

# Enhancing Quality Assurance in a Cervical Cancer Screening Program Through Utilization of WhatsApp Group; A Case Study from Cameroon

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## ABSTRACT

Cervical cancer is the second most common malignancy seen in women in Cameroon with an annual prevalence of greater than 41.2 per 100,000, 2770 cases diagnosed each year with 1787 deaths making it 13.4% proportion of all cancers diagnosed in the country. Despite these alarming statistics, screening coverage in LMIC countries like Cameroon remains low. Reasons for this include competing health and non-health funding priorities, low prioritization of screening services and few trained and skilled healthcare service providers available to perform or implement screening and treatment programs. With regards to cervical cancer prevention, a systematic review of 44 published articles suggests that engagement with HPV related social media discussions is associated with improved awareness, knowledge and quality of screening for both patients and physicians.

This paper highlights the role of WhatsApp in presenting and managing 7 challenging cases in the field of cervical cancer prevention by nurses in Cameroon, with expert inputs for quality assurance.

**Keywords:** Quality Assurance; Cervical Cancer; Screening; Whatsapp Group

## Introduction

Cervical cancer is the second most common malignancy seen in women in Cameroon with an annual prevalence of greater than 41.2 per 100,000 [1]. In 2020, GLOBOCAN reported 2770 cases of cervical cancer in Cameroon with 1787 deaths making it 13.4% proportion of all cancers diagnosed in the country [1]. According to (GLOBOCAN, 2020), the age standardized incidence and mortality rate of cervical cancer in Western African countries including Cameroon is 23 per

100000 and 16.6 per 100,000 respectively [1]. Being a preventable disease, various screening methods have been developed such as cytology-based methods (Pap smear), visual inspection method with acetic acid (VIA) and human papilloma virus (HPV) testing methods in identifying precancerous lesions and treating them before they become cancer [2]. Despite these alarming statistics, screening coverage in LMIC countries like Cameroon remains low. A previous study in one district opportune to have a screening program in Cameroon revealed

a screening uptake of 19.6% but this figure does not reflect the national reality which is estimated to be far below 5% as Cameroon has about 189 health districts [3,4]. Reasons for this include competing health and non-health funding priorities, low prioritization of screening services and few trained and skilled healthcare service providers available to perform or implement screening and treatment programs [5,6]. Social media platforms (like WhatsApp) are potential tools for linking experts in cervical cancer screening/HPV.

Social media use is on a phenomenal rise with figures reported in some parts of the world as high as 88% of young adults 18 to 29 years and 78% adults aged 30 to 49 years [7,8]. Participation in social media-based interventions has been effective in impacting provider and patient health care behaviors [7-9]. With regards to cervical cancer prevention, a systematic review of 44 published articles suggests that engagement with HPV related social media discussions is associated with improved awareness, knowledge and quality of screening for both patients and physicians [10]. Cameroon Baptist Convention Health Services (CBCHS), is a faith-based pay for service organization. CBCHS has the largest cervical cancer screening program [11]. This program screens appropriately aged women using Visual Inspection with acetic acid and Visual Inspection with Lugol's iodine in adjunct to Digital Cervicography (VIA/VILI-DC), and Human Papilloma Virus (HPV) testing [11]. Social media platforms are a part of the provider care map allowing linkage to national and international experts. One of these platforms is the Extension for Community Health Outcomes (ECHO) which has yielded great impact in more than 28 countries across the world by pulling experts towards sharing their views on

challenging/ interesting cases. Two ECHO groups within the MD Anderson framework focus on cervical cancer prevention (one in English and the other French) [3]. Project ECHO is a simple inexpensive tele-monitoring tool that connects community-based providers with distant specialty consultants [3]. WHP nurses prepare and present monthly cases in the field of lower genital tract screening and diagnosis. A CBCHS WHP WhatsApp group was created in 2018 to link trained nurses in cervical cancer prevention with their nurse mentors who are cervical cancer experts. The aim is to assure quality of care for clients. In the WHP WhatsApp forum, challenging cases are discussed to expedite prompt clinical decision making and appropriate referral if needed. The members of this WhatsApp forum are all WHP Nurses, the consultants and mentors together with other health professionals within and without CBCHS. This article highlights some challenging cases reviewed by the WHP WhatsApp forum and we evaluate the impact of the WhatsApp on outcomes of care.

### Case 1

This is a case of a 28year old woman G1P1 HIV negative seen for cervical cancer screening WHP nurse said VIA was negative and VILI positive (yellowish well defined lesion found in the transformation zone). Case reviewed by the WhatsApp group. It was agreed that the screening (VIA and VILI digital cervicography) was positive and thermal ablation of the cervix be done. Client received thermal ablation with no complication.

### Cervigrams

(Figure 1).

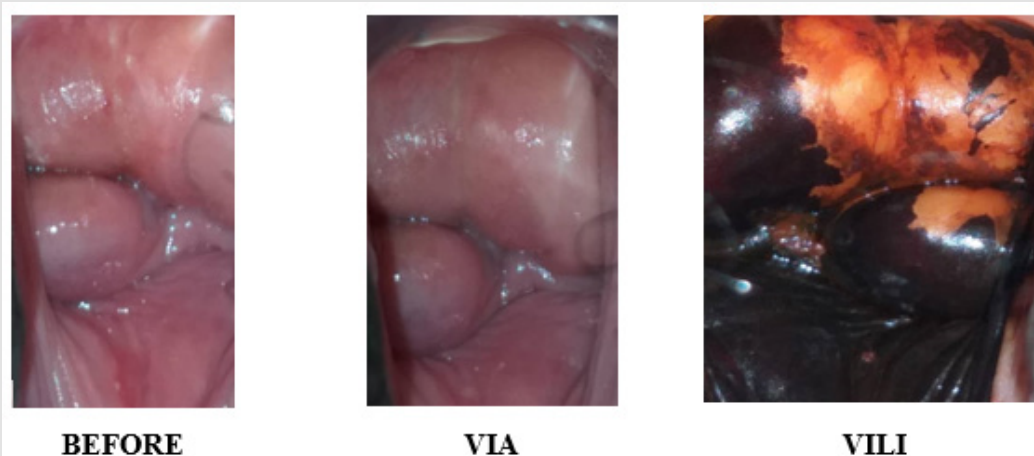


Figure 1.

**Case 2**

38year old G2P2 HIV positive woman with a CD4 count done in the last 3months (value 310cells/ $\mu$ l) seen for cervical cancer screening. The WHP nurse provided cervical cancer screening for this woman by VIA and VILI DC. The WhatsApp group confirmed the screening as negative. Recommendation that the client should be rescreened in

one year given her HIV status. Cervigrams The WHP WhatsApp experts review these cervigrams and concluded that these findings are actually and that this woman be rescreened in one year given her HIV status.

**Cervigrams**

(Figure 2).

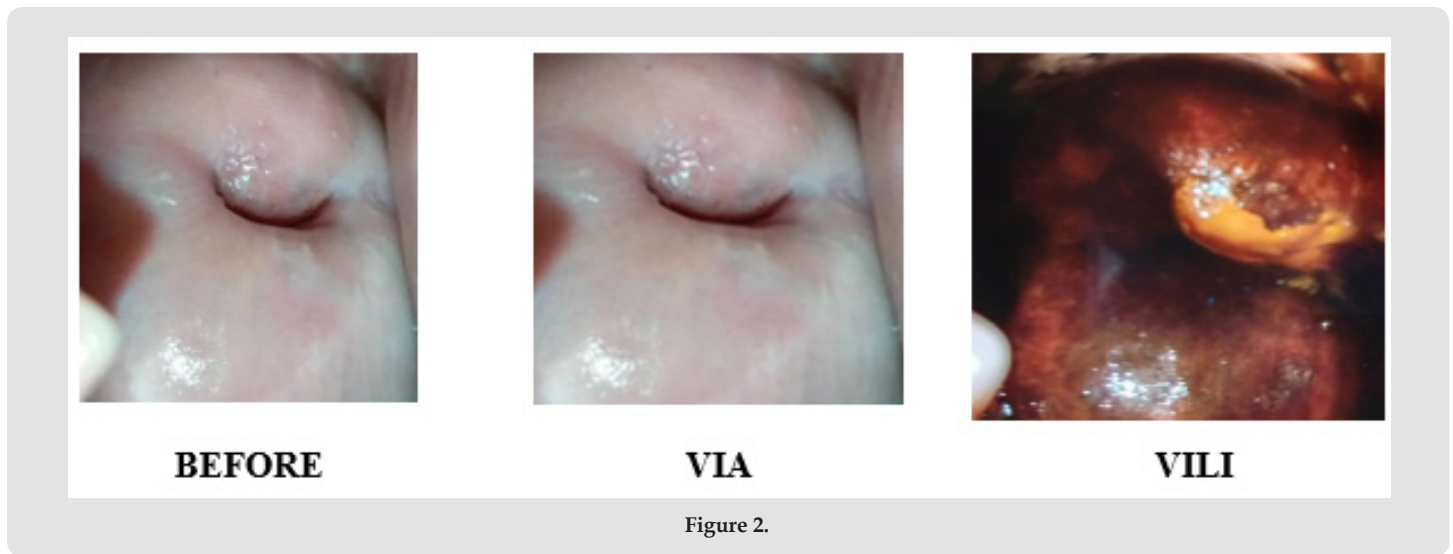


Figure 2.

**Case 3**

32-year old G4P2 HIV negative woman was seen for cervical cancer screening. She had a Pap smear 4months prior at a different health facility which said low grade squamous intraepithelial lesion (LSIL). At WHP, the VIA/VILI was negative as evident by no clear cut characteristic lesion. WhatsApp group reviewed the cervigrams and

felt the results were positive but recommended HPV testing. An HPV test showed positive for other 13 high risk types. Treatment recommendation was thermal ablation.

**Cervigrams**

(Figure 3).

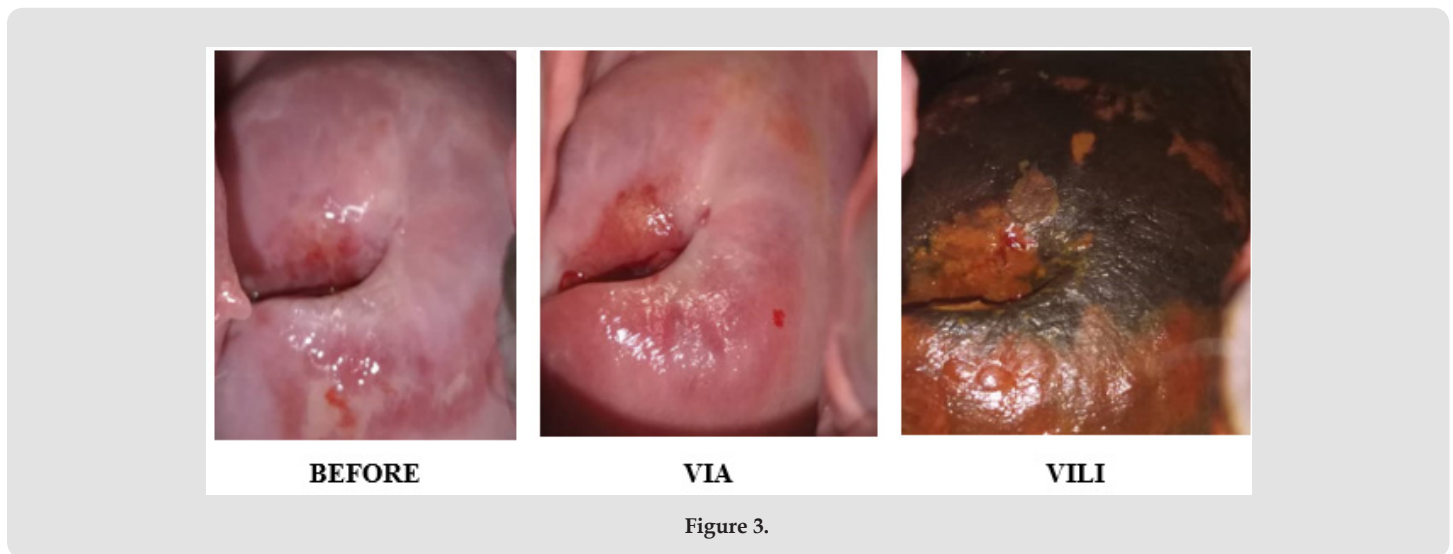


Figure 3.

### Case 4

A 40-year old G5P3 HIV negative woman was screened by a WHP nurse with a non-conclusive VIA/VILI result obtained. During the weekly clinic cervigram review, the nurse realized that this client was positive. The consensus from the WhatsApp group was positive and recommended an HPV test. This test showed positive for 13 HR types implying a thermal ablation had to be done. Procedure was done with no complication and client given a one-year appointment.

### Case 5

A 72-year old G8P7 HIV negative elderly woman was seen at the WHP for cervical cancer screening. According to screening, VIA/VILI

was positive with a LEEP eligible lesion (thick and raised with straight borders). The WHP nurse needed further opinion from the experts on best management option given the irregular nature of the cervix. A punch biopsy was recommended which showed CIN 2. Based on this pathology report, the WHP experts on WhatsApp forum further recommended a radical hysterectomy for this woman instead of a LEEP. Procedure was done with no complication and pathology report on hysterectomy specimen showed CIN3 with micro invasion less than 1mm.

### Cervigrams

(Figure 4).

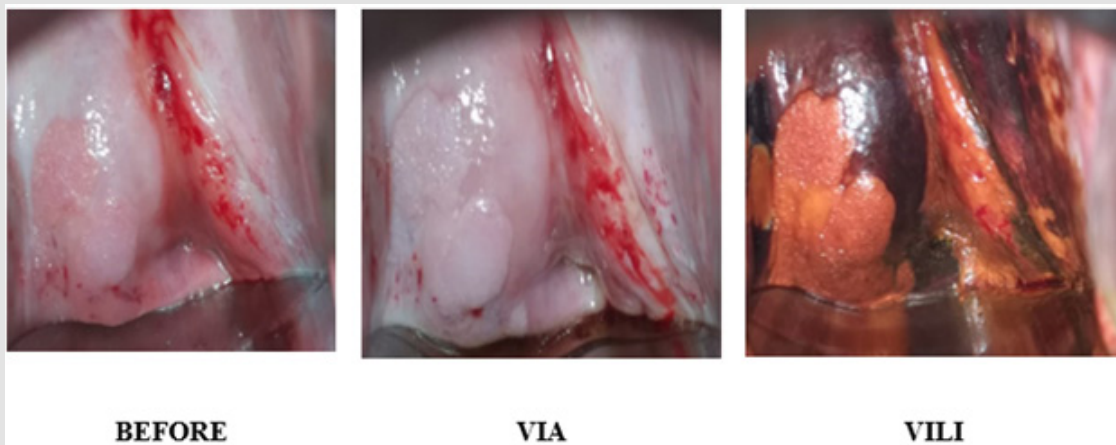


Figure 4.

### Case 6

A 70yrs old G7P7 HIV negative woman seen for cervical cancer screening with VIA negative but VILI positive lesion and an associ-

ated polyp on the cervix (Figure 5). Photos Opinion from the group agreed with the onsite clinician that it was a positive LEEP eligible lesion, This woman later had LEEP with histopathology report showing CIN2.

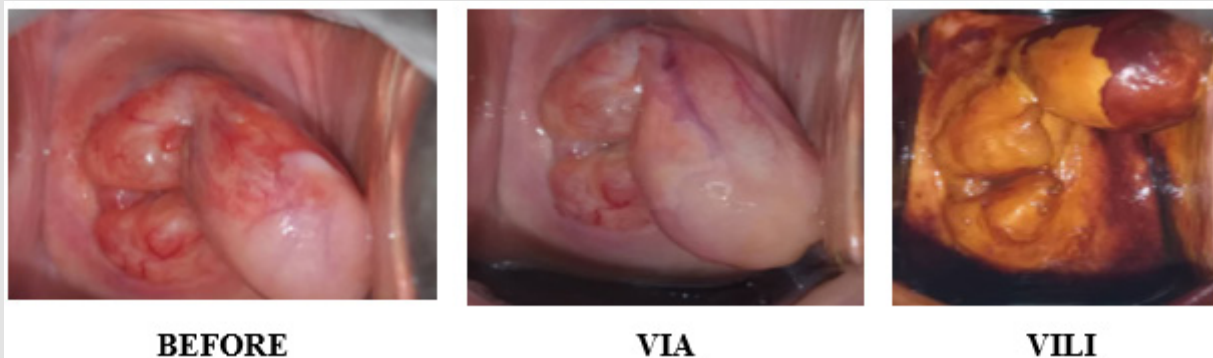


Figure 5.

## Case 7

40years old G4P1 HIV positive woman was seen complaining of vulvar itching and lesions. This woman could not tolerate a speculum. The WHP nurse thought this vulva growth was Kaposi sarcoma (Fig-

ure 6). The WhatsApp group suggested a biopsy be done. An antihistamine was recommended for the itching. Biopsy was not completed as the woman never returned to clinic and she died some few weeks later.



Figure 6.

## Discussion

The above case studies demonstrate the availability of social media platforms in connecting experts in the field of cervical cancer screening [8]. Advantages include expert consultation at no cost, timely, safe / prompt clinical decision on best intervention and quality assurance in patient care is assured. The nurses doing cervical cancer screening are well mentored through this forum. Disadvantages include: sometimes expert opinions may conflict, ethical issues (bridge in confidentiality) and feedback to patient could still delay especially if internet network quality is poor. Case one needed a confirmation of screening result. Though the attending clinician had a first clinical impression as positive VIA, further views were able to come up with a treatment option for this patient. Without a social media group like this one, perhaps the attending clinician would refer this patient for a LEEP instead of a thermal ablation seen as an overtreatment in this case. LEEP might be associated with long term complications (e.g. preterm delivery) in certain cases [12]. For case two, both the attending clinician and experts in the group agreed that the screening was negative. Using visual screening methods of 5% dilute acetic acid (VIA) and Lugol's iodine (VILI), a negative screening means no aceto white changes with VIA and with VILI, homogenous staining of cervix [13] Case three was declared negative after frank deliberations in the group. It is worth noting that this particular case was declared positive for cervical pre-cancer in another health facility using a less effective test than HPV (Pap Smear Test). This further indicates the benefit

of HPV testing as the most accurate cervical cancer screening test currently available globally [14]. HPV DNA testing is the primary cervical cancer screening test used globally in women thirty years and above [14]. WHP is among very few programs or facilities conducting HPV DNA testing currently in Cameroon. Case four brought keen attention to a missed lesion by the primary screener. With the help of further peer and expert review, this lesion was identified. HPV result came out positive further affirming the presence of cervical precancerous lesion. HPV is currently the most effective cervical cancer screening test available in the world with a sensitivity of at least 95% [14]. Case five had an evident high grade lesion (thick and raised aceto- whitening area with straight borders after application of 5% acetic acid). A radical hysterectomy was recommended given the atrophied nature of the woman's cervix [13]. Case six was quite similar to case five but in this case a LEEP was done instead of a radical hysterectomy. Use of social media has a significant role in improving cervical cancer screening services in Sub-Saharan African countries through tele-linking with experts in the field of cervical cancer. This provides an opportunity for primary cervical screening providers to build up competence and for the clients to get quality consultancy care at no cost.

## Disclosure

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