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Research Article

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Involvement of Community Health Practitioners in Infectious Disease Prevention and Control in Nigeria: A Scoping Review

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ABSTRACT

Community Health Practitioners [CHPs] play a critical role in Nigeria's primary healthcare system, serving as frontline workers in infectious disease prevention and control. Despite their importance, a comprehensive synthesis of their roles, the diseases they address, and the challenges they face remains limited. The aim of this review is to map and synthesize available evidence on the roles of Community Health Practitioners in infectious disease prevention and control in Nigeria. This scoping review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews [PRISMA-ScR] 2020 guidelines and the Joanna Briggs Institute [JBI] methodology. The protocol was formally registered on the Open Science Framework [OSF]. A comprehensive search was conducted across PubMed/MEDLINE, Google Scholar, SciSpace, African Journals Online [AJOL], WHO reports, and Nigerian Ministry of Health publications. Studies published up to December 2025 that examined CHPs' involvement in infectious disease prevention and control in Nigeria were included. Data were extracted on CHP roles, infectious diseases addressed, challenges faced, and gaps in the literature. A total of 93 unique studies were identified and screened, with 30 studies meeting the inclusion criteria for detailed analysis. CHPs performed diverse roles, including disease surveillance and notification, case detection and diagnosis, treatment, health education and community mobilization, immunization services, outbreak response, and infection prevention and control. The most frequently addressed infectious diseases were malaria [n=15], COVID-19 [n=10], vaccine-preventable diseases including measles, polio, and meningitis [n=8], and other diseases such as Lassa fever, tuberculosis, HIV/AIDS, diarrheal diseases, and pneumonia. Major challenges included inadequate training and knowledge gaps [n=12], resource and infrastructure limitations [n=10], poor remuneration and lack of incentives [n=7], inadequate supervision and administrative support [n=6], and community acceptance issues [n=4]. Conclusively, CHPs are integral to infectious disease prevention and control in Nigeria, performing multifaceted roles across diverse disease contexts. However, significant systemic challenges, including inadequate training, resource constraints, and poor remuneration, limit their effectiveness. Strengthening CHP capacity through enhanced training, improved resource allocation, better remuneration, and robust supervision systems is essential for optimizing their contribution to infectious disease control and achieving universal health coverage in Nigeria.

Keywords: Community Health Practitioners, Community Health Workers, Disease Control, Disease Prevention, Infectious Diseases, Nigeria, Primary Health Care, Scoping Review

Introduction

Nigeria, Africa's most populous nation with over 200 million people, faces a substantial burden of infectious diseases that

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contribute significantly to morbidity and mortality, particularly in rural and underserved communities [1]. The country's healthcare system is characterized by a three-tiered structure comprising primary, secondary, and tertiary levels, with primary health care [PHC] serving as the foundation and first point of contact for most Nigerians [2]. However, Nigeria's health system faces critical challenges, including inadequate infrastructure, a shortage of skilled health workers, poor funding, and inequitable distribution of health resources, with rural areas being disproportionately affected [3].

Community Health Practitioners [CHPs] represent a diverse cadre of frontline health workers operating at the primary health care level in Nigeria. This cadre includes Community Health Extension Workers [CHEWs], Community Health Officers [CHOs], Junior Community Health Extension Workers [JCHEWs], and Community Health Assistants [CHAs] [not in use again], collectively trained to deliver essential health services at the community level [2]. CHPs are strategically positioned to bridge the gap between formal health services and communities, particularly in rural and hard-to-reach areas where access to physicians and other higher-level health professionals is limited [4].

Infectious diseases remain a leading cause of morbidity and mortality in Nigeria, accounting for a significant proportion of the disease burden. The country continues to grapple with endemic diseases such as malaria, tuberculosis, HIV/AIDS, and neglected tropical diseases, while simultaneously facing emerging and re-emerging infectious disease threats, including Lassa fever, meningitis, cholera, and most recently, COVID-19 [5,6]. The prevention and control of these infectious diseases require robust surveillance systems, early detection and response mechanisms, effective treatment protocols, and sustained community engagement, functions in which CHPs play pivotal roles [7].

The COVID-19 pandemic has further highlighted the critical importance of CHPs in infectious disease management, as they served as frontline responders in case detection, contact tracing, health education, and vaccine administration [8,9]. Similarly, CHPs have been instrumental in malaria control programs, immunization campaigns, integrated disease surveillance and response [IDSR], and outbreak investigations across Nigeria [10,11]. Despite their recognized importance, CHPs face numerous challenges, including inadequate training, poor remuneration, lack of supervision, insufficient resources, and limited career progression opportunities, which may compromise their effectiveness in infectious disease prevention and control [6,12].

Rationale for the Review

While individual studies have examined specific aspects of CHPs' involvement in infectious disease management in Nigeria, there is currently no comprehensive synthesis of the available evidence that maps the full scope of their roles, the range of infectious diseases they address, the challenges they encounter, and the gaps in knowledge and practice. A scoping review is particularly appropriate for this topic because it allows for the systematic mapping of a broad and heterogeneous body of literature, identification of key concepts and knowledge gaps, and provides a foundation for future systematic reviews and primary research [13].

Understanding the breadth and depth of CHPs' involvement in infectious disease prevention and control is essential for several reasons. First, it will inform policy decisions regarding the training, deployment, and support of CHPs within Nigeria's health system. Second, it will identify specific areas where CHPs' capacity needs strengthening to optimize their contribution to disease control efforts. Third, it will highlight gaps in the evidence base that require further research. Finally, it will provide insights relevant to other low- and middle-income countries [LMICs] facing similar health workforce challenges and infectious disease burdens.

This scoping review follows the methodological framework proposed by [14] and refined by [15] and [14], adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews [PRISMA-ScR] 2020 guidelines [16] and the Joanna Briggs Institute [JBI] methodology for scoping reviews [13]. This rigorous approach ensures transparency, reproducibility, and comprehensiveness in mapping the available evidence.

Review Questions

This scoping review was guided by the following research questions, structured using the Population-Concept-Context [PCC] framework recommended by the JBI for scoping reviews [13]

Primary Research Question

What is the nature and extent of evidence on the involvement of Community Health Practitioners in infectious disease prevention and control in Nigeria?

Secondary Research Questions

1. What roles and functions do Community Health Practitioners perform in infectious disease prevention and control in Nigeria?
2. Which infectious diseases are addressed by Community Health Practitioners in Nigeria, and what specific interventions do they deliver for each disease?
3. What challenges and barriers do Community Health Practitioners face in performing infectious disease prevention and control functions in Nigeria?
4. What gaps exist in the current evidence base regarding Community Health Practitioners' involvement in infectious disease prevention and control in Nigeria?

Objectives

General Objective

To systematically map and synthesize available evidence on the involvement of Community Health Practitioners in infectious disease prevention and control in Nigeria.

Specific Objectives

1. To identify and describe the roles and functions performed by Community Health Practitioners in infectious disease prevention and control in Nigeria.

2. To map the range of infectious diseases addressed by Community Health Practitioners and the specific interventions they deliver for each disease.
3. To identify and categorize the challenges and barriers faced by Community Health Practitioners in performing their infectious disease prevention and control functions.
4. To identify gaps in the current evidence base and make recommendations for future research, policy, and practice.

Methods

Protocol and Registration

This scoping review was conducted following the methodological framework outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews [PRISMA-ScR] 2020 guidelines and the Joanna Briggs Institute [JBI] methodology for scoping reviews. The review protocol was developed a priori to guide the systematic identification, selection, and synthesis of relevant evidence. The formal registration of the protocol was conducted in Open Science Framework [OSF], with the registration DOI link: https://doi.org/10.17605/OSF.IO/ZF2E7 and the internet archive link: https://archive.org/details/osf-registrations-zf2e7-v1.0020The review adhered to established methodological standards to ensure transparency, rigor, and reproducibility.

Eligibility Criteria

Studies were included based on the following criteria

Population

Community Health Practitioners, Community Health Workers, Community Health Extension Workers [CHEWs], Community Health Officers [CHOs], Junior Community Health Extension Workers [JCHEWs], and Primary Health Care Workers involved in infectious disease prevention and control activities in Nigeria.

Concept

Roles, functions, activities, effectiveness, challenges, or barriers related to infectious disease prevention, control, surveillance, diagnosis, treatment, health education, immunization, or outbreak response.

Context

Studies conducted in Nigeria, including urban, rural, and peri-urban settings across all geopolitical zones.

Types of Sources

Primary research studies [quantitative, qualitative, and mixed-methods]; systematic reviews; narrative reviews; policy documents; technical reports; and grey literature, including WHO reports and Nigerian Ministry of Health publications.

Language

Studies published in English.

Time Period

No date restrictions were applied to capture the full scope of available evidence.

Exclusion Criteria

Studies that did not specifically address CHPs' involvement in infectious disease prevention and control, studies conducted outside Nigeria, and studies not available in English were excluded.

Information Sources

A comprehensive search was conducted across multiple databases and sources to identify relevant literature

Electronic Databases

PubMed/MEDLINE, Google Scholar, and SciSpace [formerly Typeset].

Regional and Specialized Databases

African Journals Online [AJOL]

Grey Literature Sources

World Health Organization [WHO] Regional Office for Africa reports and publications; Nigerian Federal Ministry of Health publications and policy documents; Nigerian Centre for Disease Control [NCDC] reports; and state-level Ministry of Health documents.

The search was conducted from March 1, 2026, with the final search completed on March 27, 2026.

Search Strategy

A comprehensive search strategy was developed using a combination of keywords and Medical Subject Headings [MeSH] terms related to Community Health Practitioners and infectious diseases in Nigeria. The search strategy was adapted for each database while maintaining consistency in core concepts.

Core Search Terms

Population terms

“Community Health Practitioners" OR "Community Health Workers" OR "Community Health Extension Workers" OR "CHEWs" OR "Community Health Officers" OR "CHOs" OR "Primary Health Care Workers" OR "Primary Healthcare Workers" OR "Frontline Health Workers"

Concept terms

Infectious Diseases" OR "Communicable Diseases" OR "Disease Prevention" OR "Disease Control" OR "Disease Surveillance" OR "Outbreak Response" OR "Epidemic" OR "Pandemic" OR "Malaria" OR "COVID-19" OR "Tuberculosis" OR "HIV/AIDS" OR "Lassa Fever" OR "Cholera" OR "Measles" OR "Polio" OR "Meningitis" OR "Immunization" OR "Vaccination"

Context terms

"Nigeria" OR "Nigerian"

PubMed Search Strategy

(("Community Health Workers"[MeSH] OR "Community Health Practitioners" OR "Community Health Extension Workers" OR "CHEWs" OR "Community Health Officers" OR "Primary Health Care Workers"] AND ["Communicable Diseases"[MeSH] OR "Infectious Diseases" OR "Disease Prevention" OR "Disease Control" OR "Disease Surveillance" OR "Malaria" OR "COVID-19" OR "Tuberculosis" OR "HIV" OR "Immunization"))AND ("Nigeria"[MeSH] OR "Nigerian"))

Similar search strategies were adapted for Google Scholar, SciSpace, and AJOL databases. For grey literature sources, targeted searches were conducted on organizational websites using relevant keywords.

Selection Process

The selection process followed a systematic two-stage screening approach:

Stage 1: Title and Abstract Screening

All retrieved records were imported into a reference management system, and duplicates were removed. Two independent reviewers screened titles and abstracts against the eligibility criteria. Disagreements were resolved through discussion and, when necessary, consultation with a third reviewer.

Stage 2: Full-Text Screening

Studies that met the inclusion criteria based on title and abstract screening, or where eligibility was unclear, proceeded to full-text review. Two independent reviewers assessed full-text articles against the eligibility criteria. Reasons for exclusion at this stage were documented. Disagreements were resolved through discussion and consensus.

Search Results

- PubMed/MEDLINE: 20 records
- Google Scholar: 20 records
- SciSpace Basic Search: 100 records
- SciSpace Full Text Search: 100 records
- Total unique records after deduplication and merging: 93 records
- Grey literature sources [AJOL, WHO, Nigerian Ministry of Health]: 20 records
- Records included in final synthesis: 30 studies

Data Charting Process

A standardized data charting form was developed based on the review objectives and piloted on five studies to ensure consistency and comprehensiveness. Data were extracted independently by two reviewers, with discrepancies resolved through discussion. The data charting form was iteratively refined during the extraction process to capture emerging themes and relevant information.

Data Items

The following data items were extracted from each included study:

Study Characteristics

- Author[s] and year of publication
- Study title
- Study design and methodology
- Study setting [geographic location, urban/rural]
- Study population and sample size
- Data collection methods

CHP-Related Information

- Types of CHPs involved [JCHEWs, CHEWs, CHOs, etc.]
- Roles and functions performed in infectious disease prevention and control
- Specific activities undertaken [surveillance, diagnosis, treatment, education, etc.]

Disease-Related Information

- Types of infectious diseases addressed
- Disease prevention activities
- Disease control interventions
- Outbreak response activities

Challenges and Barriers

- Training and knowledge gaps
- Resource and infrastructure limitations
- Funding constraints
- Supervision and administrative support issues
- Community acceptance and cultural factors
- Workload and staffing issues
- Personal protective equipment availability

Outcomes and Effectiveness

- Reported outcomes of CHP interventions
- Effectiveness measures
- Impact on disease burden

Synthesis of Results

Data synthesis followed a narrative approach consistent with scoping review methodology. Extracted data were organized thematically according to the review objectives. Descriptive statistics were used to summarize study characteristics and quantitative data where appropriate. Qualitative data were synthesized narratively, with themes and patterns identified through iterative analysis. Results were organized to address each specific objective, with findings presented in tables and narrative summaries to facilitate interpretation and identification of knowledge gaps.

Results

Study Selection

The comprehensive search across multiple databases and grey literature sources yielded a total of 113 records [93 unique scholarly articles and 20 grey literature sources]. After title and abstract screening, 65 records were deemed potentially relevant and proceeded to full-text review. Following detailed assessment against eligibility criteria, 30 studies were included in the final synthesis. The primary reasons for exclusion were studies not specifically addressing CHPs' roles in infectious disease prevention and control [n=20], studies conducted outside Nigeria [n=10], and studies not available in full text [n=5].

Study Characteristics

The 30 included studies were published between 2016 and 2025, with a notable increase in publications from 2020 onwards, likely reflecting heightened attention to community health systems during the COVID-19 pandemic. The studies employed diverse methodological approaches, including cross-sectional surveys [n=15], qualitative studies [n=5], mixed-methods studies [n=4], intervention studies [n=3], systematic reviews [n=2], and narrative reviews [n=1].

Geographic Distribution

Studies were conducted across multiple Nigerian states, with representation from all six geopolitical zones. The most frequently studied states included Enugu State [n=5], Cross River State [n=3], Benue State [n=3], Kano State [n=2], and Anambra

State [n=2]. Several studies were multi-state or national in scope [n=8].

Study Settings

The majority of studies were conducted in rural settings [n=18], reflecting the predominant deployment of CHPs in underserved rural areas. Urban and peri-urban settings were represented in 8 studies, while 4 studies included both rural and urban contexts.

Types of CHPs

The studies examined various categories of community health practitioners, including:

- Community Health Workers [CHWs] - mentioned in 22 studies
- Community Health Extension Workers [CHEWs] are mentioned in 12 studies
- Community Health Officers [CHOs] are mentioned in 10 studies
- Primary Health Care Workers [general term] - mentioned in 15 studies
- Volunteer Community Health Workers [VCHWs] are mentioned in 2 studies
- Community Distributors - mentioned in 1 study

Results of Individual Sources

Roles of Community Health Practitioners in Infectious Disease Prevention and Control

The synthesis of evidence revealed that CHPs perform diverse and multifaceted roles in infectious disease prevention and control across Nigeria. These roles can be categorized into seven main domains:

1. Disease Surveillance and Notification

CHPs play a critical role in community-based surveillance systems for early detection and reporting of infectious diseases. Multiple studies documented CHPs' involvement in Integrated Disease Surveillance and Response [IDSR] activities, including case identification, data collection, and notification to higher levels of the health system [11,7,17]. In epidemic settings, CHPs demonstrated knowledge and skills in community-based surveillance for epidemic-prone diseases, including measles, pertussis, diphtheria, and Lassa fever [18]. The use of digital tools such as the AVADAR [Auto-Visual AFP Detection and Reporting] application enhanced CHPs' capacity to report suspected cases with geolocation data, facilitating rapid investigation and response [19].

However, studies revealed suboptimal knowledge and practice of IDSR among primary health care workers, with only 38% demonstrating adequate knowledge and 25.8% showing good practice [11]. This highlights the need for enhanced training and capacity building in disease surveillance functions.

2. Case Detection and Diagnosis

CHPs are involved in active case finding and diagnosis of infectious diseases at the community level. For malaria, trained volunteer community health workers successfully diagnosed cases in under-five children using rapid diagnostic tests [RDTs] [14,20]. In the context of COVID-19, CHPs performed case-finding duties and screening activities [5,9]. CHPs also attended to children with suspected severe malaria and provided pre-referral treatment [21].

The Test-Before-Treat approach for malaria management was implemented by primary health care workers, though compliance varied between Global Fund-supported and government-supported facilities [20]. This underscores the importance of adequate resources and support systems for effective case detection and diagnosis.

3. Treatment Provision

CHPs provide treatment for common infectious diseases, particularly in settings where access to higher-level facilities is limited. For malaria, CHPs administered Artemisinin Combination Therapy [ACT] for uncomplicated cases and rectal artesunate for severe malaria as pre-referral treatment [14,20,21]. In the context of Integrated Community Case Management [ICCM], primary health care workers treated children under five years with pneumonia, diarrhea, and malaria [22].

CHPs also delivered intermittent preventive treatment of malaria in pregnancy [IPTp] at the community level, extending coverage beyond facility-based antenatal care [8,23]. The acceptability of pre-referral rectal artesunate for severe malaria was high among both health workers and caregivers, demonstrating the feasibility of task-shifting for emergency treatment [8].

4. Health Education and Community Mobilization

Health education and behavior change communication constitute core functions of CHPs in infectious disease prevention. CHPs provided education on COVID-19 prevention measures, though knowledge gaps were identified [9,8,6]. For malaria prevention, CHPs educated communities on the use of insecticide-treated bed nets, environmental sanitation, and early treatment-seeking [14].

CHPs mobilized communities for preventive actions, including building latrines and wells, and promoted health-seeking behavior for various conditions [24]. They served as liaisons between communities and formal health facilities, demystifying hospital care and encouraging utilization of health services [25]. Health talks delivered by CHPs at primary health centers covered infectious diseases including malaria, HIV/AIDS, tuberculosis, and Lassa fever [18].

5. Immunization Services

CHPs are frontline implementers of immunization programs in Nigeria, contributing significantly to the prevention and control of vaccine-preventable diseases. They achieved 80% coverage in routine immunization for most vaccine-preventable diseases, though coverage for Tetanus Toxoid [TT] 2 remained lower at 54%. CHPs identified pregnant women and children for immunization, conducted supplementary immunization activities, and promoted compliance with routine immunization schedules [19,25].

During the COVID-19 pandemic, CHPs continued to deliver routine immunization services while implementing infection prevention and control measures [10]. They also participated in outbreak response immunization campaigns for diseases such as measles and meningitis [18].

6. Outbreak Response

CHPs demonstrated rapid response capacity during infectious

disease outbreaks and epidemics. During the COVID-19 pandemic, CHPs were engaged in surveillance, case-finding, contact tracing, and health education activities [5,9,8,6]. They implemented infection prevention and control measures, including hand hygiene, mask use, and safe distancing during service delivery [26].

For Lassa fever outbreaks, CHPs were trained in early detection, community-based counseling, and targeted risk communication. They participated in rapid response teams and supported outbreak investigation activities. CHPs also maintained essential health services during outbreaks, ensuring continuity of care for other conditions, including malaria [27,10].

7. Infection Prevention and Control [IPC]

CHPs implement infection prevention and control measures in primary health care facilities and during community-based service delivery. Studies assessed CHPs' knowledge, practice, and compliance with IPC guidelines, including hand hygiene, use of personal protective equipment [PPE], safe injection practices, and waste management [28-30].

Being a community health extension worker or community health officer was identified as a predictor of good IPC practice. However, significant gaps were identified in IPC knowledge and compliance, with only 27.3% of primary health care workers demonstrating good knowledge. Challenges included inadequate availability of IPC materials, PPE, and administrative support [28,29].

Types of Infectious Diseases Addressed by CHPs

The synthesis revealed that CHPs in Nigeria are involved in the prevention, control, detection, and treatment of a wide spectrum of infectious diseases. The diseases can be categorized as follows:

1. Malaria [n=15 studies]

Malaria emerged as the most frequently addressed infectious disease in the literature. CHPs' involvement included case management using RDTs and ACT, treatment of severe malaria with pre-referral rectal artesunate, delivery of intermittent preventive treatment in pregnancy, distribution of insecticide-treated bed nets, delivery of seasonal malaria chemoprevention, and health education on malaria prevention. Studies documented CHPs' knowledge and compliance with national malaria treatment guidelines [14,20,8,23,10,26,18,31]

2. COVID-19 [n=10 studies]

The COVID-19 pandemic featured prominently in recent literature, with CHPs playing critical roles in pandemic response. Their involvement included surveillance and case-finding, health education on prevention measures, implementation of infection prevention and control measures, contact tracing, and maintaining essential health services during lockdowns. Studies assessed CHPs' knowledge, attitudes, and adherence to COVID-19 prevention protocols [5,9,8,6,26,28].

3. Vaccine-Preventable Diseases [n=8 studies]

CHPs addressed multiple vaccine-preventable diseases, including polio [acute flaccid paralysis surveillance], measles, meningitis [cerebrospinal meningitis], diphtheria, pertussis, yellow fever, and tetanus. Their roles included routine immunization delivery, supplementary immunization activities, disease surveillance, and outbreak response [19,18,24,25].

4. Lassa Fever [n=4 studies]

CHPs were involved in Lassa fever prevention and control through community-based surveillance, early detection and reporting, health education and risk communication, and outbreak response activities [18,27,18].

5. Pneumonia and Diarrheal Diseases [n=4 studies]

CHPs treated children under five years with pneumonia and diarrhea as part of integrated community case management. They also promoted oral rehydration therapy for diarrheal diseases [22,27].

6. Tuberculosis [n=3 studies]

CHPs' involvement in tuberculosis control included case detection, treatment support, and health education [18,27,28].

7. HIV/AIDS [n=3 studies]

CHPs contributed to HIV/AIDS prevention and control through health education, testing promotion, and treatment support [18,25,27].

8. Other Infectious Diseases

Additional diseases addressed by CHPs included cholera, Ebola virus disease, hepatitis B and C, and intestinal helminthiasis [19,27,28,29].

Challenges and Barriers Faced by CHPs

The synthesis identified multiple interconnected challenges that constrain CHPs' effectiveness in infectious disease prevention and control:

Inadequate Training and Knowledge Gaps [n=12 studies]

Suboptimal knowledge of infectious disease prevention and control was a recurrent theme across multiple studies. For COVID-19, CHPs demonstrated poor knowledge, with mean scores of 28.14% and only 9.3% achieving satisfactory knowledge levels. Similarly, only 16.2% of health care workers demonstrated adequate knowledge regarding COVID-19 before training interventions. Knowledge and practice of IDSR were suboptimal, with only 38% showing adequate knowledge and 25.8% demonstrating good practice [9,14,11,28,24,4].

Training gaps extended to infection prevention and control, with only 27.3% of primary health care workers demonstrating good IPC knowledge [28]. Many CHPs had not received formal training in disease surveillance, with only 84.7% reporting previous IPC training [28]. The lack of continuous professional development and refresher training programs was identified as a significant barrier [9,14,11,28,24,4].

Resource and Infrastructure Limitations [n=10 studies]

Inadequate resources emerged as a major constraint affecting CHPs' performance. Studies documented lack of IPC materials and equipment [65.5%], inadequate personal protective equipment [61.8%], and poor-quality equipment [63.2%] [11]. Stock-outs of essential medicines and diagnostics, particularly RDTs and ACTs for malaria, were frequently reported [29].

Infrastructure challenges included poor logistic systems for outreach services [24]; long distances and poor road conditions impairing service delivery [29], and inadequate health facilities in rural areas [4]. During the COVID-19 pandemic, inadequate testing capacity and overwhelming health resources were documented [5].

Poor Remuneration and Lack of Incentives [n=7 studies]
Poor or no remuneration for CHPs, particularly volunteer community health workers, was identified as a significant demotivator affecting retention and performance. Lack of incentives contributed to high turnover, especially in remote areas. The absence of financial motivation dampened CHPs' zeal and commitment to their roles [29,4,24].

Inadequate Supervision and Administrative Support [n=6 studies]
Poor supervision of CHPs was a recurrent challenge, with supervision often overlooked, underestimated, or inadequately planned. Lack of administrative support was evident in the absence of IPC committees, signage, and policies in primary health care facilities. Poor compliance with administrative control measures was documented [4,28].

The chronic shortage of well-trained health workers meant that CHPs often performed functions outside their scope of practice without adequate supervision [4,28]. This raised concerns about quality of care and patient safety.

Funding Constraints [n=5 studies]
Inadequate funding for community health programs was identified as a systemic challenge. Political will for funding community health initiatives was often lacking, leading to donor-driven programs with sustainability concerns. Funding instability affected the continuity of CHP programs and availability of essential supplies. The comparative study on malaria management revealed differences in compliance between Global Fund-supported and government-supported facilities, highlighting the impact of funding on service quality [24,30,4,20].

Community Acceptance and Cultural Factors [n=4 studies]
Community trust in CHPs' knowledge and competence was sometimes low, affecting health-seeking behavior and acceptance of interventions. Cultural norms made implementation of certain preventive measures, such as safe distancing during COVID-19, difficult. Mask-wearing by CHPs led to communication issues and community mistrust in some contexts. Lack of awareness and motivation among community members to seek appropriate care was identified as a barrier to CHPs' effectiveness [29,26,4].

Workload and Staffing Issues [n=4 studies]
Increased workload resulted from implementing new interventions, such as explaining COVID-19 prevention measures and addressing caregiver concerns during seasonal malaria chemoprevention campaigns. The chronic shortage of health workers meant that CHPs were overburdened with responsibilities. Inadequate numbers and uneven distribution of CHPs across geographic areas limited coverage and accessibility of services [26,4,24]

Personal Protective Equipment [PPE] Challenges [n=3 studies]
During the COVID-19 pandemic, poor practice of PPE use was documented, with only 50% using face masks, 12.8% using goggles, 30.2% using gloves, and 56.4% practicing hand hygiene. Low availability of disinfecting wipes and bio-waste bags was reported. Insufficient hand hygiene adherence was attributed to time constraints, discomfort, and skin irritation from sanitizers [9,26].

Synthesis of Results

Summary Table: Roles of CHPs in Infectious Disease Prevention and Control

Role Category	Specific Activities	Number of Studies
Disease Surveillance and Notification	IDSR implementation, case identification, data collection, reporting, use of digital tools [AVADAR]	6
Case Detection and Diagnosis	Active case finding, RDT use for malaria, COVID-19 screening, Test-Before-Treat implementation	8
Treatment Provision	ACT for malaria, rectal artesunate for severe malaria, ICCM for pneumonia/diarrhea/malaria, IPTp delivery	9
Health Education and Community Mobilization	Behavior change communication, health talks, community mobilization, promoting health-seeking behavior	12
Immunization Services	Routine immunization, supplementary immunization activities, vaccine-preventable disease prevention	6
Outbreak Response	Epidemic surveillance, contact tracing, outbreak investigation, emergency response	8
Infection Prevention and Control	Hand hygiene, PPE use, safe injection practices, waste management	7

Summary Table: Infectious Diseases Addressed by CHPs

Disease Category	Specific Diseases	Number of Studies
Malaria	Uncomplicated malaria, severe malaria, malaria in pregnancy	15

COVID-19	SARS-CoV-2 infection	10
Vaccine-Preventable Diseases	Polio, measles, meningitis, diphtheria, pertussis, yellow fever, tetanus	8
Viral Hemorrhagic Fevers	Lassa fever, Ebola	5
Respiratory Infections	Pneumonia, tuberculosis	5
Diarrheal Diseases	Cholera, other diarrheal diseases	4
HIV/AIDS	HIV infection	3
Hepatitis	Hepatitis B, Hepatitis C	1
Helminthic Infections	Intestinal helminthiasis	1

Summary Table: Challenges Faced by CHPs

Challenge Category	Specific Issues	Number of Studies
Training and Knowledge Gaps	Suboptimal knowledge, inadequate training, lack of refresher courses	12
Resource and Infrastructure Limitations	Lack of equipment, stock-outs, poor infrastructure, inadequate facilities	10
Poor Remuneration and Lack of Incentives	No/low pay, lack of motivation, high turnover	7
Inadequate Supervision and Administrative Support	Poor supervision, lack of administrative structures, absence of policies	6
Funding Constraints	Inadequate funding, donor dependency, sustainability concerns	5
Community Acceptance Issues	Low trust, cultural barriers, lack of awareness	4
Workload and Staffing Issues	Overburdened staff, shortage of workers, uneven distribution	4
Personal Protective Equipment [PPE] Challenges	Inadequate PPE, poor compliance, discomfort, supply issues	3

Discussion

Summary of Evidence

This scoping review provides a comprehensive mapping of the roles, diseases addressed, and challenges faced by Community Health Practitioners in infectious disease prevention and control in Nigeria. The synthesis of 30 studies reveals that CHPs perform multifaceted and critical roles across the continuum of infectious disease prevention and control, from surveillance and early detection through treatment and outbreak response.

Key Findings on CHP Roles

The evidence demonstrates that CHPs are integral to Nigeria's infectious disease control architecture, performing seven distinct but interconnected roles. Their involvement in disease surveillance and notification, particularly through the IDSR system and innovative digital tools like AVADAR, positions them as the eyes and ears of the health system at the community level. This frontline surveillance capacity is essential for early warning and rapid response to disease outbreaks, as demonstrated during recent Lassa fever and COVID-19 outbreaks [18,19,5,27].

CHPs' diagnostic and treatment roles, particularly for malaria, pneumonia, and diarrheal diseases, extend the reach of essential health services to underserved populations. The successful implementation of community-based management of severe malaria using pre-referral rectal artesunate exemplifies the potential for task-shifting to CHPs when supported by adequate training and resources [20,8]. Similarly, the delivery of intermittent preventive treatment of malaria in pregnancy at the community level demonstrates how CHPs can complement facility-based services to improve coverage of critical interventions [8,23].

The health education and community mobilization functions of CHPs are foundational to behavior change and health promotion. Their cultural proximity and community embeddedness enable them to deliver contextually appropriate health messages and mobilize communities for collective action [14,24,25,18]. This role was particularly evident during the COVID-19 pandemic, where CHPs served as trusted sources of information and promoters of preventive behaviors [9,8,6].

CHPs' role in immunization delivery is well-established and has contributed to significant gains in vaccine coverage for preventable diseases [19,24,25]. Their ability to identify and reach zero-dose children and maintain routine immunization during emergencies underscores their importance in sustaining immunization programs [19,10].

Spectrum of Infectious Diseases Addressed

The review reveals that CHPs are involved in addressing a broad spectrum of infectious diseases, with malaria and COVID-19 being the most frequently studied. The predominance of malaria in the literature reflects both the high burden of this disease in Nigeria and the established role of CHPs in malaria control programs. The substantial attention to COVID-19 in recent publications highlights the critical role CHPs played in pandemic response and the recognition of community health systems as essential for epidemic preparedness and response [5,6,8-10,26].

The involvement of CHPs in vaccine-preventable disease control, particularly polio, measles, and meningitis, demonstrates their contribution to Nigeria's efforts to eliminate and control these diseases [18,19]. The engagement of CHPs in Lassa fever surveillance and response is particularly relevant given the endemic nature of this disease in Nigeria and the need for community-based early warning systems [18,27].

The evidence also reveals gaps in CHP engagement with certain infectious diseases. Notably, tuberculosis and HIV/AIDS, despite being significant public health challenges in Nigeria, were addressed in relatively few studies [25,18,27,28]. This may reflect either limited CHP involvement in these disease programmes or insufficient research attention to their roles in these contexts.

Challenges Constraining CHP Effectiveness

The synthesis reveals a constellation of interconnected challenges that significantly constrain CHPs' effectiveness in infectious disease prevention and control. Inadequate training and knowledge gaps emerged as the most frequently reported challenge, documented across multiple disease contexts, including COVID-19, IDSR, malaria, and infection prevention and control [11,9,8,28,31,14]. The finding that only 16.2% of health care workers demonstrated adequate COVID-19 knowledge before training, which improved to 83.8% post-training, underscores both the severity of knowledge gaps and the effectiveness of targeted training interventions [14].

Resource and infrastructure limitations constitute a fundamental barrier to CHP performance. The lack of essential supplies, equipment, and infrastructure not only limits CHPs' ability to deliver quality services but also affects their motivation and professional satisfaction [24,28-30]. The documented stock-outs of RDTs and antimalarials directly compromise CHPs' ability to implement test-before-treat protocols and provide appropriate treatment [20,29].

Poor remuneration and lack of incentives represent a critical systemic failure that undermines the sustainability of CHP programs. The reliance on volunteer community health workers without adequate compensation is neither sustainable nor equitable [29,4]. This challenge is compounded by inadequate supervision and administrative support, creating an environment where CHPs work with limited guidance, feedback, and professional development opportunities [28,29,4].

Funding constraints reflect broader challenges in Nigeria's health financing and the prioritization of primary health care. The dependence on donor funding for many CHP programs raises concerns about sustainability and the alignment of programs with local priorities [24,29]. The comparative study showing better compliance with malaria treatment guidelines in Global Fund-supported facilities compared to government-supported facilities illustrates the impact of funding on service quality [20].

Community acceptance issues, while reported less frequently, represent important contextual factors that can facilitate or hinder CHP effectiveness. Building and maintaining community trust requires ongoing engagement, demonstration of competence, and cultural sensitivity [26,29,4].

Implications for Policy and Practice

1. **Strengthening Training and Capacity Building:** There is an urgent need for comprehensive, standardized training programs for CHPs covering the full spectrum of infectious disease prevention and control competencies [11,9,24,28,14,4].
2. **Improving Resource Allocation and Infrastructure:** Adequate and sustained investment in primary health care infrastructure is essential [19].
3. **Addressing Remuneration and Incentive Structures:** A sustainable financing mechanism for CHP remuneration must be established [24,29,4].
4. **Strengthening Supervision and Supportive Systems:** Robust supervision systems should be institutionalized [28,29,4].
5. **Increasing Domestic Health Financing:** Greater political commitment and increased domestic financing are needed [20,24,29].
6. **Enhancing Community Engagement:** Strategies to strengthen community trust should be implemented [26,29,4].
7. **Expanding CHP Roles in Neglected Disease Areas:** There are opportunities for expanding CHP roles in TB and HIV programs [25,23,27,28].

Limitations

This scoping review has several limitations that should be considered when interpreting the findings:

1. The review relied primarily on published literature, which may not fully represent the breadth of CHP activities, particularly successful programs that have not been formally evaluated or published. Grey literature was included to mitigate this limitation, but unpublished reports and program data may have been missed.
2. While studies from multiple Nigerian states were included, some geopolitical zones and states were better represented than others. The findings may not fully capture regional variations in CHP roles, diseases addressed, and challenges faced.
3. As a scoping review, formal quality assessment of included studies was not conducted. The evidence base includes studies of varying methodological rigor, which may affect the reliability of some findings.
4. The included studies examined various categories of community health practitioners [CHWs, JCHEWs, CHEWs, CHOs, etc.] with different training levels and scopes of practice. This heterogeneity may obscure important differences in roles and challenges across cadres.
5. The review included studies spanning a decade [2016-2025], during which significant changes occurred in Nigeria's health system, disease epidemiology [particularly with COVID-19], and CHP programs. Temporal trends and their implications were not systematically analyzed.
6. Many studies focused on describing CHP roles and challenges rather than evaluating effectiveness or health outcomes. This limits the ability to draw conclusions about the impact of CHP interventions on disease burden.
7. The inclusion of only English-language publications may have excluded relevant studies published in other languages.
8. Despite comprehensive searching, some relevant studies may have been missed, particularly those indexed in databases

not included in the search or those using terminology not captured by the search strategy.

Conclusion

This scoping review provides comprehensive evidence that Community Health Practitioners are integral to infectious disease prevention and control in Nigeria, performing diverse and critical roles across the continuum of care. CHPs serve as frontline surveillance agents, diagnosticians, treatment providers, health educators, immunization deliverers, outbreak responders, and infection prevention practitioners. They address a broad spectrum of infectious diseases, with particular emphasis on malaria, COVID-19, and vaccine-preventable diseases.

However, significant systemic challenges including inadequate training, resource constraints, poor remuneration, insufficient supervision, and funding limitations substantially constrain CHPs' effectiveness and threaten the sustainability of community health programs. Addressing these challenges requires comprehensive, multi-level interventions encompassing policy reform, increased investment, capacity building, and strengthened health systems.

The evidence reveals important gaps in the literature, including limited research on CHP involvement in tuberculosis and HIV/AIDS control, insufficient evaluation of CHP intervention effectiveness and health outcomes, limited understanding of regional variations in CHP roles and challenges, and inadequate exploration of innovative models for CHP deployment and support.

Future research should focus on rigorous evaluation of CHP interventions using robust study designs, comparative studies across different CHP models and contexts, implementation research to identify effective strategies for overcoming identified challenges, cost-effectiveness analyses of CHP programs, and longitudinal studies examining CHP retention, career progression, and long-term program sustainability.

Strengthening the capacity, support, and recognition of Community Health Practitioners is essential for Nigeria to achieve its infectious disease control objectives, strengthen epidemic preparedness and response, and progress toward Universal Health Coverage. CHPs represent a critical human resource for health that must be adequately trained, equipped, remunerated, supervised, and integrated into the broader health system to realize their full potential in protecting and promoting the health of Nigerian communities.

Ethical Consideration

This scoping review was conducted using publicly available data and did not involve human participants; thus, ethical approval was not required. The study adhered to methodological guidance from the Joanna Briggs Institute and reporting standards in the PRISMA extension for scoping reviews. All sources were properly acknowledged.

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Conflict of Interest

The authors declare that there was no conflict of interest as far as this review is concerned.

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