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REVIEW OF PROSTATE CANCER IN GHANA: WHY GHANA NEEDS FATHER'S DAY DECLARATION AS NATIONAL PROSTATE CANCER AWARENESS DAY

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ABSTRACT

Aim: Prostate cancer is more aggressive in men of African descent than men of other races. There are lots of disparities in prostate cancer yet most men in the black communities are not aware of the disease let alone go in for screening programs. In Ghana, it is stated that the county has reached the global prostate limit. This review explores the trend and focus of cancer of the prostate research activities in Ghana as one of the ancestral nations for black men. It seeks to locate the place of the Ghanaian research environment in the global progress on prostate cancer disparities. **Method:** Extensive Literature was reviewed mainly through a Pub med search with the terms "prostate cancer "and "Ghana", as well as from internet, Ghanaian newspapers and hard copies of journal pages. **Result:** The countries largest men's charity, men's health foundation Ghana states that 1 in 5 Ghanaian men will get prostate cancer in their lifetime. Prostate cancer in Ghanaian men is on the rise with little or no governmental effort to fight it. **Conclusion:** The global focus on prostate cancer disparities in black men calls for more efforts from Africa, in all areas of research, along with international collaborations for capacity building. Prostate NGO's in Ghana needs serious funding in other to help fight the disease in Ghana.

KEYWORDS

Prostate Cancer, Ghana, Men's Health Foundation Ghana, Black men and Disparities.

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INTRODUCTION

“Those with a vision are made to struggle though we have eyes we do not see. Keep up the struggle”, a mailed dated June 2016 prior to the father's day sent to me from one office of the Ministry of Health states. But the question is for how long should those with a vision be made to struggle? How long should Ghana waits before considering a specific policy for men? How long should we wait before father's day is declared as national prostate cancer awareness day?.

For the past five years, I have researched extensively on prostate cancer in Ghana. My research focused specifically on men of African descent. After, I studied the masters program in prostate cancer-Sheffield Hallam University, UK, I have been actively involved in the fight against the disease in Ghana. As a Ph.D., candidate in alternative medicine and Prostate Cancer at the Indian Board of alternative medicines academy, in Kolkata, India, I realized from my research that prostate cancer is more aggressive in men of African descent. I therefore akin prostate cancer as a verb in men of African descent because it is a doing word in this group of men and for white men I akin it to a noun it is just a name in this group of people as they have slow growing cancer.

Our cells don't get cancer, they can't have cancer but they cancer. Judging from the over whelming notion Ghanaians have over certainty of cancer, little efforts seems to go into the ultimate cancer cure. The ultimate cancer cure is its prevention. Ghana needs to channel its resources into preventive medicine and not curative medicine.

In 2015, I presented a proposal to the president of the republic of Ghana, His Excellency John Dramani Mahama to consider the father's day as a national prostate cancer awareness day to strengthen the fight against the disease as I realized that Prostate Cancer has become the number one cancer in men with increasing incidence and morbidity in men of black African ancestry¹.

It has been established that black ancestry is a key risk factor and black men are more likely to die of prostate cancer. However, the reason for this is still not yet understandable and an explanation for the disparity may lie in studies involving black men from different populations to see if there is an enhancing factor associated with the racial origins of these men².

As Ghana and other West African countries like Nigeria is ancestry home of many black men living outside Africa, WI research work hoped that an exploration of research activities emanating from the country may shed some light on the disparity³. According to Odedina *et al*⁴ there is therefore the

need to focus on areas of genetic and environmental risk factors in the group.

In Africa, most researchers and practitioners rely on foreign research to support their work. The over-reliance on foreign research is not favourable and not beneficial to black men, especially prostate cancer and it was evident when the US Task Force called for abolishment of the PSA test for prostate cancer screening. Many countries are developing pragmatic measures to fight prostate cancer. In the UK, the Public Health England, with support from Prostate Cancer UK, is launching a local Be Clear on Cancer pilot in London to raise awareness on the increased risk of prostate cancer amongst Black men aged 45+. 1 in 4 Black men in the UK will be diagnosed with prostate cancer at some point in their lives compared to 1 in 8 of all men.

The campaign will target Black men from all socio-economic groups over the age of 45. It will also target their key influencers, such as wives/partners, friends and family. The campaign is using 45 as opposed to 50 as Black men have been shown to be diagnosed with prostate cancer on average five years younger than white men. So if you are a black man and 45 years above whether you have symptoms or not you are entitled to free prostate cancer screening on the NHS. Other countries are also addressing prostate cancer in black men and it is time for Ghana to rise up⁵.

From my research in prostate cancer in Ghana, Some of the reasons why men of African ethnicity are more prone to prostate cancer include the lack of health workers, the quality of our healthcare system, distrust in the medical sector, lack of screening programs and centres across the country, few charities fighting against men's prostate issues, our tertiary institutions not running courses in prostate cancers to train expert in the management of the disease, cancer registries and misinformation regarding right treatment option in the media by some Herbal Practitioner in Ghana⁵.

Prostate Cancer in Ghana

According to Wiredu and Armah⁶, until recently, cancers and other non-communicable diseases were thought to be unimportant public health problems in developing countries, like Ghana, partly because of

the overwhelming high prevalence of communicable diseases.

Also according to MB *et al*⁷ recent data suggest that West African men also have elevated risk for prostate cancer relative to European men and accounted that genetic susceptibility to prostate cancer could account for part of this difference. They conducted a genome-wide association study (GWAS) of prostate cancer in West African men in the Ghana Prostate Study. Association testing was performed using multivariable logistic regression adjusted for age and genetic ancestry for 474 prostate cancer cases and 458 population-based controls on the Illumina HumanOmni-5 Quad Bead Chip.

The most promising association was at 10p14 within an intron of a long non-coding RNA (lnc RNA RP11-543F8.2) 360 kb centromeric of GATA3 ($p = 1.29E-7$). In sub-analyses, SNPs at 5q31.3 were associated with high Gleason score (≥ 7) cancers, the strongest of which was a missense SNP in PCDHA1 (rs34575154, $p = 3.66E-8$), and SNPs at Xq28 (rs985081, $p = 8.66E-9$) and 6q21 (rs2185710, $p = 5.95E-8$) were associated with low Gleason score (< 7) cancers. The authors sought to validate their findings *in silico* in the African Ancestry Prostate Cancer GWAS Consortium, but only one SNP, at 10p14, replicated at $p < 0.05$. Of the 90 prostate cancer loci reported from studies of men of European, Asian or African-American ancestry, they were able to test 81 in the Ghana Prostate Study, and 10 of these replicated at $p < 0.05$. They suggested that further genetic studies of prostate cancer in West African men are needed to confirm their promising susceptibility loci.

Another 2014 study by Tagoe *et al*⁸ aims to describe the profile of cancers seen at the Korle Bu teaching hospital which is a major referral centre in Ghana for cancers and other health conditions. The authors obtained data from the cancer registry of the hospital and covered the period from January 2012 to December 2012. The public health unit actively collects data on all cancer cases presenting to any department/unit of the hospital to feed the cancer registry. Their result revealed that a total of 1136 patients with cancer were studied. Their ages ranged

from 1 year to 92 years with a mean of 52.3 ± 15.9 years and a median of 54 years. Patients were predominantly female (70.2%) and majority had attained secondary level of education or higher. The most prevalent cancers seen in men were those of prostate, pharynx and colorectal while in the females, the corresponding cancers were breast, cervix and uterus. They concluded that breast and prostate cancers were the commonest among females and males respectively who presented with cancer at the Korle Bu teaching hospital in 2012.

In the same year 2014, another study by Hsing *et al*⁹ aims to estimate the prostate cancer burden in West African men. The study authors performed a population based screening study with biopsy confirmation in Ghana.

They randomly selected 1,037 healthy men 50 to 74 years old from Accra, Ghana for prostate cancer screening with prostate specific antigen testing and digital rectal examination. Men with a positive screen result (positive digital rectal examination or prostate specific antigen greater than 2.5 ng/ml) underwent transrectal ultrasound guided biopsies.

Their result revealed that of the 1,037 men 154 (14.9%) had a positive digital rectal examination and 272 (26.2%) had prostate specific antigen greater than 2.5 ng/ml, including 166 with prostate specific antigen greater than 4.0 ng/ml. A total of 352 men (33.9%) had a positive screen by prostate specific antigen or digital rectal examination and 307 (87%) underwent biopsy. Of these men 73 were confirmed to have prostate cancer, yielding a 7.0% screen detected prostate cancer prevalence (65 patients), including 5.8% with prostate specific antigen greater than 4.0 ng/ml.

They concluded that in this relatively unscreened population in Africa the screen detected prostate cancer prevalence is high, suggesting a possible role of genetics in prostate cancer etiology and the disparity in prostate cancer risk between black and white American men.

They suggested that further studies are needed to confirm the high prostate cancer burden in African men and the role of genetics in prostate cancer etiology.

Another, 2014 paper conducted by Laryea *et al*¹⁰ which employed data from the Kumasi Cancer Registry for the year 2012. The reference geographic area for the registry is the city of Kumasi as designated by the 2010 Ghana Population and Housing Census. Data was from all clinical departments of the Komfo Anokye Teaching Hospital, Pathology Laboratory Results, Death Certificates and the Kumasi South Regional Hospital. Data was abstracted and entered into Canreg 5 database. Analysis was conducted using Canreg 5, Microsoft Excel and Epi Info Version 7.1.2.0.

Their result revealed that the majority of cancers were recorded among females accounting for 69.6% of all cases. The mean age at diagnosis for all cases was 51.6 years. Among males, the mean age at diagnosis was 48.4 compared with 53.0 years for females. The commonest cancers among males were cancers of the Liver (21.1%), Prostate (13.2%), Lung (5.3%) and Stomach (5.3%). They concluded that their first attempt at population-based cancer registration in Ghana indicates that such registries are feasible in resource limited settings as ours. Strengthening Public Health Surveillance and establishing more Population-based Cancer Registries will help improve data quality and national efforts at cancer prevention and control in Ghana, they stated.

Just recently in 2015, the country men's charity, Men's Health Foundation Ghana works out Ghanaian men lifetime risk of getting prostate cancer. According to the charity 1 in 5 Ghanaian men will get prostate cancer in their lifetime¹¹.

Men's Health Foundation Ghana intervention

The country biggest men's charity, Men's Health Foundation is a prostate cancer support group with the broad aim to raise awareness, research into prostate cancer in Ghana, provide relevant information regarding prostate cancer treatment and offer free screening programs in the country using PSA and pelvic scan of the prostate at a single sitting.

Men's Health Foundation Ghana believes that there are cancer inequalities. With the Charity concerned about men's prostate health in order to transform the

future for prostate cancer in Ghana has set up some goals to be met by 2025 and has therefore call for support and collaboration from individuals and corporate institutions to achieve their objectives. The charity recently sets up 2025 goals and 2015-2016 strategy¹².

The charity also called for a specific prostate cancer policy in the country for Ghanaian men concerning prostate cancer screening for men 40years and above and 35years for men with a high risk group. The charity believes that prostate cancer behaves differently in individual so men of African descent needs different screening programs and called for prostate cancer screening on the country national health insurance scheme¹³.

The charity provides Information and advocacy on prostate disease in church men's fellowships, men clubs, schools, television, and radio. The charity also helps Raise awareness across the country through activities, special events and annual programs¹⁴.

The charity also recently made an appeal to the president, John Dramani Mahama to declare father's day a prostate cancer day in Ghana just as the Valentine day has become the National Chocolate day. This the charity believes is one of the measures to help raise awareness on prostate cancer and therefore churches, individuals, media houses , corporate institutions , charities and philanthropist will use the day to organize programs and free prostate check for the men¹⁵.

As part of its measures to tackle prostate cancer in Ghana, the charity also established the De Men's Clinic and Prostate Research Lab in Dodowa, Akoto House to provide screening programs in the country and it intends to established more screening centres in the county¹⁶.

The charity has also submitted a white paper on prostate cancer to the relevant bodies in the country concerning prostate cancer and the charity also argue for integrative approach towards prostate cancer management in the country¹⁷.

Prostate Cancer diagnosis in Ghana

In Africa some of the epidemiological studies have revealed the following incidences of the disease: Ghana >200/100,000, Nigeria 127/100,000 and Cameroun 130/100,000. Data for prostate cancer in

Ghana is ill-defined with late stage diagnosis with over 80% death. No project exists to reduce the high mortality rate in Ghana¹⁷.

In the UK, national screening programmes have been introduced for breast, cervical and colorectal cancers, helping to reduce mortality from these diseases. However, there is currently no prostate cancer screening programme, despite it being the most common cancer affecting men in the UK. This leaves men at a significant disadvantage to women, who are able to access breast screening from the age of 47.

The Charity recognises that prostate cancer screening with the PSA test is not currently advisable because it would lead to a significant level of over-diagnosis and potential over-treatment of prostate cancer. However, for the first time, it has been demonstrated that screening can reduce mortality. The Charity believes it is now imperative that every man over 40 (and younger men at higher risk of the disease) has access to balanced information about the pros and cons of the PSA test so that they can make an informed and individual choice about whether to have it¹⁷ the charity however advocate for early detection programme for prostate cancer for Ghanaian men.

The Charity wants a National Cancer plan in Ghana in their submission to involve free PSA testing for men concerned about prostate cancer under the NHIS but before testing men should be given a balanced information about the pros and cons of the PSA testing for prostate cancer, side effect of treatments, statistics of prostate cancer and side effect of biopsy and men must make their informed decision on testing and treatments based on information given for men 40 years and above but men in a high risk group like family history of the disease can start screening at 35 years. The charity (MHFG) is also ready to collaborate in any form to send the message to the people.

There is also growing concern that medical students are not gaining enough skills in DRE¹⁸, such that clinical diagnosis of prostate cancer may become a problem for the younger generation of doctors. According to Akinremi *et al*² though final year students at the University of Jos have adequate

teaching, right attitude, perspective, and knowledge about examining for prostate cancer, they have not translated the same into practice and 86% had never felt a malignant prostate while 45% had never examined the gland¹⁹. For instance in Ghana, in one hospital where I work with an urologist and a medical student doing his houseman ship felt lazy inserting her finger to do the digital rectal exam in the consultation room.

Survivorship programs in Ghana

To combat this issue, access to preventative care must be improved. Of course this is not an easy task and brings about an entirely different discussion, but efforts can be made. The charity for instance also believed that Ghanaian Men who are undergoing or who have completed treatment for prostate cancer often experience life-changing side effects that can have a significant impact on the quality of their daily lives. The charity also recognized that treatment for prostate cancer also differ based on where men leave hence Ghanaian men do not received the right treatment option concerning prostate cancer and support to deal with the side effect of prostate cancer¹⁷.

Although services appear to exist, men have told Men's Health Foundation Ghana that they are not getting the support they need. It is vital that GPs, as providers and commissioners of care, ensure that there are integrated health and social care services in all areas of the country that have the specific expertise to help men living with and beyond prostate cancer manage the impact of the disease and maintain a good quality of life. Emotional support services appear to be less commonly available and incentives may need to be considered to ensure that GPs prioritise the provision of psychological support services to help men and their families cope with the impact of prostate cancer.

The need for support to deal with the side effects of treatment is not unique to men with prostate cancer. Hence the charity also thinks Ghana needs National Cancer Survivorship and integrative Oncology must be considered and research must be supported by commissioners to ensure a long-term improvement in outcomes for cancer survivors. Survivorship in cancer is an underdeveloped area in the Ghana, and

nationwide - rather than purely locality-based - approaches to ensure the critical improvements which are needed¹⁷.

In addressing side effects of conventional treatment, there is the need for Collaboration between complementary and alternative practitioners as some of these alternative Therapies have been proven to support patient's quality of life and rate of survival. In the US for instance about 95% of cancer treatments centres have developed integrative therapies and its role have been defined. For instance in the UK the Macmillan Cancer Relief commissioned Dr. Michelle Kohn to evaluate the state of CAM in the UK Summary. Three key role model of how these therapies work have been outlined, so desperate patients seeking for alternative therapies don't end up in quack practitioner's hand who will promise cure¹⁷.

Prostate Cancer Treatment in Ghana

Prostate cancer treatment is very expensive but one question still persists. Do men even get the best treatment for the amount of money they pay for *prostate cancer treatment in Ghana*? Although it appears most men diagnosed with prostate cancer are pensioners and cannot even afford the treatment and some have called for the inclusion of prostate cancer treatment on the NHIS, it is a good thing. But my only challenge with this is that if it is included would men make their informed decision on the type of treatment choice they deem it right for them or they would be subjected to the one that the NHIS can afford?.

As we know that prostate cancer treatment comes with a lot of side effects. It is therefore necessary to allow men in Ghana to make their informed decision and choices on the treatment they think it is good for them²⁰.

In Ghana, almost 70% of the people rely on herbal medicine. Some herbal centers also misinformed the general public on prostate cancer cure and something has to be done with the Traditional and Alternative Medicine Practice Council on advertisement concerning health issues. This creates a lot of conflict of interest between herbal practitioners and conventional train practitioners. Recently, Dr. James Edward Mensah, head of the Urology department at

the Korle-Bu Teaching Hospital has called on government to institute measures to prosecute practitioners in the herbal sector who claim they have treatment for prostate cancer. According to him, these self-acclaimed herbal doctors do not have scientific knowledge about the disease; rather they are amassing wealth out of the ignorance of people who visit their facilities for treatment²⁰.

Conventional treatment cannot be afforded by everyone in Ghana. In a recent interview with the Daily Graphic, a Consultant Urologist at the Korle Bu Teaching Hospital, Emeritus Prof. Edward D. Yeboah, said Ghana currently has 28 urologists who can be found at Korle Bu, the Effia Nkwanta Hospital in Sekondi, the Cape Coast Regional Hospital, Koforidua Regional Hospital, Komfo Anokye Teaching Hospital, Kumasi and the Tamale Regional Hospital.

He said early treatment of prostate cancer in Ghana, which can last up to a month, costs between 1,000 us dollar to 10,000 us dollar in Ghana. He added that about 1,500 cases had been handled at the Korle Bu Teaching Hospital to date, with some patients who detected the cancer late undergoing treatment through radiotherapy for over 15 years.

In his closing remarks as chairman for the lecture program, Prof Yeboah said the highest PSA found in Ghana was 29,000, adding that the patient survived for a year after undergoing castration. He noted however, that the average PSA measurement was now 59 and that "Fortunately, now we see 62 per cent of the cases at Korle Bu are now stage one to two."

Retired Methodist Church Bishop, William Blanks on, appealed to the government to make the National Health Insurance Scheme (NHIS) cover the treatment of prostate cancer. He told the Daily Graphic that one of the drugs he was taking to treat the disease cost him 4 us dollar a day, which was having a toll on his pension. "It's getting to about 100 dollar a month and yet the NHIS does not cover. It is affecting my finances very much," he said.

PREVENTION

There is currently no national prostate cancer screening program and annual PSA checks are not

practiced routinely in Ghana. However, screening programs exist for breast and cervical cancer in Ghana. Lifestyle and behavioural patterns are known to be important in cancer prevention but education about prostate cancer is sparse in Ghana and opportunistic. Recently the flag bearer of the Conventional People Party in Ghana, Mr. Ivor Kwabena Green street supported the call by the Men's Health Foundation Ghana to declare father's day in Ghana as national prostate cancer awareness day to help strengthen the fight against the disease.

This, he believed it's a form of preventive medicine and not curative medicine. He further stated that Ghana has recognized National Sanitation day to help clean the country so significant disease like Prostate cancer should be given equal attention. In Ghana also, Valentine's Day is celebrated as National Chocolate day to promote the nation chocolate.

There is remarkable lack of awareness of prostate cancer among the Ghanaian urban and rural population. Prostate cancer screening and serum PSA test for screening is globally unknown among Ghanaian men and some rural men view the disease as demonic and end up in the prayer camps. Some also believe that it is as a result of frequent sex in men in Ghana.

When we established the men's health foundation Ghana and started the free screening programs I have realized that though knowledge and risk perception of prostate cancer were low, I found that about 90% of Ghanaian men are now willing to be screened for the disease if it is done for free in the country but however the men find very difficult to pay for screening because of financial challenges. As the men are now aware of a screening facility or where they can now find a support, I have also realized that the men can confidently walk in to have their prostate check. So establishing specialized centers for prostate in Ghana can help to reduce the high mortality rates in Ghana.

Ghanaian farms have been crippled with all sorts of chemicals resulting in their foods becoming toxic. There are also lifestyle changes in Ghanaian men leading to westernized diet and bad cooking practices in their various homes. Foods are prepared

at high temperatures and consumed so much carbohydrate foods in the country.

Facing up challenges in Prostate Cancer in Ghana

There is currently no effort to tackle the high mortality rates in the country. Prostate cancer is a major problem in Ghana, yet fewer men receive regular screening. Incidence and mortality rates are among the highest in the world, with the age-standardized mortality rate from prostate cancer reported as being more than three times the global rate.

The reasons for these high rates include a lack of investment and weak governance in the recent past. A review of Ghana's national policies and actions against chronic disease for the period 1992-2009 concluded that these two factors "have hindered the effective and speedy implementation of proposed interventions"²¹.

The same review, published in 2012, noted that the situation was improving, with diseases such as cervical cancer becoming a high priority for the country's government and health services. The launch of the HPV vaccination programme in November reflects this renewed focus. The role of women in Ghana in helping to support efforts to tackle prostate cancer in Ghana cannot be tokenistic as women played a critical role in the various homes in Ghana. There is therefore the need to include Ghanaian women to help in the fight against prostate cancer.

For instance, with our men's charity work in the various churches where we interviewed 50 women, I found that women "play a significant role in the health behaviours of some Ghanaian men" but many have misconceptions about the disease, or have concerns that could potentially restrict the provision and effectiveness of care. Some believed that promiscuous men get this disease and so one particular man refused to check his prostate partly because he was afraid that eventually he was told that he has a problem with his prostate the wife will leave him as she will accuse him of infidelity.

Some women also support their men to go for regular screening programs. Another challenge has to be the use of digital rectal exam for prostate cancer diagnosis as most Ghanaian men are not

happy with the practice especially a female performing the procedure. For example, some men expressed anxiety about a female doctor performing tests hence more male should rather be trained to perform such procedures.

Urologist in Ghana must also step their fight against the disease and collaborate with others knowledgeable in the disease to help formulate policies to strengthen the disease. There should be special programs to help men deal with the side effect of conventional prostate cancer treatment^{22,23}.

CONCLUSION

Prostate cancer behaves differently based on race hence the subject should be addressed on race. Prostate cancer research in Ghana is also growing and multifaceted. Ghana needs a reliable cancer register to collate figures. Prostate cancer in black men should have a special focus on testing, awareness and treatment.

RECOMMENDATION

1. The first recommendation is for Ghana to consider declaring the father's day as a national prostate cancer awareness day to start policies formulation and awareness raising.
2. Herbal practitioners must also collaborate with conventional practitioners to help fight the diseases especially its management.
3. Holistic Urology should be considered in Ghana.
4. More NGOs and resources should also be channel into prostate cancer awareness and screening program.
5. The NHIS should incorporate free screening programs and treatment on the NHIS.
6. The media can also join the fight to help raise awareness.
7. More health workers also needed to be trained in prostate cancer and more tertiary schools needs to open their curriculum to include prostate cancer and other oncolological areas.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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