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EDITORIAL: RATIONALE FOR EMPLOYMENT OF BACHELOR OF SCIENCE IN NURSING GRADUATES IN KENYA

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Abstract

Introduction: Training nurses at degree level globally started upon realization that employment of highly trained nurses had a direct relationship with quality of care, improved patient health outcomes and decreased patient mortality rate at reduced health care delivery costs.

Purpose: The purpose of this treatise is to provide a background of the Bachelor of Science in Nursing (BScN) program in Kenya, justify the need for employment of BScN graduates upon completion of the internship and appeal for national action.

Context and Justification: Despite the recommendations by the International Council of Nurses and WHO to governments to ensure employment of highly trained nurses, majority of BScN nurses are not employed in Kenya. Even at this time of COVID-19 pandemic when the need of quality nursing care is dire, the employment of graduate nurses compared to other cadres of nursing is at a negligible < 1 %. Employment of graduate nurses is justified to improve nurse-patient ratios, add value to patient outcomes, make economic sense, mitigate the shortage of nursing faculty and support universal health coverage.

Conclusion and Petition: The revised scheme of service for nursing personnel (2014) provides for employment of nursing officers with degree qualification. However, six years since then, there is lack of clarity on implementation of the scheme in regard to the Nursing Officers' positions beyond internship position, and no policy has been enacted to provide for continuous offer of employment to a significant number of nurses with degree qualification. The Ministry of Health should therefore anchor continuous employment of degree level nursing graduates in health human resource policy that provides for inclusion of graduate nurses in advertised nursing vacancies at all levels of health care delivery system, including the devolved government, in line with 2014 revised scheme of service of nursing personnel.

Key words: *Bachelor of Science Nursing; Employment; Nursing care; Outcomes; Quality care, Kenya*

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Introduction

In Kenya, the Bachelor of Science in Nursing (BScN) program was established in August 1987. To date, there are over 30 universities offering the undergraduate nursing program with a few of them offering graduate and post graduate (MScN &PhD) degrees in nursing. Currently, over 6,997 degree nurses have been licensed by the Nursing Council of Kenya to practice. Nevertheless, the government has seemingly been reluctant to employ degree nurses and thus foregoing the potential benefits that come along with this cadre of professionals to the healthcare system. In 1996 and 1997, the Ministry of Health undertook the first direct absorption into public service of the pioneer groups of degree nurses. Since then, only some 89 degree nurses were employed in the year 2009 and little effort has been made to ensure consistent employment of BScN graduates in the public healthcare system. This situation has been worsened by the devolution of health services to counties which don't seem to value employment of degree nurses contrary to the Geneva Declaration of the SIDIEF which urges that countries consider BScN degree as the minimum entry to professional nursing practice (Abdullahi, Ghiyasvandian, Shahsavari, & Imanipour,2019; Bvumbwe, & Mtshali, 2018).

As in many sub-Saharan African countries, nurses in Kenya are the first level of frontline healthcare workers. They form the universal access point for almost 90% of consumers of health services and contribute approximately 85% of all health outcomes for citizens (Abdullahi, Ghiyasvandian, Shahsavari, & Imanipour, 2019; Bvumbwe, & Mtshali, 2018; Mosadeghrad, 2014). This implies that nursing care determines the quality of health care services and by extension the level of the Nation's health.

Research, has over the years demonstrated that hospitals with higher proportions of nurses trained at graduate and post graduate levels have better client health outcomes (Miseda et al. 2017; Ministry of Health [MOH], 2015; Wakaba et al. 2014).For instance, a report published over a decade ago, demonstrated that an increase of the number of Bachelor of Science in Nursing (BScN) personnel in a hospital ward by 10% reduced mortality rate by 4-5%. Similarly, Kendall-Gallagher, Aiken, Sloane, & Cimiotti (2011) reported better health outcomes in hospitals with higher proportion of nurses with degree level of education. This can explain why the magnet hospitals in the USA that are famous for quality health care have consistently employed the BScNs in their hospitals.

In Kenya, data on health workforce (Miseda et al ,2017; Ministry of Health [MOH], 2015; Wakaba et al ,2014),have consistently reported a shortage of nurses that jeopardes delivery of health care services in Kenya while there are many BScN graduates leaving the country due to unemployment. The data on health workforce is supported by County Directors of Health who confirmed that BScNs and clinical nurses are in short supply by 60% and 95% respectively (Miseda, Were, Murianki, Mutuku, and Mutwiwa, 2017).It is sad that

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Kenya is not taking advantage of the large pool of unemployed BScN graduates at a time when the WHO is worried that dire shortage of nurses is constraining and threatening to derail achievement of Universal Health Coverage and health–related Sustainable Development Goals (SDGs).

The Kenya Ministry of Health requires a advantage of nurses trained at a higher level to be able to contribute to the reduction of disease burden. The mortality and morbidity from non-communicable diseases (NCDs) globally that had already hit the 70 % mark in 2015 is still rising (Miseda, Were, & Murianki, 2017; Mwenda, Githuku, Gathecha, et al. 2019). The situation is worsened by mortality from communicable and infectious diseases. For instance, Frings et al (2018), estimated that 78.3% of total disability adjusted life year (DALYs) are constituted by years of life lost (YLL) to premature mortality majorly caused by HIV/AIDS, lower respiratory infections, diarrheal diseases, tuberculosis, and malaria.

The BScN will not only contribute positively in reducing the burden of disease, but will be instrumental in providing high quality of health care as enshrined in the Kenyan constitution 2010 as a right for every citizen in various ways. Firstly, the BScN clinical nurse will employ critical thinking skills that are necessary for sound clinical judgement. Secondly, the BScN as nurse educator will be useful in improving the quality of education in mid-level medical/health training colleges where the majority of health personnel are trained.

THE CONTEXT

Until 1987, Kenya had a nursing workforce consisting of mainly enrolled (certificate level) and registered (diploma level) nurses. The few degree nurses existing at the time were those trained abroad in multidisciplinary courses such as public health and medical education among others. Informed by evidence on the need to have a better educated and more competent nursing human resource, Universities in Kenya commenced training of nurses at bachelor's degree level. The University of Eastern Africa Baraton was the first academic institution to train nurses at degree level from August 1987. This was followed by University of Nairobi in 1992, Moi University in 1998 and Kenya Methodist University in 2002. Currently, thirty two (32) Universities (22 public and 10 private) are approved to offer the Bachelor of Science in Nursing (BScN) programme.

According to Kenya Health Workforce Report, (2015), there were 3,849 undergraduate nursing students enrolled in 22 universities between 2006 and 2015 (Ministry of Health, 2017).With regards to qualified BScNs, a total of 6,997 graduates are currently registered by the Nursing Council of Kenya (NCK); yet out of the total nursing workforce which stands at 55, 516, BScNs only comprise 12%. Similar non-deployment of BScNs is reflected in other data within the Ministry of Health workforce. For example, out of the 6,997 BScN graduates registered by the Nursing Council of Kenya (NCK), only 940 are employed by National and County

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governments, while 402 work in Mission hospitals, Private hospitals and NGO sectors. The rest of 5000 or more BScNs are unaccounted for, implying that they may be unemployed. The exact number of those who have migrated for employment elsewhere is also unclear.

Despite lack of employment, the number of BScN graduates applying to the Nursing Council of Kenya (NCK) for internship program has been rising each year - 238 (2011), 310 (2012), 346 (2013), 571(2014) and 477(2015). This trend translates to an average of 388 nursing students who graduated each year during the five year period. The current annual output of BScN graduates is higher, going by the number of universities offering the BScN programme. Universities, both public and private, admit nursing students through Kenya Universities and Colleges Central Placement Services (KUCCPS), a government agency that places qualifying candidates to universities and colleges. Such students have most of their tuition fees subsidized by the government and are therefore considered government sponsored. After completing the four-year BScN programme, the graduates are placed for one year internship which is fully paid for by the government through the Ministry of Health, irrespective of whether the graduate is from private or public university. This means that the government of Kenya has invested heavily in the training of degree nurses.

THE PROBLEM

The World Health Organization's *State of the World's Nursing 2020: Investing in education, jobs, and leadership* report urges national governments to catalyze and lead an accelerated effort to:

i. "Build leadership, stewardship and management capacity for the nursing workforce to advance the relevant education, health, employment and gender agendas;
ii. Optimize return on current investments in nursing through adoption of required policy options in education, decent work, fair remuneration, deployment, practice, productivity, regulation and retention of the nursing workforce; and
iii. Accelerate and sustain additional investment in nursing education, skills and jobs" (WHO, 2020).

Though Kenya as a country has seemingly done well in investing in nursing education and training, and in building nursing leadership, the Ministry of Health has not made efforts to *optimize return on investment (ROI) in nursing through adoption of required policy options in education, decent work, fair remuneration, deployment, practice, productivity, regulation and retention of nursing workforce with regard to bachelor's degree level nurses.*

Secondly, the Global Strategy on Human Resources for Health: Workforce 2030 calls for upholding

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> *"the personal, employment and professional rights of all health workers, including safe and decent working environment and freedom from all kinds of discrimination, coercion and violence"* (WHO, 2016),

However, there has been a worrying trend on employment of nurses in which there has been glaring omission of BScN graduates from advertised nursing job vacancies by both National and County governments. The exclusion of BScN nurses has been evidenced by the failure by both National and County governments to include positions for degree nurses in most advertisements for nursing jobs, except for a few managerial positions, which in any case favours the already serving senior nurses. For example, at this time when the whole world is struggling to fight with COVID-19 pandemic, there is limited evidence that the national and county governments are making sufficient effort to engage BScN who are unemployed.

Apparently, predetermined discrimination against BScN professionals was embedded in the document entitled "Towards Universal Health Coverage: The Kenya Health Strategic and Investment Plan, 2014–2018 - Human Resources for Health Norms and Standards: Guidelines for health sector". In this document Table 3 establishes the National Human Resources for Health Staffing and allocates 23,574 positions for enrolled nurses, 11,335 for registered nurses, and only 467 for BScN nurses to be filled between 2014 and 2018 (Ministry of Health, 2014). This meant that the Ministry of Health and Counties were to employ only 93 degree nurses per year in the whole country. In Table 5 which shows the distribution of staffing norms by level of care establishes 12 BScN positions per a Level 5 hospital, and only 4 per each Level 4 hospital (Ministry of Health, 2014). Surprisingly, according to the established norms, the BScN nurses were not expected to work at levels 3 and 2 health facilities as well as level 1 settings. This is a glaring segregation of degree nurses anchored in policy and which must be addressed urgently for proper corrective action.

JUSTIFICATION

1) IMPROVE THE NURSE-PATIENT RATIO IN HEALTH FACILITIES

Periodic employment of degree nurses was undertaken between 1998 until about 2009 when it appears to have stagnated. The Kenya Health Strategic and Investment Plan, 2014–2018 provided for employment of a total of 467 degree nurses from 2014 to 2018. The category of nurses were to be predominantly deployed in level 4 and 5 health facilities which are now under county government in the devolved health care system. However, the proposed number which translates to 93 degree nurses per year is inadequate considering that the patient to nurse ratio is health facilities is far below the WHO recommendation. Besides, the broad based education and training of degree nurses equip them with essential competencies in community health, midwifery, medical-surgical nursing and

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research which make them suitable for deployment at all levels of health care settings, thereby enhancing population access to quality health services. They should therefore be recruited to work at all levels including level 1 to provide direct care and the necessary leadership as stipulated in the scheme of service.

Employment of degree nurses contributes to ameliorating the perennial staff shortage in public health facilities and especially during the CoVID-19 pandemic. The Kenya Health Sector Strategic plan and Investment plan (KHSSPI, 2013-2017) projected a nursing staff shortage of 35,685 against the desired 90,249 in the year 2020 which has impact on quality and access to health care. Quality care in the long-term leads to reduction of hospital and health care costs while improving the quality of life.

2) ADD VALUE TO PATIENT OUTCOMES

Ample evidence exists to support the need for increased engagement and inclusion of degree nurses in health care delivery. Kutney-Lee et al. (2013), observed that a 10 point increase in the percentage of BScN degree nurses resulted in decrease of 2.12 deaths per 1000 patients in general. Similarly in patients with post-surgery complications there was a reduction of 7.47 deaths per 1000 patients. The positive patient outcomes were attributed to stronger clinical decision making and communication skills possessed the BScN degree nurses.

A study conducted in a 21 University Health System Consortium, USA, showed that hospitals with a higher proportion of nurses with BScN degree or higher had lower post-surgical complications, failure to rescue and shorter hospital length of stay (Blegen et al., 2013). It can therefore be concluded that positive patient outcomes are largely influenced by institutional investment in highly educated nurses comprising a higher proportion of BScN degree nurses or higher.

Related studies by Aiken et al., (2003), Aiken et al., (2011), Cho et al., (2015) found the link between nurse education level and patient outcomes. Every 10% increase in the proportion of BScN degree nurses on the hospital staff resulted in a 5% reduction of risk of death in surgical patients within 30 days of admission and failure-to-rescue rate as well as lower odds of patient death and failure to rescue. Furthermore, evidence suggests that 10% increase in the proportion of nurses with Bachelor’s degree decreases the patient likelihood of dying by 7% from admission. Also hospitals with at least 60% degree nurses and caring for average 6 patients had 30% lower mortality than in hospitals with 30% of nurses with BScN degree (Aiken et al., 2014). Similarly, Tourangeau et al., (2007), associated a higher proportion of nurses with baccalaureate degree with lower 30-day patient mortality.

Research evidence indicate that patients who are cared for by a higher proportion of degree-prepared nurses were less likely to die, stayed in the hospital for shorter periods, and faced lower health care costs.

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This was attributed to the BScN programs emphasis on "critical thinking skills" that contribute to development of advanced clinical judgment which increases the safety of care provided (WHO, 2020,).

3) MAKES ECONOMIC SENSE

Due to the mounting evidence on the role of increased nurse education and positive patient outcomes, the Institute of Medicine (IOM) had recommended in 2011 that hospitals in USA increase the proportion of nurses with BScN degree from 50% to 80% by the year 2020 (IOM, 2011). To justify implementation of this recommendation a patient-level evidence of cost and quality implications was carried out in which an economic analysis of meeting the 80% BScN threshold on patient outcomes and cost was conducted. The results showed that continuous BScN proportion was associated with lower mortality (OR=0.891, P<0.01) and that compared with patients with <80% BScN care, patients receiving ≥ 80% of care from BScN nurses had lower odds of readmission (OR=0.813, P=0.04) and 1.9% shorter length-of-stay (P=0.03). The study observed that economic simulations supported a strong business case for increasing the proportion of BScN educated nurses to 80% (Yakusheva, Lindrooth, & Weiss, 2014).

It is evident that there is a clear link between nurses who are highly educated and positive patient outcomes, reduced adverse events and hospital costs. This supports recruitment of increased number of BScN degree nurses in the Kenya public health care system for the benefit of patients and the whole society. Moreover, in view of the government investment in higher nursing education it is desirable that the BScN graduates are given opportunity to provide health services to Kenyan people and thereby contribute to achievement of UHC and vision 2030.

4) MITIGATE SHORTAGE OF NURSING FACULTY IN UNIVERSITIES AND TEACHING HOSPITALS

According to the Commission for University Education (CUE) (2014) regulation/standard guidelines, a teacher should have a qualification higher than the program students being taught. . Therefore, BScN even at the basic level are suitable for diploma training colleges while MScN are suitable for colleges offering post basic diploma.

There has been an exponential increase in number of universities offering BScN programme without corresponding increase in qualified and competent lecturers and clinical instructors, able to produce competent and well-grounded nursing graduates. While a postgraduate education at master's level is commonly accepted for appointment as nursing faculty in universities, it is acknowledged that having clinical practice experience is necessary or desirable prior to such appointments. A study on meeting the requirements for becoming a nurse lecturer (Hardicre, J., 2003) showed that 31% of respondents felt that recent clinical experience was necessary for appointment as a nurse lecturer while

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57% considered clinical experience as desirable. Only 12% of respondents said recent clinical experience was not necessary. With the increasing number of Universities offering the BScN program, there is corresponding increase in the number of students requiring clinical placements and graduates requiring internship. Both groups require clinical instruction and mentorship respectively to achieve the expected outcomes. The mentors in sufficient numbers should hold BScN qualifications or higher to role model and mentor the students and interns successfully. Therefore, increasing the numbers of degree nurses in public health facilities support quality nursing education besides improved quality health services.

During clinical practicum, nursing students apply and integrate the critical thinking, clinical assessment and nursing care competencies learned in educational settings. Clinical teaching faculty is required to provide appropriate supervision and conduct clinical skills assessment. Failure to employ BScN graduates denies them opportunity to gain the necessary clinical experience that prepares them for taking effecting teaching roles in universities and hospitals. This ultimately affects the quantity and quality of faculty for nursing programmes in Kenya. The current establishment of only 12 degree nurses at Level 5 hospitals and 4 at Level 4 facility is not adequate to provide clinical supervisory and teaching of nursing students.

5) SUPPORTS THE UNIVERSAL HEALTH COVERAGE (UHC)

One of the pillars of the government is universal health coverage (UHC) which anchored in vision 2030 and reflected in the sustainable development goals. Among the aims of UHC is providing accessible and quality health services but, this this is dependent on the nature of health human resources besides other resources. In the State of the World's Nursing 2020 Report it stated thus:

> *"Nurses are critical to deliver on the promise of "leaving no one behind" and the global effort to achieve the Sustainable Development Goals (SDGs). They make a central contribution to national and global targets related to a range of health priorities, including universal health coverage, mental health and non-communicable diseases, emergency preparedness and response, patient safety, and the delivery of integrated, people-centered care. No global health agenda can be realized without concerted and sustained efforts to maximize the contributions of the nursing workforce and their roles within interprofessional health teams. To do so requires policy interventions that enable them to have maximum impact and effectiveness by optimizing nurses' scope and leadership, alongside accelerated investment in their education, skills and jobs. Such investments will also contribute to the SDG targets related to education, gender, decent work and inclusive economic growth." (WHO, 2020 p. xii)*

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Therefore, availability, accessibility and capacity of nursing staff at all levels of health service delivery is critical to attainment of UHC goals. With a focus on quality the degree nurses are well prepared to provide people-centered care and integrated health services while taking leadership in research for evidence-based health care.

According to the latest health workforce status report, by the World Health Organization (2017), Kenyan nurse to patient ratio is placed at 25:10,000. The recommended ratio is 83:10,000. This is evidence of huge gap to be filled. On further inquiry by the Kenya health workforce report of 2017, it was revealed that degree nurses employed by the government of Kenya accounted for less than 3% of the total nursing staff

BENEFITS OF INCREASING DEGREE NURSES IN HEALTH CARE

It is clearly evident that hospitals that have invested in recruitment of well-trained nurses have shown excellent patient outcomes like reduced mortality and improved patient safety.

Patient safety is fundamental to delivering quality essential health services (IOM, 2001). Indeed, there is a clear consensus that quality health services across the world should be effective, safe and people-centred. In addition, to achieve the benefits of quality health care, health services must be timely, equitable, integrated and efficient. Each year, 134 million adverse events occur in hospitals in low- and middle-income countries (LMICs), due to unsafe care, resulting in 2.6 million deaths. Some of the adverse events relate to nursing care. These include:

Medication errors- these are a leading cause of injury and avoidable harm in health care systems: globally, the cost associated with medication errors has been estimated at US$ 42 billion annually (IOM, 2001).

Health care-associated infections- occur in 7 and 10 out of every 100 hospitalized patients in high-income countries and low- and middle-income countries respectively.

Unsafe injections practices- in health care settings these can transmit infections, including HIV and hepatitis B and C, and pose direct danger to patients and health care workers; they account for a burden of harm estimated at 9.2 million years of life lost to disability and death worldwide.

Patient safety during provision of safe high quality healthcare is a prerequisite for strengthening health care systems and making progress towards effective universal health coverage (UHC) under Sustainable Development Goal 3. To ensure successful implementation of patient safety strategies; clear policies, leadership capacity, skilled health care professionals and effective involvement of patients in their care, are all needed (WHO Fact sheet, 2019).

Globally studies have shown that well – educated nurses are vital in improving health outcomes. For instance a study conducted by

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Coster, Watkins and Norman (2017) revealed that adequate numbers of well-educated nurses working in acute care areas can reduce the risk of patient mortality, well trained nurses can produce improved positive health outcomes for the chronically, particularly for those patients managed in primary care, and that nurse-led is quite effective in promoting patient adherence to treatment and patient satisfaction.

A study by Aiken et al. (2014) established that the educational level of nurses in hospitals was associated with patient mortality. These findings confirmed that the educational level of nurses does make a difference in patient outcomes, and provided the impetus for state-level proposals to establish the baccalaureate degree as the minimum level of entry into the nursing profession in the US. The researchers concluded that Hospitals with employment policies that favor highly educated nurses, staffing policies recognize the contributions to quality that registered nurses make, and organizational policies that support nurses in their decision making will have good outcomes (Aiken et al., 2011).

In Kenya, the nursing workforce plays a vital role in health service delivery, providing the bulk of direct patient care. The nurse is present at all levels of health services from basic attention to the most complex services. Nursing is therefore acknowledged as an essential component of healthcare delivery systems and the role of nurses is continually being redefined in the context of health sector change.

In order to promote health, prevent the spread of diseases, and offer quality care, Kenya must ensure that its nursing workforce is comprised of well trained professionals that are strategically deployed and equitably distributed at each level of care.

CONCLUSION: The evidence supporting the dire need to employ nurses at degree level is overwhelming and the impact that such a cadre of nurses on the health care system is beyond imagining. Progressive nations have embraced the concept of ensuring their nursing personnel are adequately trained with apparent impact on the health status of their citizens. Kenya should make deliberate steps to improve the health of its citizens through ensuring the health system is adequately equipped with a sufficient number of highly trained nurses. This will be realized through adequate budgetary allocation aimed at recruiting more graduate nurses and equipping the health facilities.

THE PETITION

The revised scheme of service for nursing personnel (2014) provides for employment of nursing officers with degree qualification. However, six years since then, there is lack of clarity on implementation of the scheme in regard to the Nursing Officers' positions beyond internship position, and no policy has been enacted to provide for continuous offer of employment to a significant number of nurses with degree qualification.

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The above statement notwithstanding, the Ministry of Health has made some progress in implementing the scheme of service through the placement of most BScN graduates as Nursing Officer (interns) at Job Group K for one year. However, there has been lack of clear process for transitioning of the nursing officer interns to regular employment in the public health care delivery system after internship.

This treatise therefore is appealing to the government through the Ministry of Health to anchor *continuous employment of nursing degree graduates in health human resource policy that provides for inclusion of graduate nurses in advertised nursing vacancies at all levels of health care delivery system, in line with 2014 revised scheme of service of nursing personnel.*

By so doing, the government will not only be optimizing return on investment in nursing human capital, but will also be upholding the personal, employment and professional rights of all health workers as urged by the Global Strategy on Human Resources for Health: Workforce 2030.

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