WHAT IS THE STATE OF PROSTATE CANCER SCREENING AWARENESS AT SIAYA COUNTY REFERRAL HOSPITAL (SCRH)?

By: Denise Asafu-Adjei, MPH
2014 GE/NMF International Medical Scholar

INTRODUCTION

BACKGROUND

- Prostate cancer is the most common cancer of men in Africa and the third cause of cancer deaths in men after age 55 worldwide
- Kenya's National Cancer Control Strategy (2011-2016) aims to improve cancer diagnosis by conducting community awareness on available services and the need for early cancer diagnosis
- The three primary cancers it focuses on are of the breast, cervix, and prostate
- According to the most recent estimate by the Nairobi Cancer Registry from 2003-2007, 15% of Kenyan men in Nairobi are estimated to have prostate cancer
- Unfortunately, there are currently no comprehensive cancer surveillance systems in place to provide nationwide or hospital level statistics

BACKGROUND

- SCRH has a male catchment population of approximately 20,293 (48%)
- A total of 19 prostatectomies were performed at SCRH in 2013
- 41 patients obtained a rapid PSA for prostate cancer screening in 2013. 26.8% (11/41) of tests yielded positive results
- There are no consultant Urologists at SCRH

OBJECTIVES

- Assess the awareness of prostate cancer screening among health care workers (HCWs) at SCRH
- Assess the awareness of prostate cancer screening among patients at SCRH
- Correlate how social and demographic factors affect the awareness and knowledge of prostate cancer screening

METHODS
HYPOTHESIS

- About 80% of HCWs will display basic knowledge about prostate cancer screening and clinical practice guidelines.
- About 50% of patients will show some awareness of prostate cancer and have received counsel about screening.
- Those with higher levels of education will be more aware of prostate cancer.
- Church will be the most popular way identified by which to spread awareness about prostate cancer screening.

STUDY DESIGN

- Case study at SCBH over the course of 2 weeks.
- Information obtained regarding the availability and cost of PSA tests, frequency of screening, and availability of treatment options.
- Survey developed to assess knowledge of prostate cancer screening, history of individual experiences and opinions, and basic demographics.
- Surveys made in English for specific male and female healthcare workers in all hospital departments.
- Patient surveys in English were distributed to male patients attending an outpatient clinic (no inpatient males were surveyed).
- Wald Chi Square analysis for both staff and patient data.

HEALTHCARE STAFF SURVEY

- Survey developed to assess knowledge of prostate cancer screening, history of individual experiences and opinions, and basic demographics.

PATIENT SURVEY

- Surveys made in English for specific male and female healthcare workers in all hospital departments.

RESULTS

- Gender Composition:
  - Women: 48%
  - Men: 52%

- Marital Status:
  - Single: 42%
  - Married: 48%
  - Unknown: 10%
RESULTS

**Staff Levels of Education**

- Primary School: 2%
- Secondary School: 18%
- College/Diploma/Vocational: 59%
- University: 0%
- Masters/Doctoral: 23%

**Results**

- Total Number of Completed Surveys: 50
- Percentage of people who heard of prostate cancer: 94.00%
- Percentage of people who had counseled a patient on prostate cancer: 64.00%
- Percentage of HCWs who regularly obtain PSAs for men >=45: 33.33%
- Percentage of HCWs responders who perform DREs for men >=45: 35.69%
- Percentage of HCWs responders who feel there are cultural barriers to treating prostate cancer: 64.00%
- Percentage of men who had been screened for prostate cancer: 11.5%

**How do certain variables affect if you've heard of prostate cancer?**

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<thead>
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<th>p-value</th>
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1. DF – Degrees of freedom for Wald chi-square test of significance
2. Wald chi-square test significance
HOW DO CERTAIN VARIABLES AFFECT IF YOU'VE EVER COUNSELED A PATIENT ON PROSTATE CANCER?

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1 DF – degrees of freedom for Wald chi-square test of significance
2 Wald chi-square test statistic

II. PATIENT SURVEY RESULTS

RESULTS

Highest Level of Education Completed

- No education: 12%
- Primary School: 38%
- Secondary School: 36%
- College/Diploma/Vocational: 1%
- University: 1%
- Masters/Doctoral: 3%
- Unknown: 5%

Marital Status

- Married: 79%
- Single: 11%
- Unknown: 6%

RESULTS

Number of Male Patients from Different Outpatient Clinics

RESULTS

Age Distribution of Patient Sample
BEST WAYS TO SPREAD INFORMATION ON PROSTATE CANCER

Summary of Patient Responses

<table>
<thead>
<tr>
<th>Total Number of Completed Surveys</th>
<th>34</th>
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<tbody>
<tr>
<td>Percentage of men who had heard of prostate cancer</td>
<td>44%</td>
</tr>
<tr>
<td>Percentage of men who had known someone with prostate cancer</td>
<td>41%</td>
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<tr>
<td>Percentage of men who had been counseled about prostate cancer</td>
<td>24% (8/34) of the 8 who were counseled, 7 responded that they had been counseled by a clinician.</td>
</tr>
<tr>
<td>Percentage of men who had been screened for prostate cancer</td>
<td>18% (6/34) of the 3 were farmers, 2 were teachers, and 1 was a student.</td>
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Summary of Patient Responses

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Healthcare Workers</th>
<th>Patients</th>
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<tbody>
<tr>
<td>Predominant Age Range</td>
<td>20-30 years old</td>
<td>41-50 years old</td>
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<tr>
<td>% Married</td>
<td>48%</td>
<td>79%</td>
</tr>
<tr>
<td>Highest level of education completed</td>
<td>College/Diploma (35%)</td>
<td>Masters/Doctoral (23%)</td>
</tr>
<tr>
<td>% Who had heard of prostate cancer</td>
<td>94%</td>
<td>44%</td>
</tr>
<tr>
<td>Best way to spread information about prostate cancer screening</td>
<td>Media</td>
<td>Medical professionals</td>
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Comparison of Results

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1 DF = degrees of freedom for Wald chi-square test of significance
2 Wald chi-square test significance

How do certain variables affect if you have heard of prostate cancer?

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<td>1.4898</td>
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How do certain variables affect if you have been counseled about prostate cancer?

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How do certain variables affect if you have ever been screened for prostate cancer?

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DISCUSSION

Less than 50% of HCWs appear to perform routine screening procedures for men ages 45 and up, suggesting poor adherence to Kenyan guidelines.

A majority of HCWs appeared to have knowledge of the purpose of a PSA test.

Given that 44% of patients have heard of prostate cancer (vs. 94% in HCWs) and 24% had ever been counseled on the topic, there appears to be a loss in translation of knowledge to the patients.

DISCUSSION

Only 18% of male patients were ever screened for prostate cancer, despite a majority being in the target age range for screening.

The low percentage of male staff who were screened can be explained by the younger age of the cohort.

Potential reasons to explain the low rate of screening in an age-appropriate population:
- Lack of knowledge about prostate cancer
- Cultural misconceptions about prostate cancer
- Cost limitations of PSA screening

DISCUSSION

44% of the staff felt there were cultural barriers to prostate cancer screening:
- Potential impotence
- Loss of respect and household status if prostate is removed
- Sexual implications of digital rectal exam

Staff and patient responders have discordant views on the best way to spread information about prostate cancer (media vs. medical professionals, respectively).

DISCUSSION

Occupation, age, gender, marital status, and level of education did not significantly affect:
- Whether or not a staff member has counseled a patient on prostate cancer
- Whether or not a staff member has heard of prostate cancer

Age, marital status, and level of education did not significantly affect:
- Whether or not a patient has heard of prostate cancer
- Whether or not a patient has been counseled about prostate cancer
- Whether or not a patient has been screened for prostate cancer

POTENTIAL INTERVENTIONS

Devise a “Prostate Cancer Quick Facts” reference sheet for HCWs and community health workers

Implement a screening form with mandatory documentation to track patients who have received counseling and screening

Conduct community level open forums to dispel myths about prostate cancer screening and treatments

Subsidize cost of PSA tests and make both quantitative and qualitative PSA tests available

Media campaign “Ask About the P” to encourage men 45 and up to seek out information about prostate cancer screening.
CONCLUSIONS

- HCWs at SCRH have a sufficient knowledge base about prostate cancer, but lack adequate compliance with national screening guidelines.
- Male patients at SCRH are less aware of prostate cancer than had been hypothesized (44% vs. 50% hypothesized).
- Low screening rates can be attributed to cultural misconceptions, cost of screening, and lack of knowledge about prostate cancer.
- Improving screening practices among HCWs may increase the number of screened men.
- Patient demographics did not have a significant effect on whether patients have heard of prostate cancer, have been counseled on it, or have been screened.

FUTURE DIRECTIONS

- Improve the statistical power of the survey study.
- Examine the changes in screening trends after implementation of one of the aforementioned interventions.
- Advocate for government-sponsored PSA screening.
- Mandate use of quantitative, rather than qualitative, PSA blood tests.
- Recruit and incentivize certified surgeons and urologists in high-prevalence areas in Kenya.
- Expand the availability of prostate cancer treatment modalities in Kenya.

THANK YOU!

- GE/NMF International Medical Scholars program
- Dr. Agumba (Project mentor)
- Dr. Omoto (Medical Superintendent at SCRH)
- Dr. Wagude (SCRH site director)
- Dr. Onyango (Kenya site director)
- All medical staff and patients for their participation in the surveys and assistance with recruitment
- Team Suya and Team Yala

REFERENCES

   (http://www.jcpcr.kenya/Kenya-National-Cancer-Control-strategy.pdf)