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Review Article

Nurse Practitioners in Community Health Care: A Rapid Scoping Review of Their Role, Tasks, Responsibilities, and Implementation in Northwest Europe

S. F. M. de Leede-Brunsveld [iD],[1,2,3] **N. Bleijenberg** [iD],[4,5] **J. Verhoef,**[3] **C. Holtkamp,**[6] **and J. A. H. van Vught** [iD][7,8]

[1]*Leiden University Medical Centre (LUMC), Department of Public Health and Primary Care, Leiden, Netherlands*
[2]*Leyden Academy on Vitality and Ageing, Leiden, Netherlands*
[3]*Stichting Buurtzorg Nederland, Almelo, Netherlands*
[4]*HU University of Applied Sciences, Utrecht, Netherlands*
[5]*University Medical Centre Utrecht, Utrecht, Netherlands*
[6]*Buurtdiensten, Stichting Buurtzorg Nederland, Almelo, Netherlands*
[7]*HAN University of Applied Sciences, School of Health Studies, Organisation of Healthcare and Services Research Group, Nijmegen, Netherlands*
[8]*Dean of nursing at CWZ Hospital, Nijmegen, Netherlands*

Correspondence should be addressed to J. A. H. van Vught; a.vanvught@han.nl

The objective of this rapid scoping review is to provide an overview of studies from northwest Europe that describe and evaluate community care delivered by a nurse practitioner (NP) in a team of healthcare professionals. In particular, we explore the roles of NPs within community care, the perceived impact at the patient and informal caregivers levels, and influencing factors (facilitating and impeding). This rapid scoping review was performed in accordance with Prisma RR guidelines. Data were collected from online databases between October and December 2020 and an update in March 2023. Medline was used for the search string, and the following databases were searched: Cinahl, Cochrane, Embase, Medline, and Web of Science (WoS). All studies described the roles of NPs, including their tasks and responsibilities in community care. The main findings about the roles were that NPs in community care diagnose, treat patients, and support and advise informal caregivers. They refer and perform case management for (frail) older people. They train DNs and take on project and strategic management roles. The results showed that the NP meets the increasing and complex care demands in patients' homes. The main findings about the perceived impacts were that patients and informal caregivers were generally satisfied with the deployment of the NP. Healthcare professionals experienced the benefits of NPs working in community care. Some healthcare professionals were sceptical when the role was first introduced, but attitudes improved after they worked alongside NPs. Other influencing factors were the competences of the NP, i.e., have a pioneering mentality, a clear vision, and a job profile from community care organisations, and having to collaborate with allied healthcare professionals. However, implementation of the NP in community care is still in its infancy in northwest Europe. This review will help policy makers and professionals understand the potential impact of this role and enhance it in the context of community care.

1. Introduction

Healthcare systems are facing major challenges due to ageing populations and shortages of healthcare professionals.

According to the World Health Organization (WHO), the percentage of people aged 65 and older is expected to increase from 14% in 2010 to 25% in 2050 [1]. Europe's population is ageing rapidly; its median age is already the

highest in the world. The aims for the European region according to the WHO are to achieve universal health coverage while paying attention to age and the specific needs of older people, to better protect people from health emergencies, and to ensure healthy lives and well-being for all [2]. The European Commission's policy on active ageing is focused on "helping people stay in charge of their own lives for as long as possible as they age and, where possible, contribute to the economy and society" [3].

The increase in the number of older people, will lead to an increase in diseases. A steadily rising proportion of people has two or more medical conditions simultaneously, known as multimorbidity [4]. Ageing and multimorbidity contribute to frailty, which creates a higher risk of complications such as falls, disability, hospitalisation, and mortality. These developments will require different interventions in community care, such as caregiver support and services at home. Assistive technologies, home exercise programs, and better transport and housing policies are also needed [5]. Affordable high-quality long-term care services, particularly home-based care and community-based services, are crucial to an ageing population [3]. A growing trend is the hospital@home care [6]. Such services require community care professionals who can meet this increasing demand and deliver complex care.

Academic literature uses different terms for community care: nursing in home care, nursing in primary care, district nursing, and community health care. In this article, we will use "community care," which also covers the other terms because the NP delivers care in the people's home, which is part of the primary care and includes district nursing. Community care is defined as the nursing care that people with (complex and multiple) care problems receive at home [7]. It involves any technical, medical, supportive or rehabilitative nursing care, and the provision of assistance with personal care [8].

Most community care is provided by certified nurse assistants and nurses. However, due to the increasing complexity of care, several countries have added nurse practitioners (NPs) to community care. NPs can provide aspects of primary care, complementing the work of general practitioners (GPs) [9]. NPs have a master degree and are trained to take over medical tasks independently from GPs [10, 11]. NPs in community care usually had a few years' experience as district nurses (DNs), before starting the training to become a NP. During their training they develop general medical skills and integrate these skills with complex nursing care. Besides, they were amongst others educated persons to use the best scientific evidence, deliver person-centered care, provide patient education, work multidisciplinary, and being a leader in innovation and implementation [12]. According to the International Council of Nurses (ICN), NPs can integrate clinical skills associated with nursing and medicine to assess, diagnose, and manage patients in primary healthcare settings and acute care populations, as well as provide ongoing care for populations with chronic illness [13].

In the Netherlands in 2012, the capacities of the NP were codified by law through the adoption of a government decree. Through this decree, (registered) NP's are allowed to independently perform medical tasks, such as prescribing medication, giving injection, and catheterization [14]. NPs also play a leading role in professional innovations and health care in general, supported by research and the implementation of research results. They contribute to their own professional development and to other professions, and to the quality of care [15] as described in their professional profile [16]. From the patient's perspective, NPs offer care and cure that further strengthen the continuity and quality of both nursing care and medical treatment. Self-management and quality of life play a pivotal role here [15].

Although the role of the NP is relatively new to the healthcare systems of northwest Europe, it has been common in other parts of the world (e.g., the US and Canada) since the 1960s [17]. Countries like the United Kingdom, Finland, and Australia developed a broad scope for the NP's role [18]: most NPs in there work in a general or psychiatric hospital setting. Only a quarter work in primary health care, with a small proportion in community care [17].

Research focusing on the role of the NP in primary health care has shown that they mainly replace care from GPs. NPs probably provide care that is equal or even better than that provided by GPs and probably achieve equal or better health outcomes for patients [19]. A systematic review by Van Erp et al. [20] found that care from medical specialists is replaced by care from NPs in primary care plus settings, and the NPs perform additional tasks related to nursing care. They conclude that the "quality of care within primary care plus delivered by nurse practitioners appears to be guaranteed, at patient-level and professional-level, with better access to healthcare and fewer referrals to hospital." However, these reviews in primary care and primary care plus settings do not include community care. The role and impact of NPs in community care are less frequently studied and, to date, no reviews have investigated the care NPs deliver in community care settings.

1.1. Research Aim. The aim of this rapid scoping review was to provide an overview of studies from northwest Europe that describe and evaluate community care delivered by a NP in a team of healthcare professionals. In particular, we explored the role of NPs in community care, the perceived impact on the patient and informal caregiver, and influencing factors (facilitating and impeding) for implementation. These insights are needed to further develop the NP role in Dutch community health care.

2. Materials and Methods

2.1. Design. We conducted a rapid scoping review, a method that Tricco et al. [21] described as "a form of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a timely manner." PRISMA Rapid Review (PRISMA RR) reporting guidelines were followed [22].

2.2. Setting. Studies form northwest Europe (Sweden, Denmark, Germany, Switzerland, Austria, and the UK) were included, because the healthcare challenges share similar aspects to the Dutch healthcare system. We searched for articles written in English and Dutch.

2.3. Setting Research Question. The search was limited to care provided by NPs to patients who need home-based care. This includes care for patients aged 18 and older who are mentally ill, older people or people with impairment that is provided in the community rather than in hospitals or institutions.

2.4. Inclusion/Exclusion Criteria. This rapid scoping review included studies with quantitative, qualitative, proof of action, and mixed-method research designs published from the year 2000 onward. We chose this year because NPs began taking an active role in health care in northwest Europe in the early 2000s. We excluded all texts that were not published in a (scientific) journal (i.e., book chapters, reports, interviews, and symposium reports) because we were interested in results from peer-reviewed studies. We also excluded studies from the US, Canada, Australia, and other countries outside of northwest Europe. Only studies published in English or Dutch language were included.

2.5. Search. The literature search for this rapid scoping review was carried out from October 2020 to December 2020 and an update in March 2023. The search strategy comprised subsequent steps, as proposed in the reporting guidelines from PRISMA RR [22]. First, we used the Medline database to identify relevant keywords for our search string (Appendix 1: Search String Medline). Second, we used those keywords to build an elaborate search string. An information specialist from the HAN University of Applied Sciences and four reviewers (MdL, RW, JV, and AvV) helped to define terminology by searching for synonyms and broadening definitions in the search strategy. The search string was discussed with all the authors of this article. The search strategy was improved to increase its sensitivity and reduce the risk of missing relevant studies. Finally, the search was performed in Cinahl, Cochrane, Embase, Medline, and Web of Science (WoS).

We also conducted desktop research in grey literature, such as national reports. Other supplemental searching was done in Google Scholar. We checked the reference lists in included articles for snowballing purposes.

2.6. Study Selection. Identified records were imported into Rayyan QCRI for further investigation and selection. Reviewers (MdL, CH, JV, and RW) supervised by an associate professor (AvV) conducted a pilot exercise in pairs with 70–100 abstracts, and then, each reviewer searched the remaining abstracts. For each abstract, the reviewers assigned one of three choices: include, exclude, or conflict. The abstracts that were labelled as "conflict" were discussed by reviewers later using conflict resolution principles. There were also situations in which some abstracts were initially included by one reviewer but, after discussion and conflict resolution, were excluded by all reviewers.

2.7. Full-Text Screening and Data Extraction. We then read the full texts of all "included" articles. The articles were divided among the four reviewers (and one reviewer read all the articles). Once an article had been read, the reviewer wrote a summary in a standard data extraction format. This format was implemented after the reviewers conducted a pilot exercise using a single full-text article.

2.8. Synthesis. The four reviewers discussed all included articles and synthesised evidence narratively. The excluded articles were discussed by the four reviewers and excluded based on consensus. The reviewer (MdL) who read all the full texts formalised the decisions on the standard form.

3. Results

The research resulted in 3273 hits (Figure 1). After duplicates were removed, 1186 hits remained and were screened on title and abstract. Out of these, 69 hits were screened on full-text. After screening and discussion between the researchers, 22 studies remained for full-text reading. Seven articles did not meet the inclusion criteria and were therefore excluded. One more hit was identified by checking reference lists of relevant studies. One study was included after a search in Google Scholar. In total, 15 articles from 14 studies from databases were included and 2 articles from other sources. Ultimately, 16 studies reported in 17 articles met the inclusion criteria and were included in the rapid scoping review.

The result section is organized according to the research aim. After the characteristics of the studies, the role of NPs in community care, the perceived impact on the patient and informal caregivers levels, and influencing factors (facilitating and impeding) are elaborated.

3.1. Characteristics of the Included Studies. All articles were published between 2003 and 2022. The studies were conducted in the UK ($n = 14$), Norway ($n = 1$), and the Netherlands ($n = 1$). Most applied a qualitative design ($n = 13$), including semistructured interviews ($n = 8$). There was, one cross-sectional study, one proof of concept, and one study with a mixed design (Table 1: rapid scoping review).

Seven studies were carried out in primary healthcare trusts in England [27–33]. Six were carried out in towns and surrounding rural areas in England [24–26, 34–37]. One study was performed across England and Wales [38]. The Norwegian study was carried out in three municipalities [39], and the Dutch study was performed in the northwest part of Holland [40].

The population of eight of the included studies consisted of 399 patients and 65 informal caregivers [24, 25, 29, 30, 32, 33, 36, 37, 40]. Seven studies included NPs (70 in total) [26–29, 35–37, 40]. Six studies included managers (220 in total) [26, 27, 29, 35, 38, 39]. Seven studies included GPs (72 in
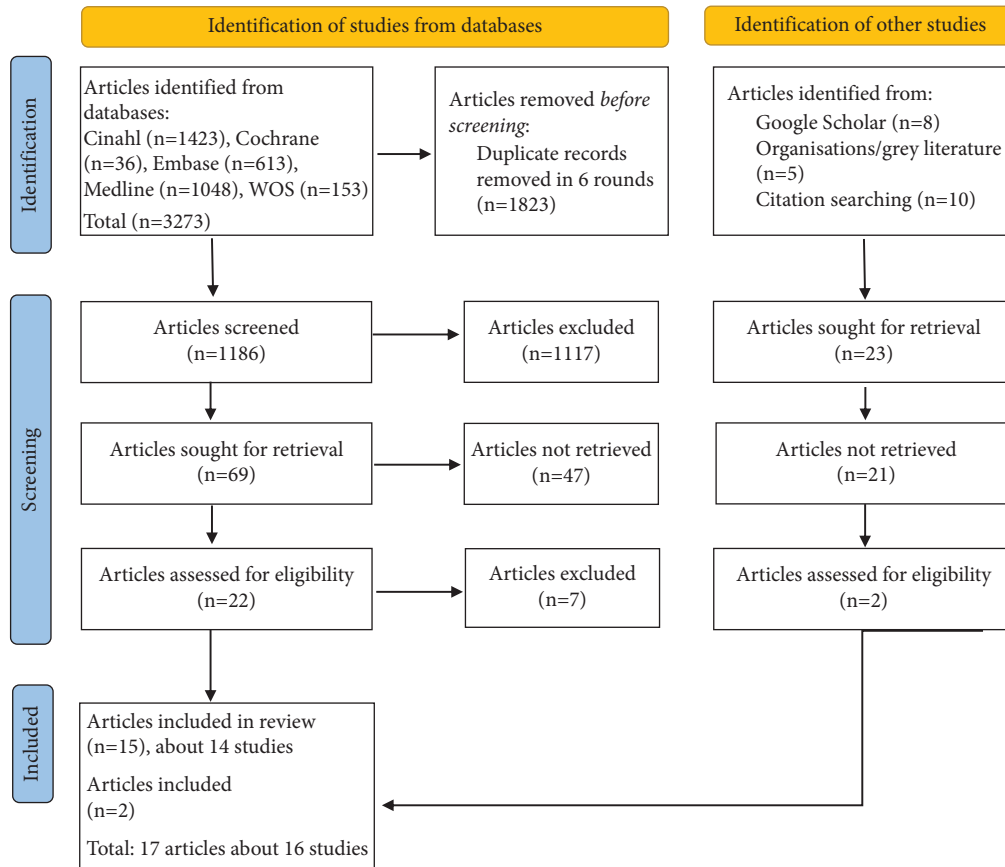
FIGURE 1: PRISMA_2020_flow_diagram_rapid scoping review [23].

total), other healthcare professionals (41 in total), and DNs (27 in total) [28–30, 35–37, 39, 40].

3.2. Roles including Tasks and Responsibilities. All studies described the roles of NPs, including their tasks and responsibilities in community care.

3.2.1. Medical Care Provider. As healthcare providers, NPs diagnose, treat, and refer patients [26, 28, 32]. In two studies, they also manage chronically ill patients [26, 39]. In three studies, the NPs perform physical examinations in patients' homes [32, 35, 40]. Five studies reported that NPs independently prescribe medication for regular prescriptions, resulting in faster treatment [24, 26, 28, 32, 34], and one study found that they conduct medication reviews [28]. In four studies we found that NPs also advise and play a role in medication management for patients [25, 32, 33, 36, 37]. Two studies described hospital@home care performed by NPs for patients with COPD, endocarditis, and heart failure [24, 40]. This care inlcuded intravenous treatment and checking C-reactive protein (CRP) at home; the NP's preform this diagnostices independently [40].

3.2.2. Case Manager. Ten studies described the role of the NP as a case manager [25, 27–32, 36–38]. When the role of the NP was implemented in the UK in early 2000, the primary goal

was to perform case management activities for frail older people with multimorbidity and thus to reduce unplanned hospital admissions and readmissions. Ten studies explored the NPs' focus on promoting self-reliance with the goal of enabling patients to live longer at home and reducing the risk of hospital admission [24–28, 30–32, 36, 37].

Several other elements of the NP's role were described in various studies: they provide holistic care, including psychosocial care [25, 26, 31–33, 35, 36]; they coordinate care for frail older people, encourage patients to be self-reliant, give health advice, and explain medical terminology [25–28, 31–33, 36, 37]; they care for and support informal caregivers [25, 32].

3.2.3. Other Roles. Seven studies described other roles of NPs in community care [25, 27, 31, 33, 36, 37, 39]. Two described a leadership and consulting role in which NPs were involved in project management and strategic development [25, 31]. One study also noted that NPs do scientific research [25]. Two studies described how NPs are involved in activities aimed at increasing their professional skills and knowledge [25, 39], and four studies described how NPs were perceived to network and work in partnership with other healthcare and social care professionals [25, 33, 36, 37]. One study explored the role of the NP in multidisciplinary team meetings in which NPs reviewed and shared information with other healthcare professionals [27].

TABLE 1: Roles including tasks and responsibilities, experienced impact and implementation of the NP role in community care.

#	Authors, years, and countries	Design	Setting	Participants	Aim of the study	Roles, tasks, and responsibilities of the NP* in community care (*NPs are called community matrons (CMs) in the UK, but this article uses the term NP)	Patient and informal caregiver outcomes (morbidity, health status, quality of life, patient and informal caregiver satisfaction, patient compliance, and patient safety)	Implementation (facilitating and impeding factors associated with the use of NPs in community care)
1.	Ansari et al. [24], (2009), UK	Observational, comparative cohort study	Urgent care team in Sunderland and Sunderland Royal Hospital	Community patients ($n = 60$) Hospital patients ($n = 30$)	Prevent hospital admission for COPD patients during an exacerbation by offering hospital-at-home care from a UCT of NPs	(i) Visit the patient's home in response to a phone call (30 minutes' target response time) (ii)Provide medical treatment (nebulised bronchodilators, prednisolone, and doxycycline)	Health status: FEV1% pred. (intervention) baseline: 46.9 ± 19.8, follow-up: 48.1 ± 21.6; FEV1% pred. (comparison) baseline: 45.9 ± 19.0, follow-up: 53.5 ± 18.2. Admission: 1/60 patients from the UTC group required admission to hospital within 10 days. Quality of life: some improvement in both groups. significant improvement of activity in the UTC group (i) Better QOL, improved physical health, and better mental health (ii) Improved self-management of conditions and medication	Facilitating factors: hospital-at-home care followed up on by a UCT of NPs in the community is safe for patients known to have severe COPD and is likely to reduce costs by reducing hospital admissions
2.	Brown et al. [25], (2008), UK	Qualitative study, in-depth semistructured interviews	Nottingham and rural areas	Patients with LTCs and informal caregivers ($n = 24$)	Explore the experiences and attitudes of older people (patients and informal caregivers) who receive NP care in two PCTs (one city, one rural) and understand the successes and failures of this form of case management	(i) Provide personal care, attention, and emotional support (holistic care) (ii) Manage chronic illness (iii) Sort out and explain medication (iv) Enable patients to more easily access services (v) Support patients and their informal caregivers	(iii) Reduced the need for social and psychological support (iv) NPs keep people out of residential care and out of hospital and reduce GPs' workloads (v) Easy access to services	Facilitating factors: (i) NPs filled a gap in PHC and reduced GPs workloads (ii) Prevented hospital admission and residential care by giving case management to LTC patients (iii) Psychosocial support is highly valued (implementation surplus), and holistic care is provided

Table 1: Continued.

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3.	Carnwell and Daly [26], (2003), UK	Qualitative study, semistructured interviews	Primary care setting in the West Midlands region	Phase 1: NPs one year after qualification (n = 18) Service and practice managers of the NPs (n = 11) Phase 2: NPs 15 months later (n = 14)	Explore the current role of NPs in primary health care and how NPs developed their roles over time	(i) Diagnose, treat, and refer patients (ii) Give direct patient care (holistic) and educate patients in self-care (iii) Fulfil a leadership and consultancy role (iv) Develop oneself and others; be a professional adviser (v) Be involved in project management, strategic development, and searching and reading literature (vi) Prescribe medication (vii) Manage chronic disease (vii) Network across agencies	NPs had a positive effect on patient care in terms of patient choice, accessibility, and quality of care	Facilitating factors: (i) Managers have positive opinions of NPs (ii) NPs greatly reduce GP's workloads (iii) NP has a different role then the DN towards GP after graduation as an ANP Impeding factors: (iv) Role and status conflict with managers and colleagues (DN and GP) (v) Salary and funding: no salary raise after graduation as an ANP.
4.	Challis et al. [27], (2011), UK	Descriptive design; cross-sectional survey and 4 case studies using semistructured interviews and focus groups	4 PCTs in England	Full questionnaire (n = 56), shortened version (n = 91) (directors of nursing at 4 PCT sites). Semistructured interviews with service managers (n = 4) and focus groups with practitioners at 4 sites, ranging from 5 to 11 participants	Describe the current provision of case management arrangements in PHC for people with LTCs and identify the extent and nature of self-care support services within it	(i) Case management for patients with LTCs including assessment, care coordination, direct support, and tuition (ii) Promote self-care support services for patients (iv) Participate in multidisciplinary team meetings to review and share information	(i) Case management as a service to patients with LTCs (ii) Support patients in their self-care	Facilitating factors: (i) Case management for patients with LTCs at an early stage (ii) Multidisciplinary team meetings Impeding factors: (iii) Difficulty in transferring information electronically (iv) Effective implementation requires NPs to have influence over both the form and content of the services provided

TABLE 1: Continued.

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5.	Chapman et al. [28], UK, (2009)	Qualitative design: focus groups	1 PCT in the south of England	Five focus group discussions: 1 group of NPs ($n = 7$) 1 group of GPs ($n = 5$) 1 group of SWs ($n = 7$) 2 groups of DNs ($n = 12$)	Explore the views and experiences of primary care professionals in relation to the role of the NP and its progress. Explore any barriers or facilitators to performing this role	(i) Meet patients' medical and social needs (ii) Monitor and review patient care (iii) Educate patients systematically (iv) Adopt a proactive and preventive care strategy to promote patients' self-management (v) Monitor patients to prevent deterioration or relapse of a chronic condition (vi) Review and prescribe medication (vii) Diagnose patients	As a result of the NPs' work, the patients: (i) benefit in term of their medical and social needs (ii) are educated, which helps them develop their self-management (iii) medication is reviewed	Facilitating factors: (i) NPs monitor patients to prevent deterioration or relapse of a chronic condition (ii) Multidisciplinary teamwork and coordinating care (iii) Complements the roles of the GP, DN and SW (iv) Reduces GPs' workloads Impeding factors: (v) Lack of role definition (vi) No job description for the NP by the introduction of the NP role added to potential role conflict with DNs.
6.	Gage et al [29], UK, (2013)	Qualitative design: case studies, semistructured interviews, and diaries	4 PCTs from inner city, rural and coastal areas	NPs ($n = 4$) CNSs (n=3) Senior DNs ($n = 3$) ANP ($n = 1$) Home case manager ($n = 1$) Patients ($n = 33$)	Compare NPs with other nurses (CNS, DN, ANP, and home case manager) carrying out case management for impact on service use and costs	Case management of older patients by NPs (giving usual care)	Patients: (i) have more contact time with NPs than with other CNSs (ii) are older (iii) take more medications (iv) have a lower baseline EQ-5D	Facilitating factors: (i) NPs have smaller caseloads then CNSs (ii) More patient contact time Impeding factor: (ii) Monthly costs are higher for patients who live alone and whose care is managed by NPs

Table 1: Continued.

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7.	Herklots et al. [34], UK, (2015)	Qualitative design: semistructured interviews	South of England	NPs (*n* = 7)	Explore the prescribing experiences of NPs including their prescribing practices and any influencing factors	(i) Have the essential pharmacological knowledge to prescribe medication (ii) Prescribe a limited range of medicines regularly (e.g., medication for exacerbations of COPD and antibiotics for infections) (iii) Refer to the GP for prescription when outside their competency	N/A	Impeding factors: (i) GPs lack confidence in the NPs' prescribing knowledge (ii) Lack of formal structure (iii) No easy access to electronic records, which complicates communication with the GP or pharmacist (iv) NPs must find their own ways to gain pharmacological knowledge Facilitating factors: (i) Need for enhanced clinical competence among registered nurses (ii) Need to reorganise advanced practice (iii) Need to negotiate professional barriers (iv) Demanding economic situations; keeping more complex patients at home creates higher workloads for GP Impeding factors: (v) There is not yet a finance system for reimbursing NPs (vi) Difficulty clarifying the role of the NP and how to organise them (vii) NPs should not replace the GP (viii) Need to gain trust among GPs and DNs
8.	Holm Hansen et al. [39], Norway, (2020)	Qualitative design; longitudinal	3 municipalities	11 meetings with nurse leaders and GPs from 3 municipalities over 3 years	Describe the reflections of nurse leaders and GPs on the establishment of the new NP role in primary health care in Norway	(i) Work with chronically ill (complex) patients (ii) Prevent hospital readmissions (iii) Be a resource for DNs by teaching and supervising to increase DNs' clinical competence (iv) Make a complete and secure assessment that is clearly communicated to the GP	N/A	

Table 1: Continued.

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9.	Iliffe et al. [38], UK, (2011)	Qualitative design: semistructured interviews	Telephone interviews with 10 English strategic health authorities and 2 Welsh health boards; face-to-face interviews with 12 nurse case managers, 12 GPs and five NHS community service managers	Phase 1: Community nurse managers (n = 41) Phase 2: Nurse case managers (n = 12) GPs (n = 12) NHS Community service manager (n = 5)	Understand how nurse case managers (both DNs and NPs) are perceived by GPs and NHS managers	(i) Nurse case managers (NPs and DNs) perform case management (ii) NPs still do too much DN work (iii) DNs feel that their workloads are too high	N/A	Impeding factors: (i) Case management and NPs may disrupt existing communities of practice and be perceived negatively, at least in areas where GP and nurses work well together (ii) NPs are seen as staff who were imposed on local health services, sometimes to detrimental effect (iii) Commissioners should be aware of potential resistance from GPs and DNs to the role of the NP (iv) The dominant mood was scepticism about the ability of nurse case managers to reduce hospital admissions and reduce GPs' workloads
10.	Leighton et al. [30], UK, (2008)	Mixed method: questionnaire (quantitative) and telephone interviews (qualitative)	2 PCTs	Patient and informal caregivers (n = 123) quantitative GPs (n = 48) qualitative	Evaluate the NP service from different perspectives (GPs, patients, and informal caregivers)	(i) Manage patients with complex needs (ii) Avoid hospital admissions (iii) Improve communication between patients and the GP practice	(i) Improved patient satisfaction (65%) (ii) Improved communications (56%) and coordination of services (64%) (iii) 73% were satisfied with the NP's person manner (e.g., courtesy and respect) (iv) NP is a link to the GP and other services (v) Avoided hospital admissions	Facilitating factor: (i) P is a bridge between the patient, the GP and other healthcare facilities

TABLE 1: Continued.

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11.	Raleigh & Allan [35], (2016), UK	Qualitative interpretative single-embedded case study	South of England from one university	NPs, GPs, nurse educators, and managers (n = 22)	Explore multiple perspectives on the use of PAS by NPs in the community (1. policy perspectives, 2. practice context, and 3. education)	(i) Use PAS in the community to deliver a wide range of services in response to changing patient needs *Prevent unwanted hospital admissions, maintain patient safety, and provide person-centred and holistic care	N/A Further study is needed to explore patients' views	Facilitating factors: 1.Policy perspectives: benefits of PAS for NP in the community 2.Practice context: negotiating boundaries and time constraints 3.Eduction: barriers to PAS use in practice (i) NPs supports GP workloads, particularly for patients with LTCs
12	van Ramshorst et al., [40] (2022), Netherlands	A proof of concept	Northwest Holland, Netherlands	NPs (n = 3) Home care cardiovascular nurses (n = 12) Endocarditis@home patients (n = 34) Heart-failure treatment patients (n = 16)	To test the feasibility of (1) providing hospital@ home care, (2) combining both financial budgets, (3) increasing workforces by combining teams, and (4) improving perspectives and increasing the satisfaction of patients and nursing staff	The NP checks once a week from the endocarditis@home patients: (i) C-reactive protein (CRP) (ii) an echocardiographic examination. For the heart-failure treatment patients, the NP takes (iii) notes, (iv) performs physical examinations, (v) provides i.v. treatment@home (vi) prescribes doctor's orders	Patients (all): (i) rated the quality of care as good or excellent (ii) would recommend heart failure@home care to others (iii) again in the future (iv) safely achieving a reduced length of stay: 847 days with endocarditis patients and 201 days with heart-failure patients without unexpected major cardiovascular events	Facilitating factors: (i) All nurses and NPs said they were satisfied with their role (63%) or highly satisfied (25%) (ii) they obtained enough knowledge (88%) (iii) they were (highly) satisfied with providing heart failure@home care (88%)

Table 1: Continued.

	Authors, years, and countries	Design	Setting	Participants	Aim of the study	Roles, tasks, and responsibilities of the NP* in community care (*NPs are called community matrons (CMs) in the UK, but this article uses the term NP)	Patient and informal caregiver outcomes (morbidity, health status, quality of life, patient and informal caregiver satisfaction, patient compliance, and patient safety)	Implementation (facilitating and impeding factors associated with the use of NPs in community care)
13.	Randall et al. (2014), [37], UK	Qualitative design: mixed method with semistructured interviews, focus groups and audio diaries	4 PCTs	NPs (n = 15) Patients (n = 13) Family caregivers (n = 8) Secondary care staff (n = 7)	Evaluate case management of individuals with LTCs by NPs	(i) Case management for patients with LTCs (ii) Coordination of care (iii) Implement self-management (iv) Prevent hospital admission (v) Take a leadership role	(i) Patients are happy to be seen as whole people (ii) Trust and knowing that someone is there improves patients' mental well-being (iii) Patients feel NPs give them an extra layer of support before having to contact the GP (iv) Family caregivers appreciated the coordination aspect	Impeding factors: (i) Limited understanding of the NP role (ii) Lack of shared vision across the other health care professionals concerning the role and its goals
14.	Randall et al. [31](2016), UK Two articles about the same study	Qualitative design: semistructured interviews and audio diaries	Three cities in central England and rural area in England	Patients (n = 10) Caregivers (n = 5) Health professionals (n = 30; including NPs, community service managers, and service commissioners)	Explore factors that affect embedding the NP role	(i) Avoid hospital admissions (ii) Coordinate care (also social care) are proactive and offer holistic care to patients with LTCs (iii) Explain medication (iv) Work in partnership with patients and other healthcare professionals	(i) NPs are held in high regard in relation to support, promoting mental well-being, and acting as advocates (especially for patients from minority ethnic backgrounds in complex social situations and often with housing issues) (ii) NPs are very visible and are an essential part of healthcare delivery (iii) All the work takes place in patients' homes	Facilitating factors: (i) The NP's advanced skills lead to a skill mix that includes case management of patients with LTCs and taking a managerial role Impeding factors: (ii) The NP's invisibility is a key factor of embedding the role, and more time is needed to implement the role (iii) Difficulties in role setup have led to changes in service delivery (iv) Lack of vision for the role

Table 1: Continued.

	Authors, years, and countries	Design	Setting	Participants	Aim of the study	Roles, tasks, and responsibilities of the NP* in community care (*NPs are called community matrons (CMs) in the UK, but this article uses the term NP)	Patient and informal caregiver outcomes (morbidity, health status, quality of life, patient and informal caregiver satisfaction, patient compliance, and patient safety)	Implementation (facilitating and impeding factors associated with the use of NPs in community care)
15.	Sargent et al. [32], (2007), UK	Qualitative design: in-depth interviews	6 PCTs	Patients (n = 72) Informal caregivers (n = 52) Patients and informal caregivers were recruited from 6 PCTs	Describe case management from the perspective of patients and informal caregivers in order to develop a clearer understanding of how the model is being delivered to patients with LTCs	(i) Clinical care (ii) Care coordination (iii) Liaison between individuals and organisations (iv) Health promotion Disease education (v) Advocacy (vi) Psychosocial support (vii) PAS (viii) Order tests (ix) Prescribe medications (x) Medication reviews (xi) Advise about education (xii) Advise about support services (xiii) Refer patients to specialists (xiv) Advocate on behalf of the patient to hospital, GP, pharmacist, local authorities, and organisations (xv) Take pressure off informal caregivers and make them feel supported	(i) Patients are enthusiastic about the NPs thorough use of PAS (ii) Patients felt cared for (iii) Patients have less anxiety (especially those with LTCs) (iv) Creates an open dialogue in which the NP advises (v) Psychosocial support is as important as clinical care	Facilitating factors: (i) Case management is done in a holistic way for patients with LTCs and their informal caregivers (ii) Very positive marks for the NP's help and support, especially the psychosocial support
16.	Williams et al. [33], (2010), UK	Inductive qualitative design: semistructured interviews	1 PCT in the south of England	Patients (n = 14)	Explore patients' views and experiences of the NP role in primary care	(i) Improve patient self-management (ii) Educate (iii) Enhance coordination between social and primary care	(i) Access (ii) Patient advocacy (iii) Psychosocial support (iv) Patients see that the NP delivers different care than the GP or DN (e.g., continuity of care, patient education, and being proactive)	Facilitating factors: (i) Meets need on clinical and emotional levels for both younger and older patients (ii) Improves access to care (iii) Coordinates care between primary and secondary care services

ANP = advanced nurse practitioner; CNS = clinical nurse specialist; COPD = chronic obstructive pulmonary disease; DN = district nurses; GP = general practitioner; HCP = healthcare professionals; LTC = long-term conditions; N/A = not applicable; NP = nurse practitioner; PAS = physical assessment skills; PCT = primary care trust; PHC = primary health care; QOL = quality of life; RN = registered nurse; SW = social workers; UCT = urgent care team.

3.3. Perceived Impact on Patients and Informal Caregivers. Thirteen qualitative studies explored patient satisfaction with care provided by NPs and concluded it was high [24–33, 36, 37, 40]. Seven studies found that patients experienced better access to healthcare facilities because the NP acts as an "advocate" for them and knows the networks well [25, 26, 30, 32, 33, 36, 37]. Patients also felt that they received more accessible health care (including medical care) because NPs could provide some of the complex medical care on site [24, 40].

Five studies found that patients perceived that the NP has more time for patients and is more visible to them, and they felt that NPs see each patient as a whole person [29–31, 36, 37]. Some patients emphasised that they valued the attention from the NP in coordination of care [27, 30, 32]. They even experienced a better quality of life and a better quality of care [24–26].

Six studies noted that NPs act as a bridge to other healthcare professionals, which provides a higher quality of care for patients [25, 30, 32, 33, 36, 37]. This improved communication between patients and other healthcare providers [26, 32, 33]. Some patients also felt that the NP's work improved the connection to their GP [30].

Two studies explored informal caregivers' experiences with NPs [25, 32]. The caregivers emphasised the psychosocial care the NPs provided especially for them, and this was highly valued. They felt that they were not alone in caring for someone. One study described how the NP performs health promotion activities and delivers disease education, also to informal caregivers [32].

Despite the positive response from patients and informal caregivers, some patients expected to receive different care than the NPs actually provided. One study found that patients expected the NP to visit them regularly, regardless of need, to monitor their condition [33]. Another study reported that out of office hours cover was poor overnight, and patients were encouraged to call for emergency care [31].

3.4. Implementation. Fourteen out of the 16 studies described facilitating and impeding factors associated with implementing the role of NPs in community care.

3.4.1. Facilitating Factors. NPs working in community care frequently collaborate with other healthcare professionals. Two studies reported that having NPs in this role reduces the workload of GPs [25, 28]. One study found that NPs complement the work of other healthcare professionals such as the GP, the DN, and the social worker [28]. In addition, the NP works in a multidisciplinary team coordinating care [28]. NPs also share knowledge with DNs and support them in their work [26, 28, 39]. GPs find it helpful when the NP provides a complete assessment that improves communication between the GP, NP, and DN [39].

Education and training also facilitate the implementation of the NP's role. Some NPs emphasised that knowledge related to prescribing medications and treatments is essential to fulfilling their role [34]. Furthermore, their university training in physical assessment skills gives NPs the competence and capability to perform such tasks independently in patients' homes [35].

One study showed that NPs were (highly) satisfied in their role as they provided heart failure@home care [40]; it improved their perspective and job satisfaction. They also said that they obtained enough knowledge (88%) to care for heartfailure patients at home.

Other facilitators included expanding NP practice to carry out tasks in addition to case management of patients with long-term conditions. This might include taking on a managerial role that involves day-to-day management of staff [36].

3.4.2. Impeding Factors. Nine studies also found factors that impeded the implementation of the NP role in community care. Four studies found scepticism from GPs and managers due to unfamiliarity with the competences of the NP in community care [26, 34, 38, 39]. In addition, it was perceived that NPs had to gain the GPs' trust [34]. Three studies by Randall et al. [31, 36, 37] reported that other healthcare professionals had a limited understanding of the NP's role. Some managers and GPs question whether NPs can really reduce hospital readmissions and reduce GPs' workloads [38].

Another factor that can impede the implementation of the NP role is a lack of vision related to the care and cure delivered by NPs [26, 28, 31, 36, 37]. Five studies reported that there was no clear job profile for the NP and thus poor implementation of the role [26, 28, 36, 38, 39]. Two studies reported that a conflict of role and status can occur between the NP and the DN when the new NP role was created [26, 27].

Herklots et al. [34] reported that NPs perceive a need to find their own ways of acquiring professional education to keep their pharmacological knowledge up to date. In two studies, NP's reported that they have no easy access to electronic records, which complicates communication with the GP or pharmacist [27, 34].

Another study [26] reported that NPs did not earn a salary commiserate to their master-level education.

Gage et al. [29] reported that the monthly costs are higher for patients who live alone and whose care is managed by NPs.

4. Discussion

This rapid scoping review provides insight into the roles NPs take on (including their tasks and responsibilities), the perceived impact for patients and informal caregivers, and the implementation of the NP role in community care in northwest Europe. In total, the review included 16 studies that describe how NPs provide care and cure in the community. NPs in community care take on a wide range of roles: they contribute to medical and complex nursing care at home such as prescribing medication, physical examination, and independently performing diagnostics, and they perform case management for patients with complex long-

term conditions. Patients and their informal caregivers are generally satisfied with the care and cure provided by NPs. NPs act as a bridge between patients and other healthcare professionals. However, implementation of the NP role in community care is still in an early stage. After some initial scepticism, GPs and other healthcare professionals are coming to see the added value of NPs. They can relieve the GP's workload and contribute to educating other healthcare professionals.

Using NPs in community care is a recent development, as indicated by the articles' publication dates (2003–2023). In northwest Europe, the UK has the most experience with using NPs in community care. One study showed the impact of the NP in community care for heartfailure patients in a hospital@home program in the Netherlands [40]. Other European countries are still in the pioneering phase, as shown by the fact that no related studies were found. A Norwegian study also found that the use of NPs in the community is still in its infancy, and NPs are searching for a way to fulfil their role in the community together with GPs and DNs [39]. Although healthcare systems between the UK and the Netherlands differ, it is interesting to learn how the NPs are embedded in the healthcare system in the UK. They are autonomous as health care professionals in their role and tasks when they combine their general and specialist expertise. They have also a leading role in nurse-led clinics.

Increasing complexity of care and demography is creating greater urgency for expertise and highly trained nurses in community care [9]. In the Netherlands, the government strategy is to provide right care at the right place, to transform health care. The implementation of NPs in community care is seen as an intervention in translating the government vision into practice (Right care Right place/ Juist zorg op de juiste plek, n.d.) [41]. Thus, one might ask why the NP is not yet a common role in community care in northwest Europe. An integrative review by Busca et al. [42] reported barriers to implementing the role of the NP in community care, in thirteen different countries from around the globe. The most frequently reported barriers were related to regulatory aspects of the nursing profession in the contexts of care, cultural, and organisational aspects, training, and transferring specific skills that had been performed by doctors. Implementation takes time and requires redeployment or role definition of other professionals already working in community care [42].

Glarcher and Lex [43] found that NPs' skills and job profiles depend on the commitment and organisational opportunities of individual healthcare executives. The evaluation of NPs on health outcomes is based mainly on the individual initiative of these pioneers and is not accessible nationally. This may require an effort from the NP to pioneer and position the role.

NPs perform both nursing and medical tasks. Medical tasks include physical examination at home, prescribing medication independently, reviewing, and providing advice on medication management. NPs also treat, diagnose, and refer patients. We found limited information about the degree of responsibility attached to the NP's tasks. It is unclear whether NPs work independently or closely together and under a GP's supervision when providing medical care. An observational study by Michalowsky et al. [44] concluded that an NP in community care can be an adequate substitute for a GP. However, this study was conducted among a specific target group (i.e., patients with dementia). It is important that the scope of practices is clearly defined for NPs in community care, in coordination with the scope of practice of GPs and DNs. This should be done in close collaboration with professional nurse organisations.

Most of the studies we reviewed found that patients and their informal caregivers are very satisfied with the care NPs provide. NPs are easily accessible, patients can be treated at home, and rehospitalisation can be prevented. This is in line with findings from other studies, such as a systematic review conducted by van Erp et al. [20]. That review looked at primary care plus and described the role of the NP in it. Primary care plus was developed with the aim of creating substitution and stimulating integrated care by allowing NPs to perform consultations in primary care. The review showed that the quality of care, at both the patient and professional levels, seems to be guaranteed, and there may be better access to health care and fewer referrals to hospital. Although the type of care given here may differ from that in our study, the setting is the same (i.e., close to patients' homes).

The systematic review by Donald et al. [45] also noted that NPs prevent rehospitalisation, and they found evidence of reduced rehospitalisation when patients receive care from an NP in the community. This was confirmed in a systematic review by Laurant et al. [19] that focused on NPs in GP practices. Patient satisfaction was perceived to be slightly higher in nurse-led primary care. Furthermore, quality of life may be slightly higher for patients who receive NP care than for those who receive usual care.

Most of the included studies found that other healthcare professionals are somewhat sceptical about the role of the NP a priori. Our findings are in accordance with studies from Ljungbeck and Sjögren Forss [46] and Michalowsky et al. [44]. However, those studies found that the sceptical attitudes from other health professionals change when NPs work with a specific target group, such as people with dementia or frailty at home. This could be explained by the intensity of care and the additional tasks NPs perform in relation to these target groups (e.g., bridging the gap between nursing and medical care or educating nurses who work in the same specialism). Thus, NPs should think about how to remove impediments by working alongside and closely with other professionals, which would allow them to experience the added value of the NP.

The literature shows that NPs are positioned differently in primary care, and this has had promising outcomes. Employment settings range from general practice, primary care plus, and outreach in a nursing home to community care organisations [19, 20, 45]. Our study focused on NPs employed by community care organisations. The question that emerged is how can the NP be optimally positioned in community care to have maximum impact on patient outcomes?

4.1. Strengths and Limitations of the Study. One strength of our rapid scoping review was the solid methodological approach and the help of an experienced information specialist in conducting the search. The data analyst helped us compile an extended search string. Another strength of the study was the fact that multiple researchers were involved in selecting articles and extracting data. The involvement of multiple researchers reduces the risk of selection bias and incomplete data extraction.

This study also has some limitations that should be considered when evaluating the findings. Defining the role and impact of the NP in community care was challenging because NPs who work in community care hold various titles (e.g., advanced nurse, practice nurse, and community matron). During the selection procedure, the review authors critically appraised whether the NP was working in patients' homes. As described in the methods section, the review authors discussed their interpretation of the eligibility criteria for 70–100 records (sorted on best matches) at the start of the selection procedure. After these, they continued screening individually. It is possible that relevant studies were interpreted incorrectly and thus excluded from this rapid scoping review.

Furthermore, we excluded studies that investigated the care provided by NPs employed by general practice. We may have missed some relevant publications because, in some countries, NPs employed by general practices mainly perform home visits and closely collaborate with community care nurses. However, for this review, we were searching for the role of the NP deployed from a community care organisation. Besides, we did not critically appraise the methodology of the included studies. The research was of an exploratory nature with mostly descriptive studies and was set up as a rapid review. The quality of the articles is therefore not weighted in the results. It is possible that low-quality studies were included [21].

Finally, we excluded studies carried out in countries outside northwest Europe. By doing so, we omitted studies from countries like the US and Australia where the role of the NP has long existed and where the NP's role in community care has been developed and implemented further.

4.2. Recommendations. This study showed that community-based care provided by NPs in northwest Europe has only been investigated by a few studies to date, mainly in the UK and with restricted methodological quality. Most studies have used a qualitative design and reported selection procedures, population characteristics, and results in insufficient detail. It is recommended that researchers perform an evaluation study of the impact of advanced nursing roles in community care using the framework from Bryant–Lukosius et al. [47]. That framework was developed to inform decisions about the effective use of NP roles. Further research should also focus on ethnographic studies to further understand the nurse's adaptability to the various contexts of care, recognizing the patients' role, and the desire to develop multidisciplinary and effective working groups to respond to the health needs of the population in primary care contexts.

The review by Busca et al. [42] underlines the fact that implementing the NP role seems to be a complex process influenced by many factors. Thus, there cannot be simple and linear recommendations for developing and implementing the role of the NP. The role has a direct impact on the work of other healthcare professionals. It is only through a dynamic and context-dependent implementation process that NPs will be able to strengthen the resilience of national healthcare systems around the world. Lessons learned from other countries such as the UK can support other countries with the implementation of the NP role. In the Netherlands, the NP is currently developing for example more integrated care in the community, where the NP can be seen as an autonomous practitioner in integrated care.

Such studies are needed to draw conclusions about the potential role and impact of NPs in community care, so the NP role can be implemented more widely. Implementing the role requires a pioneering mentality from the NP, a clear vision and job profile from community care organisations, and good coordination with other healthcare professionals right from the start.

5. Conclusion

Although the use of NPs in community care is still in its infancy in northwest Europe, patients and informal caregivers highly value the deployment of the NP. NPs in community care help to meet the increasing and complex care demands in patients' homes. Healthcare professionals such as GPs and DNs also experience the benefits of NPs working in community care. A context-dependent implementation process for the NP role is needed to strengthen community healthcare organisations. Since most of the studies had a descriptive design, findings should be interpreted with caution. However, this review can help policymakers and healthcare professionals understand and enhance the potential impact of NPs in community care settings.

Appendix

Search String Medline 20230531

A. #1

(Community Health Nurses[MeSH] OR Community Health Nursing[MeSH] OR Public Health Nursing[MeSH] OR Public Health Nurses[MeSH] OR Home Nursing[MeSH] OR Community Health Nurs ∗ [tiab] OR Community Care Registered Nurse ∗ [tiab] OR Community Care Nurse ∗ [tiab] OR Public Health Nurs∗[tiab] OR Home Health Nurs ∗ [tiab] OR Community Nurs ∗ [tiab] OR Distri ct nurs∗[tiab] OR Home Nurs ∗ [tiab] OR Visiting nurs∗[tiab] OR Neighborhood Nurs ∗ [tiab] OR Neighbourhood Nurs ∗ [tiab] OR Home Care Nurs∗[tiab] OR Homecare Nurs ∗ [tiab] OR ((Geriatric Nursing[MeSH] OR Geriatric Nursing[tiab] OR nurs ∗ [tiab]) AND (Home care[tiab] OR community[tiab] OR district[tiab] OR public[tiab] OR house call ∗ [tiab] OR "House Calls" [Mesh] OR Home Care Services [MeSH] OR Home Care Service ∗ [tiab] OR Health Visitor ∗ [tiab])))

B. #2

"nurse practitioners" [mesh] OR "Advanced Practice Nursing"[mesh] OR "Physician Assistants" [tiab] OR nurse practitioner ∗ [tiab] OR advance nurs ∗ [tiab] OR advanced nurs ∗ [tiab] OR physician assistant ∗ [tiab] OR physicians assistant ∗ [tiab] OR physician associate ∗ [tiab] OR physicians extender ∗ [tiab] OR physician extender∗[tiab] OR advanced providers[tiab] OR advanced professional ∗ [tiab] OR nonphysician clinic∗[tiab] OR nonphysician extender ∗ [tiab] OR nonphysician medical personnel [tiab] OR nonphysician personnel [tiab] OR nonphysician practitioner ∗ [tiab] OR nonphysician primary care clinicians [tiab] OR nonphysician primary care providers [tiab] OR nonphysician specialists [tiab] OR nonphysician staff[tiab] OR non physician clinic staff [tiab] OR non physician clinicians [tiab] OR non physician first assistants [tiab] OR non physician health care personnel [tiab] OR non physician health care professionals [tiab] OR non physician health care providers [tiab] OR non physician health care workers [tiab] OR non physician health professionals [tiab] OR non physician health providers [tiab] OR non physician health workers [tiab] OR non physician healthcare professionals [tiab] OR non physician healthcare providers [tiab] OR non physician healthcare workers[tiab] OR non physician medical personnel [tiab] OR non physician personnel [tiab] OR non physician practice staff [tiab] OR non physician primary care providers[tiab] OR non physician professionals [tiab] OR non physician provider [tiab] OR non physician providers [tiab] OR feldsher [tiab] OR emergency practitioner ∗ [tiab] OR midlevel clinician ∗ [tiab] OR midlevel health care [tiab] OR midlevel health care professional ∗ [tiab] OR midlevel health care provider ∗ [tiab] OR midlevel health provider ∗ [tiab] OR midlevel health worker ∗ [tiab] OR midlevel personnel [tiab] OR midlevel practitioner ∗ [tiab] OR midlevel professional ∗ [tiab] OR midlevel provider ∗ [tiab] OR mid level clinicians [tiab] OR mid level health care professionals[tiab] OR mid level health care provider ∗ [tiab] OR mid level health care workers [tiab] OR mid level health professionals[tiab] OR mid level health providers [tiab] OR mid level health workers [tiab] OR mid level healthcare workers [tiab] OR mid level medical workers [tiab] OR mid level personnel[tiab] OR mid level practitioners [tiab] OR mid level professionals [tiab] OR mid level provider [tiab] OR mid level staff[tiab] OR mid level workers [tiab] OR advanced practice ∗ [tiab] OR advance practice ∗ [tiab])

C. #3

(iii) #1 AND #2

Data Availability

The data supporting this rapid scoping review are from previously reported studies and datasets, which have been cited. The processed data are available in the figure files.

Additional Points

What Is Known about This Topic: (1) Using the NP as a healthcare professional in community care is a recent development. (2) Nations and community healthcare organisations are searching for ways to implement the role of the NP in community care. (3) The UK was the first country in northwest Europe to implement this role in this context. What This Paper Adds: (1) An overview of the care provided by the NP in community care. (2) Description of the impact for patients and informal caregivers who are treated by a NP. (3) Factors influencing the implementation of the role of the NP in community care.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

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