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INTEGRATING NURSING INTO NATIONAL CANCER CONTROL PROGRAMS: PREVENTION AND EARLY DETECTION – THE NIGERIA EXPERIENCE

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ABSTRACT

Cancer is a major killer disease in Nigeria; breast, cervical and prostate cancers being the commonest. Data from Globocan 2000 indicate an increasing rate in cancer morbidity and mortality in Nigeria. It is estimated that by the year 2010 about 500,000 cases will be diagnosed annually. Over 70% of the cancer patients present themselves in stages III and IV when only palliative therapy can be offered. In spite of the increasing rates in cancer prevalence in Nigeria, the importance placed on cancer as a health problem is somewhat very low, relative to other non-communicable diseases. The National Government does not allocate up to 6% of its National Annual budget to health. Currently, the government has not given the issue of cancer prevention and treatment the priority it deserves, as compared with HIV/AIDS, which has suddenly gained attention as a result of international efforts. The high rates of morbidity and mortality associated with cancer related diseases could be considerably reduced through effective cancer education, championed by community health nurses and targeted at prevention and early detection. Unfortunately, this approach has not got the attention it deserves. In a country where about 65% of the populace live in rural communities (where there is a high level of ignorance, inadequate manpower and health facilities) cancer outreach programs aimed at rural areas, can be enhanced. This can be achieved through a program that integrates nursing especially community nursing, into national cancer control. Currently, only limited attempts promoted by State Ministries of Health, NGOs and professional bodies, have attempted doing this with the focus on primary, secondary and tertiary prevention. This paper shall analyze, evaluate and discuss the efforts made so far in Nigeria as a basis to coming up with options and strategies for effectively using nurses, especially community health nurses, in the prevention and early detection of cancer.

INTRODUCTION

I thank the organizers of this conference for inviting me to present a paper on the Nigerian experience with respect to the integration of nurses into national cancer control. The significant position of Nigeria within the geo-political context of Africa and the world in general makes a discourse on Nigeria on a topic like this very relevant to the general theme of this conference. Nigeria is the most populous country in Africa, situated in West Africa, South of Sahara. Two out of five of the entire population of Africa comes from Nigeria. Nigeria has a population of about 126 million. About 7% of the population is between ages 30 and 50 years. The rate of population growth is very high in spite of the poor performance on most of the survival and

human quality indicators. (refer to Tables 1-2). Life expectancy is very low (49 and 51 for men and women, respectively). Cancer is one of the major killer diseases.

Table 1: Demographic Indicators

Demographic	Indicators
Estimated Population	126 million
Population Growth	2.6%
Birth Rate	39.7 births/1,000
Death Rate	13.9 deaths/1,000
Life Expectancy - Female	51years
- Male	49 years
Literacy Rate (Average)	57%
Urban/Rural Population	35% urban; 65% rural

Table 2: Health and Social Indicators

GDP Growth	3.5%
GDP Per Capita (PPP)	$950
Population living below poverty	45%
Total Fertility Rate	5.6 born/woman
Health Insurance Access	85% uninsured, 15% private insurance
Cost of Cancer Treatment:	
Mammography	About $35
Cytology alone	$2-$14
Cervical smear test	$4-$25
Minimum wage for government workers	$65 per month

Sources: CIA World Fact Book 2001, Field Survey, 2002

Cancer in Nigeria

Data from the National Headquarters of Cancers registries in Nigeria (see tables 3 and 4) reveal the following facts:

- ✓ About 100,000 new cases occur annually.
- ✓ 1 out of every 6 Nigerians will develop cancer, now or later.
- ✓ It is estimated that by the year 2010, 500,000 new cases will be diagnosed annually.
- ✓ Over 70% of our cancer patients present themselves in stages III and IV.
- ✓ Breast and Cervical cancers are the commonest cancer in women, where they affect about half a million women annually, translating to one (1) case every minute.
- ✓ In 1995, Breast cancer overtook the ranking when it became the leading cause of death among Nigerian women.
- ✓ As of today, one (1) out of every 3 cancers in women is a genital (gynecological) cancer.

- ✓ Cervical cancer constitutes about 63% of our gynecological cancers (Babarinsa, Akang&Adewole, 1998).
- ✓ There is a dearth of oncology nurses, Cytopathologists, Cytotechnicians, Radiation, Surgical, Medical and Psycho-Oncologists in Nigeria.

Table 3: Top Cancer Incidence Rates in Nigeria, 2000

S/N	Male Cancers	Incidence Rate per 100,000	S/N	Female Cancers	Incidence Rate (per 100,000)
1.	Prostate	20.6	1.	Breast	28.9
2.	Non-Hodgkin	10.3	2.	Cervix Uteri	16.3
3.	Liver	8.2	3.	Colon/Rectum	4.8
4.	Stomach	5.3	4.	Non-Hodgkin Lymphoma	4.3
5.	Colon/Rectum	4.9	5.	Liver	4.1
	Male incidence for cancers except skin	81.1		Female incidence for cancers except skin	92.9

Table 4: Top Cancer Mortality Rates in Nigeria, 2000

S/N	Male Cancers	Mortality Rate per 100,000	S/N	Female Cancers	Mortality Rate (per 100,000)
1.	Prostate	20.6	1.	Breast	28.9
2.	Non-Hodgkin	10.3	2.	Cervix Uteri	16.3
3.	Liver	8.2	3.	Colon/Rectum	4.8
4.	Stomach	5.3	4.	Non-Hodgkin Lymphoma	4.3
5.	Colon/Rectum	4.9	5.	Liver	4.1
	Male mortality for cancers except skin	81.1		Female mortality for cancers except skin	92.9

Sources for incidence and mortality rates: J. Ferlay, F. Bray, P. Pisani and D.M. Parkin, GLOBOCAN 2000; Cancer incidence, mortality and prevalence worldwide, version 1.0 IARC cancer base No. 5, Lyon, IARC Press, 2001.

The Ibadan Cancer Registry reports that cancer of the cervix constitutes 21.3% of all female malignancies, with about 5-6 cases seen every week. As the incidence of HIV infection increases (women with HIV-induced immune suppression are at a high risk of developing cervical cancer), and as our population ages during the coming decades, the number of cases can be expected to increase.

The Prevention of Cancer, Lessons from Experience

We all know that Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread, called metastasis, is not controlled, it can result in death. Cancer

is caused by both external factors, such as chemicals, radiation, and viruses, and internal factors, including hormones, immune conditions, and inherited genetic mutations. These factors may act together or in sequence to initiate or promote cancer. However, most cancers are preventable, and primary prevention is the preferred strategy for reducing the disease burden of cancer. For example, all cancers caused by tobacco use and heavy use of alcohol could be prevented completely. Many cancers related to dietary factors can be prevented by maintaining a low-fat diet, high in goods from plant sources. Many skin cancers can be prevented by protection from sun exposure.

In advanced industrial countries like the United States, cancer incidence and mortality are beginning to decline, as a result of major commitment of Human and Financial Resources to cancer control, well-developed infrastructure and high standard of living. As a result of active cancer prevention and control measures, the relative cancer survival rate in some advanced countries has been increased to 60% or better, as compared with 30% or less in the developing countries where there is modest or negligible commitment of human and financial resources to cancer control and development of infrastructure for cancer management.

Experience from the advanced countries has shown that health professionals such as nurses and doctors are effective agents in the prevention and control of cancer. They have taken active role in teaching and counseling to raise public awareness about cancer risks and preventive measures. For example, people working in hazardous occupations have been counseled about the risks and can be encouraged to use safety equipment. Health care providers have helped patients to eliminate carcinogenic exposures, especially through cessation of smoking. Other areas where health workers have helped include counseling about alcohol use, physical activity, and dietary changes. These have proved to be effective means of preventing many cancers.

Experience has also shown that early detection, while it does not prevent cancer from occurring, can extend life, reduce treatment, and improve quality of life for patients living with cancer. Screening examinations, conducted regularly by a health care professional, can result in the detection of cancers of the breast, cervix, prostate, tongue, mouth, colon, rectum, testis and skin (the nine screening-accessible cancer sites) at early stages, when treatment is more likely to be successful. The importance of screening for early detection and treatment can therefore not be over-emphasized. If the increasing incidence of cancer and mortality associated with Cancer in the developing countries must be reduced, appropriate machinery for prevention and control must be in place and health workers must be mobilized to lead the prevention and control programs.

Cancer Prevention and Control in Nigeria

Cancer screening is at a very rudimentary level in Nigeria. Cytology based cervical cancer screening is only practiced opportunistically in Nigeria, sometimes it is linked with family planning and ante-natal care, and at other times, as an ad-hoc approach for symptomatic patients

and the few who request for it. Cytopathologists and cytotechnicians are actually very few. The cost of cervical smear test in Nigeria varies a lot, depending on where it is done, going for between $4-$25, with cytology alone costing up to between $2-$14. To a large majority of Nigerians, this cost appear prohibitive and has inhibited the adoption of this method of cancer control. Routine examinations for early detection of cancer are not usually recommended for patients because the costs are not affordable. For instance, most women age 40 and older do not have annual mammogram because of the cost and yet for cancer prevention and control annual mammogram is a must for women of this age range. Only well-to-do women (and this constitute less than one percent of the women population) utilize this essential service. Table 5 presents the treatment ratings for cancer treatment arrangements in Nigeria. As evident from the table, facilities, accessibility, social support, patient education and public enlightenment are generally poor. The situation is worsened by the very limited number of institutions and organizations working in the area of cancer prevention and control in Nigeria (See Table 6). As evident from table 7, there are few health facilities and NGOs who provide cervical and breast screening services.

Table 5: Cancer Treatment in Nigeria

Indicator	Treatment Rating				
	Excellent	*Very Good*	*Fair*	*Somewhat poor*	*Very poor*
Financial cost to patient					XX
Quality of medical care (e.g. Nurses, Doctors)			XX		
Public Hospitals and facilities (e.g. equipment availability)			XX		
Accessibility (e.g. travel time, wait time for appointment, etc)					XX
Social support, guidance and counseling			XX		
Patient Education			XX		
Public Enlightenment program/cancer awareness and cancer prevention education in rural communities				XX	

Source: Field Survey, 2002

Table 6: Local Organizations working on Cancer

S/N	Name of Institution/Organization	Type	Advocacy	Public Education	Training	Research	Cancer Treatment	Screening	Diagnosis
1.	Teaching Hospital	Govt. Hospital			X	X	X	X	X
2.	State Hospitals in big cities	Govt. Hospital				X	X	X	X
3.	Centre for Hope	NGO	X	X	X	X		X	
4.	Nigerian Anti-tobacco Coalition	NGO	X	X					
5.	Nigerian Cancer Society	NGO	X	X	X	X			
6.	Breast Cancer Association of Nigeria	NGO	X	X					
7.	Care, Organization, Public Enlightenment	NGO	X	X					
8.	EDUCARE Trust	NGO	X	X					
9.	J-Rapha Hospital	NGO	X	X	X			X	X

Table 7: Local Cancer Services – Cancer Screening in Ibadan, Nigeria

Indicator	Treatment Rating				
	Excellent	*Very Good*	*Fair*	*Somewhat poor*	*Very poor*
Financial cost to patient					XX
Screening Accuracy and Quality of Results			XX		
Availability of Screening and Diagnostic Facilities			XX		
Trained Health Professionals			XX		
Accessibility (e.g. travel time, wait time for appointment)					XX
Awareness and Education					XX
Educational Preparation of Nurses towards cancer control				XX	

Source: Field Survey, 2002

There are no specialized health facilities in Nigeria dedicated to cancer care, hence cancer patients are managed in teaching hospitals and state-owned hospitals in big cities. There is a dearth of oncology specialists such as: cancer nurses, Cytopathologists, cytotechnicians, radiation, surgical, medical and psycho-oncologists. Many women live in fear of being diagnosed as having breast or cervical cancer, yet a great number are also ignorant of how to spot

symptoms and many go through their lives without ever being screened. Many Nigerians still believe that the presence of lump in the breast, or an abnormal smear means one thing – the letter 'C'.

Barriers to Cancer Screening in Nigeria

Below are some of the barriers to cancer screening and control in Nigeria:

- Poor awareness, misconceptions, and low economic status of the general populace.
- General lack of knowledge about the reason and usefulness of screening.
- Poor awareness among the medical team about cervical pre-cancerous states.
- Poor level of knowledge and lack of necessary skills among healthcare providers.
- Poor communication skills.
- Lack of efficient healthcare providers, manpower, finance, resource management.
- Absence of an efficient national policy on cancer control programs.
- Due to cultural and religious practices, most women prefer to be examined or have a smear taken by other women. In a country where female health workers are still few, this poses a great risk to cancer control through early diagnosis.
- Many health professionals also serve as barriers to effective utilization, acceptability, and patronage of health services by those they are meant to serve due to their poor communication and inter-personal relationship skills.

Cultural Myths/Perceptions about Cancer in Nigeria

In addition to the dearth of facilities and the barriers mentioned above, there are a number of cultural myths and misconceptions among the Nigerian populace which constitute major hindrances to cancer control and prevention. Among these are the following:

- Cancer is God's punishment and causes pain and death (as a result of sins).
- Breast, cervical and prostate examinations are perceived to be related to sexuality.
- Presence of lump in the breast is believed to be synonymous to cancer.
- Prayers can heal cancer (syncretic churches).
- Cancer can be cured by witch doctors.
- Cancer is caused by supernatural powers and curses.
- Cancer is not associated with diet, environment or lifestyle factors.
- Cancer is due to witchcraft, sorcery and enemies who wish ill-will against those with cancer.
- Cancer is taboo subject, considered as bad luck, so people are secretive about it and do not want to talk about cancer in public.
- People are so scared about the letter 'C', so the pronouncement of cancer diagnosis is seen as the end of life.
- There is no point in finding out if you have cancer, since it is hopeless.

How Do We Change the Situation?

There are three major approaches to cancer prevention: education, regulation and host modification. Education is intended to reduce the cancer-causing behaviours of individuals. Educational programs must include messages to avoid tobacco use, avoid exposure to the sun and use of sun blockers, modify the diet, and improve workplace practices to reduce exposure to carcinogens. Educational programs can be implemented on a one-to-one basis, be targeted to high-risk groups, or take the form of mass-media campaigns. All educational programs must be age and culture-sensitive.

Some carcinogens can be avoided by means of individual behaviour changes and educational programs. For some environmental carcinogens, a regulatory approach is needed.

The socio-cultural context under which cancer control and prevention is expected to take place in Nigeria calls for advocacy and public enlightenment programs aimed at achieving the following objectives:

a) Changing the myths and misconceptions among the Nigerian populace about cancer.
b) Passing the correct information to the general public and the care-givers about cancer.
c) Mobilizing the public to realize the need for preventive measures and early detection of cancer.
d) Fostering greater understanding between care givers and members of the public with a view to enhancing cancer control and prevention measures in Nigeria.
e) Promoting preventive approaches while adequate attention is also given to curative measures as well.

Cancer Prevention and The Specific Roles of Nurses

The critical question at this juncture is: which category of care-givers is best suited to carry out more successfully the advocacy and enlightenment roles justified above? A quick situation analysis of workers in Nigeria will bring out the probable answer:

- ✓ Doctor-patient ratio is very low in Nigeria – about one (1) doctor to 45,000 people.
- ✓ Access to doctors is therefore very difficult for the poor majority, particularly the rural population.
- ✓ In most rural areas, the only care-giver the population can afford to related with and have easy access to are the community health workers – nurses and nurse aids at the primary health care centres.
- ✓ They are the people who man the health clinics, the Primary Health Care Centers (PHCs), the private maternity centers and the few nursing homes.
- ✓ In a country where about 65% of the population live in rural areas and where the access to medical facilities is through PHCs, most of which are manned by nurses and CHEWs, the medical services they can afford and have access to is PHCs and the likes, the role of

the nurses who manage these PHCs as agents for changing the myths and the misconceptions about cancer become very significant.

The importance of nurses in cancer prevention, early detection and screening become very important for the following reasons:

(a) The proportion of the population the nurse can reach is higher than those of the medical doctors.
(b) The ratio of nurses to population is much higher than the ratio of doctors to population. There is about 1 nurse to 67 people meaning that they have greater accessibility and a wider distribution over the social spectrum.
(c) The ability of the public to afford the services rendered by nurses.
(d) Nurses are closer to patients vis-à-vis other health-care givers.
(e) There is closer interaction between nurses and the public, particularly the community health nurses.

Nurses' Role in Cancer Screening and Early Detection

The array of roles that nurses can play is summarized in tables 8 and 9. There is need to serve as health educators and counselors; they could carry out screening activities, perform advocacy roles; carry out research and training; they could dialogue and they could carry out public enlightenment programs.

Table 8: Summary of the Role of the Nurse in Cancer Prevention and Early Detection

- ✓ Health Education
- ✓ Counselor
- ✓ Screening Activities
- ✓ Advocacy
- ✓ Research in Nursing
- ✓ Training
- ✓ Diagnosis
- ✓ Public Awareness
- ✓ Collaborator

nurses have the added advantages of greater numbers, greater accessibility and a wider distribution over the social spectrum, particularly if auxiliaries are included in the description "nurse". The importance of the health education function has been increasingly recognized within the profession (Smith, 1979, Akinsola, 1993; Okanlawon, 2002).

Measures of prevention and early detection are of particular importance in the control of cancer. Nurses are called upon to participate in the education of both public and patients about cancer (Davidson 1973, Hubbard, 1978) and there is evidence with specific reference to anti-smoking education that they accept they have a role to play (OPCS, 1977).

The Cancer Nurse as a Researcher

To ensure that nursing is effective, is safe, is acceptable to patients and is economic, nurses must find out why they are doing what they are doing and whether what they are doing has the effect it is meant to have. Such a task requires research, research by nurses into nursing. It is only by undertaking such research that nursing can continue to develop as a profession, justify its own existence and, most important of all, give patients the care they need.

The commitment of cancer nurses must be towards standards of excellence that will be the foundation for appropriate care of patients with cancer. Clinical nurses are needed to establish excellence in cancer nursing, nurses who are able to identify and interpret patients' needs, and who can skillfully plan and administer individually prescribed care.

To achieve this, the clinical nurse requires the support of her research colleges who will provide the body of knowledge upon which the clinical nurse can base her decisions. She requires the support of her educational colleagues who will keep her informed of new developments and ideas, and provide a structured framework for the interchange of relevant information. She also requires the support of her managerial colleagues who can provide an environment in which the autonomy of the clinical nurse within a multi-disciplinary team is respected, fostered, and developed so that the prescribing of nursing care and planning the delivery of nursing care becomes and activity based upon nursing criteria, reinforcing the concept of nursing as a professional activity in its own right.

Current Level of Nurses' Involvement in Prevention and Early Detection of Cancer in Nigeria

The level of involvement of Nigerian nurses in cancer control activities can best be described as 'Just fair'. This is borne out of the fact that the few nurses who are involved in one form of cancer control activity or the other, are the ones that are employed by the Federal and State Governments.

Majority who are working in the community as community and public health nurses, as well as those in Doctors' private clinics, seldom see this as part of their functions, as they are ill-

prepared during their nursing training. Generally speaking, nurses that are involved in prevention and detection activities, are limited in their knowledge and skills, hence their low morale and interest.

Strategies for the Effective Utilization of Nurse in the Prevention and Early Detection of Cancer in Nigeria

In order to make it possible for Nigeria to maximally utilize the services of nurses in cancer control and prevention, certain steps must be taken:

1. There is urgent need for capacity building for nurses (especially community health nurses) through training in:
    - Counseling skills
    - Effective communication skills
    - Advocacy
    - Clinical Breast Examination Skill
    - Low-cost technology for screening uterine cervical cancer
    - Research methodology skill
    - Availability of essential infrastructures in health facilities and communities.

    There is the dire need to build the capacity of all health workers in Nigeria. Specifically, nurses in Nigeria, need to be empowered through skills acquisition and capacity building through training, to enable them prevent cancer through early detection. This training must include effective communication skills as many doctors and nurses are poor communicators. The health policy trust in Nigeria on prevention through the Primary Health Care Scheme, which has Health Education and the treatment of non-communicable diseases, such as cancer, as two of its components demands the integration of nursing into its national cancer control. Community health nurses need appropriate empowerment, which will enable them carry out effective cancer outreach programs, aimed at rural areas with large under-served population.

2. There is need for policy shift that favors effective national cancer control program. The high rage of morbidity and mortality associated with cancer and related diseases could be reduced through a program of information, education and communication championed by community health nurses, targeted at prevention and early detection. The government needs to adopt multi-disciplinary and multi-sectoral approaches, in strengthening the national cancer control activities.

    There is the urgent need to improve nursing curriculum that encourages the integration of nursing into national cancer control efforts. Presently, the nursing curriculum only exposes nurses to pap smears during family planning course of 6-week duration.

However, after training, early cervical and other cancers' detection through screening is not offered routinely and regularly by most hospitals where nurses practice in Nigeria.

3. There is need for greater emphasis on the unique role of the nurse in cancer prevention and early detection strategies, in nursing education programs.

4. There is need for adequate funding by the National Government of Cancer control activities. In spite of the alarming data on cancer prevalence in Nigeria, the importance placed on cancer as a health problem is somewhat very low. The National Government of Nigeria does not allocate up to 6% its National Annual budget to health. This calls for the need of government to give the issue of cancer prevention and early detection, the priority it deserves. Adequate funding should be made available by government for comprehensive cancer control, including the training of health personnel.

5. The watchword for the effectiveness of cancer screening seems to be "quality assurance". The introduction of a national cancer-screening program is highly desirable in Nigeria. For it to work, the screening would have to be of the highest quality. Public information focusing on cancer education should be more freely available. Doctors should feel a greater responsibility to talk to clients through that information. Nurses should use their role as first and favored point of contact to reassure their clients and give them plain facts about screening and cancer.

Conclusion

For any successful national program on cancer control, education, prevention and early detection, to be successful, integration of nurses, education and training and re-training of nurses, doctors and other cadres of health service providers, including policy makers, must be the starting point. Once these are done, they will help reduce fruitless government and family expenditure on advanced cancers. However, if there is no national program on cancer prevention and early detection which encourages and support the integration of nursing at the 3-tiers of government, we will necessarily have to continue to manage advanced cancers which are costly, frustrating as they eventually end in death in spite of high cost of management.