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Quality improvement: Physician providers, and the Women Health Connection Program, in the provision of breast and cervical cancer screening services in Nevada.

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**Quality Improvement: Physician Providers, and the Women Health Connection
Program, in the Provision of Breast and Cervical Cancer Screening Services in
Nevada.**

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Bachelor of Science
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A professional paper submitted in partial fulfillment of
the requirements for the degree of

Master of Public Administration

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2003

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ABSTRACT

Quality Improvement is one of the best solutions to the performance of healthcare services. The purpose of this study is to identify areas that need to be improved in relationship between physician providers and the Women Health Connection Program (WHC) in the provision of breast and cervical cancer screening services in Nevada. An assessment of how physicians view the program, their cooperation with the WHC program, an analysis of areas for improvement and the value of services to WHC clients have been discussed in order to improve the quality of breast and cervical cancer in the state.

Comparisons have been made between Clark County, Washoe County, and Other Nevada Counties, and opinion has been analyzed based on findings. Data has been collapsed between Urban and Rural areas in order to understand the depth of services between these two regions. The type of services provided, accuracy, accessibility, communication, documentation, timing, training, technology, and the number of physicians in each clinic have been studied in order to understand the status of screening services in Nevada. Finally, recommendations were made based on quality improvement methods. Overall, findings suggest that, a total of 82 percent physician providers believe that WHC services are valuable to them and WHC clients.

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I. INTRODUCTION

Background Overview:

According to the Centers for Disease Control and Prevention (CDC), estimated two million American women will be diagnosed with breast or cervical cancer in this decade, and half of them will lose their lives to this dangerous disease. A disproportionate number of deaths are expected to occur among women of minority and low-income groups. However, many of these deaths can be avoided by making screening services available to women of all ethnic background. Previous projections done by the CDC have estimated that at the national level, 175,000 new cases of breast cancer and 12,800 new cases of cervical cancer were diagnosed in 1999. The CDC has also speculated that, by the year 2010, 43,300 women will die from breast cancer and 4,800 women will die from cervical cancer (CDC, 2003). Therefore, early detection efforts become an important tool in the process of cancer prevention to all women. The key to early detection is screening tests to look for signs of cancer in people who are symptom free, i. e. Papanicolaous (Pap) test for cervical cancer, and Mammography test for breast cancer, (Allen et al., 1997).

The purpose of this paper is to identify potential areas that need to be improved in the relationship between physician providers and the Women Health Connection Program (WHC) in the provision of breast and cervical cancer screening services in Nevada. Breast and cervical cancer screening services are provided to all eligible women whose income is 250 percent under poverty level. The study will be done through the use of a questionnaire that will help the state identify physician needs as a major part of quality improvement. According to the Delaware Healthcare Association, Quality Improvement (QI) in healthcare can be defined as a continuous process that identifies problems in health care delivery, examines solutions to those problems, and regularly monitors the

solutions for improvement, (DHA, 2003). One best way to achieve good service in quality is to address how organizations deliver services to their targeted population. Nevertheless, in order for quality improvement to be successful, most organizations must first be able to anticipate the obstacles that may face the actual implementation process (Cochran, 2003).

In this case study, the Quality Improvement task is done with a great cooperation of Nevada's State offices through the Women Health Connection Program (WHC), Southern Nevada - Area Health Education Center (SN-AHEC), and the University of Nevada, Las Vegas (UNLV). The WHC operates under the supervision of Nevada Department of Human Resources, and the Health Division. The WHC program is a breast and cervical cancer-screening program that began providing services in 1997 to all enrolled income-eligible women between ages 40-64, since Medicare starts at age 65. Funding for the WHC comes from the Department of Health and Human Services' Centers for Disease Control and Prevention, through the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), (Cochran et al, 2003). The NBCCEDP was established in order to increase access to the use of breast and cervical cancer screening services among low-income women who are uninsured or underinsured.

In order to accomplish this quantitative study, the State of Nevada authorized the WHC program and SN-AHEC to contract with Dr. Christopher Cochran, Associate Professor in the Healthcare Administration Program at UNLV as a program consultant and I, as a graduate student contractor. Through SN-AHEC, the WHC provided funding for this study. The purpose of this agreement was to help State programs learn different ways on how to identify physician needs that will lead to the identification of areas for improvement, assess how physicians view the program and their relationship with the

program, and perform an assessment of the WHC program in the provision of the breast and cervical cancer screening services.

The State Health Division of Nevada Department of Human Resources undertook a quantitative physician needs assessment survey that was developed in order to help the WHC, SN-AHEC and UNLV consultants assess the types of screening services provided, suggest ways to improve the quality of screening services provided to the state, respond to the needs of physicians providers, and overall identify areas for improvement in breast and cervical cancer screening program in the state. Further details of the performance and outcomes of the survey will be discussed in later chapters of this paper and a descriptive analysis will be performed by giving out major conclusions on how and why early detection screening services for breast and cervical cancer should continue to operate in the fast growing state of Nevada.

By recognizing the importance and the value of life to all women, Congress authorized the CDC through the Breast and Cervical Cancer Mortality Prevention Act of 1990 to provide regular breast and cervical cancer screening services to underserved women. This includes older women, women with low incomes, the uninsured and underinsured women and women of racial and ethnic minority groups. The CDC expanded the program to provide screening services in all 50 states, in 5 U.S. territories, in the District of Columbia, and through 15 American Indian/Alaska Native organizations. By October 1997, NBCCEDP had provided an estimated 1.5 million screening tests across the country, (NBCCEDP, 1999).

Physician providers who participated in this program have been contractors with the WHC program since 1997. Physician providers are open to provide screening services to all income eligible women while the WHC program and the CDC state offices reimburses them for the services that they provide. When the WHC program started

providing screening services in 1997, more emphasis was done on developing contractual relationships with providers for screening program implementation, (Cochran et al, 2003). A large number of screening activities actually began during the second year of funding, and according to some of the responses from the surveys, the majority of the physician providers started to perform a large number of services at the beginning of 1999.

The risk and causes of breast and cervical cancer for most American women include: the exposure of certain foods, i.e. fat intake, increased body weight i.e. overweight and obesity, environmental quality i.e. pollution, lifestyle i.e. the use of contraceptives, increased alcohol intake, substance abuse, mental health, increased tobacco use, and decrease in daily exercises, (Chlebowski, 2000). Improving personal lifestyle and making changes in behavior is one of the tools that most women can use in order to fight the risk of having cancer. Secondary prevention, through the use of mammography and pap smear test can help saving a woman's life since the goal of these tests is to discover cancer at its earliest stage.

Some social economic factors such as: lack of health insurance, lack of transportation, lack of physicians referrals, lack of having child care, and lack of enough health education can impede access to health care something that leads to late diagnosis and hence poor survival. Other factors include fear, general cost, and communication barriers. Due to fear and ignorance, most minority individuals tend to eliminate themselves from healthcare educational program and as a result, most Government project face the challenge of bringing them back to the circle. Language barriers remain as a problem to many physicians while communicating with some of their minority patients, i.e. Asians and Hispanics. For breast cancer, a family history in a first degree relative is an established risk factor. A relative risk of 1.5 to 3.0 has generally been found

among women whose mother or sister has had breast cancer, as compared to those whose first- degree female relatives did not have breast cancer (Greene, 1997).

Cancer mortality rates have been significantly higher and cancer survival rates have been lower among many ethnic minority populations. The rate of African Americans, Hispanics, and Asians who enroll for yearly medical check-ups is very discouraging as compared to that of the majority White population. According to the WHC report, fewer than 500 women had been screened for breast and cervical cancer in 1999 despite the fact that 250,000 women were eligible for the services, (WHC program- NV, 1999).

One of the shortfalls of the early detection program is the fact that, once cancer is detected, the NBCCEDP does not authorize the CDC to pay for treatment of breast and cervical cancer. However, participating state programs have been creative in ensuring and suggesting treatment services for women who are diagnosed with breast or cervical cancer abnormalities through a network of providers who are currently associated with the program. For Nevada, under the supervision of Governor Kenny Guinn, a separate state fund has been set aside in order to help diagnosed women get minimum treatment of breast and cervical cancer. Otherwise, additional partnerships are being developed with programs such as the Susan Komen Foundation to help provide treatment services for those women in whom cancer has been detected.

The current practice of screening services monitored by the state allows patients to get referrals to visit physicians for Mammogram and Papanicolaous (PAP) screening services. The WHC program and the State Health Division provide annual screening of breast ultrasound, colposcopy, follow-up tests, lab work, clinical breast exams, pelvic exams, and an office visit to talk to a doctor about any detected abnormal screening results at no cost to all low-income eligible women between the ages of 40-64 years.

After the screening services are provided to these women, physician providers send a bill to the state for the services that they performed, and the reimbursement process takes place between the state and the physicians' office.

In Nevada, the WHC program and SN-AHEC offices play a vital role by working hand-in-hand with the CDC in monitoring and assisting breast and cervical cancer screening services in the state. Fast growing urban centers in Clark County are heavily impacted by national wide demands for breast and cervical cancer screening services. As Nevada continues to lead the nation in population growth, the demand for healthcare facilities is expanding proportionately and as a result; the state has fallen behind in providing health care services in many areas. Nevada has fewer primary care physicians, physicians' specialist, and nurses per 100,000 than many states around the country (National Vital Statistics Report, #48).

Furthermore, Nevada has a history of having a large uninsured/underinsured population. Such populations have increased the need to provide and improve physician-screening services for breast and cervical cancer to income-eligible women with the hope of rescuing a large number of women dying from cancer. Expanding and improving the quality of services to all women who are at risk can avoid many deaths from breast and cervical cancers. History also indicates that, many deaths from these diseases tend to occur disproportionately among women of low income and ethnic minorities.

However, screening alone is not sufficient enough to prevent unnecessary illness and death. Other factors such as quality assurance, program tracking and evaluation, professional education and outreach are necessary additional tools for both the CDC and state offices to work on in order to expand the knowledge and awareness of breast and cervical cancer early detection program in Nevada. The earlier both types of cancers are

detected, the better the survival rate among patients', therefore, cancer awareness education is a very important part of this entire project.

In 2003, the American Cancer Society (ACS) estimated a diagnosis of 1,334,000 new cases of cancer in the United States, including 10,300 in Nevada, and 556,500 cancer deaths will occur in the United States, including 4,300 in Nevada, for all types of cancers, (ACS, 2003). Nevada's five-year survival rates of cancer are lower than the overall rates in the U.S. and one of the major reasons to this discrepancy is due to lack of enough early detection educational programs. Due to these shortcomings, the CDC awarded the Nevada State Health Division a \$2.6 million grant in 2002 to provide screening and diagnostic services for breast and cervical cancer to all women in the state of Nevada. The \$2.6 million grant is aimed to assist the needs of low income, the uninsured or underinsured women in gaining access to breast and cervical cancer-screening services. What the new program does is to educate Nevada's women about the importance of the early detection breast and cervical cancer screening activities.

Under the supervision of Nevada's First Lady Dema Guinn, congressman John Ensign, the State of Nevada, United Way, the WHC program and the Women Bell, fundraising activities took place that purchased the first 'Mammovan', Nevada's first mobile car for breast and cervical cancer screening activities. The mammovan travels throughout Nevada to provide breast exams, mammogram tests, pap smear tests and other preventive healthcare measures for women free of charge. Every client who receives screening services from the mammovan, is informed of her results, and tracked down until breast or cervical cancer can be ruled out or diagnosed. The mammovan began its first operation in the year 2000 in order to support the work of physician providers in the fight of breast and cervical cancer screening program in the state of Nevada. By the year

2002, the mammovan had served 2,678 unduplicated patients, and 2,862 patient visits, (Nevada Health Centers, Inc. ‘NVHC’ 2003).

Research Question:

In order to improve the quality of services, what areas need to be improved in the relationship between Nevada Physician Providers, and the Women Health Connection Program in the Early Detection-Screening Services of Breast and Cervical Cancer? What differences exists in those areas that need to be improved between urban physicians – Clark and Washoe County and those physicians practicing in the rural areas?

Number of Women Served in the NBCCEDP, 1991–2002	
Fiscal Year (FY)	Number Served
91/92	54,697
93	134,853
94	177,300
95	238,934
96	298,239
97	339,271
98	330,573
99	350,498
00	380,495
01	402,940
02 (thru 09/02)	407,896

Source: - See reference section.

II. LITERATURE REVIEW

As healthcare has undergone technological advancement, secondary prevention of breast cancer through mammogram tests, and cervical cancer through pap smear tests, is one of the major triumphs of the twentieth century medicine, as prevention is always better than cure. Understanding the needs of physician providers who currently provide screening services to the majority of women is very crucial in order to assist them on how we can better meet their needs, improve the quality of services, and work hard on making the whole process easier for both patients and physician providers. Time and money remains to be crucial factors while conducting these services, and the need to minimize cost, maximize performance, in a timely manner is important for all participating programs in the fight of breast and cervical cancer in Nevada.

Although the importance of mammograms and pap smears screening programs as a preventive measure have been clearly established, opinion is still divided as to who is responsible for initiating the necessary screening, (Stellman, 1987). One view as discussed by Steven D. Stellman places the responsibility with physicians alone. For example, for cervical cancer, the claim is that, “the management of pre-invasive cervical cancer lesions is so effective that physicians should offer pap smears to all patients regardless of presenting complaint” (Stellman, 1987). The other view places the responsibility with patients alone stating that, “a great number of women in different regions of the country are ignoring their gynecological health by avoiding annual physicals and such easy tests as mammograms and pap smears” (Stellman, 1987). For breast cancer, other studies have suggested that, many physicians performing clinical breast examinations on older women may be overlooking the opportunity to educate their patients about the benefits of screening for mammography and to recommend a mammogram test (National Cancer Institute Breast Cancer Screening Consortium, 1990).

Further research by Stellman indicated that, “many women experience these tests to be uncomfortable, anxiety producing and often degrading procedures” (Stellman, 1987). Cervical examinations usually takes place in the physician offices and therefore, physician providers certainly play a great role in influencing patients to have these procedures done, at-least once every year. Rudolph S. Jackson suggests that, “if these physicians consider the frustrations and inefficiency caused by schedule delays or even lost patient records, they will recognize the need to implement improvement in quality” (Jackson, et al. 1994).

With an exception of skin cancer, breast cancer is the most common diagnosed type of cancer among American women at the National level. Breast cancer has been estimated to be the second to lung cancer as the leading cause of cancer related death among women in the Nation. In 2003, an estimate of 211,300 new cases of invasive breast cancer will be diagnosed among all women in the nation, and 39,800 of them could die from this disease, (ACS, Cancer Facts and Figures, 2003). If breast cancer is detected early, ‘the estimated survival rate for a complete cure is expected to be 95 percent’ (Fitzpatrick, et al 2000). In terms of cervical cancer, an estimate of 12,200 National wide new cases will be diagnosed and 4,100 women could die from this disease, (CDC, 2003). Both the CDC and the ACS have suggested a routinely screening service that can prevent the disease from expanding on a large scale.

Additional literature suggests that, the Breast Health Center (BHC) was established to better meet the needs of communities with screening services. The purpose of the center was to reduce anxiety associated with screening mammography services because most women who required diagnostic follow-up expressed dissatisfaction and increased anxiety as they waited for their test results. The diagnostic follow-up process in need of improvement required additional scheduling for services that often leads to

delays, added anxiety, and decreased patient satisfaction for women who maneuver through a complex system (Rust, 2003).

Excellence in quality, as discussed by the National Committee on Quality Assurance (NCQA) suggested the need to identify priorities for QI in preventive health services. Breast cancer screening was selected as a top ten priority for guideline development and for focused intervention because of the disease's prevalence, morbidity, and mortality and because of the fact that, it is most treatable and curable when it is found early through routine screening. The program achieved several results such as the expansion of screening services to Saturday hours, mobile mammography, medical records reminders, patient and physicians reminders, call-center outreach, provider feedback on performance and provider financial incentives. These innovations demonstrate the ability to integrate improved care management and efforts to improve the quality of screening services (Perry, 2000).

Continuous Quality Improvement (CQI) is frequently proposed as one of the major solutions to many of these screening problems, but the growing literature focuses much on the applications, and so little is known about the implementation challenges being involved (Solberg, 1993). Little research has been documented in measuring the effectiveness of quality improvement in state and local government healthcare programs (Cochran, et al. 2003). Furthermore, bureaucratic impediments are difficult to overcome and can lead to resistance to change, and lack of commitment to the process. Improving quality in large bureaucratic organizations is difficult even in private sector healthcare organization (Carman, et al., 1996).

In healthcare, much of the research regarding quality improvement has concentrated more on clinical issues, and not in services. (Cochran et al, 2003). To make screening services more challenging for physician providers, most older women who

have not been fully exposed to so much health education tend to think that, “disease is not present if there are no symptoms and hence do not fully appreciate the potential of early detection and treatment” (Redmond et al., 1997).

In reality, breast and cervical cancer screening practices depend highly on the interest, knowledge, and cooperation of the medical providers. According to the National Cancer Institute (NCI), Nevada will diagnose thousands of women in breast and cervical cancer and that is why the need to identify the shortcomings of cancer screening services that physician providers faces is very important in the quality improvement process, (NCI Facts and Figures, 2002).

Individual Breast Self Examination (BSE) that is highly recommended by most physicians is sometimes regarded to be controversial, and suggestions are, “breast self examination should not be regarded as a substitute for proper mammographic screening” (Redmond et. al., 1997). Hence, physician providers face the necessity to physically perform breast exam screening services. While other European countries have reduced promotion on breast self-examination, the concept of breast awareness remains as a valuable factor to women of all ages. Although research has not proven to have a typical profile for people with cancer, “the risk of cancer tends to increase more with age, and in most cases affect adults in their midlife or older ages, and more than half of all cancers and 60 percent of all cancer deaths occur after age 65” (Allen et. al., 1997).

Furthermore, literature indicates that there is at least a 4 to 5 fold variation in breast cancer rates worldwide, with the highest rates observed in Europe and North America and the lowest rates in Asia, (Allen et. al., 1997). The international differences in breast cancer rates are due, at least in part, to environmental and lifestyle differences. Large experiments on breast cancer risk began when oral contraceptives came into use widely in the 1960s, and later on when an increasing proportion of women began using

postmenopausal hormone replacement therapy, (Hankinson et al, 2002). Regardless of the differences in continental environments, the earlier cancer screening is done, the easier it is for both patients and physicians in the prevention and treatment procedures.

The possibility of false positive results of mammogram has caused some serious concerns about the usefulness of screening for mammography especially for women at age 40. In the United States, breast cancer incidence rate per 100,000 women is 25 in the 30-34 age groups, 200 in the 40-45 age groups, and 463 in the 70-74 age groups (National Center for Health Statistics, 1998). Some recommendations have been made suggesting that, regardless of age factor, “all women with and without strong family histories of previous breast cancer should begin discussions about breast-cancer screening at age 40 and continue until their life expectancy is less than 10 years” (Fletcher et al, 2003). Previous research completed by a group of experts agreed that, screening for mammography reduces mortality from breast cancer among women in their 50s and 60s (Fletcher et al, 2003). Hence, physician providers have a major task of explaining the necessity of early detection program to both younger and older women and these women depend highly on the information about breast and cervical cancer from their doctors.

In order to improve the quality of screening services provided to WHC clients, the use of new and improved technologies have been introduced to the public and physician providers. The utilization of the liquid based thin-layer pap test has been introduced in the medical field and it is intended to reduce the rate of false-negative pap smear results, improve sensitivity and specificity of screening, improve adequacy of pap smear, improve laboratory productivity, and reduce operating costs in the long run (Nuovo et al, 2001). National-wide, among 13,000 women who develop cervical cancer annually, approximately 50 percent of them have never had a Papanicolaous smear test, (Howell, 2001). Therefore, efforts to improve compliance with cervical cancer screening should

include physician and patient reminders, and screening at visits not specifically intended for healthcare maintenance.

When women and their physicians are making important decisions about early detection such as: screening procedures and treatment options, a better understanding of the underlying risks of the condition being screened for, the effectiveness of the procedures in preventing an untoward outcome such as death, and the potential ill effects of screening, such as a 'false positive test' ought be explained well to these women in order to clarify any previous misunderstanding/confusion about the screening program. Women should be made aware of the fact that; at least half of all patients who are given a diagnosis of breast cancer do survive regardless of the use or nonuse of screening services, a fact that many women do not seem to understand. Physician providers must make women aware of their increased risk of cancer as they age, and encourage them to get screened at least once every year.

III. METHODOLOGY

The Survey Instrument:

A two-page survey instrument consisting of 40 questions was developed based on the information obtained from WHC program staff, monitoring tools, CDC performance measures, other breast and cervical cancer survey instruments, and some literature review. Physician providers were asked to complete the questionnaire, assisted by a small paragraph of instruction at the beginning of the page. The purpose of the survey was clearly stated by explaining the reason why the WHC program and its associates were conducting this survey, which is: To improve the quality of screening services by identifying weak areas that needs to be changed for physician providers in the WHCs' Breast and Cervical Cancer Early Detection Program. An authorization to send out the surveys was obtained from the WHC program state office. A cover letter was also attached to the questionnaires signed by Debra McBride, State Health Division, WHC program director describing the intent and the importance of this study – see Appendix C.

Population Sample:

The initial target population consisted of a total number of 223 physician providers located throughout Nevada. These providers are contracted with the WHC program of Nevada in the early detection-screening program of breast and cervical cancer. The questionnaires were sent out in order to assess some of the factors that may facilitate the implementation of quality improvement of breast and cervical cancer early detection and prevention screening services in Nevada.

The questionnaires were first mailed out in June 2003; and the initial mailing produced fewer than 40 responses. As a result, the consultants reviewed and revised the original mailing list, and removed those names that did not provide medical services. This review reduced the overall sample from 223 to 126 providers. Among those omitted

for the follow-up survey were surgeons who did not provide initial breast and cervical cancer screens, pathology laboratories, radiology and other diagnostic clinics.

A low response rate from the first mailed questionnaires required a revised personal approach to the survey process. In August of 2003, surveys were faxed out to physician providers who had not previously responded to the first mailing. A few surveys were faxed back within a day or two and some of them were either faxed or mailed back within a few weeks. Follow-up phone calls were made to providers in order to coax additional responses. The total distribution time lasted over a period of 3 1/2 months and as of September 30, 2003 a total number of 50 completed mailed or faxed surveys were received back through the Southern Nevada Area Health Education Center. Surveys were analyzed by using SPSS statistical analysis software and frequency rates, means and standard deviations were obtained to all questions asked.

The Questionnaire:

At the beginning of the questionnaire, participants were asked to provide the name of the provider, the year that the provider started providing screening services to WHC patients, and the name of the person who is responsible for submitting reimbursement requests to the state offices. Physician participants were asked to respond to the survey on a scale of 1 to 5, with 1 being *Strongly Agree*, 2 being *Agree*, 3 being *Neutral*, 4 being *Disagree*, and 5 being *Strongly Disagree*. However, based on the type of analysis that I will perform, i.e. means and standard deviation, in order have meaningful results, this scale process was then re-coded during data entry for clear results on a scale of 5 to 1. Therefore, the revised scale included: 5 = *Strongly Agree*, 4 = *Agree*, 3 = *Neutral*, 2 = *Disagree*, and 1 = *Strongly Disagree*. Although the answer selection did not address each of the five categories listed above, the items selected to categorize the responses fit well with the format of the survey.

Further more, data was collapsed in order to compare services on the weakest areas of services in Urban versus Rural parts of Nevada. Responses from urbanized areas such as - Clark County and Washoe County were combined on a scale of 3 to 1 with 3 being *Agree*, 2 being *Neutral* and 1 being *Disagree*. Data responses from rural areas that includes - Other Nevada Counties were also collapsed on the same scale, from the original 5 to 1 scale. The purpose of this modification was to help the WHC program and its consultants understand what areas are the most critical ones when it comes to breast and cervical cancer screening services in urban and rural parts of the state.

The first group of questions asked whether the clinic provides pelvic exams, pap smear exams, clinical breast exams, and mammography exams to WHC patients. Following that, the need to understand whether or not the clinic receives lab reports for each individual screening exams on time, the length of time it takes the lab to provide the results was also inquired in order to understand the actual timeframe that the clinic takes to perform a particular screening test and receive its lab results as a measure of efficiency. Another main category of the questions was whether or not the clinic should be responsible and receive follow-up diagnostic reports for the WHC patients.

Reimbursement questions were asked pertaining to the existence of any reimbursement problems, and whether or not reimbursement from the WHC program makes up a significant portion of the operating budget for a particular clinic. The status of physician, nurses, and other support employee's turnover was questioned in order to learn about the major impacts of employee turnover that may affect screening services. Other major issues such as: training, communication barriers, compliance with HIPAA requirements, easy access to the clinic, and the value of services being provided were asked in order to learn and understand the depth of the requirements on how to improve the quality of screening services in the state of Nevada.

Questions were also developed to address the estimated number of women receiving breast and cervical cancer screens in the provider's clinic who qualify for WHC program services. In addition, providers were asked to address the number of physicians in their clinic who were responsible for providing WHC program screening services. Finally, an optional space was provided at the end of the survey in order to provide any additional comments or suggestions on how the quality of screening services for the WHC patients and physician providers can well be improved. An analysis has been done by running a set of descriptive frequencies and bivariate correlation. Frequency tables have been used in order to show the number and percentages of the occurrences of each variable. Bivariate correlations have been performed in order to determine if there is any relationship between the dependent variables and the independent variables. For a clear sample of the actual survey, please see Appendix A for survey instrument.

IV. RESULTS

Description of Data:

Data was obtained from a potential total of 50 physician responses out of the 126-revised list of providers. A total of 67 responses were received back from physician providers and only 50 of them were complete: with 27 coming from Clark county, 15 from Other Nevada Counties, and 8 from Washoe county. Only those completed responses were utilized to analyze this study. Descriptive frequencies were analyzed by using means, standard deviations and percentages.

Table 1. Descriptive Statistics - The percentage of services provided to WHC clients:

<i>Variable measures in terms of</i>	<i>Mean & Std.</i>	<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>	<i>Missing</i>
<i>Screening services:</i>	<i>Deviation</i>	<i>Agree</i>				<i>Disagree</i>	<i>Data</i>
Clinic provides pelvic exams	4.22 (1.558)	78%	0%	0%	4%	16%	2%
Clinic provides pap smear exams	4.22 (1.582)	80%	0%	0%	2%	18%	0%
Clinic provides clinical breast exams	4.59 (1.171)	86%	2%	0%	2%	8%	2%
Clinic provides mammography exams	2.33 (1.693)	22%	6%	6%	10%	52%	4%
WHC should provide CME training to physicians	3.92 (1.269)	44%	20%	20%	4%	8%	4%
Clinic provides flw-up calls to WHC patient who missed apts.	3.49 (1.371)	28%	28%	20%	8%	14%	2%
Clinic provides outreach Services to minority patients	3.71 (1.611)	48%	16%	8%	4%	20%	4%
Clinic provides adequate patient confidentiality	4.39 (1.367)	78%	6%	0%	2%	12%	2%

Assessment of Services Provided:

Table 1 addresses the type of services provided by the clinicians who responded. The status of each test was determined and the results have been summarized below. With the highest score being 5, research has found out that: Clinic provides pelvic exams at a mean score of 4.22 with a total of 78 percent between strongly agree and agree. Clinic provides Pap smear exams at a mean score of 4.22 with a total of 80 percent for providers who agreed. Clinic provides breast exams at a mean score of 4.59 with a total of 88 percent between strongly agree and agree. More than 80 percent of the respondents agreed that the clinic was able to provide adequate patient confidentiality at a mean score of 4.39.

Clinics that provide CME training to physicians scored a mean of 3.92 and a total percentage of 64 between strongly agree and agree. Clinics that provide follow-up calls to patients scored a mean of 3.49 and a total percentage of 56 between strongly agree and agree, and finally clinic provides outreach services to minority patients scored a mean of 3.71 with a total percentage of 64 between strongly agree and agree. An estimate mean average of 3.70 was calculated out of the three scores in order to understand where these screening services stand. Only 22 percent of the 50 responses strongly agreed that they provide mammography exams, 6 percent agreed, 6 percent were neutral, 10 percent disagreed and 52 percent strongly disagreed. The mean score for the provision of mammography exams was at 2.33 with a standard deviation of 1.693 indicating the need to improve and promote mammogram exams to WHC patients in Nevada. Nearly 68 percent of the providers referred patients elsewhere for mammography exams.

Table 2. Descriptive Statistics - Percentages on the Quality of service provided to WHC clients:

<i>Variable measures in terms of Screening services:</i>	<i>Mean & Std. Deviation</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Missing Data</i>
Clinic should be responsible for patients follow-up	3.57 (1.281)	30%	20%	26%	10%	8%	6%
Physicians receive follow up info on referrals out	4.46 (1.129)	22%	12%	28%	22%	16%	0%
Physicians don't need Training for new CBEs proc.	2.88 (1.453)	20%	12%	22%	20%	22%	4%
Clinic hasn't had any reimbursement problems	2.44 (1.201)	6%	6%	34%	14%	26%	14%
Access to our clinic isn't A problem to WHC patients	4.47 (1.082)	70%	18%	2%	2%	6%	2%
Clinic accepts walk-ins for WHC patients	3.55 (1.621)	46%	10%	14%	8%	20%	2%
Clinic is familiar with Reporting requirements	3.98 (1.186)	46%	22%	22%	4%	6%	0%
WHC provides training on Reporting requirements	3.29 (1.225)	22%	18%	30%	22%	6%	2%
Physicians turnover isn't A problem at this clinic	3.98 (1.362)	52%	18%	12%	6%	10%	2%
Nursing turnover isn't A problem at this clinic	3.82 (1.453)	48%	18%	10%	10%	12%	2%
Support employee turnover isn't a problem at this clinic	3.94 (1.252)	48%	18%	20%	8%	6%	0%
Communication with patients Is not a problem at this clinic	3.90 (1.212)	42%	22%	22%	6%	6%	2%
Clinic is aware of optional Medicaid treatment	3.36 (1.663)	42%	12%	8%	16%	22%	0%
Clinic believes WHC provides valuable services to patients	4.38 (.987)	64%	18%	12%	4%	2%	0%

Assessment of Quality of Services:

With reference to Table 2, more descriptive frequencies were run in order to examine the quality of services provided to WHC clients. Most responses scored a mean of 3.5 or better with the exception of services such as: physicians don't need training for new Clinical Breast Exam procedures (CBE) at a mean of 2.88, clinic hasn't had any reimbursement problems at a mean of 2.44, WHC provides training on reporting requirements at a mean of 3.29 and clinic is aware of optional Medicaid treatment at a mean of 3.36. These services scored a mean average of 2.99 with a standard deviation average of 1.27. Percentage wise, a low average of 34.50 percent was found to be a result of these physicians' responses that chose strongly agree and agree to the performance and responsibility of these services.

Otherwise, respondents were asked more qualitative questions such as: clinic should be responsible for patients' follow-up scored a mean of 3.57, and also agreed above 50 percent that WHC case managers should be responsible for following up with WHC patients. Physicians should receive follow-up information on referrals out had a mean score of 4.46 with a total of 44 percent among those who agreed. Access to our clinic is not a problem to WHC patients scored a mean of 4.47 with a total of 88 percent between strongly agree and agree. Clinics that accept walk-ins for WHC patients' scored a mean of 3.55 with a total of 56 percent that agreed. Communication with patients is not a problem at this clinic scored a mean of 3.90 with a total of 64 percent between strongly agree and agree.

Assessment on Internal Organization Issues:

In Table 2, providers were also asked some internal organizational issues that could have an impact on service delivery. Respondents were asked if physicians' turnover, nurses' turnover and support employee turnover could be major problems to the

best performance of their clinics. Most of them agreed that physician turnover was not a problem at their clinic at a mean of 3.98, nurse’s turnover was not a problem at their clinic at a mean of 3.82 and support employee turnover was not a problem at their clinic at a mean of 3.94. Respondents were asked their level of agreement with the statement “physicians in this clinic do not need training on the latest procedures for clinical breast exams”. The majority of them were likely to disagree with the statement at a mean score of 2.88 while a total of 42 percent chose disagree and strongly disagree to the statement. Overall, 22 percent of them were neutral to this statement and only 32 percent of them agreed.

Table 3: Reporting Measures and Performance Compliance

<i>Variable measure and Performance Compliance</i>	<i>Mean & Standard Deviation</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
This practice/clinic is familiar with all reporting requirements for the WHC.	3.98 (1.19)	46%	22%	22%	4%	6%
Documentation forms used for WHC patients are easy to complete.	3.84 (1.02)	32%	30%	30%	6%	2%
Compared to other payers, documentation for WHC requirements is not excessive.	3.43 (1.22)	22.4%	26.5%	32.7%	8.2%	10.2%
Clinic has an assigned individual who is familiar with WHC reporting requirements.	3.74 (1.35)	38%	30%	10%	12%	10%
WHC provides training as necessary on reporting requirements.	3.29 (1.23)	22.4%	18.4%	30.6%	22.4%	6.1%
Clinic would benefit from regular reports regarding program compliance.	3.98 (1.09)	42.9%	22.4%	28.6%	2%	4.1%
WHC reimbursement is a significant portion of the operating budget for this clinic.	2.47 (1.31)	10.2%	10.2%	26.5%	22.4%	30.6%
This practice/clinic has not had problems with reimbursement from the WHC.	2.44 (1.20)	7%	7%	39.5%	16.3%	30.2%
Overall, the WHC staff is very helpful in providing support for WHC services.	3.92 (1.05)	34%	36%	22%	4%	4%
Overall, this clinic believes WHC program provides a valuable service to our patients.	4.38 (0.98)	64%	18%	12%	4%	2%

Reporting Measures and Program Compliance Issues:

In Table 3, most of the respondents agreed that their practice or clinic was familiar with all reporting requirements for the WHC program at 68 percent, and a mean score of 3.98, although 22 percent of them seemed to be unsure and 10 percent of the respondents disagreed with the statement. The majority of respondents at 62 percent either strongly agreed or agreed that documentation forms used for WHC patients are easy to complete at a mean score of 3.84. Nearly 49 percent of the respondents either strongly agreed or agreed that in comparison to other patients payers, documentation for WHC requirements were not excessive, 32.7 percent of respondents were neutral on the question and 18.4 percent either disagreed or strongly disagreed.

Most respondents indicated that their clinic has an individual assigned who is familiar with WHC program reporting requirements at a mean of 3.74. Over 40 percent of the respondents strongly agreed or agreed that the WHC program provided training as necessary on reporting requirements at a mean score of 3.29 and 28.5 percent disagreed with the statement while 30 percent were not sure. Although most of the respondents disagreed or strongly disagreed that the WHC reimbursement was not a significant portion of the clinic's operating budget, 20.4 percent either strongly agreed or agreed with the statement and 26.5 percent were not sure at a mean score of 2.47. Only 8 percent disagreed or strongly disagreed that the WHC program staff has been helpful in providing support for their service at mean score of 3.92.

Descriptive statistics – Percentage of women who qualify for WHC program:

Table 4. Descriptive statistics – The % of women who qualify for WHC program:

<i>Variable measure in terms of % of women who qualify for WHC</i>	Mean & Std Deviation	< 5%	5 - 10 %	11 - 20%	21 - 30%	31 - 50% or >	<i>Missing Data</i>
% of women receiving pelvic exams who qualify for WHC	3.46 (1.345)	10%	16%	12%	30%	24%	8%
% of women receiving breast exams who qualify for WHC	3.58 (1.302)	10%	10%	18%	30%	28%	4%

The percentage of women who qualify for the WHC program was calculated on Table 4 in order to find out an estimate of clients who get pelvic and breast exams screening services regardless of their qualification. At 21 - 50 percent or greater, a total estimate of 54 percent of women are thought to be qualified for WHC screening services for pelvic exams, while at the same range, an estimate of 58 percent of women are thought to be qualified for the screening services of breast exams for the WHC program. At a range of 5 to 20 percent, a total of 28 percent of women are estimated to qualify for each category: pelvic and breast exams screening services for the WHC program.

Lastly at a range of 5 percent or less, 10 percent of women are thought to be qualified for each category: pelvic and breast exams. Overall, the mean scores and standard deviation for the percentage of women who qualify for WHC and receives pelvic exams is 3.46 (1.345), and the percentage of women who qualify for WHC and receive breast exam is 3.58 (1.302).

Based on a scale of 3 to 1, data was collapsed in Urban areas – Clark County and Washoe County on Table 5-see Appendix B, in order to identify potential weak areas of services between urban versus rural parts of the regions. The total number of combined

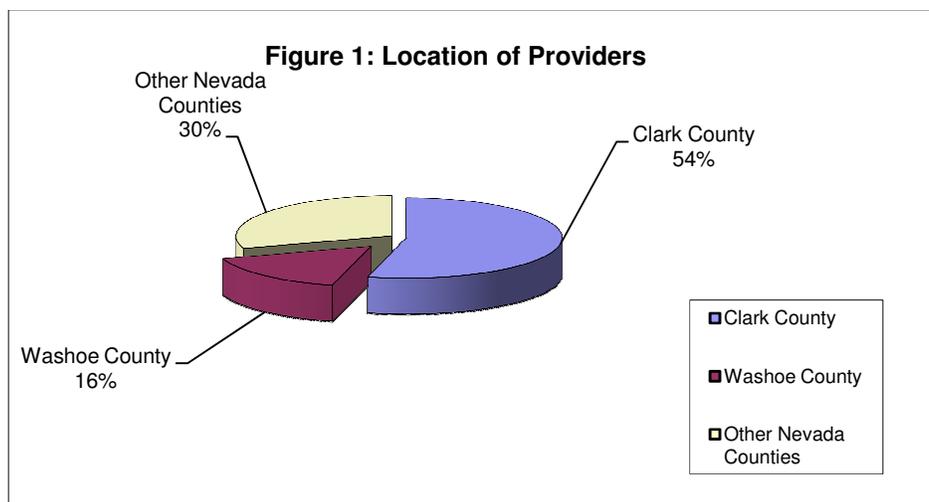
surveys was 35, and these includes: This clinic has not had problems with reimbursement from the WHC program at a mean score of 1.54, with 8.60 percent of the respondents who agreed, 31.40 percent of the respondents were neutral, 48.60 percent of the respondents disagreed, and 11.40 percent was calculated to be missing data. This clinic provides mammography exams to WHC clients scored a mean of 1.57, with 22.90 percent of the respondents who agreed, 8.60 percent of the respondents were neutral, 62.90 percent of the respondent disagreed, and 5.70 percent of the respondents were missing data. Reimbursement from WHC makes up a significant portion of the operating budget for this clinic scored a mean of 1.70, with 20 percent of the respondent who agreed, 28.60 percent of the respondent chose neutral, 48.60 percent of the respondents disagreed and 2.90 percent were missing data.

Clinic does not need training on the latest procedures for Clinical Breast Exam scored a mean of 1.90, with 31.40 percent of the respondents who agreed, 22.90 percent of the respondents were neutral, 40 percent of the respondent disagreed and 5.70 percent of the respondents were missing data. Physicians in this clinic should receive follow-up information on WHC patients referred out for other services scored a mean of 1.97, with 34.30 percent of the respondents who agreed, 28.60 percent of the respondents were neutral and 37.10 percent of the respondents chose disagree. In terms of being qualified for services, the percentage of women who qualify for breast exams in the WHC program scored a mean of 1.28, with 54.30 percent of the respondents who agreed, 20 percent of the respondent chose neutral, 20 percent of the respondents chose disagree, and 5.70 percent was missing data. In urban areas, 80 percent of the respondents indicated having only 1 physician who sees WHC clients in their clinics.

Based on a scale of 3 to 1, Rural areas such as Other Nevada Counties -see Table 6 – Appendix B, results from areas of services that were identified to be weak from a

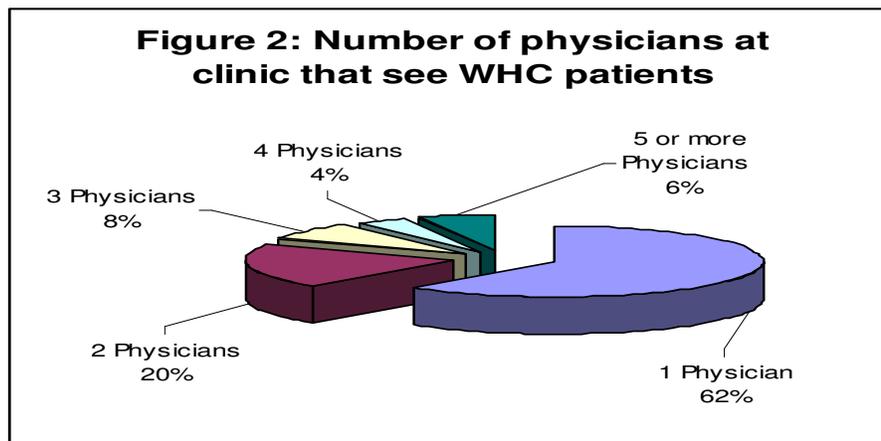
total of 15 responses included: Reimbursement from the WHC program makes up a significant part of this clinics budget scored a mean of 1.60, with 20 percent of the respondents who agreed, 20 percent of the respondents were neutral, and 60 percent of the respondent disagreed. This clinic provides mammography exams scored a mean of 1.80, with 40 percent of the respondents who agreed, and 60 percent of the respondents disagreed. Clinic does not need training on the new procedures for CBE test scored a mean of 1.86 with 33.30 percent of the respondents agreed, 20 percent of the respondents were neutral, and 46.70 percent of the respondents who disagreed. Both questions about WHC provides training as necessary on reporting requirements and Physicians should receive follow-up on info referred out for other services each scored the same mean of 1.93 with 33.30 percent of the respondents who agreed, 26.70 percent of the respondents chose neutral, and 40 percent of the respondents chose disagree. In rural areas, 86.70 percent of the respondents indicated having 1 physician who sees WHC clients in their clinics.

Descriptive Statistics – The regions that survey responses came from:



From figure 1 above, out of the completed 50 responses that have been analyzed, the majority of respondents came from Clark County at 54 percent, followed by respondents from other Nevada Counties at 30 percent, and finally respondents from Washoe Country at 16 percent. In general, out of the three counties, Clark County has proven to be the fastest growing county in the state of Nevada, and therefore the demands of its people tend to increase at a faster pace as well. With that in mind, the quality of screening services ought to be improved at the same pace in order to avoid failure not to provide better quality of breast and cervical cancers screening services.

The number of physicians in each clinic that see WHC Program Patients:



This research has also analyzed how many physicians actually see WHC patients in each clinic on Figure 2 above. Based on the responses, 62 percent of the providers stated having only 1 physician who attended to WHC patients in their clinic, 20 percent of the providers reported having 2 physicians who attended to WHC patients in their clinic, 8 percent of the responses reported having 3 physicians who attended to WHC patients in their clinic, 4 percent of the responses reported having 4 physicians who saw WHC patients and finally, 6 percent of responses reported having 5 physicians in their clinic who saw WHC patients.

The Volume of WHC Program Patients compared to other Patients Seen:

Figure 3 and 4 identifies the percentage of WHC patients who comprise the services provided by the practice or the clinic. In Figure 3; 33 percent of the respondents indicated that WHC patients receiving cervical exams comprised of 21 to 30 percent of the total number of patients seen at their clinic for those services; 26 percent reported that WHC patients made up 31 to 50 percent of the women seen at their clinic for cervical exam.

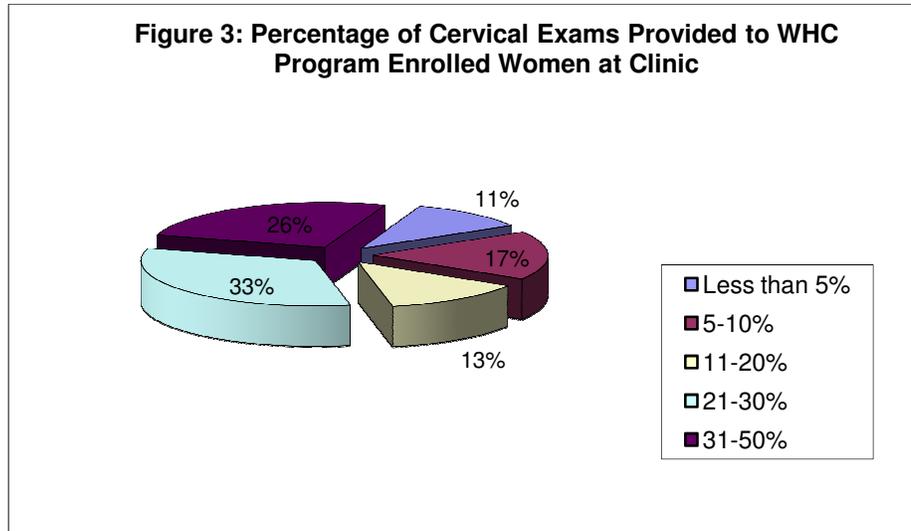
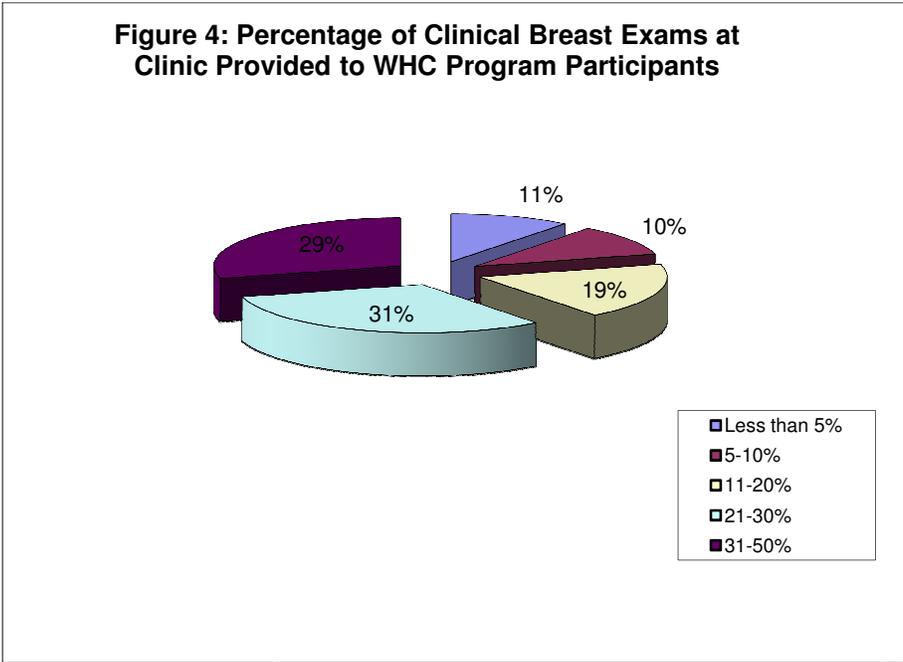


Figure 4 illustrate a similar number whereby, WHC enrolled patients comprised of 21 to 30 percent of the patients screened for breast cancer at 32 percent, and 31 to 50 percent of breast cancer screening patients at 29 percent. Only 20 percent of those responding indicated that WHC patients comprised fewer than 10 percent of the patients screened.



Bivariate Correlation:

Table 6. Pearson Correlation – Clinic hasn't had any reimbursement problems:

<i>Dependent vs. Independent Variables:</i>	<i>Pearson Correlation: (Significance Level)</i>
Clinic is familiar with reporting requirements for WHC	-0.371 (0.007)
Documentation for WHC requirements isn't excessive	0.272 (0.039)
Clinic has an individual familiar with WHC reporting	-0.340 (0.013)
Reimbursement makes up a large portion in our budget	0.208 (0.090)

In Table 6, Pearson Correlation were calculated in order to find out if there is any relationship between the dependent variable – Clinic has not had any reimbursement problems from the WHC program and the independent variables which includes – familiarity with reporting requirements, documentation excessiveness, the availability of an individual who is familiar with WHC reporting requirements and finally if reimbursement received from WHC makes up a significant portion in the clinic's budget. Certainly, there is a relationship between these variables since all of them fall under the required range of -1 and 1.

The clinic is familiar with reporting requirements is more significant at 0.007, followed by clinic has an individual who is familiar with WHC reporting requirements at 0.013 significant level. With the correlation being negative, this means that, those clinics that are familiar with the WHC reporting requirements and have an individual who is familiar with the WHC reporting requirement have more reimbursement problems. With the correlation being positive for documentation requirements and whether reimbursement from WHC makes a significant portion of the clinics budget, that indicates less problems.

Table 7. Pearson Correlation - Access to our facility isn't a problem:

<i>Dependent vs. Independent Variables:</i>	<i>Pearson Correlation (Significance Level)</i>
Clinic accepts walk-ins for WHC patients	-0.068 (0.326)
Communicating with patient isn't a problem	0.409 (0.002)
Clinic provides outreach services to minorities	0.411 (0.002)
Clinic provides follow-up calls to patients	-0.084 (0.027)

Lastly, in Table 7, Pearson correlation were calculated to find out if there is any relationship between the dependent variable – Access to the facility and the independent variables – Clinic accepts walk-ins, Communication is not a problem with WHC clients, Clinic provides outreach services to minorities and finally, Clinic provides follow-up calls to patients who missed their scheduled appointments. All four independent variables seemed to have a relationship with the dependent variables, with communication and outreach services to minorities being more significant at 0.002 than the others.

With correlation being positive, communication with patients and clinic provides outreach services to minorities implies that those clinics are less likely to have

accessibility problems. With the correlation being negative for clinics accepts walk-ins and clinic provides follow-up calls to patients who missed scheduled appointment, it means that there are more accessibility problems in those facilities. However, for clinic that accepts walk-ins and clinics that provide follow-up calls to patients who missed scheduled appointments indicate the presence of accessibility problems with the correlation being negative. With quality improvement, accessibility to the clinic is very important to the performance and standards of all clinics that are contracted with the WHC program in order to provide breast and cervical cancer screening services to all eligible women in Nevada. Without easy access or penetration into these clinics, a lesser number of women will be screened for cancers and this will result into a large number of cancer deaths in the near future.

The survey also gave physicians respondents the opportunity to make additional comments on the questionnaire regarding the program. Among the 50 utilized questionnaires, only 12 individual respondents made comments that substantiate some of the findings reported in this study. Those comments includes: Needs communication with WHC staff, Needs updates on procedures, Current forms processing is time consuming, Poor reimbursement, Relationship and services have improved during the past year, Needs to re-program the system, Needs to get diagnostic reports, Survey questions needs to be revised, Needs to revise WHC forms, WHC needs to update each satellite clinic, Needs North and South coordination regarding documentation, Needs North and South communication and organization, and finally, Thanks for all your services.

V. DISCUSSION

This paper finds strong evidence for the need to improve the quality of breast and cervical cancer screening services on the physicians' side in order to improve overall patients' satisfaction. One of the major trends that has developed in the WHC program since the beginning of service in 1997 is the shift of services from the providers in the Northern part of the state to the Southern part of Nevada. Surprising, 54 percent of the respondents were from Clark County region, followed by 30 percent of responses from other Nevada counties, and only 16 percent of the remaining responses came from Washoe County. Based on these findings, it is clear that Clark County area is benefiting more from the WHC program services as compared to other counties in Nevada.

Physicians in the state of Nevada act as the roots of screening services simply because both the WHC program and its patients depends highly on the work performance of physician providers. Most of the clinics have a good relationship with the WHC program and in assessing the services most physicians provide both clinical breast exams and pelvic exams. Overall, the quality of screening services is not very bad for the state of Nevada, but the demands for these services are expanding on monthly basis and the need to catch up with population growth especially in Southern Nevada ought to be recognized almost immediately.

The questions developed on this study were intended to determine the needs of physicians' providers while assisting the WHC program identify ways to improve the quality of services being provided. Questions attempted to determine the type of screening services provided, accessibility to the clinics, the knowledge of reimbursement procedures, the need for training for new technologies, the status of employee turnover and its impact on the services, the compliance of the program with HIPAA regulations, the percentages of women who qualify for WHC, and the number of physicians who

attend to WHC patients. It is possible that, the survey did not cover every detailed question on this quality improvement study that one would learn more about what needs to be done for physician providers' clinics.

Quality improvement study on physician providers was measured in terms of responses in relation to the number of screening services that they provide in their clinic, the time frame their clinic received lab reports, and whether or not physicians in that particular clinic required training on the latest procedures of screening tests. As a whole, access to the clinic, the clinic's knowledge on reimbursement procedures, the reporting requirements for the WHC program, the clinics ability to follow-up on missed scheduled appointments, the knowledge of nurses and staff employees on optional Medicaid treatment for breast and cervical cancer, the compliance with HIPAA regulations, the total number of physicians in that particular clinic and much more are the things that were questioned in order to understand the status of a particular clinic, and the kind of services that it provides.

Most people who have a good knowledge of the healthcare industry can agree that, a large number of physicians are busy people and this could have been a reason to a slower rate of responses from physician providers. It is a possibility that, some of the physician providers might have asked their nurses or office assistants help them complete the two-paged survey since they work with them on daily basis, and may seem to understand the physicians' actual work performance and the actual screening activities. This is one of the things that the quality improvement study conductors could not have control with.

Summary of Findings:

The first category of questions in regards to the type of services provided to WHC clients includes: clinic provides pelvic exams, clinic provides Pap smear exams, clinic provides breast exams and clinic provides adequate patient confidentiality to WHC patients. These questions all scored a mean above 4.0 indicating a good performance of screening services. Low scores have been found when it comes to whether or not the clinics provide mammogram exams. A mean score of 2.33 with a standard deviation of 1.693 were calculated with more than half of the percentages strongly disagree at 52 percent, 10 percent of responses disagreed, and 6 percent of responses chose neutral. Only 28 percent of the responses chose strongly agree and agree indicating something to be wrong when it comes to mammography screening. Like other screening tests, I believe the provision of mammography exams ought to be improved in terms of providing better equipments to these providers because, most of their clinics refer their patients to outside facilities for mammograms screening.

Physicians do not need training for the new CBE procedures was objected by 42 percent of respondents, and 22 percent of the respondents were neutral meaning that they were not so sure as to what is best for this situation. Only 32 percent of the responses strongly agreed and agreed to the statement about training procedures. Therefore, my interpretation finds the necessity to have CBE training available to physicians who needs it. Based on the responses from the majority of the providers in this study, physicians' turnover, nurses' turnover and support employee turnover do not seem to be a major problem for the WHC program. However, a substantial number of respondents for physicians turnover (16 percent), nurses turnover (22 percent) and support employee turnover (14 percent) disagreed, indicating the need for the WHC program staff members

to conduct further studies on this particular area before the number of objections increases.

This research study has also come to a conclusion that, there appears to be some problems with reimbursement procedures between the WHC offices and physicians' offices. A mean score of 2.44 was a result of the calculation based on a scale of 5 to 1. Overall, 40 percent of respondents have strongly disagreed and disagreed to the statement that, 'clinic has not had any reimbursement problems from WHC program', while 34 percent of respondents were neutral, and only 12 percent of respondents strongly agreed and agreed that yes, their clinic has not had any reimbursement problems from the WHC program.

Reimbursement problems have to be straightened out between the WHC program and physician provider's clinics in order to improve the quality of budgeting on both ends. For a period of time, the program did have problems regarding reimbursements for a number of providers in the state. However, the question asked does not specify if reimbursement problems are a continuing problem or if the problems have been resolved. Staff training on reimbursement procedures, better communication between WHC and clinic employees, and the simplicity of reimbursement documentation ought to be improved in order to save more time on reimbursement.

The questions as to whether or not the clinic had an assigned individual who is familiar with reporting requirements was included because some WHC programs had been provided with special funding to hire an individual who was directly responsible for WHC patients paperwork. In addition, there were some speculations that, turnover among other clinic personnel might make it difficult for the clinic to maintain a better understanding of the reporting requirements.

Overall, more than half of the responses have one physician who sees WHC patients in their clinic. This implies the need for the state to increase and encourage the number of physicians in these clinics who will attend to WHC patients in order to expand and improve the quality of breast and cervical cancer screening services in Nevada. A mean score of 1.72 was calculated with a standard deviation of 1.61 both indicating an overall average of 2 physicians who currently attend to WHC patients.

Not the least, one positive finding of this study is the level of communication between WHC program staff and physician providers facilities. Only 8 percent of the respondents indicated having communication problems with the WHC program. Otherwise, 64 percent of all clinics strongly believe that WHC provides valuable services to their patients, 18 percent agreed, 12 percent were neutral, 4 percent disagreed, and only 2 percent of them strongly disagreed.

Result from the data that was collapsed by comparing urban versus rural areas of Nevada indicates a slight difference in some services that were identified to be weak on both ends. Clinic has not had reimbursement problems seems to be more of a problem in urban areas than in the rural. There is a very slight difference between urban and rural parts of the regions for the provision of mammography exams, with the former having a mean score of 1.57, and the latter having a mean score of 1.80. The result of mammography exams indicates the need to improve this test on both parts of the region. Reimbursement from the WHC program makes a significant portion of this clinics budget seems to have a slight difference between urban = 1.70 (mean) score and rural = 1.60 (mean) score for these two parts of the region. Clinic do not need training on the new CBE procedures also indicates a very minimal difference with urban scoring 1.90 and rural scoring 1.86 mean average. Physicians should receive follow-up info on referrals out is a problems at both ends with the urban scoring a mean of 1.97 and the rural scoring

a mean of 1.93, no regions seems to have this service at a better score. WHC provides training as necessary on reporting requirements seems to be a bit more of a problem in the rural areas = 1.93 mean than in the urban areas = 2.20 mean score. Otherwise, large percentage of clinics in both urban and rural areas of the state indicates having 1 physician provider who attends to WHC clients, at 80 and 86.7 percentages respectively. This seems to be an issue on both parts of the region that the WHC program might need to find means to encourage more physicians in each clinic to expand their breast and cervical cancer screening services.

Otherwise, clinic provides breast exams, clinic should receive follow-up diagnostic reports for WHC patients and clinic provides adequate patient confidentiality all scored a mean average of 3.0 in the rural areas of the state while no one response that came from the urban areas scored a mean of 3.0. In general, the same types of services that have problems in the urban areas are the same types of services that have problems in the rural areas. The difference between them is very slight; therefore, it still remains a critical issue to improve these areas that seems to be weaker on both ends.

VI. CONCLUSION

This study provides important information to the WHC program and its physician providers. Some areas for improvement can easily be identified such as: reimbursement issues, follow-up reports, training, the provision of mammogram exams, and the number of providers who attend to WHC patients. On one side, WHC program staff members deserve some recognition on how much improvement they have made since 1997 in cooperating with the physician provider in the state. In general, services have expanded in Southern Nevada, the fastest growing part of the state. On the other hand, it remains crucial for physician providers to participate in quality improvement studies in order to make their job and that of the WHC program much easier. Although the response rate of 40 percent is acceptable, yet a contribution of ideas from more physician providers might have yielded better results.

Quality improvement can be an effective tool for improving client services when there is an organization-wide commitment from program employees and leadership, proper training on QI, and the involvement of key staff members in an organization, (Cochran et al., 2003). One reason for a successful study on quality improvement for physician providers and the WHC program is the fact that, WHC is not faced with all major organizational barriers to implement quality that affect other government – sponsored healthcare programs.

Limitation of the Study:

More survey responses came from Clark County at a rate of 54 percent, occupying more than half of the region while 16 percent of responses came from Washoe county, and 30 percent of responses came from other Nevada's counties. This may be a problem only if the opinion of providers in Clark County does not match with the needs of physician providers in the rest of the state. The demands and needs for one county

may be different from the demands of physicians in another county. Clark County has a more transient population. In general, the Southern part of the state has experienced a rapid growth with growing businesses and gambling activities on daily basis, causing more peoples' interaction than the rest of the state.

One limitation of this study is due to the type of questions asked on the questionnaire, requesting providers to give their responses of a scale of 5 to 1. These types of choices may have hindered more detailed results and opinion as to what physician providers actually need to get help from the WHC program. The majority of the questions were based on the 5 to 1 scale with the exception of the last question being an open ended type of a question that gave physicians the opportunity to fill in the blank the actual number of physicians in that clinic who attend to WHC patients. The presence of more open-ended questions might have improved the results of the study and possibly add more variety as to what areas of improvement needs to be worked on. Therefore, the limited options that they had in the formatting of most questions might have hindered the flexibility to expand their opinion. Even though a comment section was provided at the end of the survey, fewer respondents were willing to share their opinion and the majority of them chose to leave the comment section blank.

A disproportionate number of physician providers serving in each clinic may act as a limitation to this study as most of these clinics have an uneven distributed number of physicians. Some clinics had one physician provider, while others had two or three or four while some of the clinics had up to five physicians. That being the fact, the clinic with one physician may have a different experience with patients than the clinic with two or more physicians. Therefore physician needs may be different; however the study had to make assumptions that, the needs of these providers will be the same regardless of how many physicians serve in each clinic. As a result, data may have been skewed due to the

fact that, clinics with more than 3 physicians may produce different responses on the need to improve breast and cervical cancer screening services for the WHC program.

Another limitation to this study is a possibility that, some of the questionnaires that have been returned might not have been completed by physician providers, instead done by the nurses or other office staff members. This is one of the few situations that the conductors of this quality improvement study could not have a control with.

Yet, another limitation to this study with trying to determine the needs of physician providers in order to improve the quality of screening services is that, some physician providers might have stopped or literally dropped providing screening services to WHC patients if they found the whole project to be unsatisfactory on their side. Out of the 126 surveys that were mailed out, only 50 of them were completed.

Overall, this study shows that most physician providers were generally satisfied with the services provided by the WHC program. A total of 82 percent agreed that they believe the WHC program provides valuable services to patients under physicians' care. Twelve percent of them were neutral and only 6 percent of the responses strongly disagreed and disagreed to this statement. The 6 percent rejection rate does not count for a large portion of the total responses.

When data was collapsed and compared between urban and rural areas, not much difference was found, the same weak areas that needs to be improved in the urban areas are the same areas that ought to be improved in the rural areas. However, the former had a total of 35 responses and the later had a total of 15 responses. Obviously, the total number of responses does not match, and the urban regions has more than the rural, therefore, the opinion of few responses in the rural may not be strong enough to complete the comparison of these two regions.

Other findings:

Quality Improvement can be done, as other studies have suggested, but it is not a simple thing to do. This research study and its limitations provide an example of the challenges faced by organizations that must rely on inter-organizational relations in order to produce quality results, (Mays, et. al. 1999). Team work and a better understanding of what quality improvement is, and what needs to be done, remains to be important aspects of QI implementation in order to over come any type of bureaucracy. Otherwise, Kaluzny and McLaughlin have suggested that, for public sector programs, one potential pitfall is that, quality improvement requiring management or administrative change is often difficult and acceptance of quality improvement by organization members can be slow to develop (Kaluzny and McLaughlin, 1992).

As identified by some of quality improvement experts, some potential barriers in QI in healthcare programs such as this study includes: many programs are interdisciplinary leading to professional turf issues while QI requires team work, program accountability mechanism are always weak and many programs depend on inter-organizational coordination to meet their goals, and QI is more difficult to implement across organizational boundaries (Kaluzny et. al. 1992).

Other findings have suggested that, breast and cervical cancer-screening services must be secured, since reimbursement for these screening and diagnostic procedures are fairly low (True, 1995). It is unlikely that physician providers would participate for the financial profit generated however there can be other rewards from the WHC program, such as, helping physicians improve the quality of screening services by identifying areas of improvement and finding ways to overcome those shortcomings.

In summary, QI can be an effective tool for the WHC program and physician providers, but major challenges still lay ahead. Further studies need to involve the

participation of WHC clients, because other studies have suggested that, more women are becoming aware of the program, and therefore major issues will arise such as having financial resources to provide screening services to an expanding client population (Cochran, 2003). Maintaining a cohesive program that will assure that all client needs are met will require continuous quality improvement activities and commitment.

In conclusion, this study was not meant to act as an evaluation of the WHC program, and physician providers' instead it was structured to be an evaluation of the practices of breast and cervical cancer screening services in Nevada. This study however, did not include opinion from WHC patients who receives screening services from physician providers, and optional Medicaid information from the WHC program. More studies to improve reimbursement issues, training for new CBE procedures and the provision of mammography exams are highly recommended. A more extensive future study is highly encouraged in order to analyze comments from both physicians and patients associated with the WHC program for the purposes of improving the quality of screening services to all women in Northern and Southern Nevada.

REFERENCES

1. Allen., Karen M., Phillips, Janice M., (1997). Women's Health: Across Lifespan – A Comprehensive Perspective, **Lippincott Publication**, Philadelphia.
2. Adami, Hans-Olov., Hunter, David and Trichopoulos, Dimitrios., (2002), Textbook of Cancer Epidemiology, **Oxford University Press**, New York
3. Berman, E.M., Milakovich, M.E., West, J. P. (1996). Implementing TQM in State Public Health Agencies. **Journal of Health and Human Services Administration** 16 (Fall): 183-205.
4. Carman, J.M., et al. (1996). Keys for Successful Implementation of Total Quality Management in Hospitals. **Health Care Management Review** 21 (Winter):48-60
5. Cochran, Christopher, (2003). Introduction: Quality Improvement in Public Sector Healthcare Organizations. **By University of Nevada Las Vegas, NV**, Symposium Edition Editor.
6. Cochran, C., Moseley, C., Peltier, J., (2003). Quality Improvement in a Federally Funded Community Breast and Cervical Cancer Screening Program,
7. Cancer Facts and Figures 2000, American Cancer Society. (2001). National Program of Cancer Registries, Center for Disease Control, Nevada Statewide Cancer Registry.
6. Clark County Tax Assessor's Office (2001). **Clark County Admatch Population Estimate, July 1995-1999 and Southern Nevada Consensus Population Estimate, July 2000.**
7. Chlebowski, Rowan., (2000) . Reducing the risk of Breast Cancer. **The New England Journal of Medicine**, Volume 343, No. 3
8. Fargson, Crayton., (1995). Quality in the Inter-Organizational Setting, **American Journal of Medical Quality**, Volume 10, No. 1

9. Fitzpatrick, Joyce J., Fulmer, Terry., Wallace, Meredith and Flaherty, Ellen., (2000). Geriatric Nursing Research Digest, **Springer Publishing Company**, NY
10. Fletcher, Suzanne., Elmore., Joann, (2002) Mammographic Screening for Breast Cancer. **The New England Journal of Medicine**, Volume 348, No 17,
11. Grinyer, Anne., (2002). Cancer in Young Adults: Through Patients' Eyes, **Open University Press**, Buckingham, Philadelphia.
12. Green, CG, Harrison, M, Henderson, K. & Lenihan, A. (1998). Total Quality Management in the Delivery of Public Health Services: Focus On North Carolina WIC Program. **Journal of Public Health Management** 4 (May): 72-81.
13. Green, M.H., (1997). Genetics of Breast Cancer, **Mayo Clinic Inc**. Vol. 72:52-65
14. Haber, Daniel., (2000). Roads Leading to Breast Cancer, *The New England Journal of Medicine*, Volume 343, No 21.
15. Jackson, Rudolph., Leininger, Linda., Harris, Russell and Kaluzny, Arnold., (1994). Implementing Continuous Quality Improvement in Primary Care: Implications for preventive services. **Journal of Ambulatory Care Management**, Volume 17, No. 3.
16. Mays, Glen P, Hatzell, T., Kaluzny, AD, Halvarson, PK (1999). CQI in Public Health Organization in CP Mc Laughlin and AD Kaluzny (eds), **Continuous Quality Improvement in Healthcare**. Gaithersburg, MD:Aspen Publishers, Inc.
17. McLaughlin, CP and Kaluzny, AD (1999). Defining Quality Improvement: Past, Present and Future. **Continuous Quality Improvement in Healthcare**. Gaithersburg, MD: Aspen Publishers, Inc.
18. Nuovo, Jim., Melnikow, Joy and Howell, Lydia., (2001). New Tests for Cervical Cancer Screening. **American Family Physicians**. Volume 64, No. 5.

19. Norman, Sandra., (2003). Validation of Self-reported Screening Mammography Histories among Women with and without Breast Cancer, **American Journal of Epidemiology**, Volume 158, No 3.
20. Perry, Bruce., (2000). Quality Improvement in a managed care organization from a medical director's perspective. **Community Journal of Quality Improvement**, Volume 26, Issue 10.
21. Redmond, K., and Aapro, M.S., (1997). Cancer in Elderly: A Nursing and Medical Perspective, **Journal of European School of Oncology**, Volume 2, Elsevier Science B.V., The Netherlands.
22. Rust, S. (2003). Improvement of women's breast health services, **Journal of Ambulatory Care Management**, Volume 26, Issue 3, Columbus, IN.
23. Spiegel, David., (2001). Mind Matters-Group Therapy and Survival in Breast Cancer. **The New England Journal of Medicine**, Volume. 24.
24. Stellman, Steven D., (1987). Women and Cancer, **Harrington Park Place, Inc.**, New York.
25. Thurfjell, Erik., (2002). Breast Density and the Risk of Cancer, **The New England Journal of Medicine**, Volume 347, No. 12.
26. True, Susan J., (1995). Community Based Breast Health Partnership. **Journal of Public Health Management Practice**, Volume 1, No. 3. Albany, NY.
27. Diagram – Number of Women Served in the NBCCEDP for Fiscal Years 1991 – 2002. <http://www.cdc.gov/cancer/nbccedp/about.htm>.
28. The National Breast and Cervical Cancer Early Detection Program – Reducing Mortality Through Screening, CDC Facts and Figures: August, 2003 Program Facts, www.cdc.gov/cancer

29. The National Breast and Cervical Cancer Early Detection Program, At-A-Glance, 1999, By US Department of Health and Human Resources, Center for Disease Control and Prevention.
30. National Center for Health Statistics. SEER Cancer Statistics Review, 1973-1995. Bethesda, MD, National Cancer Institute, 1998.
31. Delaware Healthcare Association, Glossary of Healthcare Terms and Acronyms, 2003. <http://www.deha.org/Glossary/GlossaryQ.htm>
32. Northern Nevada Medical Center: Breast Cancer Facts 2000, Facts about Breast Cancer in Nevada, 2000, <http://www.northernnvmed.com>

