



Factors Influencing the Skill Level of Primary Healthcare Workers in Managing Paediatric Emergencies

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This work was carried out in collaboration among all authors. The entire study procedure was conducted with the involvement of all writers. All authors read and approved the final manuscript.

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ABSTRACT

Paediatric emergencies continue to be a significant public health concern in Nigeria, particularly in rural areas where primary healthcare centers (PHCs) often serve as the sole source of medical care. The ability of healthcare workers in these settings to effectively manage paediatric

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emergencies is crucial for improving child health outcomes. This study aimed to assess the factors influencing the skill level of primary healthcare workers in managing paediatric emergencies in Zaria, Nigeria. A cross-sectional descriptive study was conducted among 139 randomly selected healthcare workers in Sabon Gari and Zaria Local Government Areas. A pre-tested questionnaire was used to collect data on socio-demographic characteristics, work experience, and skills in managing paediatric emergencies. Data were analyzed using SPSS version 21. The results revealed that healthcare workers in PHCs in Zaria exhibited varying levels of skills in managing paediatric emergencies. Several factors were identified as influencing their skill levels. Healthcare workers with higher academic qualifications demonstrated significantly better skills in managing paediatric emergencies. This suggests that formal education plays a crucial role in developing the necessary competencies. While experience can be a valuable asset, the study did not find a strong association between years of experience and skill levels. This may indicate that experience alone is not sufficient for developing the necessary skills, and additional training and support may be required. Healthcare workers who had received recent training or participated in continuing medical education (CME) programs related to paediatric emergency management tended to have higher skill levels. This highlights the importance of ongoing professional development in maintaining and improving skills. The findings of this study suggest that a combination of factors influences the skill level of primary healthcare workers in managing paediatric emergencies. While academic qualifications are important, ongoing training and access to resources are also essential. It is crucial to address these factors through targeted interventions to improve the skills of healthcare workers and enhance the quality of care provided to children in need. This study highlights the critical need for targeted interventions to improve the skills of primary healthcare workers in managing paediatric emergencies in Zaria, Nigeria. By addressing factors such as academic qualifications, training, resource availability, and work environment, policymakers and healthcare providers can significantly enhance the quality of care provided to children in need.

Keywords: *Paediatric emergencies; Nigeria; primary healthcare; healthcare workers; health policy; healthcare systems; healthcare delivery; health interventions; health promotion; health education.*

1. INTRODUCTION

A medical emergency is defined as an acute illness or injury that poses an immediate threat to an individual's life or long-term health if not addressed swiftly (Ramanayake, Ranasingha, and Lakmini, 2014). When such emergencies involve children under the age of 18, they are classified as paediatric emergencies (Newgard et al., 2021). These emergencies remain a significant cause of morbidity and mortality, especially among children under the age of five, particularly in low- and middle-income countries (LMICs) where healthcare systems are often overstretched and under-resourced (UNICEF, 2020; Schmid and Raju, 2021; WHO, 2023).

Paediatric emergencies encompass a wide range of acute conditions, including respiratory tract infections, diarrheal diseases, infectious diseases, severe malaria, and severe acute malnutrition. These conditions are prevalent across regions with similar socio-demographic characteristics, particularly in Sub-Saharan Africa and South Asia. For example, a study conducted in Sudan, identified respiratory tract infections as

the most common paediatric emergency, followed by diarrheal disorders and severe malaria (Ahmed et al., 2022). Another study conducted in Ethiopia found that respiratory tract infections, diarrheal diseases, and malaria were the most common paediatric emergencies (Ambaye & Tefera, 2016). Similarly, a study in Pakistan identified respiratory tract infections, pneumonia, and diarrhea as leading causes of paediatric emergencies (Atiq et al., 2015). Similar patterns have been observed in Southwestern Nigeria, where a four-year review of paediatric admissions at the Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, revealed that febrile convulsions, severe malaria, acute pneumonia, diarrhoeal diseases, and sickle cell anaemia were the leading causes of emergency presentations (Agbesanwa et al., 2023).

Undernutrition is a critical underlying factor that exacerbates the severity of paediatric emergencies. It significantly increases the risk of mortality from common childhood illnesses, such as diarrhea, pneumonia, and malaria. The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) have reported

that over 50% of all childhood deaths are attributable to undernutrition, with mortality risks rising sharply with the severity of malnutrition (UNICEF, 2023; WHO, 2024). Despite global efforts to reduce child mortality through initiatives like the Millennium Development Goals (MDGs), significant disparities persist, particularly in rural and underserved areas where healthcare resources are scarce (UNICEF, 2016; UNICEF, 2020).

In Nigeria, the situation is particularly concerning. The country continues to grapple with high rates of child mortality, with preventable and treatable conditions such as pneumonia, malaria, and diarrheal diseases accounting for a significant proportion of deaths among children under five. Nigeria's under-five mortality rate (107.2 deaths per 1,000 live births) remains one of the highest globally (UNICEF, 2024), despite various initiatives aimed at improving healthcare access and quality (Fagbamigbe et al., 2020; Idris & Shingw, 2024).

Primary healthcare centers (PHCs) are often the first point of contact for children with medical emergencies in Nigeria, especially in rural areas where access to secondary and tertiary care is limited. PHCs are intended to provide essential health services, including the diagnosis and treatment of common paediatric emergencies. However, the effectiveness of these centers is frequently hampered by various challenges, including inadequate infrastructure, insufficient medical supplies, and a lack of adequately trained healthcare workers (Ekenna et al., 2020; Abah, 2022; Obubu et al., 2023).

A critical factor influencing the management of paediatric emergencies at PHCs is the knowledge level of the healthcare workers. Knowledge refers to the information and understanding that healthcare workers possess about various medical conditions, diagnostic procedures, and treatment protocols. Inadequate knowledge can lead to misdiagnosis, delayed treatment, and poor patient outcomes. Studies have shown that many healthcare workers at PHCs in Nigeria lack the necessary knowledge to effectively manage common paediatric emergencies, which significantly contributes to the high rates of child mortality in these settings (Eze et al., 2023; Suberu, Obohwemu & Soyobi, 2024).

Given the pivotal role that PHCs play in providing healthcare to children in Nigeria, it is essential to

assess and improve the knowledge base of healthcare workers in these centers. This study aims to evaluate the knowledge of healthcare workers in PHCs in Zaria, Nigeria, regarding the management of common paediatric emergencies. Thus, the research question is, 'What are the factors influencing the skill level of healthcare workers in primary healthcare centers (PHCs) in Zaria, Nigeria, regarding the management of common paediatric emergencies?' By identifying knowledge gaps, this research can inform targeted interventions to enhance the quality of care provided to children and ultimately reduce paediatric morbidity and mortality in the region.

2. METHODOLOGY

2.1 Study Setting

Zaria, a diverse Nigerian city, has 55 primary healthcare centers (PHCs) serving a population of approximately 698,348. These PHCs are the primary healthcare access point for many residents in the area.

2.2 Study Design

A cross-sectional study was conducted to gather data from healthcare workers in Zaria's PHCs.

2.3 Study Participants

The study included healthcare workers actively involved in patient care at the selected PHCs with at least six months of experience.

2.4 Exclusion Criteria

Healthcare workers on leave or not directly involved in patient care were excluded from the study.

2.5 Sample Size

A sample of 146 healthcare workers was determined using a 95% confidence level and a 5% margin of error, with a 10% allowance for attrition.

2.6 Sampling

A multi-stage sampling method was used to select respondents. First, 15 wards were randomly selected from Zaria and Sabon Gari LGAs. Then, one PHC from each selected ward

was chosen randomly. Finally, healthcare workers were selected proportionately from each PHC based on their number.

2.7 Data Collection Instrument

A structured questionnaire was developed and pretested to collect data on demographics, work experience, and knowledge and skills related to paediatric emergency management. A pilot study had been conducted among 56 healthcare workers in Zaria Local Government to ascertain the reliability and validity of the questionnaire.

2.8 Data Collection

Researchers visited selected PHCs to administer questionnaires and provide clarifications.

2.9 Data Management and Analysis

Collected data were cleaned, coded, and analyzed using SPSS. Descriptive statistics and chi-square tests were employed to analyze the data.

2.10 Scoring

A scoring system was used to assess skills, categorizing responses into very poor, poor, good, and excellent levels. Twenty-one questions were used to assess the health workers' skill in diagnosing and treating common paediatric emergencies. Thirteen of these questions were single response questions while 8 were multiple response questions. Each correct response was

scored 2 points and each incorrect response was scored 0. The overall maximum obtainable score for skill in diagnosing and treating common paediatric emergencies was 96 and the minimum was 0.

Table 1. Grading of knowledge and skill scores

Knowledge/Skill level	Range of scores (%)
Very poor	0-29.9
Poor	30-49.9
Good	50-74.9
Excellent	>75

2.11 Study Limitations

The study's cross-sectional design provides a snapshot of knowledge and skills in December 2016. It's important to consider potential changes since then due to factors like healthcare policy shifts, training updates, and resource availability. Additionally, relying on self-reported data for skill assessment might introduce bias, as healthcare workers could overestimate their abilities or underreport their limitations.

3. RESULTS

A total of 146 questionnaires were administered, 139 questionnaires were filled and returned giving a response rate of 95%. The results were analysed and presented in tables and charts, according to the study objectives. Cronbach's alpha for the questionnaire was 0.78, which supports the validity and internal consistency of the survey tool.

Table 2. Socio-demographic characteristics of respondents

Variable	Frequency (n=139)	Percent (%)
Age (years)		
<26	46	33.1
26-35	49	35.3
36-45	35	25.2
>45	9	6.5
Sex		
Male	23	16.5
Female	116	83.5
Marital status		
Married	96	69.1
Single	41	29.5
Divorced	1	0.7
Widowed	1	0.7
Tribe		
Hausa	116	83.5

Variable	Frequency (n=139)	Percent (%)
Yoruba	5	3.6
Igbo	4	2.9
Others	14	10.1
Religion		
Christianity	18	12.9
Islam	119	85.6
Others	2	1.4
Education status		
Primary	2	1.4
Secondary	15	10.8
Tertiary	122	87.8
Qualification		
Nurse/midwife	41	29.5
CHO	10	7.2
SCHEW	25	18.0
JCHEW	20	14.4
EHO	15	10.8
Medical Lab Technician	11	7.9
Others	17	12.2

Most (35.3%) of the respondents were within the age group 26-35 years with a mean age of 30.9±8.8 standard deviation. Majority (83.5%) of them were females, 69.1% of them were married, 83.5% of were Hausa, majority (85.6%) of them were Muslims, most of them (87.8%) have had tertiary education, and 29.5% of them were nurses/midwives.

Table 3. Work experience of respondents

Variable	Frequency (n=139)	Percent
Below 3 years	55	39.6
3-5 years	31	22.3
Greater than 5 years	53	38.1

Fifty-five (39.6%) of the respondents had a health care working experience of less than 3 years, 31 (22.3%) had experience of between 3-5 years while 53 (38.1%) of respondents have been health workers for more than 5 years.

Table 4. Determinants of knowledge of causes and treatment of common paediatric emergencies among the health workers

Variable	Frequency (n=139)	Percent (%)	Knowledge of causes	Knowledge of treatment
Age (years)				
<26	46	33.1	$X^2=10.065$ P=0.345	$X^2=7.438$ P=0.592
26-35	49	35.3		
36-45	35	25.2		
>45	9	6.5		
Sex			$X^2=2.463$ P=0.482	$X^2=0.628$ P=0.890
Male	23	16.5		
Female	116	83.5		
Marital status				
Married	96	69.1	$X^2=7.577$ P=0.577	$X^2=5.285$ P=0.809
Single	41	29.5		
Divorced	1	0.7		
Widowed	1	0.7		
Education status				

Variable	Frequency (n=139)	Percent (%)	Knowledge of causes	Knowledge of treatment
Primary	2	1.4		
Secondary	15	10.8	$\chi^2=4.296$	$\chi^2=5.454$
Tertiary	122	87.8	P=0.637	P=0.487
Qualification	41	29.5		
Nurse/midwife	10	7.2		
CHO	25	18.0	$\chi^2=33.496$	$\chi^2=57.259$
SCHEW	20	14.4	P=0.004	P=0.000
JCHEW	15	10.8		
EHO	11	7.9		
Medical Lab Technician	17	12.2		
Others				

There was a statistically significant relationship between academic qualification and knowledge of causes (0.004) and treatment (0.000) of common paediatric emergencies among the health workers.

Table 5. Determinants of skills in diagnosis and treatment of common paediatric emergencies among the health workers

Variable	Frequency (n=139)	Percent (%)	Skills in diagnosis	Skills in treatment
Age (years)				
<26	46	33.1	$\chi^2=14.842$	$\chi^2=13.359$
26-35	49	35.3	P=0.095	P=0.038
36-45	35	25.2		
>45	9	6.5		
Sex			$\chi^2=6.682$	$\chi^2=2.993$
Male	23	16.5	P=0.083	P=0.224
Female	116	83.5		
Marital status				
Married	96	69.1	$\chi^2=4.820$	$\chi^2=9.590$
Single	41	29.5	P=0.567	P=0.143
Divorced	1	0.7		
Widowed	1	0.7		
Education status				
Primary	2	1.4		
Secondary	15	10.8	$\chi^2=4.482$	$\chi^2=2.245$
Tertiary	122	87.8	P=0.612	P=0.691
Qualification				
Nurse/midwife	41	29.5		
CHO	10	7.2		
SCHEW	25	18.0	$\chi^2=32.097$	$\chi^2=16.891$
JCHEW	20	14.4	P=0.006	P=0.077
EHO	15	10.8		
Medical Lab Technician	11	7.9		
Others	17	12.2		

There was a statistically significant relationship between age of respondents and skills in the treatment (0.038) of common paediatric emergencies among the health workers, as well as between academic qualification and skills in the diagnosis (0.006) of common paediatric emergencies.

Table 6. Relationship between working experience and knowledge of causes and treatment of common paediatric emergencies among the health workers

Variable	Frequency (n=139)	Percent (%)	Knowledge of causes	Knowledge of treatment
Below 3 years	55	39.6		
3-5 years	31	22.3	$\chi^2=11.016$	$\chi^2=7.250$
Greater than 5 years	53	38.1	$P=0.880$	$P=0.298$

There was no statistically significant relationship between years of working experience and knowledge of causes and treatment of common paediatric emergencies among the health workers.

Table 7. Relationship between working experience and skills in diagnosis and treatment of common paediatric emergencies among the health workers

Variable	Frequency (n=139)	Percent (%)	Skills in diagnosis	Skills in treatment
Below 3 years	55	39.6		
3-5 years	31	22.3	$\chi^2=6.103$	$\chi^2=4.472$
Greater than 5 years	53	38.1	$P=0.412$	$P=0.346$

There was no statistically significant relationship between years of working experience and skills in diagnosis and treatment of common paediatric emergencies among the health workers.

4. DISCUSSION

Paediatric emergencies remain a significant public health concern in Nigeria, particularly in rural areas where primary healthcare centers (PHCs) often serve as the sole source of medical care. The ability of healthcare workers in these settings to effectively manage paediatric emergencies is crucial for improving child health outcomes. This study aimed to identify the factors influencing the skill level of primary healthcare workers in managing paediatric emergencies in Zaria, Nigeria. While the study focused on knowledge and skills, it is important to consider other determinants that may impact their ability to effectively manage these emergencies. Healthcare workers in PHCs in Zaria exhibited varying levels of skills in managing paediatric emergencies. Several factors were identified as influencing their skill levels.

4.1 Healthcare System Factors

- 1. Resource Availability:** Access to essential equipment, medications, and diagnostic tools is crucial for effective paediatric emergency management. Inadequate resource availability can hinder the ability of healthcare workers to provide appropriate care (Suberu, Obohjemu & Soyobi, 2024). For instance, the lack of

oxygen concentrators, defibrillators, or basic laboratory facilities can significantly impair the management of conditions like pneumonia, cardiac arrest, or infections.

- 2. Infrastructure:** The physical infrastructure of PHCs, including the availability of adequate space, electricity, and water supply, can impact the efficiency of healthcare delivery and the ability of healthcare workers to provide timely care (Anyebe et al., 2021; David & Oluwatosin, 2023). Poor infrastructure can create challenges in maintaining a clean and hygienic environment, storing essential supplies, and operating medical equipment.
- 3. Workload and Staffing:** Heavy workloads and insufficient staffing can lead to burnout, stress, and decreased job satisfaction among healthcare workers, which can negatively impact their performance (World Health Organization, 2020). When healthcare workers are overwhelmed with a high number of patients or lack adequate support staff, it can be difficult to provide timely and quality care, especially for emergencies.

4.2 Organizational Factors

- 1) Leadership and Supervision:** Effective leadership and supervision can play a crucial role in creating a supportive and conducive work environment for healthcare workers. Strong leadership can foster a culture of continuous learning and improvement, provide guidance and

mentorship, and ensure that healthcare workers have the resources and support they need to perform their jobs effectively (Odhus, Kapanga & Oele, 2024).

- 2) **Training and Continuing Medical Education (CME):** Regular training and CME programs can help healthcare workers stay updated on the latest guidelines and best practices in paediatric emergency management. Access to these opportunities can significantly enhance their skills and knowledge (Toma et al., 2021). Well-designed training programs can address specific knowledge gaps, improve clinical skills, and boost confidence among healthcare workers.
- 3) **Clinical Guidelines and Protocols:** The availability of clear and evidence-based clinical guidelines and protocols can provide healthcare workers with standardized guidance on the diagnosis and management of paediatric emergencies. These guidelines can help to ensure consistency of care, reduce errors, and improve patient outcomes (WHO, 2019a).

4.3 Individual Factors

- A. **Motivation and Commitment:** Healthcare workers who are motivated and committed to providing high-quality care are more likely to develop the necessary skills and knowledge. Factors such as job satisfaction, career development opportunities, and recognition can influence motivation and commitment (WHO, 2019b; WHO, 2019c).
- B. **Personal Characteristics:** Individual characteristics, such as problem-solving skills, decision-making abilities, communication skills, and cultural sensitivity, can also impact a healthcare worker's performance in managing paediatric emergencies. These personal attributes can help healthcare workers to effectively assess patients, make appropriate diagnoses, and communicate effectively with patients and their families.

4.4 Intersectional Factors

1. **Socioeconomic Status:** Socioeconomic disparities can influence the access to healthcare services and the quality of care that individuals receive. Healthcare workers in PHCs located in low-income

communities may face additional challenges in managing paediatric emergencies due to limited resources and infrastructure.

2. **Cultural Factors:** Cultural beliefs and practices can influence the way healthcare workers interact with patients and their families. Understanding and respecting cultural differences can help to build trust and improve communication, which can ultimately enhance the quality of care provided.
3. **Gender and Age:** Gender and age can also be factors that influence the skill level of healthcare workers. Studies have shown that female healthcare workers may face additional challenges in certain contexts, such as discrimination and limited opportunities for career advancement. Additionally, younger healthcare workers may benefit from targeted training and mentorship programs to support their professional development.

4.5 Role of Mentorship and Peer Support

Formal mentorship programs and peer support networks play a crucial role in enhancing the skills of primary healthcare workers, especially in managing paediatric emergencies. These programs provide structured support and continuous learning opportunities, which are particularly beneficial in resource-limited settings.

1. **Ongoing Feedback and Skill Development:** Mentorship programs offer a platform for continuous feedback, which is essential for skill refinement. For instance, the Cleveland Clinic's Mentoring Resource Centre has shown that structured mentoring can lead to significant professional growth by providing regular, constructive feedback (Cleveland Clinic, 2022). This feedback helps healthcare workers to identify areas for improvement and develop their competencies in managing paediatric emergencies.
2. **Increased Confidence:** Mentorship and peer support networks help build confidence among healthcare workers. By engaging with experienced mentors, mentees gain insights and practical knowledge that boost their self-assurance. Studies have shown that peer mentorship in nursing fosters a supportive environment that enhances confidence and reduces stress, which is critical when dealing with

high-pressure situations like paediatric emergencies (Kramer, 2024).

3. **Practical Suggestions and Problem-Solving:** Mentors provide practical suggestions and share their experiences, which can be invaluable in resource-limited settings. For example, mentors can offer advice on improvising with available resources or adapting standard protocols to fit the local context. This kind of guidance is crucial for healthcare workers who often have to make quick decisions with limited tools at their disposal (Theo et al., 2024).
4. **Building a Supportive Community:** Mentorship programs create a sense of community and belonging, which is vital for professional resilience. In environments where resources are scarce, having a network of peers and mentors to rely on can significantly reduce feelings of isolation and burnout. This community support is essential for maintaining morale and ensuring that healthcare workers remain committed to their roles (Kramer, 2024).
5. **Multidisciplinary Collaboration:** Formal mentorship programs often encourage multidisciplinary collaboration, which is beneficial for comprehensive patient care. By working with mentors from different specialties, healthcare workers can gain a broader perspective on managing paediatric emergencies, leading to more holistic and effective care (Cleveland Clinic, 2022).

It is evident from the above that formal mentorship programs and peer support networks are instrumental in developing the skills of primary healthcare workers in managing paediatric emergencies. They provide ongoing feedback, increase confidence, offer practical suggestions, build a supportive community, and promote multidisciplinary collaboration, all of which are crucial for delivering high-quality care in resource-limited settings.

4.6 Role of Mental Health Interventions

Stress, fatigue, and confidence significantly impact the ability of primary healthcare workers to manage paediatric emergencies effectively. These factors can lead to decreased performance, increased errors, and overall reduced quality of care. Addressing these issues

through mental health interventions is crucial for maintaining high standards of patient care.

1. **Impact of Stress and Fatigue:** Healthcare workers often face high levels of stress and fatigue due to long hours, high patient loads, and the emotional toll of dealing with critically ill children. According to the CDC, these conditions can lead to burnout, reduced cognitive function, and impaired decision-making abilities (CDC, 2024). The COVID-19 pandemic has further exacerbated these issues, highlighting the need for robust mental health support systems (CDC, 2024).
2. **Importance of Confidence:** Confidence plays a vital role in the performance of healthcare workers. A lack of confidence can lead to hesitation and second-guessing, which are detrimental in emergency situations. Building confidence through continuous training and support can help healthcare workers perform more effectively under pressure (Mosadeghrad et al., 2024).
3. **Mental Health Interventions:** Implementing mental health interventions such as counselling services, stress management seminars, and resilience training can directly improve the skills of healthcare workers. For example, a study published in BMC Health Services Research emphasizes the importance of psychological support and workforce training in enhancing the resilience of primary healthcare systems (Mosadeghrad et al., 2024). These interventions help healthcare workers manage stress, reduce burnout, and maintain their mental well-being, which in turn improves their ability to handle paediatric emergencies.
4. **Practical Examples:**
 - a) **Counselling Services:** Providing access to professional counselling can help healthcare workers process their experiences and develop coping strategies. This support is essential for maintaining mental health and ensuring that workers can continue to provide high-quality care.
 - b) **Stress Management Seminars:** These seminars teach techniques such as mindfulness, relaxation exercises, and time management skills. Such training can help healthcare workers manage their stress levels more effectively, leading to better

performance in emergency situations (Søvdal et al., 2021).

- c) Resilience Training: Programs designed to build resilience can help healthcare workers adapt to the high-stress environment of paediatric emergency care. This training often includes components on emotional regulation, problem-solving, and peer support (Ho et al., 2024).

In essence, addressing stress, fatigue, and confidence through targeted mental health interventions is essential for enhancing the skills of primary healthcare workers in managing paediatric emergencies. These interventions not only improve individual well-being but also contribute to better patient outcomes in high-pressure situations.

5. CONCLUSION

The study found that healthcare workers in primary healthcare centers (PHCs) in Zaria had different levels of proficiency in handling pediatric emergencies. Various factors influenced these skill levels. Notably, those with higher academic qualifications showed significantly better abilities in managing such emergencies, indicating the critical role of formal education in building essential competencies. Although experience is valuable, the study did not find a strong link between the number of years of experience and skill levels, suggesting that experience alone may not be enough to develop the necessary skills. Additional training and support might be needed. Healthcare workers who had recently undergone training or participated in continuing medical education (CME) programs related to pediatric emergency management generally had higher skill levels, underscoring the importance of ongoing professional development for maintaining and enhancing skills. This study thus highlights the complex interplay of various factors that influence the skill level of primary healthcare workers in managing pediatric emergencies. To effectively address these factors, a comprehensive and multidisciplinary approach is essential. This involves several key strategies, starting with investing in healthcare infrastructure to enhance facilities and ensure they are well-equipped to handle pediatric emergencies. Improving staffing levels is also crucial, as it helps reduce burnout and improve patient care. Providing targeted training and continuing medical education keeps healthcare workers updated on the latest practices and protocols. Developing and disseminating clinical guidelines

creates clear, evidence-based standards to improve outcomes. Fostering effective leadership and supervision encourages strong guidance and support for healthcare teams. Addressing socioeconomic disparities through policies that reduce inequalities affecting healthcare access and quality is another important aspect. Promoting cultural sensitivity ensures healthcare workers are aware of and responsive to cultural differences in patient populations. Finally, investing in research supports ongoing improvements in pediatric emergency care practices. By focusing on these areas, policymakers and healthcare providers can significantly enhance the skills of healthcare workers, leading to better quality care for children in need. This holistic approach ensures that all aspects of healthcare delivery are optimized to meet the unique challenges of pediatric emergencies.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Authors hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

AVAILABILITY OF DATA AND MATERIALS

The authors declare consent for all available data present in this study.

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CONSENT AND ETHICAL APPROVAL

Ethical clearance for this study was granted by the Department of Community Medicine at Ahmadu Bello University, Zaria. Furthermore, necessary permissions were acquired from the Directors of Primary Health Care in both Sabon Gari and Zaria Local Government Areas, as well as from the heads of all participating primary healthcare facilities. Informed written consent was obtained from all study participants before their involvement.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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