



## Measures to Use during Pandemic to Mitigate the Contamination Level: Case of COVID-19, North West Region of Cameroon

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### Abstract

This study seeks to expose the situation of COVID-19 among health personnel, describe any difference in contamination of COVID-19 among different categories of health personnel, and to explore any difference in exposure to COVID-19 among different categories of health personnel in the North West Region of Cameroon.

The data for the study are collected from reports of COVID-19 at the Bamenda Health Municipality from April 2020 to January 2022. The findings reveal that nurses are more exposed than medical doctors and lab technicians with a professional exposure rate of 59% with up to 107 nurses contaminated. The study observed poor standard operating procedures for health personnel, poor healthcare infrastructure and an increase in the number of COVID-19 cases among healthcare personnel.

The findings from this study lead to the conclusions that; the situation of COVID-19 among health care personnel in the North West Region of Cameroon is still on the increase, there are differences in contamination of COVID-19 among different categories of health personnel, wherein nurses are more likely to get contaminated, there are differences in professional exposure to COVID-19 among different categories of health personnel wherein nurses are more exposed. On the bases of the findings reported, we suggest the putting in place of standard operating procedures for healthcare personnel so as to reduce the spread of the pandemic among health care personnel. We also strongly suggest improvements of healthcare infrastructure for the management of a pandemic and the strengthening of the weak healthcare system in Cameroon.

**Keywords:** COVID-19, Contamination; North West Region; Bamenda; Cameroon

### Introduction

The discovery of novel Coronavirus Disease 2019 (COVID-19) in Wuhan, China in December 2019 caused by the virus species severe acute respiratory syndrome-related coronavirus, named SARS-CoV-2 pandemics have enormous implications on health care systems, particularly on the workforce. Novel-coronavirus disease is currently a global health threat and public health emergency of international concern [1]. The outbreak was first reported in late December 2019, when clusters of pneumonia cases of unknown etiology were found to be associated with epidemiologically linked exposure to the seafood market and untraced exposures in the city of Wuhan of China in Hubei Province.

In Africa, the outbreak of COVID-19 in the WHO African region has rapidly progressed over the past several weeks with large areas affected. The WHO situation report of June 9<sup>th</sup>, 2020, showed a cumulative total of 140,498 reported cases and 3,352 deaths related to COVID-19 across 47 countries and territories in the African region. The most affected countries in the WHO African region were South Africa (50,879 cases), Nigeria (12,801 cases), Algeria (10,265 cases), Ghana (9,910 cases), and Cameroon (8,060 cases). It is estimated that the majority of cases have arisen from community transmission or clusters of cases, although a few African countries show sporadic cases [2].

Cameroon is among the COVID-19 affected countries as of March 6<sup>th</sup>, 2020, the date on which one imported case was first detected and officially reported in Cameroon, and later than almost 15,000 officially confirmed cases as of July 6<sup>th</sup>, 2020 (Coronavirus Statistics 2020) As of March 26<sup>th</sup>, 2021, there were over 40,622 total notified cases and over 600 deaths in Cameroon. Cameroon was

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among the topmost COVID-19 affected countries in sub-Saharan Africa. As of May 12<sup>th</sup>, 2020, Cameroon was the country with the highest weekly coronavirus infection rate in the World [3,4].

Some studies have explored the issues that face nurses during their response to COVID-19 involving staffing shortages, depression related to anxiety and fear of infection, a lack of communication with patients, exhaustion due to working long hours without proper rest on Personal Protective Equipment (PPE). Another involves the lack of medical supplies and resources, such as PPE. In a study on the reflections on the lived experience of working with limited personal protective equipment during the COVID-19 crisis, wrote that COVID-19 has placed significant strain on United States' health care and health care providers.

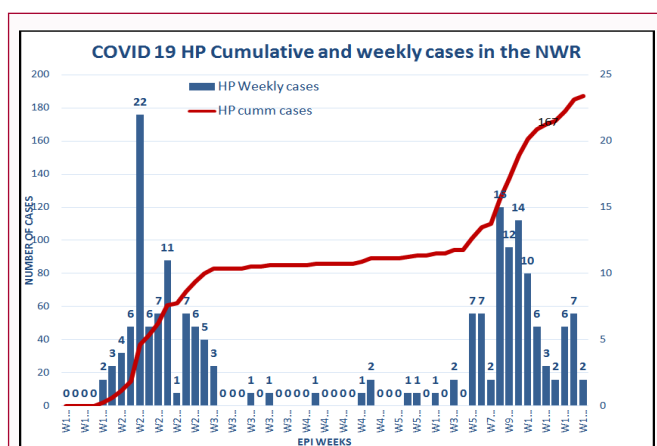
Rapid surveys such as that of Elena Savoia et al., indicated that while ramping up supplies on personal protective equipment for healthcare workers is certainly of mandatory importance, adequate training and clear instructions are just as important. Empirical evidence from Pierre-Philippe Piché-Renaud, Helen E. Groves, Taito Kitano, Callum Arnold, Angela Thomas, Laurie Streitenberger, Laura Alexander, Shaun K. Morris and Michelle [5] concluded that as part of their pandemic response plans, healthcare institutions should have ongoing training for HCWs that focus on appropriate personal protective equipment doffing and discussions around modes of transmission of COVID-19. At the same time, WHO [2] suggested the need to protect the health and well-being of the most valuable healthcare resource in the COVID-19 pandemic (our nurses in particular).

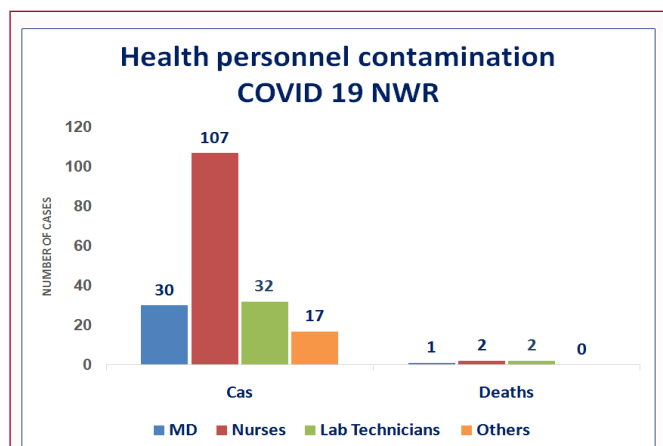
Following this same line of thoughts, Judith E. Arnetz, Courtney M. Goetz, Bengt B. Arnetz, Eamonn Arble [6] used logistic regression analysis and indicated a significant relationship between >4 h length of use and the occurrence of redness of the cheeks, dry mouth, redness of the nose bridge, and redness of the ears for N95 masks; dryness of the mouth when wearing surgical masks; skin dryness, sweating, and redness from wearing gloves; headaches from wearing goggles/face shields; and sweating when wearing overalls or a gown. Assessing the relationship between government intervention and the spread of epidemics from the perspective of epidemic prevention and control; and second, reflecting on the government's experience in epidemic management from the perspective of public crisis governance of government. The lack of standard operating procedures and poor healthcare infrastructure for the management of a pandemic put a lot of strain, in the form of increased numbers of COVID-19-positive cases, on an already weak healthcare system in Pakistan.

Despite the large number of researches carried out between 2019 and 2021 on COVID-19 related topic, to the best of our knowledge, no research has been carried out on protective models for nurses and patients in a COVID-19 treatment facility in both high- and low-income countries. The study is carried out in the North West Region of Cameroon. The research design will be exploratory and descriptive research designs. Thus, a mixed study which combines of both qualitative and quantitative method. The research explores relevant existing data already collected by organizations/institutions/agencies after ensuring that it is reliable and relevant.

**Statement of research problem**

Corona virus is a pandemic disease reducing the world's population and urgently need a lasting solution with Cameroon and Bamenda not left out. One month after the first case of COVID-19





Source: Computed by Author(s), 2021

**Figure 2:** Health personnel contamination of COVID-19 NWR.

The report on Figure 2 shows that nurses are the highest contaminated health personnel in the North West Region of Cameroon with up to 107 nurses contaminated. This is closely followed by lab technicians, medical doctors and other health workers with 32 cases, 30 cases and 17 cases of COVID-19 respectively. The number of deaths of health care personnel in the North West region of Cameroon shows that nurses and lab technicians recorded the highest deaths followed by medical doctors.

## Objectives

This paper seeks to investigate into the current situation, contaminations rates and exposure among different health personnel. Specifically, the paper seeks to;

- Examine the situation of COVID-19 among health personnel in the North West Region of Cameroon
- Describe any difference in Contamination of COVID-19 among different categories of health personnel in the North West Region of Cameroon.
- Explore any difference in exposure to COVID-19 among different categories of health personnel in the North West Region of Cameroon.

## Methodology and Data

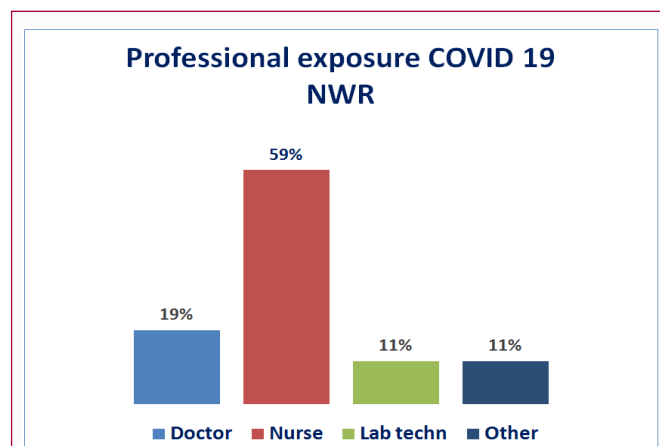
In order to address the specific research questions, simple descriptive statistics were employed which consisted of plotting graphs and computing averages and comparing them to investigate if there are significant differences in COVID-19 contamination and exposure levels among the health personnel in the North West Region of Cameroon. The study uses secondary data collected from reports of COVID-19 cases at the Bamenda municipality for 92 weeks running from April 2020 to January 2021.

## Findings and Discussions

This study attempt to identify the best measures to use during pandemic to mitigate the contamination level, better care, positive thinking and display of positivism in the hospital environment for nurses and other health personnel in Cameroon and North West Region in particular.

## Conclusion

The findings from this study leads to the conclusion that the situation of COVID-19 among health personnel in the North West Region of Cameroon is still on the increase. At the same time, this study concludes that there are differences in contamination of



Source: Computed by Author(s), 2021

**Figure 3:** Professional exposure to COVID-19 in the NWR, Cameroon.

The report reveals that nurses are more exposed than medical doctors and lab technicians with a professional exposure rate of 59%. This is followed by medical doctors with an exposure rate of 19%, lab technicians and other health professionals with an exposure rate of 11%. With up to 107 nurses contaminated in the North West Region of Cameroon.

COVID-19 among different categories of health personnel in the North West Region of Cameroon wherein nurses are more likely to get contaminated. We also conclude that there are differences in professional exposure to COVID-19 among different categories of health personnel in the North West Region of Cameroon wherein nurses are more exposed.

## Recommendations

On the bases of the findings reported, we suggest that the putting in place of standard operating procedures for healthcare personnel so as to reduce the spread of the pandemic among health care personnel.

We also strongly suggest improvements of healthcare infrastructure for the management of a pandemic and the strengthening of the weak healthcare system in Cameroon.

## References

1. Wang C, Horby PW, Hayden FG. A novel coronavirus outbreak of global health concern. *Lancet*. 2020;395(10223):470-73.
2. World Health Organization Shortage of personal protective equipment endangering health workers worldwide (2020).
3. Bang H, Mbah M, Ndi H, NdzoJ. Gauging Cameroon’s resilience to the COVID- 19 pandemic: Implications for enduring a novel health crisis. *Transforming Government: People, Process and Policy*. 2020;15(4):658-74.
4. Tamfu A, Lietbouo A. Schools in Cameroon gradually reopen amidst COVID-19 pandemic. (2020, June). Retrieved from: XINHUANET. 2020.
5. Pierre-Philippe PR, Helen EG, Taito K, Callum A, Angela T, Laurie S, et al. Science Healthcare worker perception of a global outbreak of novel Coronavirus (COVID-19) and personal protective equipment: Survey of a pediatric tertiary-care hospital. Published online by Cambridge University Press: 12 August 2020.
6. Judith EA, Courtney MG, Bengt BA, Eamonn A. Nurse reports of stressful situations during the COVID-19 pandemic: Qualitative analysis of survey responses. *Int J Environ Res Public Health*. 2020;17(21):8126.
7. CDC. COVID-19 in Cameroon - Warning - Level 3, Avoid Nonessential Travel. *Travel Health Notices Travelers’ Health*. Accessed 9 September 2020.

8. Minister of Public Health. Cameroon COVID-19 Situation Report. 2020. African continent play the long game? J Glob Health. 2020;10(1):010339.
9. Akaninyene O, Ebenso B, Labote R, Yaya S. Tackling COVID-19: Can the