



Nurse Practitioners (NPs) as Game Changers in Tanzania Health Delivery System: Lessons Learnt from Fujita Bantane Hospital in Japan

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Abstract

Shortage of physicians/doctors in the primary health care system has been evidenced in various countries. Among other things, these countries deployed nurse practitioners (NPs) in the health care delivery system to address this shortage. Countries in America, Europe, and Asia use NPs to address physicians/doctors shortage in the primary health care delivery systems. Various studies have shown that NPs have been deployed in primary health care facilities to curb these shortages. While in Tanzania shortage of physicians/doctors and other health professionals is evidenced in every sector of the health care system, nurses play a crucial role to cover this shortage by providing care and support for individuals and communities. Nurses work in various settings from being a nurse, counselor, laboratory technologist, social worker, educationist, and physician, to name a few. Nurses play a key role in preventing, diagnosing, and attending to common health problems. The question is, “When will the Tanzanian health delivery system recognize the pivotal role of these nurses and upgrade them to NPs?” This study suggests that deployment of NPs in Tanzania’s health care systems could be a “game changer.” As a fellow on Critical Care Nursing Course at Fujita Health University Bantane Hospital in Japan, witnessed deployment of NPs in health care delivery and the reaped benefits are enormous; increased access to health care services, reduction in health care costs, reduced hospital stays, and customer satisfaction through client empowerment and comfort. This is an observational study of tasks performed by NPs in Fujita Health University Bantane Hospital and their relevance as a positive innovation to curb physician shortages for effective health care delivery. The duration of the study at Bantane Hospital was 2 months from January 15 to March 16, 2024. One-to-one interviews with NPs on duty were conducted. Also, collected and reviewed information from Tanzanian government Web sites, published government documents, and academic

Keywords

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literature. Results show that NPs perform a lot of procedures that physicians/doctors were supposed to do. In the wards, theater, laboratories, and clinics, they play a pivotal role to curb shortage of physicians/doctors in health settings. NPs are an effective addition to medical facilities. They perform various procedures in the absence of the doctors. The findings from this study have important implications for improving health care delivery in Tanzania. NPs could be “game changers” in the health care landscape in Tanzania. Investment on nurses’ education, proper training, and policy changes in nurse practice regulations are key for this to succeed.

Introduction

In Tanzania, shortage of skilled health workers including nurses and physicians/doctors is quite evident. This is a major challenge that affects the quality and accessibility of health care in Tanzania.¹ According to the World Health Organization (WHO), Tanzania has a nurse-to-population ratio of 1:1,982 which is far beyond the threshold of 1:1,1000, whereas doctor-to-population ratio stands at 1:20,010 while the WHO recommendation is one medical doctor to 4,000 people.

Nurse practitioners (NPs) undergo training sufficient for them to function as a nurse with advanced practice, also they have the qualifications of a registered nurse (RN). RNs with some additional training and experiences in performing limited numbers of doctors’ procedure can be promoted as NPs. However, RNs play an important role to cover this shortage by working beyond their officially stipulated responsibilities. They work everywhere by providing care, health education, counseling, advocacy, etc. and generally, they are involved as key players in preventing, diagnosing, and treating common health problems in many occasions. They also take the role of physicians/doctors, even in performing minor procedures which could be performed by doctors.¹

In other countries like the United States, Thailand, and Japan nurses who perform such roles and more are identified as “NPs.” NPs are RNs but given extra professional training, extra skills, and are given extra responsibilities. NPs are permitted to prescribe treatments, order tests, and diagnose patients, these duties are normally performed by physicians/doctors whereas RNs are not allowed to. There are limited procedures which are supposedly to be conducted by a doctor, but privileged to experienced NPs who have performed such procedures under supervision sufficiently and demonstrated ability to perform independently. This measure is taken to address the limited number of medical doctors. Yet, nurses in Tanzania be it in health centers or hospitals (especially in the rural areas) perform all those critical roles in supporting health care, but the system is yet to recognize them as NPs. Is it lack of training? Is lack of policy to support their enrollment?

The questions compelled the necessity to conduct this study to explore more about the Japanese health care system where NPs have been successfully deployed in the health care system. During fellowship at Fujita Health University-Bantane Hospital (January 2024–March 2024) this study was

performed to learn everything about NPs in Japan. Major aim was to learn and see the possibilities to emulate the Japanese system of NPs deployment in the health system.

According to available literature, the practices of NPs differ from country to country but basically, they have been used to do the same tasks. Evidence shows that in most cases NPs have successfully improved for the better; health services, hospital costs, hospital stays, and reduced patients’ reattendance to the hospital. For example, in Canada they use NPs in primary health care and it has shown patients’ satisfaction to a larger extent compared when patients meet with the physician.^{2,3}

The trend in the past 20 years shows in many countries there is an increase in autonomy and authority of NPs and that they have assumed a prominent place in primary health care across countries, but also the number of NPs workforce continue to grow at a healthy rate and to change the perception of traditional role of nurses in a health setup. Now, NP plays a critical role in providing quality health care. In areas where NPs are used, they have been important contributors to the health care workforce.

Today, some physicians are starting to view NPs as playing a complimentary and critical role in primary health care. NPs have demonstrated abilities and competences parallel with those of primary care physicians in clinical settings and in some areas NPs quality of care indicated that NPs care was better than physician care in assisting ambulatory patients with chronic problems, that is, hypertension, obesity, communication, and counseling. In a study conducted in 2000, it was found that physicians and NPs achieved similar patients’ outcomes. Therefore, NPs are RNs with extended authority that allows them to communicate, prescribe approved drugs, order, administer approved drugs, and provide therapies.³

Materials and Methods

This is an observational study conducted at Bantane Hospital (Japan). Observation while NPs perform their daily duties in the intensive care unit (ICU), theater in the wards, and patients’ clinics. Also, one-on-one interviews with NPs were conducted at Fujita Health Bantane Hospital. Review of gray literatures and other available literature on NPs and statistics from Tanzania Ministry of Health was conducted.

Results

There is a total of 339,623 doctors, 759 NPs, and 1,320,000 nurses in Japan. While at Fujita Bantane Hospital, the Neurosurgery Department has got a total of 6 doctors and 2 NPs (since April 2021). To be a NP, you should have at least 5 years of practice as a nurse, you should have studied for 2 years in the master's program at the graduate school (training course started in 2008). It is necessary to pass the NP qualification examination (the system started in 2011). NPs are trained to perform 38 procedures. At Fujita Bantane Hospital, after graduating a 2-year NP course, they practice for another 2 years as resident NPs where they pass through all the general wards, ICU emergency, and operating room practicing the role of NPs. After that they are recognized as official NPs and permanently fixed to the central medical department and results show that they perform a lot of procedures that doctors were supposed to do, and the following are the medical activities they perform in the absence of the doctors.

In the ward:

- drain removal and stitch removal
- pathological condition assessment
- team consultation
- test ordering and result confirmation
- medical record entry
- assessment in catheter examination
- insertion of feeding tube.
- responding to calls from ward nurses
- infusion management
- wound management
- prescribing medication and counseling to patients

In the ICU:

- drain and stitch removal
- extubating the patient
- PICC (peripheral insertion of central catheter)
- intubation
- conduct cardiac ultrasound examination with supervision

In operating rooms:

- arterial puncture
- assisting in surgeries and examination
- preoperative positioning and skin preparations for the surgeon.
- suturing during wound closure (surgery) and wound dressing after surgery.
- assessment in catheter examination

In addition to the abovementioned, they do research and clinical work. Also, they advise nurses and rehabilitation staff on various issues pertaining to patients' treatment and recovery.

Discussion

NPs According to Available Literature

NPs in Japan collaborate with other health care professionals by complementing each other. They provide a full

range of primary acute and specialty health care services including assisting doctors in some procedures, catheterizations, PICC insertion, feeding tube insertion, etc. What sets NPs apart from other health care providers is their unique emphasis on the health and well-being of the whole person with focus on health promotion, disease prevention, and health education and counseling. NPs guide patients in making smarter health and lifestyle choices, which in turn can lower patients out of pocket costs. NPs are more than just health care providers, they are mentors, educators, researchers, and administrators, their involvement in professional organization and participation in health policy activities at the hospitals help to advance the role of NPs and ensure that professional standards are maintained. By providing high-quality care and counselling NPs can lower the cost of health care for patients, for example, patients who see NPs as their primary care provider often have fewer emergency room visits, shorter hospital stays, and lower medication costs.⁴ These cast a different light on the idealized picture of nursing services.

There is a saying that "NPs have brain of a doctor and heart of a nurse," with proper training and remuneration, they can perform many tasks which could be performed by doctors.

NPs may order, conduct, and interpret appropriate diagnostic and laboratory tests and prescribe pharmacologic agents, treatments, and nonpharmacologic therapies. Educating and counseling individuals and their families regarding healthy lifestyle behaviors are key components of NPs care as learnt from Bantane Hospital. Similarly, NPs in Tanzania play a key role in preventing, diagnosing, and treating common health problems as well as preventive services such as immunizations, antenatal care, and family planning. Their presence in health facilities covers the gap of physicians/doctors. If properly trained like those in Bantane Hospital they could cover shortage of skilled health workers especially doctors. The government of Tanzania should pick those who are capable, give proper training, and upgrade their roles to NPs. It is a fact that the use of NP is not something to be accomplished in a year or two, it needs time, education, change in the health care system, financial investment, and political will in accepting and implementing.

Conclusion

The findings from this study have important implications for improving health care delivery in Tanzania. NPs could be "game changers." Tanzania state legislatures, policy makers, and Health Ministry should amend the Nurse Practice Act rules and regulations in order to accommodate in the health system the new roles of NPs.

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Conflict of Interest

None declared.

References

- 1 Softmed Company Limited. The Role of Nursing in Supporting Healthcare in Tanzania; May 2023. Accessed March 15, 2024 at: <https://www.linkedin.com/pulse/role-nursing-supporting-healthcare-tanzania-softmed-company-ltd>
- 2 Wei CW, Tung HH, Tsay SL, Lin CW. Nurse practitioners in Taiwan: today and tomorrow. *J Am Acad Nurse Pract* 2012;24(03):138–142
- 3 Hanucharunkul S. Nurses in primary care and the nurse practitioner role in Thailand. *Contemp Nurse* 2007;26(01):83–93
- 4 Salkever DS, Skinner EA, Steinwachs DM, Katz H. Episode-based efficiency comparisons for physicians and nurse practitioners. *Med Care* 1982;20(02):143–153