international Partnership for Reproductive health

2015

Sister Aklesia Memorial Hospital/IPRH: Cervical Cancer Screening

Cervical Cancer Screening and Colposcopy Clinic Pilot Project

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Sister Aklesia/IPRH Cervical Cancer Screening Program

2009-2015

Introduction

The primary purpose of the International Partnership for Reproductive Health (IPRH) project in Ethiopia is to assist in decreasing the incidence of cervical cancer among women in Ethiopia. Toward this end IPRH has developed a woman-centered, multi-dimensional approach to cervical cancer awareness, screening and treatment in partnership with Sister Aklesia Memorial Hospital in Adama, Ethiopia.

**Cervical cancer kills nearly 6000 women in Ethiopia every year.**

In 2000, there were over 471,000 new cases diagnosed, and 288,000 deaths from cervical cancer worldwide.[[1]](#footnote-1) 83% of new cases and 85% of related deaths occur in resource-poor countries; affecting poor, vulnerable, and disenfranchised women at the prime of life. Records show that of nearly 22 million Ethiopian women over the age of fifteen, approximately 7600 are diagnosed with cervical cancer, and roughly 6000 die of the disease each year. Although cervical cancer is preventable, most women in developing countries lack appropriate information about cervical cancer, as well as the means for accessing proper screening and other preventative measures. The World Health Organization recognizes cervical cancer as an important health problem and recommends establishing early detection policies. However, no screening test or procedure can decrease the disease prevalence without the support of a well planned and properly managed screening program.

Hence the importance of working with existing organizations and facilities like Sister Aklesia Memorial Hospital in the building of capacity to plan and manage a screening and treatment program through procurement of medical equipment, as well as the provision of educational opportunities and training of medical personnel. Traditionally, the approximately 80-85% of the population residing in rural areas of the country represent an additional and significant challenge in the development of a viable system of healthcare that can provide screening and treatment for cervical cancer. Ethiopia has been identified as having one of the lowest concentrations of health personnel per population of any region in the world – just 1 physician per 48,000 people country wide, and just 1 physician per 200,000 people in Oromia Region.Despite these apparent shortcomings, there exists a capable, burgeoning private health sector in Ethiopia.

**International Partnership for Reproductive Health (IPRH)**

IPRH is incorporated in the United States as a non-profit organization exclusively for charitable, scientific and education purposes, and is classified as a 501 © 3 organization for tax purposes. The mission of IPRH is:

MISSION

IPRH works to improve the reproductive health and wellness of women and girls in Ethiopia, including those with disabilities, by enhancing the knowledge and skills of medical professionals, supporting community healthcare services, and providing material and human resources.

OBJECTIVES:

To support and conduct non-partisan research, education, and informational projects designed to:

* build the capacity of healthcare providers to provide cervical cancer screening and treatment;
* build the capacity of healthcare providers to provide screening for HIV/AIDS;

Assist the healthcare community in developing sustainable strategies for training and deploying physician and non-physician providers.

ETHIOPIA PROJECT:

In partnership with other non-profit organizations, universities, and private business, IPRH will design and implement a project in Ethiopia conceived and crafted to address identified needs in the area of women’s reproductive health.

The intent of the project is to assist the community in decreasing the burden of HIV/AIDS and cervical cancer among women, utilizing appropriate techniques and evidence based medicine for screening and treatment.

IPRH acknowledges the invaluable groundwork in cervical cancer detection and prevention by organizations such as the World Health Organization, the Program for Appropriate Technology in Health, the Alliance for Cervical Cancer Prevention, and the International Agency for Research on Cancer.

IPRH recognizes and supports the current efforts in Ethiopia to eradicate cervical cancer through effective cervical cancer awareness, screening and treatment programs undertaken by the Ministry of Health, USAID, and Pathfinder International. IPRH is dedicated to the implementation of high quality cancer screening and treatment utilizing existing and developing technologies to enhance the reproductive health of Ethiopian women, including women with disabilities.

**Sister Aklesia Memorial Hospital (SAMH) – Adama, Oromia, Ethiopia**

Sister Aklesia Memorial Hospital was established in 2006 as a comprehensive community hospital designed to serve the city of Adama, and surrounding region. SAMH is an 80-bed facility staffed by 19 resident and on-call physicians, including 3 international physicians who provide healthcare services across a range of health disciplines. Housed within SAMH is a fully staffed diagnostic laboratory to support screening of TB, cervical cancer and HIV/AIDs, additionally, the lab is capable of performing many routine hematology, endocrine, urinalysis, fecal and biochemistry tests.

The city of Adama is located in, and serves as the capital of Oromia Region (an area covering 353,632 square kilometers). The 2007 census of Oromia reported a population of over 27 million. Of this population 13,482,313 were women. Sister Aklesia Memorial Hospital serves a population within a 75-kilometer radius of Adama city, encompassing approximately 4 million people.

Key Challenges

Strong partnerships provide a means for addressing four key challenges faced by both public and private health sectors providers, namely:[[2]](#footnote-2)

1. Management
2. Financial strategies and accountability
3. Access for rural and vulnerable communities
4. Quality of care and systems

The importance of strong management, including the management of people, money and supplies, is absolutely essential in overcoming many health service challenges. Management makes organizations possible; good management makes them work.[[3]](#footnote-3)

The complex (and often perplexing) flow of monetary resources through any institutional system can be fraught with bureaucratic inadequacies and lack of accountability. A prominent focus of all partnerships, public and private, and the key to on-going success must include financial accountability in order to assure the protection of longevity of the program.

Providing access to health care among rural families ultimately depends upon the ability of the program to bring services to the people. For example, a mobile program that emphasized education and outreach showed positive results in rural Thailand in the 1990s.[[4]](#footnote-4)

Quality of care involves accurate provision of information, compassionate and culturally sensitive care for all women, including women with disabilities; maintenance of all equipment and proper hygiene. Perceived quality of care affects the demand for healthcare by both the rich and the poor, for example, a study in Cameroon showed that when user fees were introduced in public clinics, this resulted in a regular supply of drugs, which in turn increased use of services by the poor.[[5]](#footnote-5)

IPRH believes in working to promote cooperation between healthcare partners in Ethiopia to decrease the incidence of disability and death due to cervical cancer. IPRH will function as a liaison between its Ethiopian healthcare partners and international donor organizations in both public and private sectors for the purpose of enhancing and expanding capacity in research, clinical training, and delivery of services in the areas of cervical cancer awareness, screening, and treatment.

In 2007 a cooperative study by the Ethiopian Federal Ministry of Health, the William J. Clinton Foundation, and Yale University School of Public Health published the “Ethiopia Hospital Management Initiative: Blue Print for Hospital Management in Ethiopia” a comprehensive guide to hospital management that outlined strategies to address the four key challenge areas: 1) Management; 2) Finance; 3) Access to health resources; 4) Quality Control.

IPRH believes that through rigorous planning, implementation, and assessment, healthcare programs of high quality can be achieved in low-resource settings. To achieve sustainable quality healthcare systems at the local level, issues of staff training and retention, equipment maintenance, inventory control, accurate record keeping, and management transparency must be a priority.

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Past Activities – 2008-2013

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In **2008**, the International Partnership for Reproductive Health held two seminars in Ethiopia for medical professionals and administrators on cervical cancer screening. These conferences were held at venues in Adama, Ethiopia and Addis Ababa, Ethiopia, respectively. Over one hundred participants attended the two-day course. Two key concerns were expressed by the attendees: (1) how to motivate and enable women, especially rural women, to actively seek screening and preventative care: and (2) the need to develop a tumor registry.

Within the context of laying the groundwork for a cervical cancer screening and treatment program in Ethiopia, IPRH, in partnership with Sister Aklesia Memorial Hospital, has designed this project to address the issues of (1) management, (2) financial accountability, (3) access for rural and vulnerable communities, (4) quality of care, (5) motivating women to seek screening for cervical cancer, and (6) the need for a tumor registry.

Any viable cervical cancer screening and treatment program requires stakeholder awareness and education programs to ensure long-term sustainability and community support.

**2009**

IPRH initiated a trial Cervical Cancer Screening and Treatment Project by training non-physician providers in colposcopy and Pap smear technology with equipment provided by **Becton Dickinson and Company** of the U.S. Four non-physician healthcare workers successfully completed the weeklong intensive course consisting of four components: 1) Medical theory; 2) Sensitivity and awareness training; 3) Equipment technology & training; 4) Supervised clinical training. During the course of the seminars 30+ patients were successfully screened. All four NPP attained fundamental competence, and all responded enthusiastically to the prospect of additional training that would enhance their capacity as healthcare providers. Predicated on the success of this activity, IPRH developed the concept of a donor supported, comprehensive cervical cancer screening and treatment center housed within SAMH.

**2010**

IPRH solicited the donation of medical equipment and supplies needed to furnish the IPRH/SAMH Cervical Cancer Screening and Treatment Center in Adama. In partnership with **Hologic Corporation,** **Cooper Surgical Corporation**, and private medical practitioners in the United States, IPRH acquired donations including **Leisegang** colposcopes, a LORAD-4 mammography unit, a wide range of medical instruments used for cervical cancer screening and biopsy. An **Epson** LCD Projector, boxes of medical texts and examination room supplies were also obtained from private donors.

**2011**

IPRH implemented the second step of its project at SAMH. The objective of this phase was to: 1) conduct follow-up assessment of NPP practitioners; 2) supplement training seminars introducing refined screening protocols and procedures: 3) conduct a feasibility assessment of integrating IPRH activities into the SAMH institutional structure; 4) Initiate a cost analysis of proposed IPRH activity needed to sustain a long-term program. Training efforts will be focused on quality of care and follow up assessment, accuracy of diagnosis and charting, as well as pre-operative and post-operative communication with patients. Analysis of skill retention, diagnostic reliability percentages, procedural competency, and confidence levels among NPP suggest that a training period of 6 months, with periodic benchmark performance reviews accompanied by close supportive supervision, is required to sustain screening and treatment competency. IPRH has determined that cervical cancer screening and treatment provided by a trained cadre of NPPs can be an effective and cost efficient strategy for detecting and treating precancerous lesions when supported by physician-led supervision.

**2013**

IPRH conducted a successful cervical cancer screening initiative in collaboration with Sister Aklesia Memorial Hospital. Over the 3 weeks of intensive work we were able to train non-physician providers, physicians, and screen over 100 women for cervical cancer, as well as issues of infertility. We collected data, conducted focus groups, and collaborated with Ethiopian colleagues to demonstrate the strength of global partnerships.

Additionally we established a working partnership between sister hospitals, Sister Aklesia Memorial Hospital and Community Hospitals and Wellness Centers of Bryan, Ohio.

We established a web presence at iprh.org as well as a Facebook page, and Twitter account.

**2015**

IPRH is excited to continue building global partnerships with Addis Ababa University in the study and evaluation of cervical cancer screening, specimen collection techniques and molecular epidemiology and genetic variability of HPV in Ethiopia.

CONCLUSION: IPRH believes that a small, physician-led cervical cancer screening and treatment center, housed within a community hospital and staffed by a cadre of trained and dedicated non-physician practitioners can be an effective instrument in reducing cervical cancer mortality. Employing a ‘hospital within a hospital’ model, the IPRH/SAMH partnership can deliver comprehensive screening and treatment services in a cost effective manner. IPRH trained NPP can be effectively utilized in special screening clinics focused on rural populations, women with disabilities, and women with HIV/AIDS. IPRH also believes that the most capable student NPP’s can be encouraged to gain the requisite skills to train subsequent cadres of NPP.

\*HPV/DNA Screening & HPV Vaccine: IPRH recognizes the significant development in cervical cancer screening marked by HPV/DNA. While progress toward effective and affordable HPV screening and treatment has been remarkable, widespread deployment of such technologies in low-resource settings is some years off. Once HPV vaccine is widely available, there will continue to exist a 15-20 year treatment gap before girls treated with the vaccine will come to the age appropriate for cervical cancer screening. The necessity for establishing and maintaining comprehensive screening and treatment in low resource settings for the immediate future is inarguable.

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Future Activities – 2015

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The IPRH Cervical Cancer Screening and Treatment Center in collaboration with SAMH is a vision to offer a spectrum of services.

IPRH will conduct VIA, colposcopy and cryotherapy training seminars designed for physician and non-physician providers. Course materials developed by the World Health Organization – International Agency for Research on Cancer (WHO-IARC) and the WHO Regional Office for Africa (AFRO) will be supplemented by supportive supervision of an intensive hands-on training experience.

Cervical cancer awareness programs and technical training seminars will be conducted in association with existing healthcare and educational entities in Oromia Region.

In addition, in cooperation with SAMH, IPRH will initiate special pilot cervical cancer screening and treatment clinics for women with disabilities in Adama and rural Oromia. Clinics equipped to address the specific needs of women with disabilities, coupled with an aggressive awareness program will target this underserved and vulnerable population.

In **2015** IPRH will seek funds, or donations in kind, for the acquisition and delivery of exam equipment specifically designed to accommodate women with disabilities, including a Brewer Access High/Low Exam Table (or similar); an SW-3303 (or similar) portable colposcope with carrying case; 2-4 high intensity portable exam lights. Additional biopsy instruments; laboratory diagnostic equipment; and training aids required for ongoing cervical cancer screening, prevention and treatment seminars will be sought.

IPRH will evaluate and refine its special cervical cancer screening and treatment clinics for women with disabilities, with focus on: creation of Ethio-centric awareness and education programs targeting women with disabilities; establishing on-site counseling facilities; analysis of special needs clinic architecture, protocols and procedures.

IPRH will initiate a Rural Outreach Screening Program, by establishing periodic screening and treatment clinics in rural Oromia Region to be conducted at selected sites beyond the population centers. This program will consist of awareness and education, screening, biopsy, and cryotherapy treatment.

In **2016** IPRH will expand the scope of its initial rural outreach clinics and special clinics for women with disabilities by adding venues and increasing the number of trained non-physician providers dedicated to those projects.

IPRH will scale up its Cervical Cancer Screening and Treatment Program housed at SAMH by bringing online an additional fully equipped and staffed exam room (doubling existing capacity).

IPRH will expand its VIA, colposcopy and cryotherapy training seminars in cooperation with existing educational programs offered at regional institutions of higher education, and training hospitals.

IPRH will seek additional partnerships with public and private organizations engaged in cervical cancer, HPV, and HIV/AIDS screening.

In **2017** IPRH will seek partnerships with community based healthcare organizations and institutions beyond Oromia Region to establish satellite cervical cancer screening and treatment centers based on the collaborative model created with SAMH. Extending both comprehensive screening and treatment services and colposcopy/cryotherapy training seminars into other regions of Ethiopia.

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Project Objectives

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The objectives of the Sister Aklesia Memorial Hospital/International Partnership for Reproductive Health Cervical Cancer Screening project are to:

1. Develop the capacity of SAMH to implement a multi-dimensional early detection program for cervical cancer based on awareness, screening and treatment that will target approximately 3000 to 5000 women annually, including women with disabilities, and other vulnerable segments of society.
2. Assess the sensitivity, specificity and evaluation of cervical cancer screening programs and specimen collection techniques and investigate molecular epidemiology and genetic variability of HPV in Ethiopia in collaboration with Addis Ababa University. Evaluate the cost requirements in terms of economic, material, and human resources needed to maintain the screening program over the course of one year, three year, and five year periods.
3. Determine parameters of efficiency for public-private partnerships in cervical cancer screening and prevention.

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Project Activities

1. Organize a multi-dimensional cervical cancer screening, colposcopy and treatment site.
2. Create data-gathering forms, and implement meticulous data gathering methodologies.
3. Identify and instruct appropriate clinical personnel in conducting and maintaining the cervical cancer screening, colposcopy and cryotherapy site.
4. Create Ethio-centric awareness information for professionals and patients.
5. Create Ethio-centric training information for non-physician providers.
6. Create a system for post-training assessment and quality control.
7. Identify epidemiologic/statistical criteria for analysis of data.
8. Identify target populations including women with HIV/AIDS and women with disabilities for periodic special screening and treatment clinics.
9. Create system for monitoring progress of pilot project.
   1. Diagnosis, treatment and referral
   2. Follow-up training
   3. Cervical cancer registry
10. Develop and sustain partnerships with stakeholders in healthcare sector, community organizations, public institutions, and private business.

Project Inputs

Signage: **IPRH/SAMH Cervical Cancer Screening and Treatment Center**

***(In both English and Amharic)***

Basic Site Requirements:

* Exam table with stirrups
* Table covers (disposable paper or cloth)
* Good light (preferably a bright halogen lamp which can be directed easily)
* Pap kit and fixative
* Cytology brushes
* Cotton-tipped fine swab sticks
* Large swabs
* Colposcope
* Speculum (Graves)
* Gloves
* Cotton swabs or gauze
* Sponge-holding forceps
* Vaginal side-wall retractor
* Endocervical speculum
* Endocervical curette
* Dissecting forceps
* Punch biopsy forceps
* Ring forceps
* Tissue forceps
* Bucket for instrument decontamination (0.5% chlorine solution)
* Kidney tray
* Bottles with labels:

5% acetic acid solution

Lugol’s stain

Moncel’s solution

Formalin

**Cryotherapy Equipment**

* Compressed gas cylinder
* Yoke with a tightening knob and inlet to connect the gas cylinder to the cryotherapy gun
* Cryotherapy gun with flexible tubing
* A pressure gauge
* Assorted sizes of probe tips

1. Cervical cancer screening in developing countries: report of a WHO consultation. 2002 [↑](#footnote-ref-1)
2. World economic forum white paper: from funding to action. 2005 [↑](#footnote-ref-2)
3. Magrette, J. What management is: How it works and why it’s everyone’s business. London: HarperCollins, 2002 [↑](#footnote-ref-3)
4. World economic forum white paper: from funding to action. 2005 [↑](#footnote-ref-4)
5. Preventing cervical cancer worldwide. ACCP. 1999 [↑](#footnote-ref-5)