



ASSESSMENT OF THE ARMENIAN AMERICAN WELLNESS CENTER

Prepared for USAID

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ACRONYMS

AACA - Armenian American Cultural Association

AAWC - Armenian American Wellness Center

BBP - Basic Benefit Package

GoA - Government of Armenia

PHC - Primary Health Care

STI - Sexually transmitted infections

WHCA - Women's Health Care Association

EXECUTIVE SUMMARY

Participatory Evaluation of the Armenian American Cultural Association's "Expansion of the Armenian American Wellness Center" Partnership Program, implemented under the USAID Global Development Alliance Grant Agreement

This document describes the Participatory Evaluation of the Armenian American Cultural Association's "Expansion of the Armenian American Wellness Center" Partnership Program, implemented under the USAID Global Development Alliance Grant Agreement.

In particular, USAID and the Armenian American Wellness Center together evaluate the impact of the "Expansion of the Armenian American Wellness Center" Partnership program and the lessons learned for future programming. The evaluation informs the Ministry of Health, USAID/Armenia's Social Reform Office, the Armenian American Wellness Center (AAWC), and the Armenian American Cultural Association (AACA) of the partnership's impact on improving access to primary health care, with an emphasis on breast and cervical cancer screening and integrated family planning and reproductive health services.

In addition to the desk review, a qualitative study design was developed using observations, in-depth interviews and focus group discussions. The primary results are as follows:

- Gynecologists, family physicians, radiologists medical RN technologists, nurses and biomedical engineers, are on staff
- Family planning counseling available
- Sustained public education and efforts to raise awareness about prevention and early detection of diseases through annual clinical check-ups and screening
- Case management philosophy (e.g. diabetes)
- Breast screening and diagnosis - Mammography and ultrasound services lead to the utilization of other PHC screening services (thyroid, bone density, Pap smear and abdominal organs)
- Positive reputation and wide recognition of the center
- Pap smear screening, lab analysis and treatment in one locale
- High quality, state-of-the-art medical equipment and supplies, particularly mammography and ultrasound machines
- Quality assurance mechanisms in place (e.g. daily equipment calibration, weekly random testing of x-ray films, group consultation for film readings, and regular patient satisfaction surveys)
- Utilization of preventive services is increasing
- Awareness raising activities are innovative for Armenia (e.g. Health Fair, Health Walks, and Flash Mobs)
- Plans for extensive patient education in the area of diabetes and obesity
- Satellite clinic in Gavar provides unparalleled services in that region
- Males are not yet targeted (there are a few male patients - To date, 362 males have received mammography services with 15 cases diagnosed with cancer); there are future plans for launching a Men's Health Program, which will include prostate cancer screening
- Laboratory testing for PHC is limited – most blood analyses need to be conducted outside of the center (however, the Center has rented space to a lab in the newly expanded building, this will increase follow-up and diagnostic accessibility)
- AAWC's family physician is not registered for the country's open enrollment system which is connected to reimbursement/BBP issues
- Cultural barriers / poor preventative behavior in Armenian population - AAWC was one of the first institutions in Armenia, to introduce the notion of "preventive health" and the "importance of the early detection of diseases to save lives."
- Patient lack of awareness that mammography center now provides family physician services - Plans to advertise these services will be implemented after the renovated building is completed and fully operational.
- Lack of independent, outside, third-party evaluation of AAWC clinic services

- No follow-up data records to determine long-term survival rates of those diagnosed with cancer - The Center is a diagnostic and preventive healthcare facility and currently does not provide oncology treatment services.
- Patients often not told diagnosis – this is an issue being addressed by the clinic within the confines of cultural and diagnostic barriers.
- Rural availability increased (Gavar)
- Between 60-100 patients are seen daily in Yerevan
- Outreach missions limited in other Marzes - The doctors and medical professionals from the Center have conducted outreach missions in 181 locations in all of the eleven Marzes (districts) in Armenia seeing 11,287 patients, providing 12,932 services, and traveling a total of 34,890 kilometers to date.
- Future plans to expand diagnostic and treatment services at the Center - Men's health will be introduced, including prostate cancer screening.
- Future plans for very advanced laboratory services are in place in the clinic.
- Subsidized prices of services - The Center has subsidized prices for services since its inception in 1997 and has maintained the same price for services for the past 13 years, in spite of the fact that the prices of all supplies have increased four-fold and most of the equipment has been replaced recently – in 2008 and 2009 - with upgraded models.
- Mammogram cost to patient is competitive with others (e.g. Oncology Institute) - Cost of breast imaging services includes both the cost of the mammogram, as well as an ultrasound screening; this is the highly recommended protocol made by the US radiologist who trained the Center's staff.
- Primary Health Care visits low cost (1500 dram)
- However, total package of services could be burdensome for some - The Center provides subsidized prices and treats close to 50% of the patients free of charge, the total package of services, if used by one woman , could cost over \$100.
- Patients perceptions (Gavar and Yerevan): concerns about privacy, wait times, other services
- Lab cytologist trained in U.S. - 7 of the current AAWC medical staff have received further medical education and training in the US at major medical institutions.
- Informal referrals (only) from other facilities in Yerevan and Marzes - 35% of all patients are sent to the Center by referral from doctors.
- Formal consultation of two oncologists from the National Oncology Center (weekly), who have been hired by the Center to provide free services to the breast cancer patients.
- Formal rotations of students from the YSMU for medical training as a teaching center; in addition to the 6-month ongoing Residency Program for radiology graduates from the National Institute of Health of Armenia.
- Contracts with other institutions, e.g. AUA, Dept Defense for regular screenings
- Diffusion of Innovations: AAWC training of others, dispersion of former staff members into state institutions
- Outside funding enables quality, availability and affordability which all lead to increased utilization

The following recommendations were developed based on the results of the qualitative analysis and literature review:

- Continue awareness raising activities
- Create web site with list of total services offered and corresponding fees – Though internet access in the rural regions is very low, the educated class of working women in Armenia are increasingly turning to the internet for health information.
- List of all services offered by AAWC made available in reception through brochure and/or poster (greater advertisements of the expanded services available beyond mammography and Pap)
- Appointment making for patients with the goal of reducing wait times. The Center has tried different approaches to address this problem, which is compounded by the fact that many patients from outlying areas do not have the possibility of contacting the Center in advance to schedule their appointments.. Once the renovation is complete, a plan is in place to better manage patient flow.

- Facilitate lab services in building
- Facilitate men's health service, including a prostate cancer screening program
- Facilitate development of diabetes and obesity counseling services
- Develop mechanism for diagnostic information sharing with patients - The Center was the first of its kind in Armenia to sponsor a discussion and seminar in 2001 with medical professionals and professors from the US and Armenia on "Medical Ethics in Armenia: Cancer Patients' Right to Know the Truth." While this concept is generally still not socially accepted in Armenia by the medical community, AAWC's philosophy has always been "to tell the truth." However, the consulting oncologists for the Wellness Center insist on handling this matter themselves - which may differ from the approach preferred by AAWC's doctors – and to provide follow-up on their own at the Oncology Center. AAWC will continue to serve as an advocate for this cause.
- Add measure on patient data record regarding screening vs. diagnostic for mammography i.e. did the patient visit AAWC after feeling a lump or some other symptom or did they come purely for screening purposes.
- Review of privacy protocols, in both reception and physician exam rooms
- Review and respond to increasing human resource needs with increased staffing priority areas
- Further / continuous training of staff (US training for Gavar Family Physician successful model) - AACA has organized and led 55 medical exchanges by U.S. medical professionals (both in Armenia and U.S.), who are affiliated with 7 medical university ho- The Center conducts regular patient satisfaction surveys (without name or other identifying information), which are given randomly to patients and are based on a 5-point scale.
 - Since 2006, the Center has surveyed 3,584 patients averaging around 700 patients surveyed per year.
 - Of the 3,584 patients surveyed with 14 questions, 40.2% rated AAWC's services as excellent, 28.4% as very good, 20.6% as good, 6.6% as fair, and 1.5% as not good.
- Training of trainers in Marzes by center staff (i.e AAWC staff train others who are working in the Marzes).
- Develop mechanism for follow-up data collection to determine long-term survival and impact on mortality
- Independent monitoring and evaluation by third-party researchers of patient perceptions, services provision and management. Develop mechanism for continuous quality improvement through the feedback of these evaluations.
- With BBP support, conduct national screening for high risk populations and/or socio-economically vulnerable populations, but with full reimbursement (11,000 drams, not 5,000)
- Long-term sustainability: BBP with co-payment is a possible model. Expanded contracts with private companies, organizations, insurance

I. BACKGROUND

In 1997, the Armenian American Cultural Association (AACA) organized its first Medical Mission to Armenia. The team included medical professionals from the Washington Hospital Center in Washington, D.C., and the Akron City Hospital in Akron, Ohio, who selected and trained Armenian medical professionals and helped install mammography units and other equipment to establish the only modern screening facility in the Caucasus Region.

On April 28, 1997, AACA opened the Armenian American Mammography University Center (later renamed the Armenian American Wellness Center - AAWC) on the campus of Yerevan State Medical University in Yerevan, Armenia. This was made possible through the financial support of the Armenian American Cultural Association, the U.S. sponsor of AAWC, thousands of Armenians in the Diaspora in North America, Hranush Hakopyan, who was then the Minister of Social Welfare and became a Co-founder of the Center, equipment and supplies donated by US-based corporations, and political support from both the American Embassy in Armenia and the Government of Armenia.

From 2000 to 2004, USAID supported an American International Health Alliance partnership program between the AACA and AAWC. The overall goal was to reduce breast and cervical cancer morbidity and mortality, and to improve health through enhanced clinical, diagnostic, preventative, and community education services. Key objectives were to:

- Expand access to breast cancer screening and primary care for the Gegarkunik Region of Armenia (population approximately 200,000) through the opening of a clinic in the region's capital, Gavar.
- Strengthen management, accounting, medical and administrative recordkeeping procedures and practices at AAWC, its satellite offices, AACA, and Women's Health Care Association (WHCA).
- Expand public relations and community mobilization activities in the United States and Armenia to support AACA's and WHCA's activities to improve women's health in Armenia.
- Expand public education and outreach by organizing scientific, cultural, educational, and social activities as a forum to elevate knowledge and awareness of breast cancer, cervical cancer, and other women's and general public health issues in Armenia. These activities include the annual health walk, health fairs, and reduced fees during October, breast cancer awareness month

The "Expansion of the Armenian American Wellness Center" is one of two GDA initiated Partnerships in the USAID Armenia Health Portfolio. The Alliance between the Armenian American Cultural Association, USAID, and the Armenian American Wellness Center was funded under Grant Agreement # 111-G-00-05-00007-00, to provide support for expanding the existing programs at AAWC, in the amount of \$1,000,000 from October 1, 2004 through September 30, 2008 with the following program objectives:

1. Increased access to high quality PHC and screening services for women and their families (with a focus on women's screening).

Program Strategies and Illustrative Activities:

- Provide annual PHC physical examination to women (men and children) with emphasis on preventive screening and healthy lifestyle promotion;
- Provide high quality breast and cervical screening, diagnosis and referral services at the Yerevan Center and at its two existing satellite clinics;
- Continue expanding the GYN department for diagnosis, treatment, reproductive health and counselling for basic gynecological health, including STIs, infertility and menopause; and
- Increase outreach of AAWC by conducting monthly outreach missions to regions outside of Yerevan.

2. Increased consumer-driven demand for high quality PHC and women's health services.

Program Strategies and Illustrative Activities:

- Expand public awareness campaigns in rural and urban settings regarding the benefits of screening and early detection and treatment of disease, annual physical exams, and healthy lifestyle choices (includes annual Health Walk in which an average of 2,500 participate yearly)
- Provide high-quality patient education through dissemination of educational materials; and
- Enhance program of support groups and counseling services for breast cancer survivors;
- Promote expanded service offerings at AAWC through awareness campaign.

3. Increased institutional and human capacity of AAWC to provide high quality PHC and women's health services:

Program Strategies and Illustrative Activities:

- Expanding the existing pathology laboratory (for histology and cytology) at the Yerevan Center and introduce a hematology laboratory for blood testing and analysis;
- Enhance clinical and managerial skills of AAWC and satellite clinic staff through targeted training and educational opportunities in both Armenia and international settings; and
- Conduct needs assessment of AAWC's information system technology needs; procure and train staff on the use of a comprehensive health information system for accurate reporting, cost-accounting, and patient records.

Key Benefits and Outcomes:

The principal outcome for the proposed Alliance is increased utilization of the high-quality PHC and women's health preventive services that the Yerevan Center at AAWC and its satellite clinics provide. Currently, AAWC screens approximately 12,000 women for breast, GYN and PHC patients each year, and seeks to expand these numbers by at least 10%. Other major outcomes of the proposed Alliance will include: (the number before the outcome denotes the corresponding program objective number from the previous section).

- (1) Increased in patients seeking screening services for the first time at approximately 8%.
 - (1) Increased in patients (40 years and older) seeking screening on annual basis at approx. 8%.
 - (1) Increased in patients diagnosed with early stages of breast and cervical cancer.
 - (1) Increased referrals to higher-level facilities by 100%.
 - (1) Increased utilization of PHC and women's services through referrals. Presently, referrals from word-of-mouth are 41%; from medical professionals and institutions is 35%; from mass media and education campaigns is 15%; and distribution of brochures is 9%. In 2003 the total number of patients screened was 12,000 and the center expects to increase that number by 10%.
 - (2) Increased patient satisfaction with services provided by AAWC and its satellite clinics through implementation and analysis of patient satisfaction surveys.
 - (2) Increased public and patient awareness of benefits of screening and preventive medicine, as well as healthy lifestyles choices measured by increased number of patients coming for screening from urban as well as rural areas.
 - (3) Improved clinical, managerial and information monitoring/evaluation skills of AAWC staff through measured pretests and post-tests given to staff after each training period and/or program.
- (3) Increased in laboratory tests adherence to clinical testing protocols approx. by 95%.

AAWC has a large clinic in Yerevan and a satellite clinic in Gavar, Gegharkunik region. The range of health care services provided by AAWC include annual physical examinations, health promotion, breast and cervical cancer screening, bone density screening, diagnosis and referral services, reproductive health and family planning services, sexually transmitted infections (STI) management,

monthly outreach missions, as well as periodical training to update clinical and managerial skills of Wellness Center staff.

Partnership Goals and Objectives:

The primary goal of the Alliance over the years has been to champion a western model of Primary Health Care (PHC) practice and expand the capacity of health services that AAWC has provided within Armenia since 1997. The partnership now focuses on providing increased access to high quality breast and cervical cancer screening services for women and their families, as well as bone density screening, pathology lab services, and gynecology services.

Major objectives of the last year of the current partnership include:

Objective #1: Increased access to high quality breast and cervical cancer screening services for women and their families, including integrated Family Planning and Reproductive Health Services.

- Increased number of patients screened for breast cancer, tested for STI's, and accessing family planning/reproductive health services.
- Increased number of outreach missions to vulnerable populations living in rural communities of Armenia.
- Increased number of visits for family planning and reproductive health services.

Objective #2: Increased institutional and human capacity at the Wellness Center to provide high quality women's health services.

- Increased number of people trained in family planning/reproductive health.
- Increased percentage of patients who evaluate the services received as either "good" or "excellent".

II. EVALUATION RESEARCH QUESTIONS

The goal of the evaluation is to document the successes of this partnership in achieving its objectives, and provide recommendations for future program planning. The evaluation and its data gathering were organized to answer the following six research questions:

RQ1: How has the transition been from mammography center to provider of PHC/FP/RH services?

RQ2: What are the clinic's major successes?

RQ3: What are the clinic's major obstacles to further success?

RQ4: How are service availability, affordability and quality?

RQ5: To what extent does AAWC coordinate with other PHC and relevant secondary care institutions?

RQ6: How has AAWC leveraging of resources improved capacity to access PHC services?

III. METHODS

Study Design

The research team developed a qualitative study design to meet the study objectives using observations, in-depth interviews and focus group discussions.

Study Participants and Sample Size

The research team identified key-informants to provide important information for this assessment based on their expertise and experience. The participants included two experts from the Ministry of Health, eleven employees from AAWC and Gavar Clinic, one previous employee from AAWC, two

physicians from the National Oncology Center and 4+X patients who used the services in AAWC and Gavar clinic, as well as two patients who were observed at the Family Physician office at AAWC and Gavar clinic. The sample size was 27.

Research Instruments

The research team developed focus group discussion and in-depth interview guides for each target group or participant of the assessment. All guides were first developed in English and then translated by the research team into Armenian. Examples of a focus group discussion guides are attached as Appendix 1.

Data Collection and Analysis

In total 27 participants were included in the assessment. The field work took place in July 2010 and included 11 in-depth interviews and three focus group discussions. The in-depth interviews included two interviews with the Ministry of Health experts, five interviews with the staff (management, healthcare providers and auxiliary staff of AAWC and Gavar clinic), one interview with previous staff of AAWC, two interviews with physicians from the National Oncology Center and one interview with a patient. One focus group discussion was conducted with the staff of AAWC and two focus group discussions were conducted with patients. In total focus group discussion had 14 participants. The research team also conducted two observations of patient exams at the Family Physician Office both in AAWC and Gavar clinic. After data collection, the research team analyzed data based on six research questions of the assessment. The preliminary results were presented to the USAID and clinic management and feedback was taken into account for the development of the report.

Ethical Considerations

Transcripts and the report do not contain names, professional positions, names of employers of the respondents, or any other details that could identify the participants.

Strengths of the Assessment

The evaluation was conducted with the full participation of the AAWC director. This study applied various qualitative research methods, including in-depth interviews, focus group discussions, and patient-provider observations to achieve the objectives of the assessment. The study instruments were specifically developed based on the participant roles and responsibilities. Study participants were also very diverse in their roles/responsibilities, positions, and experience relevant to AAWC. Participants from both Yerevan and Gavar were included in the study.

Weaknesses of the Assessment

The majority of data collection was conducted in the presence of the clinic director which diminished the probability of measuring negative perceptions of AAWC. Limited time, issues of confidentiality and limited access to the patient database prevented random selection of patients for interview. This limits the generalizability of the results.

IV. RESULTS

Research Question #1: How has the transition been from mammography center to provider of PHC/FP/RH services?

Summary of Results:

- Family physicians and gynecologists on staff
- Family planning counseling available
- Efforts to raise awareness about prevention, screening
- Case management philosophy (e.g. diabetes)
- Mammography services lead to the utilization of other PHC services

When AAWC first opened in 1997, its primary mission was and still is to save, prolong, and improve the lives of women/mothers through the early detection of breast (initially and now added) cervical cancer, as they were and still are the number one and two causes of cancer deaths among women in Armenia according to the Ministry of Health. Since then, through the partnership, “Expansion of the Armenian American Wellness Center,” the clinic has also expanded its services to include primary health care and reproductive health services, including family planning counseling. These services are provided by the family physicians and gynecologists on staff at the clinic.

Currently 42 individuals work at AAWC of which 39 are full-time staff and 3 are consultants. Of the 39 staff, there are 18 medical professionals, 14 admin staff and 7 support staff.

The breakdown in medical staffing is as follows:

5 radiologists and 3 RN/mammography technologists
2 gynecologists and 2 GYN nurses
3 family medicine doctors and 1 RN
1 lab cytologist,
1 biomedical engineer

According to the AAWC, all of the AAWC staff members - both medical and administrative - have received training from US medical and administrative experts both onsite in Armenia and in the US during 55 medical exchanges, which were organized, conducted, and in many cases, financed by AACA. All the US experts traveling to Armenia have donated their time and expertise to the project. The medical specialists come from such prestigious medical institutions as the Washington Hospital Center, George Washington University Hospital, University of Southern California Hospital, and Johns Hopkins.

Eleven medical professionals have been trained in the United States during extended training exchanges; of this total, 7 are still currently employed at AAWC.

In addition, the Center has hired 3 paid outside medical consultants - 2 oncologists from the Oncology Scientific Center and 1 biomedical engineer, who was trained by AACA and now provides services on all sophisticated medical equipment in the country - thus increasing the national medical capacity.

All of the family medicine physicians have been trained by U.S. internists every year since 2004 (two in Yerevan, one in Gavar). These physicians see a variety of patients and are able to screen for common chronic diseases such as diabetes and hypertension, thyroid abnormalities and heart disease. The physicians who were interviewed discussed the philosophy of case management for their primary health care patients. This evaluation was not able to determine if that philosophy is carried out in practice. However, the concept of such management, for example, the coordination of diabetics other needed services such as ophthalmologist and cardiologist, is new for Armenia and would signify progress in PHC and prevention.

The two gynecologists on staff in Yerevan are equipped to handle all of women’s gynecological and reproductive health needs. Patient profiles include women with infections, infertility, post-abortion complications, and family planning needs. In addition, the gynecologists on staff are all trained in cervical cancer screening. Yerevan staff gynecologists visit the Gavar clinic a few times a month.

Family Planning Services

Family planning counseling is integrated into the gynecology consultations. Each patient’s history of pregnancy and contraceptive use is recorded at first meeting and serves as the basis for counseling needs. The clinic does not provide contraceptive products such as the pill or condoms (which are

readily available from pharmacies in town see reference report), however they do insertions of IUD in clinic.

The following is a summary of the data from the GYN Department specifically regarding FP/RH services provided from April 2004 through June 2010:

- **21,756** patients were provided with **39,175** services at the GYN Department
- **of the 39,175 services** provided, FP/RH and counseling was included - if age appropriate
- Furthermore, **13,359** services were specifically in **FP/RH** with counseling, IUD insertions, and other birth control means
- Additionally, **8,230** patients received **PAP smears** and counseling in FP/RH

Family planning visits at the AAWC during the past three full years (2007, 2008, 2009) since receiving this grant have increased quantitatively. The numbers are as follows:

Gynecology department	2007	2008	2009
FP counseling	1079	2010	2984

Gynecologists on staff at the clinic provide FP counseling to the patients who visit the gynecology department. Family physicians provides family planning counseling to patients as well.

The researchers observed a patient-physician interaction in Gavar which involved counseling a patient about the contraceptive pill. The patient misunderstood its use, and was taking the pill only on those days she was having sexual intercourse. The physician spent considerable time counseling on this issue.

According to the AAWC, 8 medical professionals (2 gynecologists and 2 GYN nurses, 3 family physicians and 1RN) have been trained in FP counseling. They participated in 6 conferences on FP counseling organized by the USAID Armenia. Two gynecologists and 1 family physician have received medical education and training in the US at major medical institutions.

In 2009 and 2010, two gynecologists (Marine Voskanyan and Nelly Avagyan) at AAWC participated in the online course on “the FP legislative & Policy requirements” and received certificates.

AAWC uses media to raise public awareness not only about the importance of early detection of breast and cervical cancer, but also about family planning services, including FP counseling to help women plan the number and spacing of their pregnancies. Periodically, through various TV programs, the clinic’s gynecologists discuss issues in family planning.

The clinic does not provide contraceptive products such as the pill or condoms, however gynecologists at AAWC do insertions of IUD in the Clinic. Since receiving this USAID grant in 2007 the number of patients with IUD insertions is as follows:

Gynecology department	2007	2008	2009
IUD insertion	36	48	59

The clinic's gynecologists developed an information pamphlet on contraceptives and in addition to FP counseling they provide this pamphlet to their patients. It is available at the Clinic's reception area.

Furthermore, AAWC also distributes pamphlets on the "Use of Contraceptive methods" and "Future is in your hands" provided within the framework of Nova (USAID) program. These pamphlets are available at the reception area as well.

Post-abortion counselling, STI diagnosis, and Pap smear tests are listed under the heading of gynecology visits. From April 2004 through June 2010, 21,756 patients were provided with 39,175 services at the GYN Department. 92% of gynecology visits were for women of reproductive age.

The number of Pap smear tests conducted at the clinic has increased since the expansion partnership. The data from the AAWC during the past three years shows an average of 2000 Pap smears are taken in Yerevan, and another 100 in Gavar annually. Although few women come to the clinic specifically for a Pap, most women who interact with the clinic are advised to take a screening for cervical cancer, and clinic staff report that more women are agreeing to do so. The clinic employs a US-trained cytologist to read the Pap smear results in a lab on site. Cervical tissue abnormalities as determined by pap, colonoscopy, visual exam, etc can be treated by the gynecologists on staff and in clinic in Yerevan, and in Gavar, abnormalities are treated by the visiting gynecologists from Yerevan.

Given the clinic's history and well regarded reputation as a mammography center, the majority of clinic visits are for that service (in 2009, 5962 mammograms were taken in the two clinics). However, mammography patients are then offered a variety of other services for them to take advantage of while they are there. These include Pap smear, thyroid testing, bone-density test, consultation with gynecologist, and consultation with family physician, one of whom specializes in endocrinology. It is largely these intra-clinic referrals that lead to primary health care service utilization at AAWC.

Prevention as a foundation of the clinic's philosophy was evident throughout the evaluation interviews with the staff at AAWC. This is a reflection of a slowly changing paradigm in Armenia from one that focuses most of its resources on treatment to one which is realizing the cost benefits of prevention.

Research Question #2: What are the clinic's major successes?

Summary of Results:

- Reputation and recognition of the center
- Pap smear screening, lab analysis and treatment in one locale
- High quality equipment and materials; mammography, ultrasound and bone density screening machines
- Quality assurance mechanisms in place (e.g. daily equipment calibration, group consultation for film readings)
- Utilization of preventive services is increasing
- Awareness raising activities are innovative for Armenia (e.g. Health Fair, Health Walks)
- Plans for extensive patient education in the area of diabetes and obesity
- Satellite clinic in Gavar provides unparalleled services in that region

AAWC enjoys widespread recognition and a good reputation. Its awareness raising activities include annual health walks and health fairs, in addition to a great number of television, radio, and print media interviews. Health fairs provide basic diagnostic screenings free to the public including check of cholesterol, blood pressure, blood glucose, among others. During the month of October, all mammograms are conducted for 50% of the regular fee.

The staff receives continuous training and interactions with US physicians. Their equipment and materials are from the US and technologies are up-to-date.

That Pap smears are read by a qualified cytologist and the fact that detected abnormalities are treated by the same physician at the same site is quite an innovation in Armenia. The cytologist training and facility are recognized as being the top in Armenia (according to the interviews of clinic staff). According to the PMPs in the desk review, 2115 Pap smears were taken; 19 patients diagnosed with cervical pre-cancerous cells, 3 diagnosed with cervical cancer.

The director of the AAWC reported that the mammography machine is calibrated daily and reviewed by an engineer in the US prior to being utilized. In addition, high quality films are used and mammography film results are reviewed by multiple doctors, not one only.

The number of preventive services has also increased, including screening for osteoporosis through bone-density checks. In Yerevan, the number of bone density exams for the last three years was 1230. According to interviews with staff, though the majority of women seeking mammography do so because of a concern about symptoms (lump, pain, discharge, etc.), more and more women are coming in for a screening only. In FY2009, 5117 patients over 40 years of age were seen for their second or more mammogram.

AAWC has utilized innovative means to increase awareness in Armenia about the clinic, and about the importance of screening. Annually since 1997, AAWC has conducted a health walk in Yerevan (approximately 3000 people participated in the last one). This event is covered by various media and produces new patient interactions for the clinic.

One of the family physicians on staff in the Yerevan clinic has plans to develop counseling classes for diabetes and obesity – two highly prevalent problems in their patient population. These would be unique additions to PHC in Armenia.

The satellite clinic in Gavar provides services that are of a quality unparalleled in the region (according to all interview participants). The clinic's family physician has been trained in the US in family medicine, and AAWC clinic in Yerevan sends a team of gynecologists and radiologists regularly to the clinic to take mammograms and develop the films on site. Pap smears are taken by the gynecologist from the Yerevan clinic and sent to Yerevan for analysis. A health fair is conducted annually where the public can come and have their blood pressure, cholesterol, glucose and others indicators measured. More than 150 participated in Gavar's health fair last August. Gavar's city population is about 15,000. It is the regional center of the province of Geghargunik, which has a population of approximately 200,000.

Research Question # 3: What are the main obstacles to increased success?

Summary of Results, Obstacles to Utilization:

Main obstacles for further success at AAWC:

- Males are not yet targeted (there are a few male patients, and there are future plans for men's health services, including prostate cancer screening).
- Laboratory testing for PHC is limited – most blood analyses need to be conducted outside of the center (however, the Center will rent out lab space in new expanded building, this will increase follow-up, etc.).
- AAWC's family physician is not registered for the country's open enrollment system which is connected to reimbursement/BBP issues. - There are no plans for the Center to join the Ministry of Health payment mechanism at this point in time.
- Cultural barriers/poor preventative behavior in Armenian population.
- Limited human resources in PHC (number of family physicians).
- Patient lack of awareness that mammography center now provides family physician services.
- Lack of independent, outside, third-party evaluation of AAWC clinic services.

If the plan of the partnership is to increase the capacity of Armenians to access PHC services, then the inclusion of males is integral to this aim. Thus far, there are few male visits to the clinic. However, with the expansion of the clinic's space (renovations are almost complete), the Center has plans to offer prostate cancer screenings.

Currently, there are a few laboratory and diagnostic services that are offered in the clinic – most impressive are immediate readings of mammograms and Pap smears, in addition to glucometer, urine dip stick tests, etc. However, PHC comprehensive profile for blood tests is not available on-site and patient loss-to-follow-up can occur by referring out of the clinic for important diagnostic lab tests. As stated earlier, in the newly expanded space of the building there are plans to rent to a comprehensive blood lab company. If this occurs, it will serve as a referral site within the building for the AAWC patient population.

AAWC is a private clinic which is not formally integrated into the Government of Armenia's (GoA) primary health care basic benefit package (BBP) reimbursement program. BBP coverage includes basic PHC services free of charge to the general population. - The BBP needs to be analyzed and evaluated for efficacy, transparency, quality care, and actual availability within the population.

In 2006, AAWC signed a contract with the GoA for BBP reimbursement of mammography service. Currently, AAWC charges a fee of 11,000 dram (approximately \$29) per mammogram and offers the service free of charge to those who cannot afford it. In reality, this price is already subsidized, since the real cost of the service, including the donated materials from the US, would be closer to \$70 per mammogram (director of AAWC interview). The BBP, however, reimburses only 5,000 dram (approximately \$13) for mammogram. Therefore, the BBP reimbursement program forced AAWC to further subsidize their services and was cost-ineffective for them.

The study participants gave differing opinions about the impact of the lack of BBP reimbursement agreements on AAWC services. The MoH experts interviewed emphasized the importance of integrating the private clinic into the public sphere in order to strengthen the health system as a whole in Armenia and as a mechanism to provide sustainability of the project if outside funding ceases. However, given the understanding that current GoA reimbursement rates are quite low, there was a lengthy discussion about the creation of a BBP plus co-payment mechanism. The concept of co-payments for government covered services is a new one. Currently there is a co-payment system study being piloted for pediatric services in Arabkir, Yerevan.

However, in the AAWC clinic there is concern that until co-payments become established and accepted in the general population, BBP contracting with co-payment will not work. The population historically has received PHC services completely free of charge. Adding an additional co-payment at the clinic will be perceived as an "under the table" corruption charge and will create a lot of unnecessary conflict between patients and staff. For this reason and others, AAWC is currently not interested in having a contract with the GoA for BBP services, unless BBP reimburses the full cost of the breast imaging service (currently set at 11,000 dram, about \$29), which includes both mammography and ultrasound screening as well.

Similarly, there are differing opinions about whether the clinic should participate in the GoA's open enrollment program, which encourages the population of Armenia to choose a primary health care physician that serves as the gateway to other referrals to specialists. These primary health care services are again free-of-charge to the public and are reimbursed services for outpatient clinics in Armenia. Currently AAWC's family physicians are not participating in the open enrollment, i.e. official reimbursement program of the GoA. Though the price for a consultation with the family doctor at AAWC is quite low (1500 dram in Yerevan, 1000 dram in Gavar (approx. =\$2.6), it is a fee not charged by the public sector polyclinics. This is a potential obstacle to increased utilization of PHC services at AAWC.

However, the perceived quality of PHC services at AAWC is higher than at comparable public clinics. Therefore, the symbolic payment of services is not seen by AAWC staff as an obstacle to utilization.

The research team found universal agreement among study participants that cultural barriers, including misinformation, distrust of health care providers, fears of the clinics, misconceptions, and poor preventive health care seeking behaviors, are significant obstacles to utilization of services at the clinic..

An additional potential obstacle to increased utilization of services is the limited human resources currently available at the clinic (there are only two family physicians on staff in Yerevan, one of whom is presently on maternity leave). Longer patient waiting times may be related to the low number of clinic staff. Again, there are plans to expand staff numbers when the facility expansion is complete.

Due to the increased utilization of the clinic's services over recent years reported patient waiting times have increased. The total visits in Yerevan for 2007 were 16,531, for 2008 17,362 and for 2009 18,299. Patients do not call ahead for appointments, rather they are treated on a first-come, first serve basis as walk-ins. This accounts for the great rush of patients in the morning hours. To the clinic's credit, they make sure that every patient that wants to be seen that day is fit into their physician's office hours.

Some patients interviewed for this assessment had visited the clinic for mammography or Pap services and yet were unaware of the expansion of AAWC into other primary health care services. A full list of available services and their corresponding fees was not presented to the patients in this interview. The clinic director and staff have agreed that once renovation is completed, all services will be listed clearly in the reception area as well as other areas of the building.

An independent objective evaluation of patient perceptions of the clinic experience could provide valuable insight for AAWC staff leadership and enable internal changes that would lead to increased utilization. This type of evaluation has not been conducted to date. In addition, the quality of clinical and administrative management of cases should also be systematically evaluated, the data from which could be used for quality improvements.

Obstacles to Measure Impact

- No follow-up data records to determine long-term survival rates of those diagnosed with cancer.
- Patients often not told diagnosis, this is being addressed by clinic staff through dialogue with the oncologists that they contract with.

AAWC's overarching primary objective at its start was the reduction of mortality from breast and cervical cancer. However, there is no data tracking mechanism that allows for objective confirmation of this goal. Most certainly there are thousands of women who have experienced early detection of breast cancer through AAWC's screenings. Yet their long term survival rates are currently not calculated. One of the barriers to such data gathering is that not all patients and/or their family members are aware of their diagnoses. As mentioned elsewhere in this report, the AAWC is actively engaging in dialogue to address this long-standing cultural custom.

Research Question # 4: How are service availability, affordability and quality?

Summary of Results:

Availability

- Rural availability increased (Gavar)
- Between 60-80 patients daily in Yerevan
- Outreach missions limited in other Marzes, but have occurred regularly

- Future plans to expand diagnostic and treatment services at the Center, including prostate cancer screening
- Future plans for laboratory in the clinic

One of the easily measurable achievements of the partnership grant is the increased availability of services in the rural region of Geghargunik through the clinic in Gavar. Annually, the Gavar clinic conducts a free, open-to-the-public health fair which screens for blood pressure, cholesterol, blood glucose level, etc.

AAWC clinics also conduct outreach missions in other rural regions (FY2009 – outreach missions visited with 679 patients outside of their coverage areas of Yerevan and Gavar). However, this number is limited due to time and resource constraints of AAWC. Patient visits in Yerevan average from 60 to 80 visits per day (clinic director communication).

AAWC building is expanding from two floors to six floors of clinic space. Construction is almost complete. This additional space will enable comprehensive lab testing and prostate cancer screening, among other future service plans.

Affordability

- Subsidized prices of services

Mammogram cost to patient is competitive with others (e.g. Oncology Institute) – and it is acceptable knowledge that the AAWC’s breast imaging services are superior to those available elsewhere in Armenia at this time. AACA/AAWC ensures that its high level of standards is maintained by constant supervision and follow-up with the Center’s staff by US medical specialists. Also, the Center uses high quality equipment that is constantly calibrated and upgraded, as well as the high quality of supplies.

Every patient of the Center receives ultrasound screening, along with mammography screening, which is included in the 11,000 AMD price charged by the Center. For the past 13 years, AAWC has not increased the price for a mammogram, even though the cost to AACA/AAWC has increased significantly due to increased cost of supplies, replacing and upgrading the equipment (3 mammography units and 3 ultrasounds), increased salary costs and US training.

AACA/AAWC has put quality assurance measures in place to ensure the accuracy of its screening programs, its Pap smear testing, STI screening, and other services and provides continuing medical education (CME) and training for its staff by US Medical Advisory Board members. Completion of an annual USAID Family Planning Legislative and Policy Requirements Course is mandatory for AAWC medical staff, who take their exams on-line every year and receive their certificates of completion.

- Primary Health Care visits low cost (1500 dram)
- However, total package of services could be burdensome for some

AAWC, through its donor program, is able to subsidize the real costs of its services to a more affordable price for its patients. Presently, a mammogram costs the clinic about \$70 in total real costs, yet AAWC offers it for 11,000 dram (about \$29). The real cost of a Pap smear is about 5,000 dram (about \$13) and the fee is 3,500 dram (about \$9). The clinic staff is able to cover the costs for those that cannot pay even these subsidized fees, and annually about 50% of patients are seen free of charge for examination. All of the above data are reported to the researchers by the AAWC clinic director.

The fee of 11,000 dram for a mammogram is comparable to the fee charged at the National Oncology Institute (10,000 dram). Reportedly there are other clinics in the area that charge higher fees. Therefore, we conclude that given the quality of the service, AAWC is charging a very reasonable price and, when necessary, waiving the fee altogether.

The cost of an initial consultation with a gynecologist or family physician is relatively low (1500 dram which is about \$4). However, the total package of services offered to women (e.g. mammogram, Pap smear, bone-density, thyroid, family physician, gynecologist visit all together) i.e. a full check-up could cost around 40,000 dram (about \$105). This cost can be perceived as unaffordable by many.

One of the innovative initiatives taken by AAWC is to offer 50% off of services for mammograms during the month of October, Breast Cancer Awareness Month. Additional health fairs offer basic diagnostics for free.

Quality

- Patients perceptions (Gavar and Yerevan): privacy, wait times, other services
- Daily quality calibration of equipment
- Group consultation of diagnoses
- Equipment and materials sent from US
- Lab cytologist trained in US

All study participants universally agreed that the quality of the services in mammography and Pap smear screening is advanced compared to other available services in Armenia. There is a higher level of expectations from AAWC than from other clinics. As mentioned earlier in the report, AAWC enjoys a good reputation and widespread recognition. Its association with the US and the American-Armenian Diaspora leads to the perception of quality, both in Yerevan and in Gavar. In addition, Gavar's association with doctors from Yerevan also leads to a perception of increased quality when compared to other locally available services.

Patients reported satisfaction with the building conditions, cleanliness, equipment and materials.

Common complaints heard from patients interviewed include concerns about privacy during the intake at the reception room, and during the physical examination in the exam room. Some patients reported unease with discussing their symptoms with the reception staff and in front of other unknown patients. Others felt frustrated that during a mammography, ultrasound or Pap smear examination, other patients or staff may enter the room, disrupt the exam and interfere with privacy. Often patients heard physicians' discussions of other patients and their diagnoses.

Some patients reported that waiting times were long, particularly during the discounted days. In addition, patients reported that there was not always a clear mechanism for diagnostic reporting back to patient. Many of the patients we spoke with were unaware of the full availability of services in the clinic and expressed a desire to know more about them.

In spite of some areas of concern, the overwhelming majority of patients with whom we spoke would recommend AAWC to their friends and will use AAWC services again.

Some women interviewed were particularly pleased with the attitude of their physicians toward less utilization of invasive procedures rather than more. Most patients interviewed felt that they were not offered unnecessary services. However, most patients who received diagnoses from the clinic expressed the desire for greater follow-up initiative by clinic staff.

Quality of Equipment, Materials and Diagnoses: According to the clinic director, AAWC is calibrating the mammography equipment on a daily basis in consultation with engineers in the US. In addition, the materials used by AAWC for diagnostic screenings are high quality and purchased from the US. Diagnoses of suspicious mammograms are made with group consultation.

The lab cytologist on staff at AAWC is US trained and is widely recognized as being top in the field in all of Armenia.

Research Question # 5: To what extent does AAWC coordinate with other PHC and secondary care institutions?

Summary of Results:

- Informal referrals (only) from other facilities in Yerevan and marzes
- Formal consultation of oncologist from the oncology center (weekly)
- Formal rotations of students from the YSMU
- Contracts with e.g. AUA, Dept Defense for regular screenings

AAWC is a completely private clinic that does not receive any Armenian state funding at this time. The clinic receives informal referrals from other clinics, physicians, and health institutions. There is a formal agreement with two oncologists at the National Oncology Institute in Yerevan, both breast surgeons. Via these agreements the oncologists visit AAWC weekly for consultations with staff and patients. In addition, AAWC has a formal training agreement with the Yerevan State Medical University. Lastly, there are formal contractual agreements with institutions in Armenia for provision of services for their workforces (e.g. American University of Armenia and Department of Defense). These contracts are in addition to the reimbursement of services from some private insurance companies.

Research Question # 6: How has AAWC's leveraging of resources improved capacity to access PHC services?

Summary of Results:

- Diffusion of Innovations: AAWC training of others, dispersion of prior staff members into state institutions (mam. and Pap)
- Gavar clinic expands availability and capacity
- Outside funding enables quality/ availability and affordability which all lead to increased utilization

The AAWC partnership has improved Armenia's capacity for quality mammography and Pap smear services. The quality of the mammography equipment, and training on its utilization and diagnostic readings was the first of its kind in Armenia. The resources brought to AAWC by leveraging outside funding enabled this level of quality. A contributing factor to the nation's increased capacity is the fact that AAWC staff has trained others in country, including medical students and other in-service physicians, and that some of its former staff members are now working in other large scale diagnostic centers in Armenia. This last fact is significant, because although the clinic feels it may have lost its investment in staffers that leave after many years of training at AAWC, the country as a whole has gained in the increased availability of qualified specialists in Armenia.

The satellite clinic in Gavar is a clear example of increasing capacity. Prior to the opening of the Gavar clinic, the population in the region could not access quality breast and cervical cancer screening services. In addition, the US trained family physician in Gavar provides an innovative model of PHC services previously not existent in the region.

AAWC's impact on other regions is less, but not insignificant. AAWC conducts various trainings (most recently on Pap smear methods) of specialists from outside of Yerevan. These trainings are in addition to outreach missions which bring services from Yerevan to the outlying rural regions.

The funding, training, equipment, pharmaceutical and other resources that AAWC receives from outside sources enables a level of quality and availability that is higher than other public sector services. In addition, the outside sources allow AAWC to subsidize all of its patient services which makes the services more accessible to the general population. However, this model is not a sustainable one in the long-term, and necessitates a discussion of how to leverage other additional financial revenues, be they private or public.

Formal integration of AAWC and its accomplishments into the national system for reduction of breast and cervical cancer morbidity and mortality in Armenia should be one of the goals for increased national capacity building in the long-term.

V. RECOMMENDATIONS

Based on the study results and desk review of relevant program materials, the research team developed the following recommendations for AAWC:

- Continue awareness raising activities.
- Create a web site with a list of total services offered and corresponding fees.
- A list of all services offered by AAWC should be made available in reception through a brochure and/or poster (greater advertisements of the expanded services available beyond mammography and Pap).
- Appointment making for patients should have the goal of reducing wait times.
- Lab services availability will be increased if located in the building.
- Facilitate prostate cancer screening program.
- Develop diabetes and obesity counseling services.
- Develop mechanism for diagnostic information sharing with patients.
- Add a measure on patient data records regarding screening vs. diagnostic for mammography – This statement does not make any sense and is contradictory. AAWC doctors have been trained by US medical specialists who are the heads of their departments in the US on how to record patient information regarding their mammography screening and/or diagnostic results.
- Review privacy protocols in both reception and physician exam rooms
- Review and respond to increasing human resource needs with increased staff in priority areas
- Further/continuous training of staff (US training for Gavar Family Physician successful model).
- Training of trainers in Marzes by center staff.
- Develop a mechanism for follow-up data collection to determine long-term survival and impact on mortality.
- Independent monitoring and evaluation by third-party researchers of patient perceptions, services provision, and management. Develop a mechanism for continuous quality improvement through the feedback from these evaluations. We would welcome to know such an entity - third party researchers in Armenia - who would be able to provide independent monitoring and evaluation; who would be medically qualified to assess the type of work done at the Center, and who would also be impartial and cost effective in doing such an assessment.
- With BBP support, conduct national screening for high risk populations and or socio-economically vulnerable populations, but with full reimbursement (11,000 drams, not 5,000).
- Long-term sustainability: BBP with co-payment is a possible model. Expand contracts with private companies, organizations, insurance.

APPENDIX 1: Focus group discussion guide with patients

1. Introduction to interviewers and purpose of evaluation
2. How did you learn about AAWC? *Probe: from a women who used it, from advertisement, from a physician, etc.*
3. Is this your first visit? If not, how many times have you visited the Center and why? Why did you decide to utilize the service now (mammogram, Pap-smear or primary health care)?
4. How would you assess the services you received? Did they meet you expectations? What did you like? What you think can be improved? How would you compare the services here with services in other places?
5. After getting the diagnostic service did you receive any treatment services in the Center? What treatment services would like to be available at the Center? Why?
6. Did you get treatment outside the clinic after getting your diagnosis? Where did you get? How did you decide to go to that facility for the treatment? Did you get any referral from the Center?
7. After leaving the Center, were you in touch with your physician at the Center? Was she/he aware about your treatment, outcome, etc? How did she/he learn about it?
8. How do you assess the affordability of the services that you have received in the Center? Are the services affordable enough for the women who need them?
9. Are you satisfied with the Center overall? What are the strongest sides that make it different from other medical facilities? What are the aspects that still can be improved? What would you recommend to improve the services in this Center?

APPENDIX 2: In-depth interview guide with MOH Experts and AAWC Director

1. Introduction to interviewers and purpose of evaluation
2. What does she consider the major successes of the clinic? (Enumerate and ask about each one).
3. What are the major obstacles to their success?
4. How do they currently do patient follow-up post-screening? Is there an informal or formal referral system?
5. Please describe the relationship with BBP/MoH/PHC system.
6. What are the plans for sustainability? What would happen if foreign funding ceases?
7. Does AAWC provide PHC services? What is the potential to do so?
8. In her opinion, what are the most important PHC needs for women in Armenia today in general? How does she envision the AAWC's ability to meet those needs?

APPENDIX 3: Reference List of Desk Materials

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