Intensive care nursing in South Africa

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Various challenges face intensive care nursing in South Africa. This article describes the health care system of South Africa, with particular attention to intensive care nursing. It also describes the current state of intensive care and the challenges facing this sub-specialty of critical care.

Intensive care nursing (ICN) is a specialist area of nursing that involves caring for patients who are suffering from life-threatening illnesses or injuries, while at the same time offering comfort and support to their family members. The environment of an intensive care unit (ICU) is highly technological, requiring the nurses to have a broad knowledge base and a high level of decision-making skills as they care for patients and their families who are in vulnerable circumstances. Intensive care nursing is constant, complex, detailed health care provided in various acute life-threatening conditions.[1-2] Intensive care, coronary care, cardiothoracic care and emergency care are all sub-specialty clinical areas of critical care (CC), having the common element that patients admitted to these areas are in a health crisis that requires the collaborative care of a multidisciplinary team.[3]

The purpose of this paper is to describe the current state of ICN in South Africa (SA) and the challenges facing this area of intensive care.

The South African health care system

Before 1994, SA was known for its apartheid system. During this period the majority of black South Africans did not have access to health care, as the health care system was centralised, leaving many of the poorer rural areas without medical facilities or providers. SA is now ruled by a democratic government and is often referred to as the rainbow nation. The health care system has been reconstructed to a district system, with care being delivered according to the primary health care (PHC) approach. This resulted in the adoption of a decentralisation model for the governance and management of the health sector.[4] Health regions were demarcated according to health district boundaries, which provided health care services at national, provincial, district and community levels.[5] By adopting a comprehensive health care approach, the new policy of a democratic SA aimed at ensuring that every South African had access to health care. However, despite the good intentions of SA's democracy, the public health care system has been overburdened since its inception and has not yet caught up with the health needs of its people.[6]

SA's health care system consists of private and public health sectors, with the emphasis of service delivery having shifted during the past 10 years from a curative, hospital-based service to a comprehensive primary health care approach.[7]

Current challenges to ICN in SA

Disease profile and lack of resources

SA has a current population of 47.9 million. Only 20% of the population is covered by medical insurance and served by the private sector. This sector is profit driven, consumes 60% of the health care expenditure and employs 70% of the country's medical specialists. The state health care system, on the other hand, cares for 80% of the population, half of whom do not have formal employment. This sector is funded by taxpayers' money,[7] consumes 40% of SA's health care expenditure and employs 30% of the medical specialists.[8] Owing to the past inequalities in health care, a concerted effort has been made to redirect resources to primary health care in order to benefit the majority of the population. This has resulted in limited resources for high-tech medicine, including intensive care. In addition, since the democratic elections in 1994 SA has opened its borders to neighbouring countries, which has resulted in an influx of immigrants seeking, among other things, better health facilities, thus increasing the burden on a system already struggling to cater for its own indigenous people.[9]

ICN in SA is not typical of that in the rest of the world, as patients admitted to ICUs in SA are typically males (65%), and trauma (motor vehicle collisions, gunshots and stabbings) accounts for 53% of admissions. Other reasons for admission are medical (e.g. sepsis, metabolic, overdose) (30%), infectious diseases (8%), gynaecological (5%) and post-surgical (4%). The actual mortality rate for patients in ICUs in South Africa is 31.5%, with the predicted mortality rate being 30%. The process of dying can take minutes or weeks.[9]

The HIV/AIDS pandemic is also having a profound impact on intensive care in SA.[8] Of the world's 40 million HIV-infected people, 5 million are in South Africa (10% of the country's population). These patients often require prolonged stays in ICUs, increasing the strain on the services and further impacting on the limited resources. In addition to this problem, a national study of 222 health care facilities revealed that 16% of health care workers are HIV positive themselves.[10] Despite SA having a sophisticated health structure in some areas, the disease profile reflects that of a less developed country.

Bed and staff shortages

ICN is a service that falls within the district, provincial and national levels of the health service. ICUs are structured and graded from

level I to level IV. Level I units are in the public sector and are located in tertiary referral hospitals, which are affiliated to universities and have sophisticated equipment able to manage a wide spectrum of critical illnesses. These ICUs are closed and round-the-clock care is directly managed by intensivists in collaboration with other support staff and services. These units have a medical director, 24-hour medical specialists, residents and medical officers, with a nurse/patient ratio of 1:1 or 1:2.

Level II - IV units are in the private sector. Level II units are specialised units catering for neurological or coronary care, level III units are the critical care units found in community hospitals, which can provide limited invasive monitoring, and level IV units are high-dependency units.[9] Most of these units are open and have a 1:1 nurse/patient ratio, with limited input from intensivists.

As indicated in Table I, there are a total of 4 168 critical care beds in SA, with 43% in the public sector and 57% in the private sector. Of the 396 public hospitals in SA only 92 (23%) have ICU or high-care unit (HCU) facilities. This differs significantly from the 256 hospitals in the private sector, of which 216 (84%) have ICU/HCU facilities. Three provinces in SA, namely KwaZulu-Natal, Gauteng and the Free State, have 86% of these beds.

Twenty-three per cent of all commissioned beds are not utilised owing to staff and equipment shortages.[11] In SA, ICU beds account for 1 - 2% of acute care beds, and the current shortage of ICU beds is compounded by the limited number of nurses available to work in the units. Owing to the shortage of ICU beds, especially in the public sector, strict admission/exclusion criteria are exercised by intensivists in these units, which exclude patients with AIDS, end-stage cardiac and renal diseases and severe head injuries (Glasgow Coma Score <8) in adult patients. Turning away patients on a daily basis is stressful for the nurses.[9]

Brain drain and its impact on intensive care nursing

Brain drain has resulted in SA facing a critical shortage of registered ICNs. This can be attributed to multiple factors, which include inadequate salaries, limited career opportunities, poor nursing leadership, the poor public image of nursing, the huge workload as a result of insufficient staff, poor working conditions and lack of safety and security in the workplace.[12] It is difficult to estimate the number of SA health care professionals working abroad because there are no clear migration data, the current data being regarded as inaccurate because the numbers appear to have been under-estimated.[13] What is significant, however, is that the distribution of the population to professional nurse ratio has been estimated at 434:1.[14] Owing to this critical shortage of nurses, it has become the norm to employ agency staff to help cope with the demands of the ICN workload. The strategy of using agency nurses to alleviate the staff shortage poses numerous challenges. The fees charged by the agencies have led to high expenditure, impacting on the already compromised health care budget. Agency staff often display a lack of commitment, and their work is not always up to the standards of quality patient care. Moreover, use of agency staff has developed into a medicolegal risk, with some agencies using fictitious names when submitting their quotes only to have other nurses reporting for duty when they have been accepted by the institutions. An added problem is that permanently employed nurses sometimes work overtime through nursing agencies, and these double shifts make them exhausted and unproductive.[15]

Table I. Distribution of critical care (CC) beds in SA in relation to the private and public sectors (2008)[11]

Total No. of CC beds in SA	4 168
Total No. of beds in private sector	2 376 (57%)
Total No. of beds in public sector	1 792 (43%)
No. of public hospitals in SA	396
No. of private hospitals in SA	256
No. of public hospitals with ICU/high-care beds	92 (23%)
No. of private hospitals with ICU/high-care beds	216 (84%)

Despite the use of agency staff, however, registered nurses (RNs) provide the majority of care in ICUs, although only 25% of nurses in ICUs are qualified ICU nurses. Owing to the shortage of registered ICNs, the health care system has to rely on registered comprehensive (general) nurses and newly qualified nurses for service delivery.[16] According to Scribante *et al.*,[17] 53% of nurses working in critical care are registered comprehensive (general) nurses whose training is focused on primary health care. These nurses have not had orientation to intensive care or critically ill patients, thus increasing the risk to patients (Ball and McElligiot, 2003, as cited in Schmollgruber[16]). Scribante *et al.*[17] reported that 21% of all nurses working in critical care are enrolled nurses who lack expertise in this highly technical environment. Furthermore, enrolled nurses have a restricted scope of practice and the responsibilities they assume are usually beyond their abilities and scope of practice.

Intensive care training in South Africa

Intensive care training was officially established in 1966 and is a post-registration qualification. It is available to RNs at both public and private colleges as well as at universities, with colleges offering training at a diploma level (1 year) and universities at a degree level (2 years). ICN is registered with the South African Nursing Council (SANC) as Critical Care Nursing-General, an additional qualification making ICNs clinical nurse specialists (CNSs). Intensive care training is regulated by the SANC, which prescribes the legal, ethical and professional responsibilities of postgraduate qualifications. Regulation 212, as prescribed by the SANC, governs this qualification. Despite the expanded role and function of ICNs as CNSs who are expected to provide higher-quality patient care, there is a defined scope of practice that articulates the role of these nurses as specialists.[16] Even with the limitations of a specific scope of practice, the Critical Care Society of South Africa aims to support ICNs by means of providing guidelines for doctors and nurses working in ICN.

Critical care training is currently offered by 10 universities in SA where there is a focus on postgraduate research. However, even though a significant number of critical care research studies are undertaken in SA, there is no profile of this research, as only a limited number of nurses have presented their research at congresses or published their results.[17]

Access to training and study leave constraints

Nurses who work in ICUs are responsible for providing care to patients who are critically ill or at risk of experiencing life-threatening conditions. This care demands a high level of expertise on the part of the nurse, and it has been suggested that nursing staff inexperience has a negative impact on the quality of care delivered to critically ill patients. Errors are most likely to occur when inexperience of nursing staff is combined with staff shortages, inadequate supervision and high unit activity.[18] It is therefore important that nurses working in ICUs are experienced ICU nurses with the additional ICU educational qualifications.

Obtaining the necessary qualifications, however, has its own problems. Nurses in South African ICUs have two options. They can either wait their turn to be sent for training through their place of work, which can take many years because it places additional stress on those nurses who are left behind to continue the work in the unit. Alternatively, they have to access training on their own. Studying privately can be very expensive, and may require time off from work or necessitate moving to another facility. Nurses have to ask permission from management for study leave, which can be problematic in a busy unit where management cannot release all the students on the same day. It is also important to remember that as adult learners these nurses have to cope with their own family responsibilities, work and study demands as well as additional financial expenses.

Occupation-specific dispensation

As an initiative to retain nurses in SA, the occupation-specific dispensation (OSD) for nurses was implemented in July 2007, with the aim of introducing a career progression for all categories of nurses. This included reviewing career pathing, pay progression, grade progression, recognition of seniority, increased competencies and performance on a 2-yearly basis.[19] Since the inception of the OSD it has been widely cited in the media as a source of overspending during the 2008 - 2010 financial years, with some provinces having exhausted their funds. Despite the good intentions of the SA government in implementing the OSD, it was flawed by poor communication, costing of national policy decisions and insufficient allocation of funds.[20]

Conclusion

This article gives an understanding of ICN in SA. It also highlights the key challenges facing ICN in SA, which are limited resources, challenging patient and disease profiles and staff shortages. Notwithstanding these challenges, there is still a great need for intensive care nursing in SA and it is important that proper planning and more resources be allocated to this sub-specialty of critical care.

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