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## Historical Overview of Nursing and Midwifery Education and Nursing Workforce in Rwanda

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### ABSTRACT

Nursing education in Rwanda is undergoing rapid transformation. The literature reveals that the training of nurses and midwives in Rwanda started during the colonial era. Many of the nursing schools were opened by religious institutions such as Catholics, Protestants and Adventists, some being public and private. During 1980s there was a great transformation in nursing education in Rwanda, mainly by phasing out medical assistants, and education was restructured and the secondary program was fixed to 6 years; the nursing program was integrated in secondary education. In 1994, the Genocide against the Tutsi has seriously affected all sectors of life especially nursing. After the 1994 Genocide against the Tutsi, the Government of Rwanda invested in training nurses at various levels, and many public and private nursing and midwifery schools were opened. In 2007, a competency based approach was introduced in nursing education, and Public nursing schools were permitted to train nurses and midwives with advanced diploma (A1). Today, with the support from the Government of Rwanda, Nursing and Midwifery profession is becoming a pillar and cornerstone of Rwandan Health system.

**Keywords:** History of nursing in Africa, Nursing education in Rwanda, transformation of education in Rwanda, Nursing work force in Rwanda.

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## INTRODUCTION

Nursing education in Rwanda is undergoing rapid transformation <sup>1</sup>. The literature reveals that the training of nurses and midwives in Rwanda started during the colonial Era. Many of the nursing schools were opened by religious institutions such as Catholics, Protestants and Adventists<sup>2</sup>. In recent year a lot progress has been made by the Government of Rwanda to provide quality of education for nurses and midwifery in both public and private schools <sup>1</sup>.<sup>3</sup>This paper explores historical overview of nursing education in Rwanda from colonial Era till today.

## MATERIALS AND METHOD

### **Aim**

The purpose of this article is to provide an overview of historical background of nursing and midwifery education in Rwanda, and brief descriptions of nursing workforce in Rwanda.

### **Methodology of the literature review**

A literature review was compiled on the historical perceptive of nursing education and nursing workforce in Rwanda, and in order to describe and summarize the information gathered the authors ensured transparency, comprehensiveness and rigor in searching and data synthesis, various data bases were searched and a number of key words were used.

### **Databases searched:**

The literature search included the following computer-assistance, data-based bibliographies namely MEDILINE (Medical Literature Online), Academic Search Premier, Nexus, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Google and Google Scholar, Science direct.

### **Inclusion Criteria:**

Quantitative and qualitative publications were considered for inclusion. The review was limited to articles published in the English language with no publication date restriction.

### **Key words used in searching:**

Nursing work force in Rwanda, transformation of education in Rwanda, history of nursing in Rwanda. In selecting data to be included, from the searched data bases, studies were checked for duplicates, and removed. They were also screened for relevance on title, abstract then full text article.

## **HISTORICAL OVERVIEW OF NURSING AND MIDWIFERY EDUCATION IN RWANDA**

### **Nursing education in the colonial era in Rwanda**

Training of nurses and midwives in Rwanda is traced back in the colonial Era<sup>2</sup>. The following is historical overview of nursing and midwifery education, and how it has evolved over the decades.

**In 1912**, a School of Medical Assistant is open at Gitega in Burundi. This school trained the first Rwandans and Burundians caregivers<sup>2</sup>. **In 1929**, a school was opened at Butare in Rwanda. It was multidisciplinary because it was to train administrators, teachers, agronomists and medical assistants<sup>2,4</sup>.

**In 1949**, Kabgayi Diocese started the training of two years programme of assistant midwives who were chosen among the best girls workers of the Kabgayi Hospital. The experience of the program leads to the opening of a real School of comprehensive nursing and midwifery<sup>2,4,5</sup>. **In 1952**, the School of Kabgayi trained nurses and midwives at A3 programme for a duration of three years. An entry exam was given to select candidates. Many young girls with 3 years of secondary level were admitted<sup>5</sup>. The school of Kabgayi like other nursing schools went under several reforms in the following years, and those many reforms have been made to address the need of the population and the priorities of education and health sector. There were some changes in 1962, 1966, 1979, 1993, 1995 and 2005<sup>4,5</sup>.

### **Nursing education after independence**

**In 1962**, the Protestant Church of Rwanda opened the School of Kirinda in Kibuye by training midwives' assistants and nurses' assistants. The same year, the Catholic Church opened the School of Rwamagana by Bernardine Cistercian with St. Bernard as Patron saint which began training nurses' assistants and midwives assistants; later this school of Rwamagana improved his training and graduated midwives and nurses<sup>2,6</sup>. **In 1964-1968**, the education system has undergone reform with 3-year post primary programme. After 3-year post primary programme the way was open for further professional technical training. Thus the Groupe Scolaire of Butare continued training medical assistants while the Rwamagana School trained nurses and midwives. It was during this period that nursing and midwifery programs were merged to form the A2 Nursing programme<sup>2,4</sup>.

**In 1969**, the Methodist Church opened the Groupe Scolaire of Kibogora medical assistant. The program operated for two years, 1971 and 1972; then was transformed into "Nurse A2 programme"<sup>2</sup>. **In 1970**, the National University of Rwanda opened a Nursing School with an A1 level (which operated within the University Hospital). Unfortunately, this school was closed in 1977<sup>2,4</sup>.

**In 1981-1985**, education was restructured and the secondary program was fixed at a 6 years program; then nursing program was integrated in secondary education. **In 1986**, schools of nursing and medical assistants were completely merged and followed the curriculum for A2 level nurses<sup>2,4</sup>.

Merging reasons were:

- ✓ Facilitate the teaching and administration of schools by the Ministry of Education.
- ✓ It was found that medical assistants and nurses were doing the same jobs in the health settings.
- ✓ All graduates were carrying out tasks for which they were not trained as they found themselves confronted with health problems in the workplace that require urgent action. So, often they worked as physiotherapists, anesthetists' assistants, laboratory assistants, and teachers in schools of Nursing etc.

The Government then decided to train health personnel , Nurses with A2 level who were competent for both curative and preventive care<sup>2</sup>. **In 1987**, motivated by the concept of primary health and health care for all by the year 2000, the government opened many nursing schools with A2 level, like Gisenyi, Gitwe and Ruhengeri schools. Since 1991, many other nursing schools were inaugurated. However all of them trained nurses with A2 level <sup>2,4</sup>.

### **Nursing education post 1994 Genocide against Tutsi**

**In 1994**, the genocide against the Tutsi has seriously affected all sectors of life especially nursing. The archives show that The Ministry of Health (MoH) employed 983 nurses in March 1994, and however this number decreased dramatically where 347 nurses in December 1994 were employed by MoH. The reason is that many nurses were killed and others had fled the country. **After December 1994**, among the Rwandans who had just returned in the country, there were nurses trained in the countries of exile. So, on December 31, 1995, the Ministry of Health employed 730 nurses in different health facilities of the country <sup>4,7</sup>. **In 1996**, after a the genocide against the Tutsis that killed many health professionals, the Rwandan Government opened the Kigali Health Institute which started to train A1 nurses and midwives, and this initiative was to solve many and urgent problems left by the 1994 genocide against the Tutsis, during which many health workers were killed and others left the country to exile<sup>8</sup>. Two other institutions that trained A1 nurses have emerged: it is the UNILAK and ISPG Gitwe. **In 2002**, a Bachelor Degree in Nursing started at Kigali Health Institute <sup>2,4</sup>.

### **Transformation of nursing and midwifery education in Rwanda**

**In 2005** the need to restructure nursing and midwifery Education in the country was raised. Kabgayi School of Nursing and Midwifery with those (Five schools of Nursing and Midwifery) were selected to be a higher education institution and was mandated to produce high qualified health professionals. A recommended competences based program were introduced and implemented <sup>5</sup>. **In 2007**, the Ministry of Health promoted other five public Nursing and Midwifery Schools to tertiary education, namely (Byumba, Kabgayi, Kibungo,

Rwamagana and Nyagatare schools of nursing and midwifery), and started training nursing and midwifery at advanced diploma level. This was done in the process of improving the quality of education, and phasing out A2 diploma training<sup>9</sup>. The competence based approach was introduced in these schools in 2007 and they welcomed the first students in the new three-year, competence -based A1 Programs, which was vital to the government's plans to phase out lower-level A2 programs and transition to a workforce of A1 or higher-level professionals<sup>8-11</sup>.

The competence based approach in Rwanda was steered by the Ministry of Health, in collaboration with the stake holders, such as APEFE and BTC (Belgium Technical cooperation)<sup>9</sup>. The main reason for this change was that the education and training programmes in nursing schools in the past were too content based. The Rwandan Government identified that there was a shortage of skilled workers and the traditional methods was not preparing the learners to attain skills which would allow them to become responsible nurses who would provide optimum nursing care in the country at all health sectors and in the region<sup>9</sup>. However recently there has been a shift to adopt modular system in public higher education institutions as an attempt to address the limitations of the credit system<sup>12</sup>. It is argued that this credits system limited the transferability of students; restricted multiple entries and exits of students; difficulty in comparability of graduates from the same educational system and reluctance of acceptability into the wider region of the graduates from the system<sup>12</sup>.

The credit system which was followed was criticized of having many courses of which some are no longer relevant to the needs of society as described in the preface of the Rwanda National Qualification Framework<sup>12</sup>. The recent restructuring of nursing and midwifery education system saw Byumba, Kabgayi, Rwamagana, Nyagatare and Kibungo nursing schools elevated to higher education institutions<sup>13</sup>. In 2013 they were allowed to graduate their first students since 2007<sup>13</sup>. Currently those schools are under the umbrella of University of Rwanda, School of Nursing and Midwifery-CMHS-UR<sup>3</sup>. In recent years more progress and transformation have been made in the field of nursing and midwifery education with number of private schools training nurses and midwives at different levels. These who opened in recent years are Kibogora Polytechic, Ruli School of Nursing and Midwifery.

### **Restructuring of Rwandan tertiary education and its impact of nursing and midwifery education**

**In 2013**, there are many changes that took place in the Rwandan tertiary education where MPs have endorsed a bill that seeks to have some 10 universities in the country merged to form one institution of higher learning<sup>14</sup>. The Bill allows the university to develop high

education quality and innovative teaching and research for addressing the problems of the population, the students, the nation, the region and globally <sup>14</sup>. The Law N° 71/2013 of 10/09/2013 which is a law establishing the University of Rwanda (UR) and determining its mission, powers, organization and functioning came into effects the day of its publication <sup>15</sup>. These changes have also affected public nursing and midwifery schools. The provincial nursing and midwifery school programs have recently come under the administrative umbrella of the University of Rwanda, and College of Medicine and sciences. Nursing education is provided through either a 4-year degree program at the University or a 3-year diploma of nursing program in each one of 5 provincial schools. As the MOH continues to support upgrading nursing education in Rwanda, a greater number of nurses with A1 and A0 designation will be available to practice and teach as health care professionals in this country <sup>3</sup>. According to Higher Education Council<sup>16</sup>, the Government of Rwanda is supporting the transformation of higher education so that it is fit for purpose and internationally credible. Higher education institutions are required to deliver graduates, research, consultancy services and community engagement to support the social and economic development of Rwanda.

**In 2012**, e-learning system in nursing and Midwifery education was introduced in five public schools of nursing and Midwifery (Kabgayi, Rwamagana, Nyagatare, Kibungo and Byumba), and students were recruited from different health centers and hospitals with the aim of increasing quantity and quality of nurses in the country <sup>17</sup>. The implementation of e-learning platform in the Rwandan nursing schools, was done after a pedagogical and technical evaluation, and Moodle learning management system was selected (The Laurillard's Conversational Framework was the main evolutionary tool) <sup>17</sup>. All e-learning students, ICT managers and teachers have been trained, and they have so far completed 5 courses on the use of Moodle <sup>17</sup>. The programme is structured in such a way that 80% part of it is delivered online via e-learning platform while students are at their respective workplaces, whereas the rest of the programme include face-to face contact sessions at the Schools of Nursing and Midwifery <sup>17</sup>. The challenges have been reported, mainly the use of ICT tools, language barrier and work overload for the teachers <sup>17</sup>.

#### **NURSING WORKFORCE IN RWANDA**

According to HRH Consortium and Ministry of Health <sup>18</sup> there are currently 9,138 nurses in Rwanda for a population of over 10 million, and most of these nurses have only the minimum level of training. Most nurses and midwives are now being educated in 3-yr programs at Schools of nursing and Midwifery throughout the country. The School of Nursing and Midwifery, which prepares nurses at the baccalaureate level, offers a Bachelor of Nursing Education degree, a Bachelor's degree in General nursing and a Master's program in Critical

Care Nursing. Historically, there have been three levels of training for nurses and midwives in Rwanda A2, A1, and A0. A2 level nurses and midwives are trained to the secondary school level while A1 nurses and midwives have an advanced certificate following three years of tertiary education. A0 nurses and midwives possess a bachelor's degree, and often become faculty members. Beginning in 2006, the Ministry of Health stopped training and deploying A2 level nurses and midwives, deeming their skill sets insufficient to provide quality patient care <sup>4, 18</sup>.

Currently the nursing workforce in Rwanda consists mainly of three categories of nurses and midwives with Bachelors (A0), advanced diploma (A1), and Diploma (A2) <sup>19</sup>. Very few have completed masters or Phd degrees. The minimum requirement for a Rwandan nurse is now A1, though many health facilities continue to be staffed by mostly A2 nurses due to the serious shortage of A1 nurses <sup>4, 18</sup>.

According to the National Council for Nursing and Midwifery (NCNM) registered nurses and midwives hold at least an A1 or its equivalent, with license to practice without any supervision from another nurse. A1 level is obtained on completion of three years after secondary school. A2 or associate nurses and midwives hold an advanced general certificate of secondary education or its equivalent, they work under the supervision of a registered nurse <sup>4, 20</sup>.

The critical shortage of health professionals has resulted in only 30% of health facilities being able to meet minimum staffing needs <sup>21</sup>. A significant factor contributing to the shortage of professional nurses is the insufficient numbers of qualified nursing faculty <sup>3, 22</sup>; many migrating to countries away from their own to seek higher wages, better research funding and career growth <sup>23</sup>. Therefore, in the country of Rwanda there is a significant need to educate, recruit, and retain nursing faculty <sup>3</sup>. To effectively utilize teaching strategies that promote competencies for nursing students, faculty need to be supported by the academic organization and practice settings that will ultimately empower them in their teaching role <sup>1, 3</sup>.

In 2012, the Ministry of Health, reported that the ratio of nurses and the population is 1/1,476 inhabitants. It is also reported that 62.8% of Nurses were working in rural areas in 2008, 78% in 2010, and 38.2% of nurses were working in the urban areas in 2008, and 22% in 2010<sup>24</sup>. Due to the shortage of qualified nurses some health facilities mostly those from remote areas are still employing A3 nurses, also called auxiliary nurses who are no longer recognized by the NCNM. Auxiliary nurses have two years of secondary school with a training on basic nursing skills they have no competence in nursing decision making (WHO,2010).

Nursing workforce is regulated by National council for nurses and midwives since 2008 <sup>20</sup>. The National Council of Nurses and Midwives was established by Act of Parliament N<sup>o</sup>

25/2008 of 25/07/2008 and was promulgated on 1st November 2008. The NCNM was established to regulate nursing and Midwifery professions for public protection by ensuring that nurses and midwives are capable of providing safe and effective care as well as safeguarding the integrity of the profession. The Council manages notifications (complaints) about the conduct, performance or health of nursing and Midwifery practitioners and students<sup>25</sup>.

## CONCLUSION

Although a lot of progress has been made throughout many decades to meet the new standards of Nursing Education both in Rwanda and in the East Africa Community, nursing quality care, as well as the ratio nurse/population recommended for better quality care requires to be improved. Transformation of higher education, introducing e-learning in nursing and Midwifery education in Rwanda, and NCNM being a regulatory body of nursing and Midwifery practice and education, it is a cornerstone to the future of nursing and Midwifery profession both in Rwanda and in the Region

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