

## RESEARCH ARTICLE

# Strategies to Address the Mental Health Burden of Nurses during the COVID-19 Pandemic in South Africa

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## ABSTRACT

The COVID-19 pandemic has placed a burden on healthcare systems in South Africa. This has added huge pressure on frontline healthcare workers, especially nurses, who maintain workplace safety and oversee the efficient use of resources. Prior to the pandemic, South Africa had a healthcare worker density above the WHO recommendations but faced a labour shortage due to healthcare worker emigration, with nearly 20% of public sector nurses leaving the country. In addition to this severe shortage of staff, insufficient personal protective equipment and declining wages led to increased infections, mental health distress, and poor employee morale among nurses during the pandemic. However, by following a modified response strategy similar to Peru's, which aims to isolate COVID-19 epicenters and utilize task shifting through community health workers, South Africa can alleviate the current nursing overburden by reducing mental health distress - overall improving the country's Human Resources for Health.

## INTRODUCTION

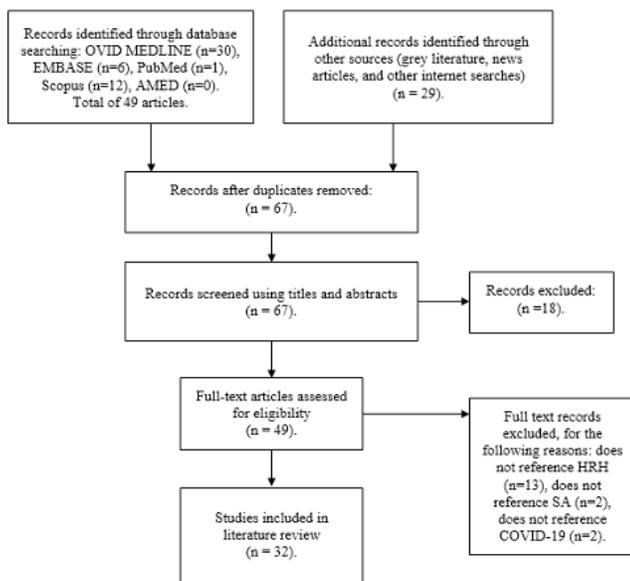
As of December 17, 2020, South Africa (SA) had reported 883,687 COVID-19 cases, 23,827 deaths, and accounted for over 60% of new cases in sub-Saharan Africa (SSA) [1]. The country declared an early and stringent lockdown after the first 400 incidences of COVID-19 but this proved ineffective, as it failed to consider the dependence of socioeconomic status on access to healthcare [2]. Deep-rooted inequities resulted in increased transmission among impoverished individuals, thereby overwhelming public hospitals [3]. SA's pandemic testing capacity was also insufficient compared to other countries, with a testing turnaround time of up to 14 days, a period that can potentially challenge an effective COVID-19 response [4,5].

A core indicator that the WHO recommends for measuring the effectiveness of human resources for health (HRH) is the number of health workers per 10,000 population [6]. This indicator represents health worker density (HWD). It is an essential metric to compare the size of the current workforce against a given threshold density of skilled healthcare workers (HCWs) required for the delivery of essential health services [7].

The COVID-19 pandemic has exposed a deep-rooted HWD challenge pertaining to retention amongst nurses in SA, which could impede SA's current and future COVID-19 response as well as its response to future epidemics. Therefore, this paper will explore different strategies and propose policies that SA can adopt to improve their HWD against subsequent waves of COVID-19.

## METHODOLOGY

An extensive literature search was conducted in five major databases: OVID MEDLINE, EMBASE, PubMed, Scopus, and AMED. The following terms were used to search each database: “South Africa”, “COVID-19 or Coronavirus”, and “Delivery of Health Care or Health Policy or Health Workforce or Human Resources for Health.” The search was then refined to only display English articles from the last five years. After combining these articles with supplemental records from literature, grey literature, news articles, etc., records were filtered for duplicates, assessed using titles and abstracts, and then screened with a full-text review. This review’s exclusion criteria included: not relevant to HRH, not specific to SA, or not relevant to COVID-19 (Figure 1).



**Figure 1.** PRISMA Flow Diagram.

## RESULTS

As of 2020, SA’s HWD of approximately 59 per 10,000 individuals was above the recommended number of 23 per 10,000 needed to attain an essential health coverage of 80% [8,9]. As nurses make up roughly 87% of HCWs and encounter 86% of primary care patients, maintaining essential health coverage is dependent on the actions of the SA government and their retention of nurses [8,10,11]

Despite meeting this global minimum criterion for HCWs, SA’s HWD is not sufficient for local needs; with nearly 20% of public sector nurses emigrating prior to the pandemic in pursuit of higher salaries and reduced occupational stress, SA faces a labour shortage [12,13]. A related factor – excessive workload, possibly related to poor mental health – has also contributed to this departure [13]. Negligence towards HCWs’ safety by the South African government during the COVID-19 pandemic may have increased departure rates by heightening nurses’ perceptions of COVID-19 infection risk and overburdening them with a high volume of COVID-19 patients [14]. Indeed, the collective effect of insufficient provision of personal protective equipment and a severe shortage of staff during the pandemic has led to poor employee morale, mental health distress, and backlash from the medical field [15,16]. Although the public health sector serves 84% of SA’s population, it has an astounding nurse vacancy rate of 28% caused by poor recruitment management processes. These issues have persisted during the COVID-19 pandemic [6,17,18].

As of May 6, 2020, 511 HCWs had already contracted COVID-19 [19]. This comprised 7% of all cases within SA, of which 53% were contracted by nurses [19]. As of July 2020, over 50% of infected African HCWs were located in SA [20]. These statistics demonstrate the unsafe working conditions within the country, which place a physical and mental burden on nurses. A recent study assessing the mental health effects of COVID-19 on SA’s HCWs determined that approximately 25% experienced poor health and well-being, with the proportion of nurses (19.4%) facing psychosocial distress being significantly higher than other HCWs [21]. The burdensome mental health effects that South African nurses have experienced throughout the COVID-19 pandemic may further intensify nurses’ emigration, rendering the healthcare system incapable of managing the pandemic and jeopardizing SA’s sustained achievement of HWD prior to the pandemic.

## DISCUSSION

Due to the disproportionately high risk they face during the COVID-19 pandemic, easing the burden on nurses is essential for improving HCW density in SA. A study on Peru's approach to the COVID-19 pandemic response highlights the overwhelming strain that HCWs experience by applying an evidence-based approach to screen for anxiety and distress [22]. The researchers pinpointed epicenters in Peru with the highest COVID-19 cases and discovered that anxiety levels decrease with distance from epicenters [22]. As such, the first step in a multistage solution to decrease the COVID-19 burden on nurses would involve identifying epicenters within SA to determine priority locations to execute strategies that improve well-being and retention. The Nelson Mandela Bay Municipality is an example of an epicenter within SA where case counts were steadily rising. Implementing this recommendation in this municipality and other epicenters may drastically alleviate the mental health burden on HCWs associated with the pandemic [23].

Task shifting to less specialized health workers like community health workers (CHWs) has also proved to be a successful strategy to tackle HCW shortages in the current COVID-19 pandemic and past health epidemics. This approach can be adapted to address region-specific nursing gaps. For instance, CHWs have already assisted COVID-19 responses in certain regions of SA [24].

In Cape Town, another COVID-19 epicenter, CHWs were mobilized to test and screen individuals from households surrounding known cases in order to reduce the strain on healthcare facilities [24]. In addition to testing those in close proximity to known cases, they opportunistically screened individuals with chronic health conditions after delivering medication to their homes; within the first month, CHWs helped screen 123,251 people [25]. Since perceived risk of infection and heavy caseloads are significant risk factors for mental health distress among frontline HCWs, this strategy

could reduce the testing demands on nurses in healthcare facilities and improve overall well-being. In terms of staffing shortages, the use of CHWs relieves nurses of their screening and health promotion duties, allowing them to focus on primary and intensive care. This would be a prudent method for improving retention rates, having been proven effective in past pandemics such as the 2014 Ebola outbreak in Guinea, Sierra Leone, and Liberia [26]. During the outbreak, CHWs relieved HCW burden by performing activities outside healthcare facilities more effectively than HCWs, who were less accustomed to community-based outreach work [27].

The clear benefits of task-shifting to CHWs, a familiar approach in SA, is applicable to nursing issues in the context of COVID-19 and has the potential to improve upon their HRH.

## CONCLUSION

Although SA's initial response to COVID-19 was swift and stringent, the nation failed to provide safe working conditions for nurses and overlooked its staffing needs. This contributed to poor mental health, burnout, and attrition among nurses, thus jeopardizing short- and long-term HWD. However, by creating innovative policies that identify COVID-19 epicenters and utilizing task shifting within them to alleviate nursing caseloads, the downstream mental health effects experienced by nurses may be alleviated.

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