




# Development of a training programme for professional nurses in South Africa – An educational response to the COVID-19 pandemic

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## Abstract

**Aim:** This paper describes the development of the training programme for South African professional nurses on how to manage critically ill COVID-19 patients in intensive care units and repurposed general wards.

**Design and methods:** The Analysis, Design, Development, Implementation and Evaluation educational instructional design model guided the development of the training programme. A case-based study approach and blended learning were used to deliver the six modules.

**Results:** The training programme was developed, reviewed and validated by the coordinating team of facilitators involved in the initiative. Implementation of the training programme and the result thereof will not be discussed as part of this manuscript.

**Conclusion:** The training programme aimed to enhance the knowledge of professional nurses in the management of critically ill patients with COVID-19. As the pandemic evolves, a need for training and ongoing support was identified, which might address the need for surge capacity and hospital readiness planning.

## KEYWORDS

ADDIE model, COVID-19, intensive care unit, professional nurses, training programme

## 1 | BACKGROUND

In late December 2019, clusters of patients with pneumonia of unknown cause were reported in Wuhan, China. This was later traced to a seafood market and identified as the novel SARS-CoV-2 virus responsible for causing the COVID-19 disease (Zhu et al., 2020). What began as an outbreak in a province in China has since become a global pandemic. Pandemics have serious implications on health-care systems, especially on the workforce.

Nurses are known to play a key role in responding to such public health crises by delivering direct patient care and reducing the risk of

exposure to infectious disease (Fernandez et al., 2020; World Health Organization (WHO), 2020c). A vital role played by nurses is the provision of safe, individualised, holistic and effective care to their patients through the implementation of the nursing process. According to the South African Nursing Council (SANC), it is imperative that nursing education and training across South Africa responds to changing needs, developments, priorities and expectations in health and health care (Mahlathi & Dlamini, 2017). It has been established that sufficient information is disseminated during the training of nurses to address various needs that apply in the day-to-day care of their patients (Singh & Mathuray, 2018). The knowledge that is

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acquired through theoretical education in the classroom, and practical education during clinical training creates the foundation for safe and effective evidence-based nursing care practices. Nurses who are equipped with the knowledge, skills and attitudes that meet the SANC competency framework can work in various roles which include practitioners, educators, managers and researchers. Hence, nurses must keep pace with the newer challenges, advancing technology and growing demands of consumers of health care (Singh & Mathuray, 2018). Due to the surge in SARS-COV-2 infections in South Africa, the need for expansion of the ICUs, shortage of existing ICU staff resources, the need to upskill professional nurses for the COVID-19 pandemic and the nursing management thereof, and a request from the National Department of Health (NDoH), this course was developed as an educational COVID-19 response.

South Africa (SA) has a two-tiered healthcare system, which comprises a public health service mainly controlled by the government, and a growing private for-profit sector (Mahomed & Mahomed, 2019). The public health services are divided into primary, secondary and tertiary health facilities that are located across the provinces and managed by the provincial Departments of Health. The Department of Health of the nine provinces in South Africa is responsible for the direct employment of the health workforce, including nurses, while the NDoH is responsible for policy development and coordination (Mahlathi & Dlamini, 2017). The majority of healthcare services in the country are provided by the public sector healthcare institutions.

During the different waves of the COVID-19 pandemic, healthcare workers (HCW), inclusive of nurses, as the frontline workers in South Africa and globally, had a high risk of becoming infected with the SARS-COV-2 virus while caring for infected patients (Chersich et al., 2020). Infections among HCWs can occur when splashes or droplets of contaminated body fluids are transferred to the mucous membranes, or by touching through contaminated hands (Chang et al., 2020). Aerosol-generating procedures, like endotracheal intubation, may increase the transmission risk of the SARS-COV-2 virus among HCWs (Hui, 2017). Logistical issues related to shortages of personal protective equipment (PPE) could further complicate the situation for nurses during a pandemic (Elhadi et al., 2020; Le Roux & Dramowski, 2020). The lack of training on how to use PPE, including donning and doffing techniques appropriately by HCWs could predispose nurses to further risks (Elhadi et al., 2020; World Health Organization (WHO), 2020c). Thus, infection prevention and control (IPC) measures and training on infection control related to the COVID-19 pandemic were identified as a priority. Apart from implementing infection control principles, nurses need to be knowledgeable regarding the assessment and management of patients with COVID-19 in healthcare facilities. On the other hand, an unprecedented pandemic of this nature comes with many gaps in understanding the pathophysiology of the disease, the virus transmission, and treatment and management modalities to minimise the impact of the outbreak on individual lives and society. According to Hou et al. (2021), establishing standardised training programmes to better equip healthcare workers with specialised knowledge and skills

to manage highly infectious diseases is necessary. In order to support the response to the pandemic and to protect healthcare workers, training programmes should include the following: transmission and spread of the disease, management of patients with COVID-19, IPC and care of the healthcare worker.

Not many studies published have reported the training of nurses related to COVID-19 in South Africa. One study conducted by the Human Sciences Research Council and University of KwaZulu-Natal College of Health Sciences and Edendale Hospital reported that 42% of nurses were confident in their general knowledge of COVID-19, as against 55% of medical practitioners; and 41.5% of nurses compared to 70.3% of medical practitioners reported they are receiving training on treatment guidelines. Although training was done by other providers, the developed programme focused on equipping professional nurses with knowledge and skills to care for critically ill patients who were COVID-19 positive. In addition, mental well-being, palliative care and death/dying topics were included, which was not noted in other programmes offered. Nurses verbalised their anxiety and concerns in managing COVID-19 patients and expressed a need to be upskilled and provided with the necessary knowledge and skills. A critical need was thus identified to equip nurses with knowledge and skills in response to the pandemic by means of providing the necessary training.

This paper aims to describe the development of a training programme for professional nurses who care for critically ill patients with COVID-19 in the ICUs and repurposed general wards in South Africa, as a response to the pandemic.

## 2 | RESEARCH DESIGN AND METHODS

### 2.1 | Design and setting

The training programme was developed using an educational instructional systems design model, namely The Analysis, Design, Development, Implementation and Evaluation (ADDIE) (Cheung, 2016). The training programme was aimed at professional nurses working in the ICUs and who were expected to care for critically ill patients with COVID-19. As hospitals started repurposing general wards into units to care for critically ill patients requiring intensive care, it also became necessary to cross-train professional nurses to upskill them to provide such care. The training programme considered the needs for such an educational response. A multifaceted approach was considered as part of the implementation strategy in delivering the training programme.

### 2.2 | Methods

The ADDIE educational instructional design model guided the development of the training programme. The five phases of the model comprise, (1) analysis, (2) design, (3) development, (4) implementation and (5) evaluation (Cheung, 2016). The ADDIE instructional

design method was used, as it is a proven method for designing clear and effective training, whether as face-to face, online or as a blended learning option. The model allows for team-effort goal setting and development of learning outcomes, which was fit for purpose in developing the programme. The ADDIE model allowed for the creation of learning experiences and materials in a manner that resulted in the acquisition and application of knowledge and skills, which was accomplished by means of the multifaceted approach followed. Furthermore, the majority of the existing instructional design models are based on the ADDIE model, and therefore, seem to be most appropriate for the development of the programme.

### 2.2.1 | Phase one - analysis

In the analysis phase, the problem is identified, the goals and objectives are established, the target group, learning environment and delivery options are developed (Cheung, 2016). As a response to the pandemic, an initial need analysis was done by the NDoH suggesting training for professional nurses on the management of COVID-19 positive critically ill patients across the nine provinces in South Africa, namely the Eastern Cape, Western Cape, Gauteng, Free State, Limpopo, Mpumalanga, Northern Cape, Kwazulu-Natal and North-West. However, the Western Cape Province which was excluded as a course for all healthcare professionals at provincial level was in place.

A team comprising a coordinator, project manager, two administrators, information technology support (ITS) specialist, five nurse educators who hold an additional qualification in intensive care nursing, one professional nurse working in the ICU, and a research fellow were constituted to develop the training programme. A rapid literature review on the topic was done to assist in formulating the goals and objectives of the training programme. Furthermore, the training programme was guided by the scope of practice for professional nurses in South Africa and the competencies required in the management of COVID-19 patients. Following the needs analysis, the literature review and consultation with the NDoH, provincial training coordinators, and relevant stakeholders' consensus was reached on the content, objectives and delivery mode of the training.

### 2.2.2 | Phase two - design

In the design phase, the facilitators created a broad overview, or blueprint, describing how to deliver the instruction to meet the objectives identified during the analysis phase. Based on needs and the fact that face-to-face contact was limited due to COVID-19, it was decided to use a blended learning, and multifaceted approach for the delivery of the programme. To disseminate knowledge widely and provide easy access for professional nurses who are working in a fast-paced and complex healthcare setting, a multifaceted approach was used. This approach included the use of live Zoom sessions, Poll Everywhere (PollEv), which showed the assessment results

immediately to the participants (<https://www.polleverywhere.com>). Case studies, additional learning materials in the form of published, validated clinical guidelines, protocols, pocket cards and algorithms were used to enhance and reinforce the training. As part of mentoring and support to be given to these nurses, a training manual was developed, which included the training material, the case studies as well as assessment questions and answers, of which hard copies were posted to the participants. A self-learning library file, which could be accessed via the learning management system, and allows for the professional nurses to refer to definitions, glossary lists, clinical practice guidelines and frequently asked questions was developed in support of the training.

### 2.2.3 | Phase three - development

After choosing the methods of instructional delivery and creating the learning objectives in the design phase, the development phase consists of creating and organising the actual learning material that will be used during the instruction. Based on the literature review and needs analysis of the knowledge and skills required to manage the COVID-19 patients, the team of facilitators mapped the overview learning outcomes, which guided the development of six modules as presented in Table 1. We decided to deliver the training content over 4 hour per session, with a specific timeslot allocated to each module as determined by the group, and based on the depth and scope of the content per module. Two training sessions over two consecutive days were done per province.

Powerpoint presentations were developed for each module, and incorporated the best available evidence as reference, for instance the WHO Guidelines on COVID-19 (World Health Organization (WHO), 2020a; World Health Organization (WHO), 2020b), The Center for Disease Control (CDC, 2020), NDoH (National Department of Health, S. A, 2020), the National Institute of Communicable Diseases (NICD; National Institute for Communicable Diseases, 2020). Six supplemental video tutorials, with permission granted for Nicole Kupchik Consulting Inc., were provided as an additional tool to the PowerPoint presentations. The content of the videos, which aligned to modules 3 and 4 included the following: intubation basics, basic ventilator settings, lung protective ventilation, prone positioning used in acute respiratory distress syndrome (ARDS) and arterial line basics.

The assessment methods included the use of PolleEV questions for each module, which allowed precursors to test the participants' knowledge prior to each module presentation. This method also enables the educators to embed questions, measure participant engagement and gauge understanding of the content presented by receiving responses from participants in real time. Short questions and quizzes at the end of each module were used to test the participants' knowledge on the learning outcomes per module. Case studies, with a set of questions and answers were developed and peer-reviewed by the coordinating team. The assessment questions and case studies were based on the literature reviewed. On completion of the

TABLE 1 Identified learning objectives, modules and teaching methods for the programme

Identified learning objectives of the programme	Identified and aligned modules	Teaching and learning methods
Assess the clinical presentation of a patient with early or advanced COVID 19 signs and symptoms through accurate triaging to enable management and referral for appropriate and timely care and treatment	Module 1: origin, aetiology and presentation of COVID-19	Blended learning approach PowerPoint presentation Poll Everywhere (PollEV) Case study
Implement infection control measures, including appropriate use of personal protection equipment when managing patients with suspected or confirmed COVID-19	Module 2: infection control principles in the management of patients infected with COVID 19	PowerPoint presentation Case study Poll Everywhere (PollEV) Pocket cards
Apply respiratory management principles in a suspected and/or confirmed COVID-19 patient with mild, moderate or severe disease Implement airway management strategies in a patient with confirmed COVID-19 including prone positioning in the critically ill patient	Module 3: Management approach of a patient confirmed with COVID-19 infection	PowerPoint presentation Video Tutorial Case study Poll Everywhere (PollEV) Pocket cards
Identify the criteria for intubation and mechanical ventilation for the patient presenting with respiratory alterations	Module 4: Management principles of the ventilated patient in the ICU COVID-19 patient	PowerPoint presentation Video Tutorial Poll Everywhere (PollEV) Case Study
Determine the psychosocial needs of a critically ill patient and manage the response to the psychological effects of major trauma/illness Understand the common response of the family or significant others to the psychological effects of major trauma/illness	Module 5: Psychosocial health in the time of COVID-19	PowerPoint presentation Case study
Plan nursing interventions that will be used to support critically ill patients in terms of dying with dignity Identify own psychosocial needs and seek appropriate support during the difficult and traumatic COVID-19 period	Module 6: aspects of palliative care, dying and death and COVID-19	PowerPoint presentation Case study

training, the participants had to provide a portfolio of evidence to the project coordinator to assess if the training was put into practice. Furthermore, a questionnaire was sent to the provincial coordinators and managers to assess the return on expectations when they selected and sent the participants for training.

#### 2.2.4 | Phase four – implementation

After thoughtful analysis, design and development, the training programme must then be implemented or delivered. In the implementation phase, facilitators need to deliver the programme with or without first implementing a pilot project. Facilitators who wish to implement long complex courses using a large group of educators might want to run a pilot study. Here, a few participants, learners and instructors, run through the programme before implementing it, providing feedback after each step in the process, and working out unforeseen practical difficulties. This process, while thorough, can consume much time. Alternatively, part of the instruction can be given to a smaller group in real time, just as it would be given to the whole group. Then, problems in implementation, especially time limitations, can be discovered and corrected (Brink et al., 2018; Cheung, 2016).

As our training programme was relatively short and our coordination team small in number, we decided that a pilot study will be

done in one of the provinces as identified by the provincial coordinators. Furthermore, the team reviewed and tested the digital platform prior to the real-time delivery to ensure that the platform was technologically sound and reliable. After the training programme was piloted with one province, as selected by the NDoH, the programme content was reviewed and simplified where needed. The facilitators reviewed the learning objectives and the delivery mode, and refined the use of PollEv for all the modules. The training programme was finalised, including the times, duration of sessions, facilitators and dates as per consensus discussion with the provincial coordinators in the respective provinces. Training commenced in the remaining seven provinces as per scheduled dates.

The content was delivered via a digital platform, namely Zoom, which allowed for interaction via PollEv, chat functions, questions and answers functionality. The programme was also uploaded to a Learner Management System (LMS), where the delivery options were set up in terms of who enrolled, assessments done, pass marks for assessments and the feedback provided. This approach allowed for self-directed learning, which is asynchronous and self-paced. The interactive online platform facilitated country-wide access for the participants. The virtual methods were supported by the central consultation and coordination team that provided logistical support and who were responsible for dissemination of the training material, as well as monitoring and evaluation of the LMS and digital platform.

## 2.2.5 | Phase five – evaluation

The ADDIE models' main goal is to provide a structured method of creating training programmes. It is also a model for improving the way in which future iterations are created. Feedback on the programme is thus essential to improve and revise the content. Feedback surveys were developed, which evaluated the programme delivery and content. Although the feedback was not quantified, participants indicated that the programme assisted them to have more confidence in managing critically ill COVID-19 patients, and alleviated anxiety in dealing with the pandemic. Feedback tools should be designed to assess whether the participants have acquired the knowledge and learning objectives. Due to the short-term delivery of the training programme, the feedback tool was not developed. However, on completion of training, participants had to submit an assessment based on the case studies, short questions and quizzes, for all the six modules within 3 months of the training. The successful completion of the modules was monitored on the LMS by the team coordinator. Completion of the assessment earned participants a certificate of completion. A summary of the outcomes of the ADDIE phases is presented in [Table 2](#).

## 2.3 | Validity and reliability

Content validity was ensured by means of the peer-reviewed process done by the six facilitators who are subject experts, including the team coordinator, who is an expert in nursing education. The content of the training programme and the multifaceted methods were reviewed for relevancy, applicability to the context and level of learning, clarity, simplicity and generalisation. The research fellow ensured that the most updated literature was sourced as an underpinning for the learning content. Face validity was done by the rest of the team who ensured that the quality of the training programme is suitable and aligned to the online platform used. A pilot study was

done, after which minor changes were done to the content and delivery mode of the programme, thus ensuring the reliability.

## 3 | DISCUSSION

Professional nurses across South Africa are vital in the fight against the COVID-19 pandemic. The nursing staff who are involved in the management of COVID-19 patients need to be adequately trained in order to care for the patients and their families. Clinical decisions should be based on sound scientific knowledge and evidence to gain the greatest value from available resources (Tobin, 2020).

The COVID-19 training programme for professional nurses in the ICUs and repurposed general wards makes a critical contribution in planning for the anticipated required human capital for the surge in critically ill patients. It contributes to knowledge and upskilling of nurses during the pandemic. The strength of the programme is in the online delivery methodology and multiphased approach, which allowed a far countrywide reach among professional nurses, the case-based study approach, the PollEv inclusion as part of the formative and flexible assessment mode, and the self-directed component which facilitated adult learning.

As healthcare facilities may be simultaneously challenged with resource limitations, infection control, protection of HCWs, and adapting services to a rapidly evolving pandemic situation, staff training is fundamentally important (Goh et al., 2020; Houghton et al., 2020). To prepare and implement rapid identification and isolation protocols and provide a sustainable workforce with a focus on infection control, staff must have adequate infection prevention knowledge. Such training can help HCWs especially nurses, understand and apply the principles of IPC, as viruses, like COVID-19, are often transferred from surfaces or hands to another person, and can be exhaled in small droplets that can cause outbreaks in hospitals (Wilson, 2019). Risks of infection among HCWs can be prevented and minimised with adequate preventative strategies (Chersich

TABLE 2 Summary of the ADDIE phases

Phase	Steps	Application of each phase
One	Analysis	<ol style="list-style-type: none"> <li>Needs analysis done by NDoH</li> <li>Narrative literature review conducted by research fellow and facilitators</li> <li>Learning objectives formulated and categorised into six modules</li> </ol>
Two	Design	<ol style="list-style-type: none"> <li>Delivery mode designed</li> </ol>
Three	Development	<ol style="list-style-type: none"> <li>Content development</li> <li>Assessment methods planned</li> </ol>
Four	Implementation	<ol style="list-style-type: none"> <li>Pilot study done in one province and the training programme finalised</li> <li>Training commenced for the remaining seven provinces</li> </ol>
Five	Evaluation	<ol style="list-style-type: none"> <li>Feedback surveys developed</li> <li>Case studies refined and finalised for asynchronous assessment</li> <li>Successful completion of the modules monitored by the team coordinator</li> </ol>

et al., 2020). These strategies include practices related to contact-, droplet- and airborne precautions (Mehtar, 2020). The early recognition and source control, and the correct use of PPE must be applied as part of infection control and preventative strategies (Houghton et al., 2020). The training programme provided professional nurses with the best available evidence pertaining to IPC pertaining to the transmission of the SARS-COV-2 virus. Special emphasis was placed on the prevention of transmission in the ICUs, for instance, during the use of aerosol-generating procedures. Due to the transmission mode of the virus, it was crucial that nurses have the knowledge on how to prevent and minimize the spread of the disease.

COVID-19 patients who need to be transferred to the ICU are critical and have a high mortality rate. Managing suspected or known COVID-19 patients requires specific considerations and airway management, which can be done via invasive or non-invasive mechanical ventilation. Healthcare practitioners must avoid unproven techniques during airway management, thus enabling it to be safe, accurate and swift (Cabarkapa et al., 2020). One module in the training programme focuses on airway management for patients by means of oxygen therapy, high-flow nasal cannula oxygen modalities, non-invasive mechanical ventilation, for instance, continuous positive airway pressure (CPAP), and introducing the nurses to targeted mechanical ventilator settings that are important in avoiding mechanical ventilator-related complications in the COVID-19 patients. Modalities, which proved to be effective in the management of COVID-19 patients such as proning, were part of the training programme, thus empowering professional nurses with knowledge in caring for such patients.

The pandemic and its associated novel and evolving coronavirus brought along with it fear, uncertainty and discomfort. Healthcare workers are required to understand their role in understanding the patients' and significant others' turmoil, anxiety, fears and effects of the pandemic on their work environment and caring for such patients. With the COVID-19 pandemic affecting nearly every institution of health care, household, social and economic well-being, individuals and communities across all parts of society face extraordinary challenges (Saunders, 2019). The sick and the critically ill, the infected and the affected people find themselves with the experience of loss of relationships, loss of personal control and identity, and invasion of their privacy is on another level. The nurse plays an instrumental role as the provider of continuity of care, and the one practitioner who finds himself/herself around the bedside of the patient for up to 12 hours long shifts (Saunders, 2019). World Health Organization (WHO) (2020c) affirms that healthcare workers may experience avoidance by their family or community due to stigma or fear during this pandemic. Psychosocial needs have a strong correlation to mental health disorders such as depression and anxiety (Saunders, 2019). Addressing the mental well-being of HCWs, including nurses during these unprecedented times is thus critical (Dharra & Kumar, 2021). Efforts could be geared towards reinforcing the art of caring not just for patients, but also for their families and significant others during this extraordinarily difficult period. It is important to create an awareness of risks and symptoms of fear,

anxiety and discomfort during the COVID-19 pandemic, enabling nurses to take ownership of creative solutions to help the patient, family or significant others to allay psychological stress and promote mental well-being. Module (5) of the training programme aims to address the psychosocial care for nurses, patients and their significant others while in the ICU and repurposed general wards in healthcare facilities during the pandemic.

Nurses find themselves amidst life and death decisions and observed how patients and their families struggle with decisions regarding whether quality or quantity of life is more important. Nurses have witnessed healthcare providers making so-called decisions pertaining to patient care but are unable or unwilling to step forward and be that patient's advocate in the way they ought to be or the way they were taught to be. Findings from a study revealed that many predisposing factors and circumstantial occurrences shaping both, the nature of care of the dying and subsequent grief that affected the nurse (Naidoo & Sibiyi, 2019). Repeated exposure to grief leads to occupational stress and burn out, causing emotional disengagement from caring for the dying, which ultimately affects the quality of care rendered for both the dying patient and their family. Issues, such as communication, multicultural diversity, education and coping mechanisms are essential in nursing education and practice. Nurses caring for the critically ill or dying patient need to have support networks and strategies put in place, not only to assist in providing care, but also for their own emotional support and well-being (Naidoo & Sibiyi, 2019).

The environment of an ICU has been recognised as a very stressful, high-tech, fast-paced environment. However, currently the ICU environment has become a highly emotionally charged atmosphere due to the COVID-19 pandemic. Nursing in an ICU can influence nurses' experiences with a dying patient or the end-of-life care (Efstathiou & Clifford, 2011). Nurses have varied experiences of grief and end-of-life patient care as they provide continuous health care to ill patients until they die, while doctors consult patients occasionally (Kgosana et al., 2019). Valiee et al. (2012) mentioned that nurse's experiences with patients and end of life was accompanied by emotional burden and a conflict in values and beliefs and concluded that there is a need to increase the current knowledge related to providing care to end-of-life patients at ICUs. Palliative care, as well as death and dying, which is compounded by the nature of the COVID-19 pandemic was included in Module (6) of the training programme.

## 4 | CONCLUSION

The article illustrates how the ADDIE model was used to help with the design of a training programme for professional nurses who care for critically ill COVID-19 patients. The multifaceted approach used in the training programme allowed for the conveying of new information to professional nurses who work in very busy and complex clinical units like the ICU and general wards that was repurposed to care for COVID-19 patients.

## 4.1 | Limitations

The delivery of the training programme via Zoom might pose a limitation in areas where the participants experience technical or internet connection challenges. Additional materials will be made accessible as hard copies and online materials to reinforce knowledge. In addition, not all the participants might be able to answer the PollEv questions directly. However, the Zoom chat box will be used to capture the answers of the participants. Survey questions in real time via SMS or the web-based interface using the PollEv might not be captured if technological challenges are experienced. The assessment by means of case studies, short questions and quizzes as per hard copies of the training programme assisted in minimising the loss of data if these technological challenges are experienced. The feedback surveys and evaluation of the programme could only be done on successful completion of the participants 3 months after the training and the result was thus not immediately available. However, the process was monitored and evaluated by the team coordinator, and a report on the feedback and completion rate will be compiled and disseminated by the team coordinator.

## 4.2 | Recommendations for future research

Research studies regarding the management of COVID-19 are ongoing. A constant review of the training manual would be beneficial in upskilling professional nurses in the care and management of COVID-19 patients in the ICU and repurposed general wards in healthcare facilities. A follow-up study after implementation of the training programme evaluating the effect of the training is recommended. A pretest/post-test design to measure the knowledge and practice of professional nurses caring for COVID-19 patients in South African ICUs is needed. Additionally, research into the expectations of the grieving family and the dying patient from the ICU nurses' perspective will serve as useful sources for future research.

## 4.3 | Key lessons learnt

This training programme was a critical step in the collective effort in response to the COVID-19 pandemic. The collaborative effort of six context experts to develop a training manual and deliver its contents using a multifaceted approach was a feasible and workable approach to empower professional nurses. Furthermore, this platform created the ideal collaborative space for the coordinating team to identify common training priorities nationwide, work on capacity building solutions together whilst adapting and disseminating information.

The training programme presents an opportunity to deliver early interventions to improve mental well-being and reduce psychosocial and psychological problems that may hold short- and long-term implications for professional nurses, and to minimise the stigmatisation attached to the pandemic.

The training programme will provide professional nurses with much needed information on a very novel virus and will equip these nurses to achieve the goals in the management of COVID-19 patients.

### AUTHOR CONTRIBUTIONS

This study was conceptualised by Prof Jordan, all authors contributed towards the writing of the paper. All authors agreed to the final version of the paper.

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### CONFLICT OF INTEREST

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

### ETHICAL STATEMENT

Ethical clearance was not required for this study. Copyright clearance was obtained for the educational materials, and articles were referenced accordingly.

### CONSENT

Seeking patient consent was not applicable in this study.

### DISCLAIMER

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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