

University of Dundee

## Improving service delivery at primary healthcare facilities for achieving universal health coverage

Agwu, Prince; Onwujekwe, Obinna; Uzochukwu, Benjamin; Mulenga, Modest

DOI:  
[10.11576/seejph-4319](https://doi.org/10.11576/seejph-4319)

Publication date:  
2021

Licence:  
CC BY

Document Version  
Publisher's PDF, also known as Version of record

[Link to publication in Discovery Research Portal](#)

*Citation for published version (APA):*  
Agwu, P., Onwujekwe, O., Uzochukwu, B., & Mulenga, M. (2021). Improving service delivery at primary healthcare facilities for achieving universal health coverage: Examining the effects of insecurity in such facilities in enugu state, nigeria. *South Eastern European Journal of Public Health*, 2021(2), 1-14.  
<https://doi.org/10.11576/seejph-4319>

### General rights

Copyright and moral rights for the publications made accessible in Discovery Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from Discovery Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



Agwu P, Onwujekwe O, Uzochukwu B, Mulenga M. Improving service delivery at primary healthcare facilities for achieving Universal Health Coverage: Examining the effects of insecurity in such facilities in Enugu State, Nigeria (Original Research). *SEEJPH* 2021, posted: 09 April 2021. DOI: 10.11576/seejph-4319

## ORIGINAL RESEARCH

# Improving service delivery at primary healthcare facilities for achieving Universal Health Coverage: Examining the effects of insecurity in such facilities in Enugu State, Nigeria

Prince Agwu<sup>1,5</sup>, Obinna Onwujekwe <sup>2,5</sup>, Benjamin Uzochukwu<sup>3,5</sup>, Modest Mulenga<sup>4</sup>

<sup>1</sup> Department of Social Work, University of Nigeria, Nsukka, Enugu, Nigeria;

<sup>2</sup> Department of Health Administration and Management, College of Medicine, University of Nigeria, Enugu Campus, Enugu, Nigeria;

<sup>3</sup> Department of Community Medicine, College of Medicine, University of Nigeria, Enugu Campus, Enugu, Nigeria;

<sup>4</sup> Tropical Diseases Research Centre, Zambia;

<sup>5</sup> Health Policy Research Group, College of Medicine, University of Nigeria Enugu Campus, Enugu, Nigeria;

**Corresponding author:** Prince Agwu;  
Department of Social Work, University of Nigeria, Nsukka Campus, Nigeria;  
Postal Code: 410001;  
Email: [prince.agwu@unn.edu.ng](mailto:prince.agwu@unn.edu.ng);

## Abstract

**Background:** Availability of health services at the primary healthcare (PHC) level is crucial to the achievement of Universal Health Coverage (UHC). However, insecurity of PHC facilities inspires unavailability of health services. From perspectives of primary health service providers, we examined the effects of insecurity at rural and urban PHC facilities in Enugu, Nigeria.

**Methodology:** The study adopts a qualitative method using in-depth interviews and non-participant observation. The study sites were eight (8) PHC facilities (rural/urban) that were purposively selected. The first author interacted with the health workers and made extensive observations on infrastructure, policing, and other security gaps affecting the facilities.

**Findings:** While health workers wish to provide services as stipulated, the fear of getting hurt or losing their properties to hoodlums scares them, especially during the dusk hours. Owing to infrastructure deficits and lack of security personnel, incidents of losing phones, stolen babies and facility items/consumables, and patients being attacked were said to be recurring. The absence of power supply during the dusk hours tend to heighten their fears, hence health workers close before it gets dark, not minding the consequences on health service users.

**Conclusion:** The issue of insecurity of lives of both the health workers and their clients is paramount to the optimal use of services in the PHC facilities. Insecurity is a priority concern for the health workers, and if not addressed could cause them to completely shun working in certain areas, or shun their jobs completely, with dire consequences for the achievement of UHC.

**Keywords:** Primary healthcare, insecurity, community policing, Universal Health Coverage, absenteeism

## Introduction

The bedrock of achieving Universal Health Coverage (UHC) is primary healthcare [1]. This was subsequently validated in what has come to be known as the “Declaration of Astana” [2]. Primary healthcare has the advantage of geographical spread and affordability. It covers remote regions and mostly accessed by the low- and middle-income class. In Nigeria, there is a PHC facility in every “ward” (the least seat of government’s administration just below the local government) [3,4]. Hence, it seems that the availability component of UHC is somewhat addressed, especially in terms of presence. However, presence of healthcare facilities seems not to translate into the dispensation of health services round the clock, where patients can access and get quality health services at any time. The absence of health workers in PHC facilities is documented in literature, alongside several drivers [5]. Insecurity of lives and properties in PHC facilities is listed among the drivers. Unfortunately, this issue is under-explored in literature, whereas it forms a cardinal reason for health workers’ presence at work and efficiency, especially during dusk hours. It is also implicated in the safety of the properties of the PHC facilities, as well as the lives of health service users. Thus, this paper is poised to address the insecurity of PHC facilities in Nigeria within the context of achieving UHC by 2030. The foundations of UHC are anchored on the availability of health services and prevention of financial hardship while accessing health services. UHC service coverage index ranks Nigeria on a score of 39, where the highest score is  $\geq 80$  [6]. This indicates how far Nigeria is away from attaining UHC. An intersection of several factors could account for Nigeria’s slow pace toward UHC, of which the closure of health facilities at crucial periods ranks highly. It is a known fact that Nigeria faces a myriad of insecurity issues across its geo-

political zones. Cases of insurgency, farmers-herders rivalry, kidnapping, banditry, and armed robbery make the daily news headlines [7,8]. These security lapses have occasioned calls for community policing, which means that communities should devise their means of securing themselves while partnering with the mainstream security agents. Fortunately, the National Primary Healthcare Development Agency (NPHCDA) states how compulsory it is for PHC facilities to be secured, including the employment of security personnel [4]. The local governments with oversights from the state governments employ PHC workers. Disappointedly, they make no vacancies for security personnel. The police force which should be an instrument of security within the State is never assigned to PHC facilities, while they could be assigned to protect some private citizens [7]. Thus, PHC facilities are forced to rely on voluntary and community-provided security guards. In a study by Okoli et al. which involved several states in Nigeria, the Ward Development Commission (WDC) in Anambra State was the only WDC that helped PHC facilities to recruit security staff [9]. Although, the recruited security staff were not strong enough, which could be attributed to deficiencies in age (older adults) and equipment. Several studies highlight the presence of key security infrastructure (perimeter fence and lighting at nights), and human security as motivators for health workers to attend work, especially at nights [10,11,12,13]. Unfortunately, these infrastructures are found lacking across most PHC facilities in Nigeria. A study by Christian Aid UK on PHC facilities in Abuja, reveals that just 24.7% of the facilities have a perimeter fence, while virtually all do not have active security guards [14]. Properly illuminated facilities will at least give a feeling of safety and capable of putting away hoodlums since they could be easily spotted.

Unfortunately, studies reveal an acute shortage of power supply across PHC facilities in Nigeria, causing them to rely on carbon-emitting kerosene lanterns and petrol-powered generators that are disastrous to the environment or illumination from their phones or electricity-rechargeable lanterns, even when electricity is also a problem [12,13]. In some other study, alternative sources of power supply, especially petrol-powered generators and kerosene lanterns could be too expensive to maintain by the health workers, since they need to service the generators and also purchase petrol and kerosene for the generators and lanterns respectively [15]. Their inability to meet up with such demand justifies leaving the facilities before it gets dark, citing the need to save their lives and those of the service users who could be attacked in the course of visiting the facilities [16]. In Onwujekwe et al, some cases of health service users visiting facilities at nights and meeting no one are highlighted [5]. Some of the cases highlight mortality scenarios as consequence. Yet the health workers feel that saving their lives by leaving insecure facilities before dusk, is the best decision to make. Given these series of security setbacks marring the efficiency of PHC facilities, this study reflects through the rational choice theory. The theory as designed by George Homans, fundamentally asserts that human actions are often premeditated to maximise benefits over losses [17]. Health workers could consider it rational when they rather choose to save their lives and those of health service users by vacating facilities before the times when they are prone to be at risk. This seems a rational choice, but it is at the expense of health service delivery, and further stalling the achievement of UHC. Therefore, closing the security gaps informing the said rational choice of abandoning facilities for safety reasons is important. The dearth of literature on the physical security of PHC facilities inspires the need to ascertain the relationship such gap shares with the

achievement of UHC. Much seems to have been done on the financial security of service users and UHC. So, it makes sense to consider their physical security as well. Therefore, our study objectives include: (a) to examine the state of security of PHC facilities in Enugu; (b) to determine the influence insecurity of PHC facilities exercises on UHC; (c) to reveal grassroots generated solutions to insecurity of PHC facilities in Enugu state and possible implications.

## Methods

### Study area

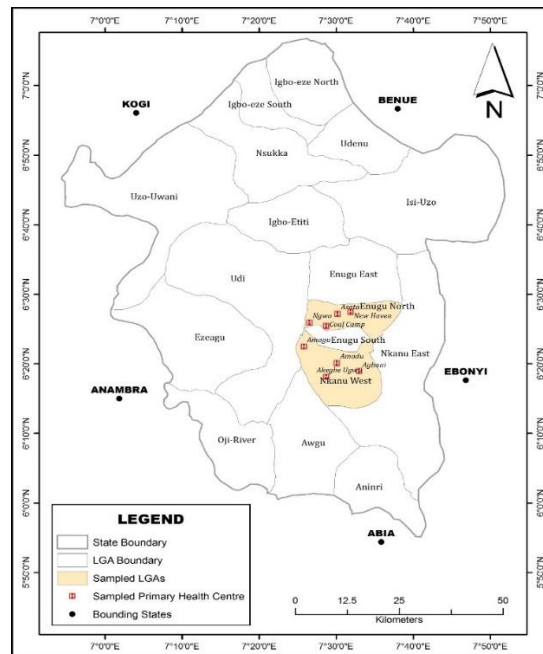
The study was conducted in Enugu State, southeast Nigeria. The state's population predominantly comprises the Igbo ethnic group and Christians. Enugu state has 17 local government areas (LGAs), of which 14 of them are categorized as rural, and the rest 3 as urban. The population in Enugu state is at 3.3 million with an annual growth rate of 2.59% [18]. About 35% of the 1,050 PHC facilities in the state are public [19]. The state of security of PHC facilities in southeast Nigeria is discussed in Etiaba et al., as suboptimal, deeply characterized by the absence of security personnel, perimeter fence, and poor infrastructure, which heighten fear during dusk hours and force the closure of facilities within such times [27]. A preliminary investigation into the state of security of PHC facilities in six distinct LGAs of Enugu State different from those the authors have selected describes it as a "sorry condition" [28]. In addition, crime statistics in Enugu State for 2017 is 2,171; 12,408 for Abia; 1,623 for Imo; 4,214 for Ebonyi and 1,888 for Anambra [8]. These five states make up the southeast region and are barely far apart with porous land borders. This means that possible infiltration of criminal elements from one state into another is quite high. Therefore, the demand for vigilance and carefulness across the region cannot be overstated.

### Sampling procedure

The purposive sampling technique was used in selecting 8 facilities across Enugu East Senatorial District that lacked perimeter fence, security personnel or both. To select the 8 facilities, two LGAs, Nkanu West and Enugu North LGAs were selected and allotted 4 facilities each. Enugu North was chosen because it is the hub of Enugu urban, and will naturally have higher levels of crime occurrences. This is corroborated by Anumba et al., who stated that Enugu urban and surrounding LGAs, of which Nkanu West is among the closest, are endemic areas for restiveness and crime [26]. However, while Nkanu West represented the rural LGAs, Enugu North was selected to represent urban LGAs (See figure 1 for a representation of the study locations and selected facilities). Of the 4 facilities selected in Nkanu West, 2 had no perimeter fence

and none had designated security personnel. The absence of perimeter fence for PHC facilities is prevalent in rural areas. In contrast, all 4 facilities in Enugu North had perimeter fence, as expected. However, none of the selected facilities in the urban LGA had an employed security guard. The rationale behind picking facilities with and without perimeter fence is to identify implications for differences in security experiences. The health workers that participated in an in-depth conversation with the investigator were selected based on their availability at the health facilities at the time the researcher visited. The study was not designed to have any specific number of respondents, but to use non-participant observation and conversations with available health workers to unravel the state of security of these facilities and the implications for healthcare.

**Figure 1: Geographical information of selected facilities**





### **Data collection**

A mix of non-participant observation and key informant interviews (KII) was used to collect data for this study. The investigator (first author) visited all 8 facilities within one month (June 2020). This happened during the first and second phases of easing lockdown for COVID-19 pandemic in Nigeria which commenced in May 2020. However, the investigator took steps to ensure safety by facemask wearing, using a private vehicle to avoid contacts, minimal close interaction with persons at facilities, had provision for extra facemasks to be given to those he interacted with, maintaining appropriate physical distancing at each point, and effective hand sanitizing when necessary. A checklist for observation was drawn by the authors to include the presence of perimeter fence, security guards and state of power supply. The investigator took extensive notes of what he observed on the spot, after introducing himself to the health worker(s) on the ground as a researcher and orally seeking their permission to proceed with the study. Permission was swiftly granted owing to a working relationship the investigator shares with most PHC facilities in the State. For coherence, the notes were structured to follow three key themes of (a) state of security of the facilities (b) implications for availability of health service delivery, and (c) what the grassroots are doing to secure themselves amidst weak or no intervention from the government, which we describe as horizontal-level solutions. To understand in-depth the security situation of the facilities, available health workers provided more insights. The insights were recorded with an android phone following acknowledgement by the health workers. Those that interacted with the investigator were promised confidentiality and anonymity.

### **Ethical approval**

Ethical approval was granted by the Health Research Ethics Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla.

Approval No: NHREC/05/01/2008B-FWA00002458-IRB00002323).

### **Data analysis**

A phenomenological process to data analysis was applied, which implies constructing field experiences and responses into thematic meanings [20]. Observations and narratives were reviewed and categorized under three thematic categories: (1) the state of security of the facilities; (2) implications for healthcare and UHC; (3) horizontal solutions. In line with Padgett's recommended observer triangulation and peer debriefing in strengthening qualitative studies [21], the thematically arranged observations and narratives were individually reviewed among the researchers. They were also handed to two peers within the fields of community health and social determinants of health to validate appropriateness. Their comments benefitted the quality of the research reporting.

### **Results**

Results are presented in three themes. The first examines the state of security of the facilities. The second considers the security concerns and influence exercised on healthcare and UHC. While the third provides horizontal-level solutions.

#### ***Security of PHC facilities in Enugu State***

Of the eight facilities visited, six of them were fenced with functional gates. The **Agbani PHC facility** shares a compound with a police station. There were mixed reactions to the security from the police. The facility also has a perimeter fence. This was the only facility the investigator visited and got checked before entering. Although, he was somewhat asked by one of the Police

officers to offer money, which he refused. A health worker in the facility said – “As you can see, we are together with the Police and should be secured, but patients sometimes avoid coming to the facility because the Police are here”.

The rest facilities had no one who monitors anyone at the entrance. The gates and perimeter fence tend to have no security implication during the day since anyone could get into the facilities unchecked. The health workers on duty receive persons who get into the facilities, and sometimes, they could be unaware of who gets into the facility or goes out.

*Well, we don't have any security guard here. I get busy and sometimes, cannot tell who is coming or leaving. It is worse during immunization or antenatal when we attend to too many persons. It is not safe, but we depend on God. My colleague's phone was stolen the other day and we could not trace who stole it (Health worker, Asata Health Centre).*

The narrative above is not farfetched from the experience across other facilities, except the one in Agbani. Such loosed security experience during the day could be instructive of what could happen at nights. A few narratives below explain further:

*We only have our volunteer worker living here. We don't live here because the accommodation is small, and it could be scary at nights. The volunteer worker is usually scared to open the gate for anyone who knocks at night because you cannot tell if it is a pregnant mother or a criminal. The other day, she was taking care of a woman who went into labour, I think around 11 pm or 12 am [...] On entering her room, a thief was in it. She fought with him, but the thief overpowered her and took her phone and money. Thank God she was not raped [...] She screamed, but no one could come to help her. Even the patient and her husband had to first secure themselves. You have*

*seen how quiet this place is [...] (Health worker, New Haven Health Centre).*

*I was delivering a woman of her baby one night. Thieves broke into the facility. They robbed me and robbed the woman even while in labour. They took our phones and money. It was so terrible that night (Health worker, Asata Health Centre).*

A health worker in **Akegbe Ugwu facility** reported that the power-generator set they got from a programme – Partnership for Transformation of Health Systems (PATHS 1) was stolen. In Nkanu West, the facilities except for Agbani PHC facility mentioned losing a few items like foodstuff, fridge, etc., to thieves. These concerns of robbery attacks and theft caused some facilities to shut down before it gets dark, health workers could stay back in fear or liaise with local and neighbouring security agents. On the issue of power supply, it is common knowledge that illumination enhances security. Being off the grid is common among PHC facilities, for the reason that they might lack the wherewithal to pay bills. The investigator only met two facilities with power supply (**Ngwo and New Haven PHC facilities**) while on ground, and both are in the urban area, even though Ngwo can be considered semi-urban. However, health workers in these facilities mentioned that the power supply is not steady and they cannot consistently fund alternative sources. What it means is that they rely on kerosene or rechargeable lanterns to function when no power and when it is dark. For the PHC facilities in the rural zone, power supply remains in hopes. The respondents said that most and if not all the attacks that they have experienced and heard, happened during the dark hours, and in the absence of power. A health worker from **Amodu PHC facility** said, “if we have a big security light in front of our facility which constantly shines when it is dark, it will help chase away hoodlums because they know they can easily be seen”. Other facilities with power



supply (although the investigator met them without power) but still had issues with steadiness are Akegbe Ugwu PHC, Amodu PHC, Agbani PHC, and Asata PHC. See

Table 1 for a complete mapping of the security features of the selected facilities and evaluation of security risks.

**Table 1: Selected PHC facilities from Nkanu West and Enugu North LGAs, security features and evaluation**

Facilities	Perimeter fence	Stand-by security personnel	Power supply	Alternative source of power supply	Risk level
<b>Nkanu West</b>					
Akegbe Ugwu PHC	Yes	No	Yes (unsteady)	No	Yellow
Amodu PHC	No	No	Yes (unsteady)	No	Red
Amagu PHC	No	No	No	No	Red
Agbani PHC	Yes	Yes (although it shares a compound with the police, security is still challenging)	Yes (unsteady)	No	Yellow
<b>Enugu North</b>					
New Haven PHC	Yes	No	Yes (unsteady)	No	Yellow
Ngwo-Hilltop PHC	Yes	Yes (just night)	Yes (unsteady)	Yes (but lacks fund to consistently run it)	Green
Coal Camp PHC	No	No	No	No	Red
Asata PHC	Yes	No	Yes (unsteady)	No	Yellow

Source: Authors' compilation

Legend: Red – High-level risk; Yellow – Mid-level risk; Green – No risk

***Insecurity in PHC facilities and implications for healthcare and UHC***

Everyone who gives and receives health services wants to be safe while doing so. On

the contrary, this is not the case across the visited PHC facilities, as both health workers and health service users are unsatisfied with the security level, but **Ngwo-Hilltop PHC**. In the **Coal Camp** facility, although

it is fenced, it is still accessed by cult groups. The cultists come around the facility to smoke marijuana. They threaten the health workers at times and steal items from the facility. The health worker that was engaged said both patients and health workers are usually scared when the cultists are around the facility, and they get disturbed by the smell of the smoked marijuana. She also mentioned that it affects the inflow of patients they receive. A sad story of a stolen baby was reported.

*[...] our patients could be scared and even us health workers. We fear what might happen to us. Some patients have stopped coming here. I am even scared of coming to work at night. There is this story that a baby was stolen from this facility by hoodlums. The community people are still scared of that till today (Health worker, Coal Camp Health Centre).*

A major concern the health workers expressed is that of closing the facilities during unsafe periods or refusing to open the facility for anyone in such times. On some occasions, their choices to stay safe affected healthcare seekers. A volunteer health worker recounted her experience:

*I have been reported to the OIC severally that I locked out persons who came to use our health centre. Some of them are pregnant women. This facility has been robbed during such odd hours. I am a young girl, and I do not want to be attacked or raped. That is why I stopped opening the gate when it is so late, especially during midnights. Most times, I am the only one staying here (Health worker, Akegbe Ugwu Health Centre).*

*[...] Anyone who wants to come to this facility for the first time, especially at night, will be discouraged for the sake of the fear that it is not fenced and no security personnel. I live here, and I get scared, even with the neighbourhood watchmen around. Sometimes, they might not be close to the*

*facility because they move around [...] So, you can imagine what patients will think about when coming here, especially the first-time patients who are not aware that the neighbourhood security watchmen can sometimes be of help (Health worker, Amodu Health Centre).*

Finally, a health worker from **Asata Health Centre** made mention of what the appalling news of robbery could cause. She pitifully said:

*The woman that was in labour who was robbed went to tell some persons what happened to her. For a while, we hardly got patients visiting at nights [...] I can't tell how they might have survived, especially those that could go into labour within such dangerous times. Maybe, they might have gone to private facilities or the Enugu State Teaching Hospital. At least those are usually secured (Health worker, Asata Health Centre).*

#### **Horizontal solutions to insecurity in PHC facilities**

Aside from the PHC facility in **Agbani**, the rest facilities tried to device some ways to secure themselves. Some of them were beneficial and those that concern locking up facilities during dusk kept the health workers safe but deprived service users of health services. For **Ngwo-Hilltop Health Centre**, the head of the facility privately employed the services of a man within the 50s to help secure the facility during dusk. According to a narrative from a health worker, the employed security personnel has a main job he does during the day and reports to the facility by the late evening hours to commence his security job. He is paid N5000 (\$12). For the efficacy of his service, see quote below:

*[...] He uses a very big torch to flash around [...] because of his presence, the volunteer health workers who stay in the facility feel comfortable at nights. They don't need to attend to the gate when someone*

*comes late at night. He attends to them, and verifies, before allowing the person in. Patients do not have any need to be scared again [...] (Health worker, Ngwo-Hilltop Health Centre)*

In **Amodu Health Centre**, there is an understanding between the facility and the neighbourhood security watch. Fortunately, they have an office not so far from the facility. Amidst the fears the health workers cite because of the poorly protected facility, they tend to feel a sense of hope that the neighbourhood security watch could come to their rescue if it matters. The phone contacts of key members of the security outfit are with the health workers residing in the facility. One of the health workers narrates her experience:

*One day, I was here at night and I sighted herdsmen. You know how herdsmen have been terrorizing the country. So, I immediately put a call across to one of the neighbourhood security men. Not so long they landed at the facility and the herdsmen had to leave the area (Health worker, Amodu Health Centre).*

Lastly, the health facilities in **New Haven** and **Amagu** tend to share a similar experience concerning the provision of security for their facilities. It deals with leveraging the security apparatus of neighbours who are elites. For instance, the facility in **Amagu** is close to the Chief of the community. What they have been able to do is to request that the security of the palace equally puts an eye on their facility. Fortunately, the Chief approved the request. The facility in **New Haven** shares a fence with a Catholic Priest. They have been able to also reach a similar bargain.

## Discussion

A vital part of the UHC is to guarantee improved access to health facilities which seems suboptimal in the study area, especially during dusk hours. Scholars in health systems have at different times researched

and communicated findings on how access to health services can be improved. In all, a missing agenda evident because of paucity in literature is the subject of physical security of health facilities. It is common sense that no stakeholder in the giving and receiving ends of health services would want to lose his or her life to insecurity. Much of financial security as a strong component of UHC is discussed extensively in literature. Yet on second thought, there could be a spillover of the effects of poor physical security into financial security while accessing healthcare. We have seen how a finding in this study implied that closure of the PHC facility for security concerns forced service users into considering private facilities and higher-level hospitals where the cost of healthcare is higher. These are some concerns raised in Onwujekwe et al. about the need to keep PHC facilities open and health workers present to effectively dispense health services [5].

Efforts are made in terms of seeking to optimize human resources for primary healthcare, but they have largely focused on mainstream health services [22,23]. The neglect of the security apparatus of the primary healthcare stands remarkably high chances of causing losses to the gains from the other areas of human resources for health. Three vital elements this study has identified that will boost the security of PHC facilities in Nigeria are perimeter fence, power supply (especially during dusk), and competent security personnel. We found a huge security gap across the studied PHC facilities, which mirrors the likelihood of similar experiences all over PHC facilities in Nigeria. The studied facilities were lacking at least two of the vital security elements, and in some cases, all three. We discovered that a facility that shares a common compound with the Nigeria Police Force (NPF) could not boast with the expected security they should enjoy from such a privilege. Rather, findings

showed that patients avoided the facility because of the presence of the Police, which could be in connection with the corrupt attitudes of most police officers in Nigeria and the grave disregard of the citizens they are meant to protect. Nigeria's Police Force is among the five worst-performing on the globe [29]. As a result of these gaps, theft, high profile stealing of properties and even babies, harassment, and attacks on health workers and patients were reported. An investigative report by Onyeji and a study from Etiaba et al revealed the neglect of PHC facilities in Nigeria, strongly maintaining that most PHC facilities are unsafe for health workers and patients [11,24]. We discovered that these concerns of insecurity were prevalent when it gets dark. This could be the pointer toward the fact that the health workers held nothing back when stating the crucial importance of power supply. They were of the view that illumination will help drive away the hoodlums. Unfortunately, they neither had a stable power supply nor the resources to maintain alternative sources. We recorded cases of petrol-powered generators donated to PHC facilities being stolen. Such generators as explained to the investigator are of big sizes. If such can be taken away from the facility without any attempt to apprehend the culprit, it reveals how terrible the security condition of the facilities must be. As a result of poor power condition in these facilities, kerosene lanterns are mostly used, especially, since you even need power supply to charge the rechargeable lanterns. Okoye et al propose the need for off-grid solutions to the power concerns of PHC facilities [13]. This could form a programmatic option for the government and donors, since most of the facilities are currently off-grid because they lack the wherewithal to regularly pay light bills. With poor power condition across the PHC facilities, added to the absence of perimeter fence and competent security guard, health workers and patients try to be rational about their

safety. At times, it could entail shutting down facilities at dangerous times or the patronage of more secured facilities for a higher fee. Although this is not good for UHC, health workers and patients might consider such choice as the best option to take. This aligns with the rational choice theory [17]. Therefore, efforts must be made to address the rational justifications that are tantamount to the achievement of UHC. This is crucial, given that primary healthcare is the cornerstone to achieving UHC [1]. One major observation in this study is that the facilities with "no risk" or "mid-level risk" were seen to have more patients than those with "high-level risk" (refer to Table 1). Since the investigator did not stay in any of the facilities late into the nights, it was vivid from activities during the day hours that facilities with some security sense fared better in patronage than those without any security sense. This is irrespective of geographical location because the investigator also discovered that rural and semi-urban facilities like Akegbe-Ugwu and Ngwo-Hilltop PHCs respectively, were seen to have more patronage than Coal Camp PHC facility which is located at the heart of Enugu urban. Again, it could be that health service consumers continue patronage with PHC facilities or any other facility that guarantee their security during odd hours. It is especially a case for pregnant women, nursing mothers or accident victims who could be in urgent need of health services. Thus, these categories of service users are more likely to go back to those facilities that attended to them during distress, and importantly, under safe conditions. This explains why urban PHC facilities like the one in Coal Camp which is centrally and strategically located, records poor patronage even during the day. In all, while vertical interventions such as providing in a standard manner the three key security elements would radically change the security face of PHC facilities, in the meantime



some horizontal strategies have been applied with evidence to show effectiveness. Although, some of these horizontal strategies could mean that health workers spend out of their poor salaries or device informal patterns of charges on health service users to provide these security elements. Such could be demotivating and could affect job satisfaction, as well as encourage corruption. For instance, engaging a willing fellow ready to offer security services to the facility only during dusk at a relatively affordable fee was applied by one of the facilities. Though, there is the concern that he might not be as active as he should, given his age, and the stress of shuttling between the security job at night and his primary job during the day. Other approaches we found included discussing with the elites around the facility to permit their security personnel to have an eye on the facility and leveraging the services of neighbourhood security watch. In conclusion, the security of PHC facilities strongly connects with the availability of health services which enhances access and utilization that are key to the tenets of UHC. This study has brought to the fore a less researched subject, yet a vital component that will improve the safety of health providers and consumers at any time within the facility. Safety will improve efficient service delivery and healthcare-seeking. This will scale up the pace of Nigeria towards UHC. Our study has also brought to the table the need to reform the Nigeria Police Force, perhaps its members could at some point be deployed to man the security of PHCs. Interestingly, President Muhammadu Buhari's agenda captures security [25]. Therefore, addressing insecurity across health facilities will be vital. It will be interesting to replicate this study in other geopolitical zones since crime statistics across the geopolitical zones vary. Also, it will be good to give patients the chance to speak on this subject. These two recommendations for further research are the limitations of our study.

## References

1. WHO (2017a). From primary health care to universal coverage – the “affordable dream”. Retrieved from <https://www.who.int/publications/10-year-review/chapter-uhc.pdf?ua=1>
2. WHO (2018). *Declaration of Astana*. Retrieved from <https://www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf>
3. Mohammed, A., Agwu, P., & Okoye, U. (2020). When primary healthcare facilities are available but mothers look the other way. *Social Work in Public Health, 35*(1-2), 11-20
4. National Primary Health Care Development Agency [NPHCDA] (2018). *Ward Health System: 2<sup>nd</sup> Edition*. Abuja: NPHCDA
5. Onwujekwe, O., Odii, A., Agwu, P., Orjiakor, C., Ogbozor, P., Hutchinson, E., Mckee, M., Roy, P., Obi, U., Mbachu, C., & Balabanova, D. (2019). *Exploring health-sector absenteeism and feasible solutions: Evidence from the primary healthcare level in Enugu, South East Nigeria*. Retrieved from <https://ace.soas.ac.uk/wp-content/uploads/2019/09/ACE-WorkingPaper014-NigeriaAbsenteeism-190916.pdf>
6. WHO (2017b). *Tracking Universal Health Coverage: 2017 Global Monitoring Report*. Retrieved from <https://apps.who.int/iris/bitstream/handle/10665/259817/9789241513555-eng.pdf;jsessionid=8E8AF531BE2EDFF9EF0774E9E22E01D3?sequence=1>



7. Abubakar, I. (2012). The health care sector and national security in Nigeria:  
An exploratory perspective. *Journal of the Historical Society of Nigeria*, 21, 133-153
8. National Bureau of Statistics (2017). *Crime statistics: Reported offences by type and state*. Abuja: NBS
9. Okoli, U., Eze-Ajoku, Oludipe, O., Spieker, N., Ekezie, W., & Ohiri, K. (2016). Improving quality of care in primary health-care facilities in rural Nigeria: successes and challenges. *Health Services Research and Managerial Epidemiology*, 1-6
10. Ebenso, B., Huss, R., Uzochukwu, B., Etiaba, E., Manzano, A., Onwujekwe, O., Ezumah, N., Hicks, J., Newell, J., Ensor, T., & Mirzoev, T. (2018). *What motivates primary healthcare workers to perform well in resource-limited settings: Insight from realist evaluation of health systems strengthening in Nigeria*. Retrieved from <https://core.ac.uk/download/pdf/199218489.pdf>
11. Etiaba, E., Agbawodikeizu, U., Ogu, O., Mirzoev, T., Russ, R., Ebenso, B., & Uzochukwu, B. (2019). Security of primary healthcare facilities as a determinant of provision and utilization of maternal and child health services in Anambra State, Nigeria. *Policy Brief*. REVAMP Project. Enugu: University of Nigeria Enugu Campus
12. Muhammed, K., Umeh, N., & Nasir, S. (2013). Understanding the barriers to the utilization of primary healthcare in a low-income setting: Implications for health policy and planning. *Journal of Public Health in Africa*, 4(3), 64-67
13. Okoye, T., Salman, T., Ofoegbu, D., & Garba, M. (2018). *Improving access to clean reliable energy for primary health care centres in Nigeria: Situation analysis of PHCs in the Federal Capital Territory*. Abuja: The Heinrich Boell Stiftung Nigeria
14. Christian Aid UK (2015). *Assessment of primary health centres in selected states of Nigeria*. Retrieved from <https://www.christianaid.org.uk/resources/about-us/assessment-primary-health-centres-nigeria>
15. Oyekale, A. (2017). Assessment of primary health care facilities' service readiness in Nigeria. *BMC Health Services Research*, 17(172), 1-12
16. Eboreime, E., Idika, O., Omitiran, K., Eboreime, O., & Ibisomi, L. (2019). Primary healthcare planning, bottleneck analysis and performance improvement: An evaluation of processes and outcomes in a Nigerian context. *Evaluation and Program Planning*, 77, 1-9
17. Homans, G. (1961). *Social behaviour: Its elementary forms*. London: Routledge and Kegan Paul
18. National Population Commission. (2010). *Priority table, volume four: Population distribution by age and sex*. National Population Commission, Abuja.
19. Uzochukwu, B., Okwuosa, C., Ezeoke, O et al (2015). Free maternal and child health services in Enugu State, South East Nigeria: Experiences of the community and

- healthcare providers. *International Journal of Medical and Health Sciences Research*, 2, 158-170.
20. Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among the five approaches*. SAGE Publications, Inc, Thousand Oaks, California
  21. Padgett, D. K. (2008). *Qualitative methods in social work research* (2<sup>nd</sup> ed). Thousand Oaks, California
  22. Kress, D., Su, Y., & Wang, H. (2016). Assessment of primary health care system performance in Nigeria: Using the primary health care performance indicator conceptual framework. *Health Systems & Reform*, 2(4), 302-318
  23. Olalubi, O., & Bello, S. (2020). Community-based strategies to improve primary health care (PHC) services in developing countries: Case study of Nigeria. *Journal of Primary Health Care and General Practice*, 4(1), 1-6
  24. Onyeji, E. (2017, December 17). Investigation: The terrible state of Nigeria's primary healthcare centres (2). *Premium Times*. Retrieved from <https://www.premi-umtimesng.com/news/headlines/252694-investigation-terrible-state-nigerias-primary-healthcare-centres-part-two.html>
  25. Tilley-Gyado, R., Filani, O., Morhason-Bello., & Adewole, I. (2016). Strengthening the primary care delivery system: A catalytic investment toward achieving Universal Health Coverage in Nigeria. *Health Systems & Reform*, 2(4), 277-284
  26. Anumba, J., Ojiako, J., Gbokwe, E., Ejikeme, J., & Nnam, V. (2018). Crime mapping in Enugu urban area of Enugu State, Nigeria using GIS approach. *Journal of Environment and Earth Science*, 8(9), 18-36
  27. Etiaba, E., Manzano, A., Agbawodikeizu, U., Ogu, U., Ebenso, B., Uzochukwu, B., Onwujekwe, O., Ezumah, N., & Mirzoev, T. (2020). "If you are on duty, you may be afraid to come out to attend to a person": fear of crime and security challenges in maternal acute care in Nigeria from a realist perspective. *BMC Health Services Research*, 20(903), 1-10
  28. Madu, C. (2019). *Sorry condition of primary health care facilities in Enugu State as government promises to overhaul the system*. Retrieved from <http://radionigeriaenugu.com/all-news/local-news/sorry-condition-of-primary-health-care-facilities-in-enugu-state-as-government-promises-to-overhaul-the-system/>
  29. International Police Science Association (2016). *World internal security & police index*. Retrieved from <http://www.ipsa-police.org/Images/uploaded/Pdf%20file/WISPI%20Report.pdf>.