments (Table 5). None of the European C-HCW programs include lay workers or informal labour market segments, and Brazil and South Africa took action to formalise CHWs, most clearly in Brazil. Our sample reveals three major pathways, that affect capacities for building community health systems differently (summarised as 'professionalisation' but not limited to a formal status [4]).

First, the establishment and formalisation of a new group with different educational backgrounds that aims for harmonised regulation and mandatory education and training standards, and enables a professional identity as C-HCWs. This pathway mirrors global efforts to raise and formalise education, [1,4] as observed (but not fully implemented) in Brazil and South Africa, and was guiding the pilots in England (Community Health and Wellbeing Workers, CHWWs) and partly also the Romanian program (Community-based Health Workers, C-BHWs). It usually connects medical/clinical, public health, and social care, but the priorities may vary across countries.

Second, the emergence of a new multi-professional field of C-HCWs with highly diverse educational (mostly middle-level) backgrounds and professionalisation pathways, that are loosely connected through community-centred health policy goals and service frameworks. This pathway is most obvious in the Netherlands, but might also be relevant in Germany. The relevance is less clear in Denmark, but the groups involved in the pilots create new occupational connections beyond the HCWF, for instance, 'club developers' supporting participation in local sport. Romania shows some overlaps with a multi-professional approach, but with a more coherent framework and limited to two major groups. The dynamic nature and fluidity of the multi-professional programs, mostly in pilot stage, make the implementation and long-term effects unpredictable, especially for Germany and Denmark. No uniform pattern of disciplinary orientation is emerging. The Netherlands (eventually also Denmark) put stronger emphasis on social care, while Germany prioritises medical/clinical care and the specialisation of nurses and medical assistants.

Third, the specialisation of nurses as a classic professionalisation path with a focus on community care. This pathway is dominant in Portugal, referring to a fully regulated middle- to higher-middle level profession included in the EU Qualification Directive [91] and prioritising medical/clinical care. It has some overlaps with Romania and may gain stronger relevance in Germany, depending on future politics, but departs most strongly from the global CHW terminology [4].

Table 4
Community-centred health and care workers (C-HCWs): organisation and work.

Categories	Global South		Europe					
	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK/England
Organisation & work								
Employment	Municipal public administration & NGOs, public PHC sector	Provincial Departments of Health, NGOs; regional variation	Variation, municipalities, regions, housing associations, sport clubs	Variation, PHC providers/ office-based physicians & Centres, local authorities	Community/ neighbourhood centres, self-employed	NHS, Public Health Units, municipalities, NGOs, private	Local public authorities	Local authorities, NHS, sub-contracts with voluntary organisations
Service provision	Part of PHC, Family Health Program; first entry point	Community care, health, social development, PHC	Variation, mental health, PHC, drug rehabilitation, urban development, public health	Variation, PHC, long-term care & nursing support services, some community care	Part of Social Care Act, mainly health & social care private non-for-profit providers	Part of NHS; mainly public health & social care services, long-term care	PHC, social care, community health care	Pilots are part of PHC & community care
Target user groups	All population but especially vulnerable groups, women & children, elderly & people with chronic diseases	All population, but focus on mothers & children; people with HIV, tuberculosis, non-communicable diseases	People with mental health problems/ substance abuse, people in vulnerable situations, general population	Depends on project, but mostly older persons & rural & remote areas	People with dementia, disabilities, mental health problems, older & lonely people, unemployed, accepted refugees	Chronically ill people, elderly, children, vulnerable people in rural/ underserved areas, low-income people	Vulnerable populations, elderly, children, maternity care, people in rural areas, people with chronic illness, Roma for RHMs	Populations in deprived areas, targeting poor and vulnerable people
Tasks	Strong variation; mainly health promotion, monitoring & information, basic services, home visits, administrative & support tasks	Health assessments, home visits, health promotion, maternity care, family planning, support for chronically ill people, cross-sector collaboration & coordination	Depends on project	Depends on project, mostly support services, home visits, support for medical & nursing care, health promotion, coordination tasks	In Centres: promotion of mental care & social interaction, administrative support; at people's homes: need assessment, arrangement of care facilities & daily-life support	NHS-defined, e.g. health promotion, epidemiological surveillance, vaccination, community health coordination	Defined by MoH; mainly public health tasks, e.g., prevention, education, health promotion; also support of physicians, professional collaboration	Varies by employer, mainly help people in under-served communities to navigate through the NHS system, social & wellbeing needs, promote healthy living
Equity-related tasks	Legally defined tasks, community involvement and promoting social participation & equity	Yes, focus on vulnerable groups, mothers & children, rural & underserved areas, improved social inclusion & participation	Mostly related to people living in socially disadvantaged areas	Mostly limited to older people and improved access to SHI services in rural/remote areas	Yes, with strong focus on social support distinct from healthcare	Defined by NHS, facilitating access and supporting vulnerable groups	Defined by MoH, community care for medically, economically, or socially vulnerable groups	Varies by employer, access to care for poor & vulnerable people in most under-served communities
Organisation of work	Part of a team comprising physician, nurses, CHWs	High variation, depends on employer and needs, but part of a team	Depends on project	Depends on project, mostly on their own, partly supervised by physician	High variation, work in teams at Centres & on their own/self-employed at people's home	C-HCW related nurses are part of larger NHS teams	Mostly on their own, but also in teams with social workers, educational mediators & counsellors	Varies by employer, mostly on their own but also with team-based working
Working conditions	Precarious, long hours (44 h), overtime work without payment/ compensation, permanent availability, lowest salary in the team, often 'dirty work', poor violence protection	High variation, depending on region, employment arrangements, community needs; government employment must be permanent according to law	Depends on project and employer	Depends on project & employer, high variation, salaries ranging from lower- to middle-level, employment law applies	Defined through national employment law & Union negotiations on salaries, high variation & flexibility depending on professional group & form of employment	Defined through NHS & employment laws; middle-level HCW salaries for community nurses	Work time (8h/ day) and salaries defined through national employment law; work monitored by the authorities through password-protected web-based platform	Varies by employer, high variation but employment law applies; example: 28h/ week, 4-days week, flexile worktime, GBP 24,000/ year (lower level HCW salary)
C-HCWs must live in the community they serve	Yes	Yes	No	No f	No	No for specialty nurses	No	Not mandatory but expected

Source: authors' own table, based on country case studies (see Supplementary Material, Table S1 – Table S8).
Abbreviations, see Table 2.

Table 5
Community-centred health and care workers (C-HCWs): education and professional development.

Categories	Global South		Europe					
	Brazil	South Africa	Denmark	Germany	Netherlands	Portugal	Romania	UK/England
Education & professional development								
Regulation	Mandatory high-school degree (national law) but no professional law on training	Variation in educational entry requirements but increasingly high-school level; no professional law	N/a; no national law on C-HCW speciality training; professional and vocational law applies	N/a; no national law on C-HCW speciality training; professional and vocational law applies	N/a, professional law applies & EU Qualification Directive for nurses, some flexibility for other C-HCWs	N/a; professional law & EU Qualification Directive for nurses	Professional law & EU Qualification Directive for nurses; RHMs defined by government & linked to EU program	Recommended apprenticeship but currently no professional law, mainly in pilot stage
Education & training	National curriculum but no mandatory education requirements; training on the job; diverse training programs developed & defined by MoH, municipalities, or NGOs	National curriculum at four levels; most CHWs have completed foundational level, but no mandatory education requirements	Depends on project	Depends on project and profession; mostly medical assistants: vocational with certificates; nurses: mixed, vocational and certificates & few Master courses	Depends on profession, highly diverse defined by professional law ranging from vocational, university & specialisation level, some flexibility	University level education for nurses and specialisation in community nursing & public health nursing	Depends on profession, defined by professional law, university level & vocational; more flexible for RHMs but a defined program & 3-months apprenticeship	Level 3 CHWW apprenticeship training (including on the job) program recommended but currently not mandatory; recognised qualification applicable to a range of roles
Career paths & professionalism	Poorly developed paths & professionalism	Poorly developed paths & professionalism	Lack of paths & professional identity, strong gender bias	Lack of paths & professional identity, strong gender bias/ women-focused	Weak paths but too early/ novel, identity depends on profession	Paths & identity defined by nurse profession	Paths & identity defined by nurse/ midwifery professions; weak for RHMs	Too early to assess, but mainly lower-level professions
Gender & ethnic composition	No data; estimated 90 % women & Black	No data, estimated 90 % women, majority Black SA	No data	No data, mostly women	No data, mostly women	No data, estimated 75–80 % women as in nursing.	No data, mostly women, RHMs must be Roma & women	No data
Overlaps with other professions	Strong with 'Endemic Agents' (monitoring endemics), some with nurses, but clearly defined boundaries	Strong with Nursing Assistants & mid-level Rehabilitation Workers, but high variation	Strong with nurses, health assistants & social workers, weak links for 'peer workers' employed in rehabilitation & for community members in public health programs	Strong with medical assistants & nurses, but defined boundaries; possible links with others	Strong with social workers, nurses, care workers & several others; little overlaps with PHC staff	Integral part of nurse profession, some overlaps within teams & social work but defined boundaries	Integral part of nurse & midwifery professions, weak overlaps with social work, & counsellors	Strong with Social Prescribing Link Workers, and others, e.g. Health Trainers, Community Connectors
Interprofessional relationships	Strong task-shifting negotiations with nurses; strong debate on merger with Endemic Agents and joint association	Connecting sectors & providers, some coordination; no formal debate but tensions in practice	Too early to assess	Too early to assess; some task delegation from physicians, little task-shifting	Task-shifting from PHC providers to C-HCWs; sectoral-shifts from PHC & home care to new forms of 'care at home'	Specialisation in nursing; defined roles, little task-shifting, little task-delegation from physicians	Formalised collaboration and some task-shifting with PHC physicians & others, but defined roles	Too early to assess, but some first examples of well-functioning collaboration

Source: authors' own table, based on country case studies (Supplementary Material, Table S1 – Table S8).
Abbreviations: see Table 2.

Discussion

Across countries, our research reveals efforts to establish community-centred services and respond to changing population health needs, but the opportunities for implementation and system transformations vary between and within LMICs and high-income countries. Brazil and South Africa developed innovative CHW programs with strong capacities to transform health systems. Some important differences exist in relation to system characteristics, funding and formalisation of CHWs, but in both countries transformations are hampered (most strongly in South Africa) by poor governance failing to provide adequate funding, implement national standards, and regulate professional and market interests effectively.

In Europe, C-HCWs receive less attention and programs are often in pilot stage, except in Portugal and Romania, but in many countries policy interest is growing at the backdrop of increasing workforce shortages and other health system challenges. It is too early to define transformative capacities and systemic effects more precisely, but some interesting patterns are emerging.

England applies a transformative professional strategy, creating a

new occupational group with some adaptive organisational and governance components. The expansion depends on sustainable funding after the pilots are integrated in an underfunded NHS system. Romania uses a mix of transformative and adaptive strategies and has established more comprehensive governance strategies, but sustainable funding remains challenging due to changing politics and limited economic capacity. In Denmark, minimal transformative capacities can be identified based on regional and local pilot projects. However, it remains to be seen whether and how a traditionally strong focus on community care and well established PHC (including funding), typically for Nordic welfare models, together with more flexible decentralised institutional paths might be linked to C-HCWs and whether this generates professionalisation dynamics.

The Netherlands combine transformative governance with some adaptive elements, operating within a national community-centred framework supported by allocation of funds. An alliance between welfare transformations, political/government interests, and funding might create strong drivers towards a community-centred health system. Germany uses mostly adaptive strategies with eventually stronger transformative components in future, including allocation of some funds and development of specialisation programs. However, federalism, decentralisation, and a lack of coherent C-HCW policy and integration in wider health system reform hamper an effective use of these capacities.

In Portugal, a nurse-based specialisation model is integrated in existing NHS governance and professional and organisational frameworks, including funding. The approach creates little opportunity for health system transformations but contributes to community care services.

Across LMIC and European high-income countries, effective governance and appropriate funding are important system pre-requisites for C-HCW programs, alongside professionalisation strategies, stakeholder support, and politics [2,3,49] Countries may combine these pre-requisites in different ways, creating diverse angles for transformations. The results may challenge the development of standardised tools and guidelines [4,14,92] and global programs, [93] but they reveal novel opportunities for building community-centred systems.

European countries create more divers pathways into the health systems, that move beyond PHC and public health and strengthen transsectoral connections with the social welfare sector. They also focus more strongly on education and a new middle-level health labour market segment. Most promising capacities for transformations emerge if C-HCW programs are interconnected with health system reform and community-centred care and social services, with the establishment of a multi-professional group, and efforts to strengthen public health and social support services. No country is using the full range of these capacities effectively, but the results highlight important variation in the ways that C-HCW programs may drive transformations, calling for context-specific C-HCW policy and implementation.

Limitations

Our research reveals windows of opportunity for C-HCW policy and community health systems in Europe, but the rapid assessment, qualitative comparative methodology and case study design have several limitations. We draw on a small sample of selected EU Member States and England and may have missed C-HCW policies in other European high-income countries. Similarly, we consider Brazil and South Africa and research and evidence developed in the context of WHO as proxy of a global CHW debate, yet other programs and system conditions exist. We focus on Europe and do not consider other high-income countries that may have more advanced CHW policies and research, such as the US or other Anglo-American countries. Also, the methodology is based on an expert-network approach and selected secondary sources and does not provide in-depth information on micro-level conditions and politics.

Empirical variety and the absence of an agreed terminology across LMICs and high-income European countries limit the opportunities for comparison, including transformative capacities, to an exploration of first trends. These trends need further clarification if C-HCW programs have made more progress. Our results present a snapshot of highly dynamic C-HCW-related interventions (e.g., pilot projects, party politics) that make systemic transformations hardly predictable and limited to emergent trends. Our study should be viewed as a pilot, that illustrates a need for C-HCW research in Europe and its benefits and offers tools for further assessments. The results may pave the way for connecting evidence from high-income European countries to the global debate and inform in-depth research; they may also motivate a comparison of high-income European and Anglo-American countries.

Conclusions

We introduced a community health system approach that moves the CHW debate from an occupational category at the margins of the HCWF into the centre of health systems, making them ‘change agents’ rather than ‘firefighters’ of burning health systems. Our research brings novel capacities of these diverse emergent groups in Europe into view – which we called community-centred HCWs (C-HCWs). These capacities support the implementation of two health priority goals for the WHO European region: ‘community-based interventions essential in integrating health and long-term care systems’ and ‘the health workforce central to drive any transformation’ [94]. Our research adds empirical evidence to the global CHW debate and supports WHO’s call for research ‘in advanced economies’ [14,p17] to better understand contextual factors.

Europe not only lags behind the global evidence, but the C-HCW programs follow diverse implementation paths that may depart from CHWs in LMICs. England, and partly also Romania, are more similar to the global approaches, including uncertainties about sustainable funding, while Portugal mirrors a nurse-based community care model. The Netherlands, Germany and Denmark explore various new approaches, highlighting novel capacities in different types of welfare systems. We call on policymakers to pay greater attention to C-HCWs and context-specific needs of policy development and implementation. Key issues include greater attention to community health systems, appropriate and sustainable funding for research and implementation of occupational programs, development of integrated transsectoral governance and professionalisation models, and global policy learning including innovations in the global South.

Declarations

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or non-for-profit sectors.

Data availability statement

The eight country case studies and relevant references (Table S1-Table S8), and a summary of country patterns of policy and implementation are provided in the online supplementary material.

CRediT authorship contribution statement

Ellen Kuhlmann: Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Gabriela Lotta:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Viola Burau:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Tiago Correia:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Michelle Falkenbach:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Marius-Ionut Ungureanu:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Iris**

Wallenburg: Writing – review & editing, Methodology, Formal analysis, Data curation. **Gemma A Williams:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Uta Lehmann:** Writing – review & editing, Methodology, Formal analysis, Data curation.

Declaration of competing interest

The authors declare no conflict of interest.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.healthpol.2025.105541.

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