

Partners in Hope: Evaluation Plan for Cervical Cancer Screening Program

Background and Significance

Cervical cancer is the leading cause of cancer deaths among women in sub-Saharan Africa (Maseko et al., 2015: 1). Malawi has the highest incidence of cervical cancer in the world, with approximately 3,684 women diagnosed with the disease each year and a mortality rate of 80-85% (Campbell et al. 2016; Maseko et al., 2015:2; Fort et al., 2011: 125). Although estimates of the population attributable risk (PAR) vary, meta-analyses of longitudinal studies on HPV found the PAR of HPV16 to be 44% in populations with low HPV16 seroprevalance (Lethinen et al., 2001). Cervical cancer is estimated to account for 8,061,667.01 Disability-Adjusted Life Years (DALYs) globally (Global Health Data Exchange [GHDE], 2019).

Cervical cancer is both preventable and curable through inexpensive, effective interventions, including immunization, screenings, and follow-up (Maseko et al., 2015:1). Two brands of the Human papillomavirus (HPV) vaccine, *Gardasil®* and *Cervarix®*, have proven 95% efficacious in preventing infection from HPV strains 16 and 18 (Cutts et al., 2007). However, in many low- and middle-income countries, the vaccine is unaffordable and therefore unavailable to the majority of the population.

Cervical cancer screenings offer another method to reduce HPV prevalence through early detection and removal of precancerous lesions (American Cancer Society, 2012: 26). Countries with available screening have seen a reduction in cervical cancer incidence rates by as much as 80% (American Cancer Society, 2012: 26). Since almost all cases of cervical cancer are attributable to the Human papillomavirus (HPV) (De Martel et al., 2017), cervical cancer control programs may also include efforts to promote awareness of cervical cancer, HPV, and safer sex behaviors.

The World Health Organization recommends a “screen-and-treat” or a “screen, diagnose, and treat” approach to reduce the burden of cervical cancer in low resource countries (World Health Organization [WHO], 2019). In Malawi, visual inspection with acetic acid (VIA) is used to provide same-day detection of precancerous cells on the cervix, with cryotherapy, or loop electrosurgical excision recommended as treatments (Fort et al., 2011: 125-26; Campbell et al., 2016: 908). However, successfully implementing cervical cancer screening programs has been a challenge due to a lack of available trained health personnel, medical supplies, and adequate transportation to facilities (Maseko et al., 2015: 2). An analysis of data collected by the Malawi Cervical Cancer Control program (2011-2015) found that only 43.3% of 2,311 women who were referred for treatment actually received the treatment at the referral center, primarily as a result of malfunctioning or missing cryotherapy machines (Msyamboza et al., 2016: 1).

As an alternative to cryotherapy, thermocoagulation is a low-pain, feasible treatment option for women with precancerous cervical intraepithelial neoplasia (CIN) lesions in resource-constrained settings, with an overall cure rate of 94% for CIN1-3 (Dolman et al., 2014). Thermocoagulation was introduced to Malawi at Nkhoma Hospital in 2014. Partners in Hope Moyo clinic has offered VIA with same-day thermocoagulation treatment since 2016 (Partners in Hope, 2018). In Malawi, thermocoagulation was found to have an interim cure rate of 93.3% (3-6 months post-treatment) and a 1-year cure rate of 85%; however, these results were considered incomplete due to substantial loss to follow-up (Campbell et al., 2016).

Women who have been treated with thermocoagulation are encouraged to return for follow-up care at 2-4 weeks to identify posttreatment side effects, such as bleeding or infection; and at 6 months to 1 year to identify treatment effectiveness (Joshi et al., 2013; Kunckler et al., 2017).

Treatment failure is defined as the presence of residual and/or recurrent high-grade CIN2+/HSIL+ lesions at least 6 months after receiving treatment (Debeaudrap et al., 2019). Accurately assessing treatment effectiveness in resource-constrained settings can be difficult due to high rates of loss to follow-up and numerous barriers that prevent women from returning for additional care. In Malawi, barriers include difficulty accessing transportation to return to healthcare facilities, failure to obtain a referral, low public awareness about the relationship between screening and treatment procedures, and needing permission from one's husband to return for follow-up care (Fort et al., 2011; Kunckler et al., 2017). As a result, research on posttreatment outcomes for Malawian women with suspected cervical cancer is limited.

Although Malawi saw an increase in cervical cancer screening rates from 14% in 2012 to 27.3% in 2015, the coverage rate continues to fall below the targeted rate of 80% (United Nations Population Fund, 2017: 25). In the last decade, Malawi has seen an increase in the number of cervical cancer deaths—a pattern also observed in other developing countries (Maseko et al., 2015:2). Increasing uptake of cervical cancer screenings among eligible women (women ages 25-49) has been proposed as a means of reducing overall cervical cancer mortality in Malawi.

Partners in Hope

Partners in Hope (PIH) is a Malawian non-profit healthcare organization that focuses on treating and preventing HIV/AIDS by strengthening the physical infrastructure of Malawian health systems, providing assistance and training within hospitals and health centers, and developing the clinical skills of health workers (Rivero, 2010; Devex, 2019). At the patient-level, PIH has supported more than 130 sites to provide physical, emotional, and spiritual HIV care. At the clinic-level, PIH offers HIV consultations and counseling, related laboratory and radiology services, HIV medications, and nutrition education (Partners in Hope, 2018). PIH facilities include Moyo clinic, Dalitso clinic, and Thandizo Ward. Since PIH has developed strong partnerships with both local hospitals, including CCAP Nkhoma Hospital, and international research institutions, such as UCLA, to provide collaborative research and training opportunities.

Although the organization's primary objective is to provide free, high quality HIV/AIDS and Tuberculosis care, they also offer general adult and child healthcare, nutrition counseling, women's health services and community-based support groups. In 2016, PIH began offering cervical cancer screenings at their Moyo Clinic facility in Lilongwe, which provides free HIV/AIDS and Tuberculosis care to a patient population of approximately 5000 HIV-positive clients. The organization's emphasis on HIV/AIDS care has allowed for integration of cervical cancer treatment with existing HIV/AIDS services. Researchers have recommended integration of these services because of the increased vulnerability of HIV-infected women: compared to uninfected women, HIV-infected women's face a higher risk of developing cervical neoplasia and are twice as likely to experience treatment failure (Joshi, 2013; Debeaudrap et al., 2019: 1).

Integrating cervical cancer screening into existing health services can improve women's awareness of and access to preventative treatment. A qualitative study in Mulanje, Malawi found that participants—select women who visited the Mulanje Mission Hospital between May and August of 2009—had only heard of cervical cancer screening while seeking another service (Fort et al., 2011: 128). Others have suggested that HIV/AIDS treatment programs can serve as a "suitable platform" for providing cervical cancer care (Joshi et al., 2013: 614). In Western Kenya, the infrastructure of an existing HIV care program was used successfully to provide population-based cervical cancer screening (Khozaim et al., 2014: 12).

PIH Program Activities

Partners in Hope's Moyo clinic has 5000 active patients (approximately 65% women) who interface with a clinical officer or nurse. (Private, higher-quality care is provided by Partners in Hope's Dalitso clinic.) HIV-positive women are recommended for VIA screening every two years. Through their screen-and-treat program, Partners in Hope aims to screen approximately 2500 women each year¹; however, due to numerous logistical and financial challenges, the actual screening rates fall well below this target. In 2016, Moyo clinic performed only 120 VIA screenings².

Moyo clinic patients are unlikely to have heard about preventative cervical cancer treatment unless a clinic nurse asks if they received a screening. In 2016, VIA screening was available only 1½ days each week; thus, even women who heard about the screenings and expressed an interest in being screened may have missed the procedure due to scheduling or transportation issues. As a free, public facility, Moyo clinic also struggles with understaffing. Women who traveled to Moyo clinic to receive VIA screening may have discovered that the nurse who is trained to perform VIA screening was not available that day. Finally, patients are supposed to receive a VIA stamp on their Health passport if they have received a VIA screening. However, this data was frequently illegible or lost.

In June 2017, several improvements were made to the VIA screening and data collection procedures. Information about cervical cancer and the availability of VIA screenings was integrated into the clinic's morning health talks, delivered to anyone waiting outside the clinic for anti-retroviral medication refills. These talks are now given three times a day (at 7:30 am, 10:30 am, and 1:00 pm). The UCLA medical residents who work at Moyo clinic developed prompts to remind clinic nurses to ask patients whether they had received VIA screening and created specific forms for nurses to record the date and receipt of screening. Additional funding for Partners in Hope made possible an expansion of VIA services, such that screenings are now performed 4-5 days/week. As a result of these changes, Moyo clinic was able to increase the annual number of VIA screenings to 246 in 2017 and 500 in 2018. As of January 2019, there are 8 nurses at Moyo clinic who are trained and qualified to perform VIA.

Despite these improvements, several barriers remain for Malawian women in need of cervical cancer screening. Studies have shown that limited knowledge about cervical cancer and cervical cancer treatment (Ports et al., 2015), fear of side effects (Lim et al., 2016), low perceived susceptibility and low perceived benefits from the service (Fort et al., 2011) constitute several patient-level barriers to cervical cancer screening uptake among Malawian women. At Moyo clinic, limited availability of screenings and a shortage of qualified nurses who can conduct VIA screenings have also been identified as barriers to cervical cancer screening uptake. At the community level, women may experience difficulty accessing clinics that provide VIA screenings due to long distances to health facilities, lack of time, and lack of support from husbands/partners (Munthali 2015; Wanyenze et al., 2017). Improving knowledge about cervical cancer among eligible women and the broader community as well as improving health service delivery are recommended approaches to increase screening uptake among eligible women (Rudd, 2017).

Needs Assessment

¹ Moyo clinic saw approximately 2775 women age 15 or older who were taking antiretroviral medications; however, some of these women may have received VIA screening at another facility. Moyo clinic therefore aims to conduct slightly less than 2775 screenings annually.

² Personal communication with Dr. Daniel Kahn, 2/11/19

In order to increase uptake of cervical cancer screenings, Moyo Clinic provides information about cervical cancer during health talks, which are delivered to all patients, and during one-on-one counselling sessions. However, it is unclear how accurate this information is, whether it is delivered consistently, and whether it reaches the target population. In addition, there is no available baseline data on Moyo clinic patients' current knowledge of cervical cancer and treatment options. The Moyo clinic facility also lacks systematic methods for collecting, managing, and analyzing data. Data collected between 2016 and 2018 suggests that the clinic is still far from reaching its goals of achieving 100% cervical cancer screening coverage among eligible women.

Patient Knowledge

In 2018, a study was conducted with providers and female patients at three PIH-supported facilities that provide same-day detection (using VIA screenings) and treatment for cervical cancer: Moyo clinic, Nkhotakota District Hospital and Kasungu District Hospital. To assess patients' baseline awareness of cervical cancer, screenings, and perceptions of treatment, participants were asked:

- Do you perceive (think or feel) cervical cancer as a major health concern for yourself? Why or why not?
- Have you ever talked to friends or family about cervical cancer? What did you discuss?
- Have you ever heard of visual inspection with acetic acid (VIA), which is a method for cervical cancer screening?
 - [If Yes] Where did you hear about it? Can you describe it to me?
- Do you think that screening is effective way to prevent cancer? Why or why not?
- Have you ever spoken with family or friends about cervical cancer screening (VIA)?
 - [If Yes] What have you talked about?
- Thinking of your friends and family, do you think they would be willing to be screened for cervical cancer? Why or why not?
- Have you ever been screened for cervical cancer?
- In your opinion, what would help make cervical cancer screening more acceptable or comfortable for women?

Responses were obtained from 10 women who had received a VIA screening at Moyo clinic on the day the study was conducted and 10 women from the broader Moyo clinic community. Although informative, does not offer an accurate assessment of Moyo clinic patients' baseline knowledge of cervical cancer prevention and treatment due to its small sample size and eligibility criteria. Respondents from the Moyo clinic community were selected only if they had already heard of cervical cancer screening. A more accurate assessment of Moyo clinic patients' knowledge—including males—and sources of knowledge about cervical cancer is needed. Only after identifying what knowledge gaps remain within the Moyo clinic patient population can PIH develop methods to address these gaps within informational health talks and/or individual counseling sessions conducted at Moyo clinic.

Data Collection and Management

Although Moyo clinic has increased the availability of screenings and the number of nurses who are trained and available to provide VIA screenings, no evaluation has been conducted to determine whether these improvements are associated with an actual increase in VIA screenings performed. Tracking the number of VIA screening conducted using patients' health passports has proven challenging, as these passports are often difficult to read or misplaced. Further, health passports belong to individual patients and are not integrated into clinical records.

To improve rates of VIA screening uptake among eligible women, prompts were developed to remind clinic nurses to order cervical cancer screenings. However, Moyo clinic nurses are often pressed for time due to under-staffing and a complicated patient population. It is unclear whether nurses utilize the prompts, how many nurses utilize the prompts, and whether the prompts have led to increased uptake of VIA screening.

Moyo clinic lacks a systematic, effective method of tracking the number of eligible women who were informed about VIA screenings, the number of eligible women who were recommended a VIA screening, the number of screenings conducted, the number of women recommended for follow up care, and the number of actual follow-up patients. Although some of this information can be obtained through patients' medical records, this information is incomplete, difficult to access, and potentially unreliable. A comprehensive review of existing materials and methods used to track VIA screening data is needed. This includes examination of data collection forms (patient intake forms, mastercard forms, clinician prompts), data entry procedures, and training available for clinic staff responsible for collecting, entering, and/or managing VIA data.

The next phase of the needs assessment involves a secondary analysis of existing data pertaining to 1) patients' cervical cancer knowledge, 2) the quality and consistency of cervical cancer information currently delivered at Moyo clinic health talks and within Moyo clinic counseling sessions, 3) Data collection and management procedures, and 4) VIA screening outcomes (Appendix A, Table 1: Secondary Data Collection).

Community Capacity and Stakeholder Assessment

Partners in Hope benefits from a strong partnership with UCLA researchers, medical professionals, and medical students. The UCLA Internal Medicine Residency Program at PIH provides UCLA residents with a one-month opportunity to participate in global health practice. UCLA residents work in collaboration with PIH staff every 1-2 months throughout the year. They are available to participate in the cervical cancer program evaluation as part of their annual team project. UCLA residents have already received training on how to promote cervical cancer awareness within the Moyo clinic community and best practices to promote efficient referral of eligible women for VIA screenings.

The UCLA-PIH residency program is part of EQUIP (Expanding Quality Improvement in Malawi), a project funded by PEPFAR/USAID that focuses on improving HIV care across Malawi. This program involves workforce training, strengthening linkages within the continuum of care for HIV, and performing operational research to improve Malawi's HIV programs and policies (University of California Global Health Institute, n.d.).

At Partners in Hope, lead resident Rajat Suri is the project lead for the cervical cancer screening program. Agnes Moses is available to conduct process monitoring materials with input from nurse Florence Chiewana. Paul Kowale at Nkhoma clinic is available for consultation on program evaluation and data management procedures.

Proposed Work and Goals

Partners in Hope aims to increase uptake of cervical cancer screenings among eligible women within the Moyo clinic patient population by 1) increasing patients' knowledge of cervical cancer prevention and treatment methods and 2) improving data collection, tracking, and management regarding VIA screenings. Specific program inputs, activities, outputs and outcomes are outlined in Appendix B (PIH Logic Model). A key underlying assumption is that health talks and one-on-one counselling sessions increase patients' knowledge about cervical cancer. In addition, it is assumed that increasing patients' knowledge will lead to an increase in uptake of VIA

screenings at Moyo clinic. These assumptions can be tested by measuring changes in patients' baseline knowledge of cervical cancer at Time 1 with endline knowledge at Time 2. Specific methods for measuring these changes are discussed below ("Outcome Evaluation").

June 2019

- Recruit UCLA residents for: secondary data collection, development of process monitoring and outcome evaluation materials, development of patient knowledge questionnaire, development of study design, sampling, data collection and data analysis

July 2019

- Conduct secondary data analysis of:
 - a) Health talks
 - b) Individual counseling sessions
 - c) Current utilization of prompts
 - d) Current VIA outcomes data collection methods: identify inconsistencies and appropriate methods for systematizing data collection
- Conduct research on best practices for integrating cervical cancer information into health talks
- Design PIH evaluation study
 - Identify indicators of patient knowledge
 - Develop patient knowledge questionnaires
 - Identify realistic "Time 1" and "Time 2" to assess changes
 - Apply for approval from UCLA IRB and Malawi NHSRC to conduct PIH study

August - September 2019

- Develop process monitoring and outcome evaluation materials
 - Cervical cancer information script for health talks
 - Cervical cancer information script for individual counseling sessions
 - Health talk attendance sheet
 - Health talk and counseling session assessment forms (including checklist of cervical cancer information to be covered)
- Develop outcome evaluation materials to establish accurate, consistent tracking of:
 - # patients screened per month
 - % VIA positivity
 - % suspect for cancer and referred
 - % of patients who underwent first cervical cancer screen
 - Outcomes of those referred to the central hospital

November – December 2019

- Pilot-test knowledge questionnaire and make appropriate adjustments based on feedback with pilot-test group and PIH staff
- Provide training to health talk facilitators and nurses on cervical cancer script delivery
- Provide training for nurses re: use of clinician prompts, patient intake forms
- Provide training for UCLA/PIH researchers on questionnaire administration/protocol and VIA data collection methods

January - March 2020

- Solicit feedback from clinicians/nurses on VIA data tracking techniques
- Conduct Phase 1 of PIH Evaluation Study: collect baseline knowledge of cervical cancer among Moyo clinic clients

April – June 2020

- Implement VIA data collection improvements:
 - Edit the patient chart intake form found on the inside cover of the patient chart to include cervical cancer screening date, result and if treatment rendered
 - Place cervical cancer form with the patient mastercard (among those women eligible and needing screening) to prompt clinicians and nurses seeing fasttrack patients (patients without the full chart) to order cervical cancer screening
- Data entry for outcome measures

Process Monitoring

The process evaluation will track the delivery of cervical cancer information given through PIH health talks and counseling sessions and patient exposure to cervical cancer information. Evaluation tools include: health talk attendance sheets, health talk assessment form, individual counseling assessment form, and a record of the number of nurses who have received training in use of clinical prompts. The purpose of the process evaluation is to determine whether the information about cervical cancer included in health talks and individual counseling sessions is accurate, delivered consistently, and reaches the target population. To measure whether these goals are reached, the following materials will be developed:

Health Talk Assessment Form

- Name of facilitator
- Date and time of delivery
- Checklist of information covered re: cervical cancer

Health Talk Attendance Form

- Total number of patients exposed to each talk/day
- Total number of women eligible for VIA screenings exposed to each talk/day

Individual counseling assessment form

- Name of clinician
- Name of client, VIA status (if known)
- Date of counseling session
- Total number of patients receiving individual counselling/day
- Checklist of information covered re: cervical cancer
- Number of eligible patients referred for VIA screening

In addition, the process evaluation will track data collection techniques to ensure that VIA screening data is collected in a consistent way by all Moyo clinic nurses. The purpose of this evaluation is to assess whether nurses are using the prompts as intended, and whether nurses consistently use patient intake forms and mastercards to track VIA outcomes. Key measurement indicators include:

- No. of nurses trained to use prompts
- No. of nurses trained in cervical cancer data entry technique using intake forms and mastercards

After one month, feedback will be requested from clinicians/nurses and appropriate adjustments will be made to VIA data collection techniques.

Outcome Evaluation

The goal of the PIH outcome evaluation is to identify whether improvements made to the quality and consistency of cervical cancer information provided within clinic health talks and individuals counseling sessions is associated with an increase in patients' knowledge about cervical cancer. In addition, the evaluation will examine whether nurses' use of prompts and changes observed in patient knowledge are associated with increased uptake of VIA screenings among eligible clients.

Knowledge Hypotheses:

H1. The integration of cervical cancer information within health talks delivered at Moyo clinic is associated with an increase in knowledge of cervical cancer among Moyo clinic clientele.

H2. The integration of cervical cancer information within individual counseling sessions delivered at Moyo clinic is associated with an increase in knowledge of cervical cancer among Moyo clinic clientele.

VIA Screening Uptake Hypotheses:

H3. The use of prompts by Moyo clinic nurses is associated with an increase in VIA screening uptake among eligible Moyo clinic patients.

H4. Knowledge of cervical cancer among Moyo clinic clientele is associated with VIA screening uptake

These hypotheses will be tested in a pre-test/post-test comparison group study. Participants will be recruited to participate following receipt of routine care. Initially, all Moyo clinic patients will be eligible to participate in the study as long as they are willing and able to provide informed consent. During recruitment, data will be collected patients' age, gender, exposure to Moyo clinic health talks/counseling services, and previous receipt of VIA screening. To test the knowledge hypotheses, patients' exposure and prior receipt of screening will be used as controls. To test the screening uptake hypotheses, only data collected from clinic nurses (H3) and women ages 25-49 (H4) will be used.

Socio-demographic data will be collected on patients' age, marital status, level of education, and employment status. Data on *patient knowledge* will be collected through a questionnaire consisting of 15 true/false statements that include both facts and myths about cervical cancer, risk factors, and Moyo clinic treatment options (See Appendix C: Patient Knowledge Questionnaire). Patient knowledge scores will be generated with one point allocated for each correct answer and 0 points allocated for incorrect or "I don't know" responses for a maximum of 15 possible points (Rosser, 2014). Data on *VIA screening uptake* will be collected through patient medical records. *VIA screening uptake* will be defined as the number of eligible patients who received a VIA screening within the past year.

Potential limitations to this study include: the frequent rotations of UCLA researchers and medical students, who typically spend only 1-2 months at Moyo clinic; time limitations of Moyo clinic nurses and PIH staff; delays collecting baseline knowledge data; obtaining funding to develop materials, trainings, and provide adequate compensation for study participants.

Feasibility and Limitations

The process evaluation described above and the initial stages for developing the outcome evaluation study are feasible to complete within one year. This is because of the strong partnerships with UCLA researchers and medical professionals, many of whom have already proposed and/or initiated changes to improve cervical cancer screening uptake and data collection processes at Moyo clinic. Nevertheless, PIH staff schedules and time constraints may

interfere with successful evaluation of the Moyo cervical cancer screening program. Moreover, providing free, HIV/AIDS services remains a priority for Moyo clinic staff and physicians. Relying on voluntary efforts of UCLA medical residents is one limitation to this evaluation plan.

Data Management

Bi-annual reports that summarize Moyo clinics' progress will be produced by Moyo clinic project leads and PIH staff. Reports and all data collected on cervical cancer screening uptake will be kept in a password protected Box folder.

Dissemination Plan

The results of the evaluation will be shared with PIH board members, Moyo clinic physicians, nurses, and staff, and UCLA researchers and residents involved in the evaluation program. Sharing these results will provide an opportunity for key stakeholders to suggest additional improvements to the Moyo clinic health talks, individual counseling sessions, and data collection/management procedures. In addition, by communicating how close PIH is to achieving its goals, key stakeholders may be able to suggest opportunities for additional funding and/or program expansion.

Learning Goals

Personal. I am grateful to have developed a relationship with UCLA researcher Dr. Corinna Moucheraud, and medical professional Dr. Danny Kahn, both of whom are associated with the cervical cancer screening program at Moyo clinic. These individuals have provided valuable information regarding the Moyo clinic patient community, cervical cancer screening delivery, and barriers to receiving effective cervical cancer treatment at the individual, health systems, and community level in Malawi. As someone with a tendency to envision (and hope for) big changes, I hope to learn more about how to develop evaluation goals that are both feasible and impactful.

Organizational. Because the cervical cancer screening program at Moyo clinic is relatively new, I believe that my proposed work would lead to improvements in data collection and, in turn, improvements in service delivery. However, it is unclear whether these changes are sustainable given the somewhat precarious nature of PIH funding. Ideally, I would share my findings through a report and presentation to key stakeholders, emphasizing how potentially "uncomfortable" findings can nevertheless be used to implement additional improvements.

Population. Although my evaluation plan aims to test whether increases in patient knowledge are associated with increased uptake of cervical cancer screenings, another assumption underlying the PIH screen-and-treat program is that increased uptake of screenings leads to reductions in cervical cancer mortality *beyond* Moyo clinic. Numerous barriers remain for patients who cannot access Moyo clinic—or other clinics that offer VIA screenings. Although my recommendations to measure patients' knowledge of cervical cancer and track whether PIH program activities are associated with changes in knowledge could be replicated at other clinics, reaching populations with limited access to health facilities remains a significant challenge. Ideally, information about Moyo clinic's cervical cancer screening program—as well as an evaluation of its effectiveness—could be communicated to the broader Moyo clinic community through commonly used media or word of mouth.

Institutional. I hope to present the results of my work at the Los Angeles Global Health conference and within departmental events at UCLA. I hope the results of my work will prove valuable to students who are preparing to do an internship at a global health organization.

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APPENDIX A

Table 1. Secondary Data Collection

Goal: Improve VIA-screening coverage rates among eligible women	
<p>Patient Knowledge</p> <ul style="list-style-type: none"> - What do patients know about cervical cancer, prevention methods, VIA screenings, and cervical cancer care provided at Moyo clinic? 	<p>Indicator/Source</p> <ul style="list-style-type: none"> - Patient knowledge survey
<p>Cervical Cancer Information</p> <ul style="list-style-type: none"> - What information is delivered at the health talks? - What information is delivered during individual counseling sessions? - How do patients typically learn about cervical cancer, prevention methods, VIA screenings, and cervical cancer care provided at Moyo clinic? 	<ul style="list-style-type: none"> - Health talk assessment: checklist - Individual counseling assessment: checklist - Patient knowledge survey
<p>Data Management</p> <ul style="list-style-type: none"> - How many nurses use the VIA screening prompts? - How effective are the prompts? - Are nurses trained on how to use prompts? - How does PIH collect and store information on VIA referrals, screenings performed, and results? - How does PIH collect and store information on VIA follow-up patients? 	<ul style="list-style-type: none"> - Interviews with PIH nurses, program coordinators - No. orders placed
<p>VIA Screening Outcomes</p> <ul style="list-style-type: none"> - Among Moyo clinic patients, how many are eligible for VIA screening? - Among eligible women, how many received VIA screening? - <i>Reasons why VIA was not received?</i> - Among women who received VIA screening, how many were referred for additional care? - How many were referred for treatment with thermocoagulation (TC)? - How many received TC? - <i>Reasons why additional care was not received?</i> 	<ul style="list-style-type: none"> - Patient medical records - Intake forms - "Mastercard" form - No. orders placed - Interviews w/Moyo clinic nurses, PIH program coordinators, patients

APPENDIX B

Partners in Health Logic Model

Assumptions	Inputs	Activities	Outputs	Short-term Outcomes
<p>PIH health talks and consultations increase patient knowledge about cervical cancer</p> <p>Increasing patient knowledge about cervical cancer will increase VIA screening uptake among eligible women at Moyo clinic</p>	<p>PIH nurses, doctors, clinic officers, staff</p> <p>UCLA residents, researchers</p> <p>Cervical cancer scripts</p> <p>VIA order prompts</p> <p>Trainings and training materials</p>	<p>Moyo clinic health talks w/cervical cancer info</p> <p>Individual counseling sessions w/ cervical cancer info</p> <p>Implementation of improved clinician prompts and data tracking procedures</p>	<p>No. health talks and counseling sessions w/cervical cancer info delivered</p> <p>No. patients exposed to health talks and counseling sessions</p> <p>No. of Moyo clinic nurses/staff trained in VIA prompts and tracking procedures</p>	<p>Increase % of Moyo clinic clients who have cervical cancer knowledge</p> <p>Increase no. VIA screenings ordered and conducted at Moyo clinic</p> <p>Improve VIA data tracking techniques among clinicians</p>

APPENDIX C**Moyo Clinic Patient Knowledge Questionnaire**

Knowledge**T / F**

1. Screening tests look for changes on your cervix that indicate you are at risk for cancer
2. Women should get screened for cervical cancer only if they have symptoms
3. If a woman has abnormal vaginal bleeding, discharge, or pain, she should see a medical provider to get screened for cervical cancer
4. Cervical cancer can be prevented
5. Screening tests can help prevent cervical cancer
6. There is no treatment for cervical cancer

Knowledge of Risk Factors

7. Family planning increases risk
8. HIV increases risk
9. Only HIV+ women are at risk
10. Washing inside the vagina decreases risk
11. Screening decreases risk
12. Nothing can prevent cervical cancer because it is fate or the will of God

Knowledge of HPV

13. HPV is an infection that can cause cervical cancer
14. HPV is spread during close contact like during sexual intercourse
15. HPV infection is always symptomatic

Composite Knowledge Score (# correct out of 15)
