

## The presence of common risk factors for cervical cancer among women attending the Visual Inspection with Acetic Acid (VIA) Clinic at the Georgetown Public Hospital Co-operation (GPHC)

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### Abstract

**Background:** *Guyana has the third highest incidence and rate of death from cervical cancer in the Western Hemisphere. There are several predisposing factors including HPV infection, early age of menarche, young age of first sexual experience and first full term pregnancy, multiple sexual partner, smoking, low socioeconomic status.*

**Aim:** *to determine the common risk factors for cervical cancer among women attending the GPHC VIA clinic*

**Methodology:** *A Self-Administered pretested and validated questionnaire which seeks to identify common risk factors for cervical factors among all women between the ages of 16 and 35 that attended The VIA Clinic at GPHC. Data was collected during a 1 week period Monday to Thursday (VIA Clinic Days) , a total of 48 women participated in the Study.*

**Results:** *There was a 60% response to the study. 25% were of the low socioeconomic status. Only 18.7% of women had a papanicolaou smear in the last three years. 31.25% had a positive family history of cancer (breast and cervical). 18.8% had menarche before the age of 12 years. 95% of the women were sexually active with 47.9% having had their first sexual intercourse between the ages of 17-20. 21.7% of women had multiple sex partners and practice unprotected sexual intercourse . In addition a little less than half of the participants consumed a low fruit diet and a significant majority ate smoked and canned foods regularly*

**Conclusion:** *Lack and irregular use of condoms at every coitus, multiple partners, inadequate diet among others were the main factors that predisposes the women to become infected with the human papilloma virus and subsequently development of cervical cancer .*

### Introduction

Human papilloma virus (HPV) is a sexually transmitted infection and it is a major factor implicated in the development of cervical cancer. It has been proposed that while the use of condoms in preventing human papillomavirus infection is unknown, condom use has been associated with a lower rate of cervical cancer, an HPV-associated disease. HIV infection can indirectly cause an increase in the risk of developing cervical cancer. The HIV virus damages the CD4+ T helper cells that form part of our immune response. Any disruption in the immune system predisposes an individual to developing other infections such as HPV or Chlamydia.

Although HPV is the usual suspect in cervical cancer, studies now suggest that lifestyle factors also play a part in its development. It has been reported that that smoking together with an HPV infection can greatly increase cervical cancer risk. Researchers reviewed the medical records of 105,760 Swedish women, identifying 375 women with cervical cancer and 363 cancer-

free controls. Smokers with high levels of HPV infection had a 27-fold increased risk of cervical cancer compared to smokers with no HPV. Other associated risk factors included diet, such as low serum vitamin A and E levels. Reproductive factors, apart from first sexual experience, multiparity and use of oral hormones, extend to include age of menarche and age of first full term pregnancy. It has been reported that, women who were younger than 17 years when they had their first full-term pregnancy are almost 2 times more likely to get cervical cancer later in life than women who waited to get pregnant until they were 25 years or older.

### **Justification**

Guyana has a population of 257000 women between the ages of 15 and older, current estimates indicate that every year 161 women are diagnosed with cervical cancer and 74 die from the disease. Cervical cancer ranks as the 1st most frequent cancer among women in Guyana, and the 1st most frequent cancer among women between 15 and 44 years of age. In South America, 13.2% of women in the general population are estimated to harbour cervical HPV infection. Cancer is the major cause of death of black women in Guyana. Guyana has the third highest incidence and rate of death from cervical cancer in the Western Hemisphere.

### **Objective of the study**

To identify the most common risk factor for cervical cancer among women attending the VIA clinic

### **Design and Methodology**

The study group consisted of all the women between the ages 16- 35 who presented themselves at the Gynaecology Clinic specially design to offer the services of The Visual Inspection with Acetic Acid Test (VIA)at Georgetown Public Hospital Corporation (GPHC) during a period of one 1 week Monday to Thursday, during the month of July 2012. Women who were younger than 16 an older than 35 were excluded from the study in addition to those who were pregnant or those who refuse to be part of the study

After obtaining Ethical Clearance and permission from GPHC and consent from each of the women in addition to explaining the purpose of the study a pretested validated questionnaire was self-administered to those who agreed to participate in the study. and after explaining the purpose of the study. A total of 48 women participated in the study. Four consecutive VIA clinic days, Monday to Thursday, were used to obtain the data from the questionnaire. After data collection was completed, a spread sheet was prepared using Windows Microsoft Office Excel. From the spread sheet, the graphs and charts were formulated using the same program. Graphs were produced from the following questions based on the objectives of the research

### **Results and Discussion**

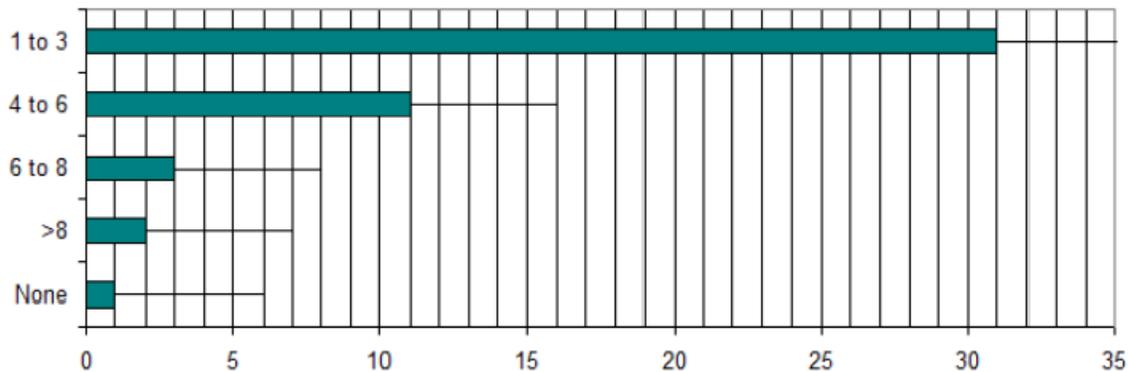
This study covered a sample population of forty eight (48) persons, 60% response of the expected. Their ages ranged between sixteen (16) years to thirty five (35) years with the majority of participants, 41.6% in the 31-35 age range. The Major ethnicity, 41.6%, that participated was Africans followed by the 37.5% being of a mixed race. There was only one Amerindian participant. Most were single women of Christian background and only 18.7% of women had a papanicolaou smear in the last three years, 95% of the women were sexually active with 47.9% having had their first sexual intercourse between the ages of 17-20 years

**Table 1:** Shows the results for the various risk factors that can lead to the development of cervical cancer among women researched at the VIA clinic at the GPHC

<b>Risk Factor</b>	<b>No. of exposed participants</b>	<b>Percentage (%)</b>
Infection with HIV	0	0%
Infection with HPV	1	2.1%
Infection with Chlamydia	0	0%
Use of Oral contraceptives > 5 years	4	8.3%
Irregular/lack of condom usage	40	83.3%
Smoking	0	0%
Alcohol use >14 shots/week	20	41.6%
Low Fruit and vegetable intake – Lack of vitamins A and E <3 times/week	21	43.8%
Papaya intake < once/week	29	60.4%
Smoked Foods	40	83.3%
Canned or plastic contained foods	39	81.3%
Multiple partners >3	13	27.1%
Age of menarche <12 years	8	16.7%
Full term pregnancies > 3	29	60.4%
Age of first pregnancy < 17 years	4	8.3%
Age of first sexual intercourse < 16 years	8	16.7%
Low socioeconomic status	11	22.9%
Family history of cervical cancer	3	6.3%
Failure to get regular screening (pap smear)	33	68.8%
Douching once/more per week	14	29.1%

Generally 31.2% of the women had a family history of cancer, 14.6% had a sexually transmitted infection ( syphilis, gonorrhoea and HPV). In addition the results indicated that none of the women smoked neither were HIV positive, however 25% of the women were exposed to second hand smoke. only 6.3 % had a family history of cervical cancer and only 8.3% had a pregnancy before age 16. However a significant majority of the women (83%) practiced irregular condom use, just under half consumed alcohol regularly, ate foods rich in fruits and vegetables regularly, a significant majority (60%) did not consume such a papaya a good source of vitamin A regularly, ate smoked foods (83.3%) and canned foods , which are both sources of carcinogens .(81.3%) , had more than 3 full term pregnancies (60.4%), and do not do regular screening(68.8%). The results also indicated that over a quarter of the women had more than 3 sexual partners and just under a quarter of the women were from low socioeconomic background, and had experienced menarche less than 12 years of age and had their first sexual encounter less than 16 years of age. Fortunately only 2.1% of the women were tested positive for HPV. There are many studies that have suggested that vegetable consumption and circulating cis-lycopene may be protective against HPV persistence. Lycopene is a carotenoid pigment and phytochemical found in tomatoes and other red fruits & vegetables, such as red carrots, watermelons and papayas. Smoked foods and canned foods contain carcinogens such as nitropyrenes and sodium nitrites respectively, both have been implicated in carcinogenesis.

### Number of Sexual partners among participants since first coitus



The figure indicated that the majority of the women had more than 3 sexual partners since their first coitus, however about one fifth of the women had as much as 6 sexual partners since their first coitus and a few had more than 8.

### Conclusion

Lack and irregular use of condoms at every coitus, inadequate diet, multiple sex partners, and inadequate screening were the main factor that predisposes women who attend the VIA clinic at GPHC to become infected with the human papilloma virus and subsequently to develop cervical cancer. Although there is a massive awareness programme on screening methods such as VIA testing and papanicolaou tests, emphasis should be place on primary preventative measures.

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