BACKGROUND

Between 2000 and 2009, the incidence of cervical cancer in the United States decreased by two percent each year. This promising trend continues; however, it is marred by persistent racial and socioeconomic disparities. HPV-associated cervical cancer rates of Hispanic/Latino and black women are 1.5 and 1.33 times, respectively, that of white women and women at or below 100% and at 100-200% of the poverty rate have respective cervical cancer rates 4.30 and 3.35 times that of women with family incomes exceeding 600% of the poverty threshold. This trend persists for other diseases as well. According to a review on excess cervical cancer mortality by the U.S. Department of Health and Human Services, women suffering high cervical cancer mortality also have high rates of breast and colorectal cancer, cerebrovascular disease, and infant mortality, likely due to a lack of regular health care and preventive services.

In 2009, California’s cervical cancer incidence was ranked 24th in the country and women of lowest socioeconomic status are almost three times more likely to develop cervical cancer than their wealthier counterparts. Cervical cancer incidence and mortality rates in Los Angeles are, respectively, 1.2 and 1.4 times the national average, with Latino and poor women having the highest rates. Watts Healthcare Corporation primarily serves LA County Service Planning Area 6 (SPA 6) which is comprised of Athens, Compton, Crenshaw, Florence, Hyde Park, Lynwood, Paramount, and Watts. SPA6 has an alarmingly high cervical cancer death rate that is 2.1 times the LA County average and 4.8 times the national average despite having slightly higher (1.1 times) reported rates cervical cancer screening in women 18-64. SPA 6 also has the highest rate of premature deaths due to breast cancer among women in LA County.
In 2012, Watts Healthcare Corporation began a reorganization of its cervical cancer screening program to adopt a patient-centered medical home (PCMH) model of care, which states that medical care should be comprehensive, patient-centered, coordinated, accessible, and committed to quality improvement and safety. Using the Institute for Healthcare Improvement’s Plan-Study-Do-Act model, two cycles were designed and analyzed for their ability to bring WHCC closer to its PCMH goals. The plan for Cycle 1 was the establishment of a three-step reminder system consisting of two telephone reminders from the newly established Call Center and an electronic medical record (EMR) reminder in the patient’s chart to notify the provider of a due cervical cancer screening. The plan for Cycle 2 was a trial replacing the protocol of referring Adult Medicine patients to the Ob/Gyn department for cervical cancer screening with a protocol of offering pap smears within the Adult Medicine department during Adult Medicine appointments for non-gynecological complaints.

METHODS

WHCC Cervical Cancer Screening PDSA Cycle 1: Reminder System Set-up

Cycle 1 (Appendix A) began the implementation of a reminder system for both patients and providers. The WHCC Quality Improvement Work Plan consists of four strategies to establish this system: (1) a health maintenance alert feature in the EMR will be implemented to remind providers to order cervical cancer screenings, (2) various reminder calls/letters/postcards will be generated for patients who are due for screening or who have not had a visit in the last 12 months, (3) a tracking log will be generated monthly to show patients who have not kept cervical cancer screening appointments and patients will be sent another reminder letter/postcard, and (4) all positive tests will be followed-up with diagnostic workup.
In December 2012, the center began to implement strategies 1 and 2. One week before an appointment, the medical assistant in Adult Medicine enters a yellow “sticky note” reminder onto patients’ EMR chart as a notice to the provider to (1) remind patient of due cervical cancer screening during the appointment and (2) finish encounter with an electronic referral to the Ob/Gyn department. Two days before the appointment, the WHCC phone tree system sends an automatic reminder to the patient regarding their upcoming appointment and the following day (one day before the appointment) a live call reminder is made by WHCC call center staff to remind patient of her appointment. Cervical cancer screening data was collected from all female patients visiting WHCC for Adult Medicine and Ob/Gyn appointments and screening rates were calculated to determine if the adoption of these strategies had any impact on cervical cancer screening rates.

**WHCC Cervical Cancer Screening PDSA Cycle 2: Adult Medicine Cervical Cancer Screening Trial**

From data collected from Cycle 1, it appears that Adult Medicine patients referred to Ob/Gyn for cervical cancer screening are not returning to WHCC for cervical cancer screening along with an annual gynecological exam within the Ob/Gyn department. There is no official survey data as to the cause of such a low Ob/Gyn-referral follow-up rate, however for the purpose of this trial, we will address this issue by bringing the target to the patients while they are already at WHCC rather than focus on sending the patient to the target in the form of a follow-up Ob/Gyn appointment.

Cycle 2 (Appendix B) of the Cervical Cancer Screening PDSA consists of the Adult Medicine Cervical Cancer Screening Trial. This intervention aims to stop this dead-end referral system—particularly for patients who unknowingly have cervical abnormalities—by offering
Adult Medicine patients cervical cancer screening while already at the center for a non-gynecological complaint. This service addresses both halves of the Health Belief Model, which suggests that patient health behaviors are based on the perception of (1) his/her disease susceptibility and the severity of the condition and (2) the potential benefits in light of barriers to taking a specific action. Making pap smears conveniently available while the patient is already at the health center for a non-gynecological complaint could lower the barriers to care that occur when patients are required to return at a later date for a separate Ob/Gyn appointment and pap screening. Patients who unknowingly possess abnormal cervical cancer cells will be notified of their abnormal results, thereby increasing their perceived susceptibility to cervical cancer. The hypothesis of this model of change is that afflicted patients’ increased perception of susceptibility upon notification of an abnormal pap result will outweigh their perception of barriers to following through with a referral to the Ob/Gyn department, resulting in decreased late-stage disease detection and better cervical cancer prognosis. On a large and long-term scale, this change in health belief can possibly spread culturally, increasing cervical cancer screening rates and the number of annual visits to the Ob/Gyn clinic.

Over the course of a week, female patients between the ages of 21 and 64 visiting the Adult Medicine department were surveyed via chart review or patient interview to determine the date and result of their last pap smear. Patients reporting a last pap date of three years or more were offered the option to receive a cervical cancer screening at the close of their appointment in another examination room. In addition to pap smear collection, consenting patients received cervical cancer educational materials (available in both English and Spanish) (Appendix C) and were referred to Ob/Gyn for a complete annual gynecological exam.
This approach to increasing cervical cancer rates has been tried and successful within Los Angeles in the past. Between 1990 and 1996 the Jonsson Comprehensive Center at UCLA conducted a five-year breast and cervical cancer screening study which aimed to increase cervical cancer screening rates for women who received their health care through the Los Angeles Country Department of Health Services. This was to be achieved through increasing the number of pap smears collected in non-gynecologic departments (adult specialty, family medicine, adult walk-in, STD, TB, dental, ambulatory, family planning, prenatal, immunization, obstetrics/gynecology, urgent care, medicine, surgery, emergency medicine, dermatology, and nursing) at one large hospital, one feeder Comprehensive Health Center, and three of the health center’s feeder Public Health Centers. In specialty clinics where pap collection is not possible (eg. dentistry, dermatology, podiatry), providers referred patients to Papanicolauou clinics. With intervention, hospital cervical cancer screening rates increased by 10.6% and CHC rates increased by 8.6%. PHC rates showed no difference between baseline and intervention years.

RESULTS

WHCC Cervical Cancer Screening PDSA Cycle 1: Reminder System Set-up

Data collected for the Cervical Cancer Screening Program interim report (covering date range January-June 2013) shows that 63.52% of female patient eligible for triannual cervical cancer screening received a pap smear. Eligibility is defined as being a female patients age 21-64 with no history of abnormal pap smear results and no record of pap smear for 3 years or more. Among patients who received pap smears at WHCC, eighty-eight percent were visiting the clinic for an Ob/Gyn appointment. Eighty-eight percent of eligible patients who did not receive a pap smear had visited the health center for a non-gynecology-related complaint while four percent of
eligible patients who had not received a pap smear in three years or more saw an Ob/Gyn provider for their last appointment.

**WHCC Cervical Cancer Screening PDSA Cycle 2: Adult Medicine Cervical Cancer Screening Trial**

The trial addressed three major issues highlighted by the CPRU study: patient barriers, factors affecting physician behavior, and organizational issues. Patients were interviewed and educated one-on-one about the importance of cervical cancer screening and given a handout. Physicians were alerted as to patients’ due cervical cancer screenings using a “sticky note” notification function in the EMR. Organizational issues were addressed through the development of the workflow. The first week of the trial was used to manage and adjust workflow as necessary. Results for the second week of the trial were collected and analyzed for program evaluation.

Criteria for eligibility for the Adult Medicine Cervical Cancer Screening Trial is defined as female patients between the ages of twenty-one and sixty-four, with no documented history of hysterectomy, attending an Adult Medicine appointment during the trial. Patients were first surveyed for the date of their last pap smear via chart review and those with no documented history were surveyed via face-to-face interview. Total patients surveyed (sample size, n=104) accounted for 94.5% of eligible female patients. The overall screening rate of the sample size was 79.8%. Nineteen pap smears were given to patients who reported receiving a cervical cancer screening over three years prior and the two patients who did not receive the procedure at the end of their appointments were missed because one woman had to rush to work and the other finished her appointment after the MCH department (for registration for the Cancer Detection Program to receive free pap smears and mammograms) had closed. During the trial, the cervical
cancer screening rate increased by 18.3% by giving a pap smear to 90.6% of the unscreened female Adult Medicine patient population which exceeds the goals of the trial and even the Healthy People 2020 goal of 90%.

**DISCUSSION and RECOMMENDATIONS**

**WHCC Cervical Cancer Screening PDSA Cycle 1: Reminder System Set-up**

Historically, WHCC cervical cancer screening has been primarily carried out by the Ob/Gyn department during gynecological exams. Patients visiting the center’s Adult Medicine department for non-gynecological complaints are referred to the Ob/Gyn department for screening if they are due for a pap smear. However, data suggests that these referrals do not result in an actual visit to the Ob/Gyn department for a pap smear and full annual gynecological exam. If patient flow and the trend of losing patients in the Ob/Gyn follow-up continue, WHCC will not be able to meet its PCMH Cervical Cancer Screening Program goals by focusing solely on screening patients within the context of a gynecological exam within the Ob/Gyn department. Even if 100% of the patients who visit the Ob/Gyn department receive a pap smear, these goals cannot be met. However, if a minimum of 36 percent of Adult Medicine’s unscreened population could receive a cervical cancer screening while they are still at the clinic, WHCC will be able to meet its goal rate of 75% screening.

Due to logistical issues, the reminder system was not fully and smoothly functioning in the earlier months of the year, which makes the data collected inconclusive as to whether or not the new efforts are having a positive impact on cervical cancer screening rates. Preliminary data is promising. The number of pap cervical cancer screenings in January-June 2013 increased by thirty-eight percent, compared to the same time frame in the year prior and ninety-nine percent of
pap test results were reviewed within one week (up from 91% in 2012). Data for the year-end report should be more conclusive as to the efficacy of these reminder tools.

**WHCC Cervical Cancer Screening PDSA Cycle 2: Adult Medicine Cervical Cancer Screening Trial**

The results of the Adult Medicine Cervical Cancer Screening Trial support the hypothesis that patients visiting the Adult Medicine department for non-gynecological complaints are strategic targets for increasing WHCC’s cervical cancer screening rates. The next step is to decide the best method of systematically incorporating cervical cancer screening for Adult Medicine patients into the current WHCC workflow. The thirty percent no-show rate at the clinic offers an opportunity to make-up for revenues normally lost by either billing the additional procedure or- if time permits- replacing no-shows with a full encounter consisting of the complete gynecological exam. Design of a new system will take cooperation between the Ob/Gyn and Adult Medicine departments as well as the Quality Improvement team. Specifically within WHCC, providers from both departments expressed preference that an Ob/Gyn provider provides the pap smears, which may be satisfied by “admin and on-call pap” days, shuttling Adult Medicine to same-day Ob/Gyn appointments, or other methods. An estimate of how many screenings will be required daily cannot be taken from the trial data because many providers were out on summer leave; however, with four of the seven providers present, six pap smears were performed on the busiest days and with diligent screening, the number of required screenings should decrease as the standard has been recently changed from annual to triannual screenings which decreases the number of newly pap eligible patients added to the pool each year.
Quality Improvement: How Cervical Cancer Screening Trial Contributes to the Long Term Strategies and Goals of WHCC

The WHCC Director of Clinical Operation, Mauricette Montredon, would like the clinic to develop and facilitate preventive medicine group appointments where patients receive health maintenance education and a list of their due screening tests. The results of cycles 1 and 2 of the cervical cancer screening trial suggest that pap smears should also be included in the screening list, calling for pap smear collection every three years for female patients age 21-64 with no history of abnormal results.

The effectiveness of WHCC’s preventive medicine program will likely require the development of realistic and effective treatment plans for patients who receive positive screening results. This suggestion comes from comparing the cervical cancer screening rates of SPA 6 to the LA County average. Despite having a slightly higher cervical cancer screening rate (1.1 times the LA County average), SPA 6 still has a cervical cancer death rate 2.1 times that of the LA County average. SPA 6 has the largest percentage of uninsured children (17.7%) and the second largest percentage of uninsured adults (36.4%) in LA County. Specific reasons for this are currently unknown, but it is suspected that access to treatment is a cause. It is important that all medical screening programs develop treatment plans in conjunction with preventive screening programs because to diagnose a patient with disease and not offer access to treatment may cause more harm than good.

Primary Care Leadership: Ideas from the Cervical Cancer Screening Trial for the FQHC and public health system

A common cliché used to describe health care operations is that medical staff often operates in “silos,” where everyone concentrates on their specific scope of practice without
giving much regard to the many other departments, staff members, care plans, budgets, etc. that one’s actions passively affect. Evaluation of the Adult Medicine Cervical Cancer Screening Trial in isolation makes the task of giving more pap smears to Adult Medicine patients seems easily feasible. However, when you add the cervical cancer screening program to the colorectal, prostate, and breast cancer,-along with other screening programs, the task becomes a lot more complicated. Spontaneous screening of so many conditions at one time will extend exam times considerably (versus needing only a few extra minutes for a single pap smear) and more staffing may be needed, but not met due to budget constraints.

A possible tool to create this balance is the development of Preventive Medicine departments and appointments within FQHCs/PCMHs, which would serve as a “one stop shop” for preventive medical screenings, used in place of new patient assessments and annual check-ups for healthy patients and as a supplement to annual check-ups for chronically ill patients. There are a few potential benefits to the establishment of Preventive Medicine departments. First, it would consolidate tracking and management of patients’ overall health into one appointment. Second, with efficient usage Preventive Medicine departments could also be used to increase revenue. One of the greatest challenges that FQHSs face is the recruitment and maintenance of a pool of healthy patients to offset the costs of chronically ill patients visiting the clinic. A big turnoff for healthy patients visiting FQHCs is the long wait time for an appointment- often up to three hours. Though FQHSs are allowed to offer up to $20 in gift cards as an incentive, many may feel that the disadvantage of waiting hours for an appointment outweighs the potential benefit of a gift card. The establishment of a Preventive Medicine department offers opportunity to solve this problem by providing incentives in the context of efficient annual check-up appointments consisting of a basic physical exam and screening tests.
The development of an organized system could accommodate a higher load of healthy patients more efficiently, therefore offsetting the costs of the chronically ill.

CONCLUSION

"In theory, there is no difference between theory and practice. But in practice, there is."
-Yogi Berra

While many suggestions and ideas can be inspired by the results of cycles 1 and 2 of the cervical cancer screening program, it is not possible to master the patient culture, clinic culture, billing and insurance policies, grant and funding requirements, etc. within a six week fellowship. Before moving forward with the program and making changes based on this data, it is important to discuss results and suggestions with clinical staff and get a more realistic, practice and experience-based input on changes being made to the WHCC cervical cancer screening program.
APPENDIX

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A.</td>
<td>WHCC Cervical Cancer Screening Trial PDSA Cycle 1: Reminder System Set-up</td>
</tr>
<tr>
<td>B.</td>
<td>WHCC Cervical Cancer Screening Trial PDSA Cycle 2: Adult Medicine Cervical Cancer Screening Trial</td>
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<tr>
<td>C.</td>
<td>WHCC Cervical Cancer Education Materials</td>
</tr>
<tr>
<td>D.</td>
<td>WHCC Cervical Cancer Screening Trial PDSA Cycle 1 Data</td>
</tr>
<tr>
<td>E.</td>
<td>WHCC Cervical Cancer Screening Trial PDSA Cycle 2 Data</td>
</tr>
<tr>
<td>F.</td>
<td>Adult Medicine Cervical Cancer Screening Trial Workflow</td>
</tr>
<tr>
<td>G.</td>
<td>Billing Codes and Procedures for Cervical Cancer Screening</td>
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</tbody>
</table>
Appendix A and B: Cervical Cancer Screening Trial PDSA Cycle 1 (pg. 14) and Cycle 2 (pg. 15)
### PLAN

<table>
<thead>
<tr>
<th>Aim</th>
<th>Increase cervical cancer screening rates for female patients between ages 21-64 from 67.1% to 75%.</th>
</tr>
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<tbody>
<tr>
<td>(2020 Goal: 93% (Healthy People 2020)</td>
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</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Increase in screening rates that is sustained in follow-up analysis. eCW (EHR) data reports can be analyzed to determine pap screening rates (fraction of qualified screening patients receiving pap).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Change</th>
<th>Reminder System - First stages of the Quality Improvement Work Plan implementation (item c):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Health maintenance alert feature in EHR implemented to remind providers to order cervical cancer screenings</td>
</tr>
<tr>
<td></td>
<td>b. Various reminder calls/letters/postcards are generated for patients who are due for screening or who have not had a visit in the last 12 months (as of Jan 2013 the last visit is within three years)</td>
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### ACT

<table>
<thead>
<tr>
<th>Questions to be answered:</th>
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<tbody>
<tr>
<td>Were cervical cancer screening rates increased by these efforts?</td>
</tr>
<tr>
<td>What fraction of patients actually received calls?</td>
</tr>
<tr>
<td>What fraction of patients made the follow-up appointment in Ob/Gyn to schedule their cervical cancer screening?</td>
</tr>
</tbody>
</table>

Cervical screening efforts were increased by the implementation of the EHR health maintenance alert and reminder call system (phone tree two days before appointment and live reminder call the day before the appointment). However, even with these efforts, WHCC falls short of its goals. It appears that although patients are referred to Ob/Gyn for their pap screening, due to a variety of reasons, many do not follow-up and make that appointment, therefore remaining unscreened.

Targeting patients when they are in Ob/Gyn department is not sufficient. Even in 100% Ob/Gyn patients are up-to-date, WHCC will fail short of goals. A proposed solution to this problem may be to offer pap screening to patients who come to Adult Med. For their regular appointments.

### STUDY

- eCW data sets will be pulled for Jan-June 2013 (first 6 months of implementation) and will be analyzed to detect if there was an increase in screening rates by these efforts.

  - Screening rate = \( \frac{\text{#pt (F, 21-64) who visited WHCC for primary care and received pap smear}}{\text{#pt (F, 21-64) who visited WHCC for primary care total}} \times 100\% \)
  
- Note: deceased and inactive pts still show up in reports so affect “apparent” rates

**Results:**

63.52% of female patients eligible for cervical cancer screening (F ages 21-64 with no history of abnormal pap smear results and no pap in 3+ years) who were due for a pap smear, received a pap smear.

If patient flow and Adult Med→Ob/Gyn referral and follow-up system remain “as is”, even if 100% of patients visiting the Ob/Gyn department are up-to-date on their cervical cancer screening, WHCC will fail short of its goal. If we can get a minimum of 35.31% of Adult Med. unscreened population to receive pap smears, WHCC will be able to meet its goal rate of 75%.
Questions to be answered:

- Were cervical cancer screening rates increased in Adult Medicine?
- Will having PA in adult medicine perform cervical cancer screening be more productive that current use? How can this model of “specialty procedures” in adult medicine be broadened to provide overall benefit to the health center?

Results:

By offering pap smears to Adult Medicine patients at the end of their AM appointments, the cervical cancer screening rate for the 104 patient sample size was increased from 79.8% to 98.1%, which is higher than the Healthy People 202 goal of 93%.

This model of “specialty procedures” in adult medicine can be broadened through the development of preventive medicine group appointments where patients receive education, all of their necessary screening tests for the year. This can possibly be used in place of new patient assessment appointments or annual check-up appointments for healthy patients with no chronic conditions.

Cycle 3 of the WHCC Cervical Cancer Screening program should address workflow and staffing questions.

### PLAN

#### Aim

(What are we trying to accomplish?)

- 2011 UDS: 67.14%
- 2012 Goal: 85%
- 2020 Goal: 93% (Healthy People 2020)

#### Measure

How will we know that a change is an improvement?

eCW (EHR) data reports can be analyzed to determine pap screening rates (fraction of qualified screening patients receiving pap).

#### Change

(What change are we making to result in the improvement?)

For this particular 2-3 week cycle, the aim is to demonstrate the need for more cooperation b/w Adult Medicine and Ob/Gyn by placing a non-MD Ob/Gyn staff member (nurse, PA, etc.) in adult medicine dedicated to providing adult female patients with pap screening tests, adding closer interactions into the multi-disciplinary approach (Adult Med and Ob/Gyn interacting within apt instead of relying on computer referral system).

### DO

#### Action date: Action:

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Baseline analysis; calculated baseline and projected #s</td>
</tr>
<tr>
<td>07/15-19/2013</td>
<td>PCLP Intern/Scholar, Adrienne NH Baksh, trained on eCW and pap smear collection</td>
</tr>
<tr>
<td></td>
<td>Dr. Seamster to send memo to Adult Medicine staff about the trial</td>
</tr>
<tr>
<td></td>
<td>Adrienne to give in-service to staff on trial</td>
</tr>
<tr>
<td>07/22-08/02/2013</td>
<td>Trial protocol:</td>
</tr>
<tr>
<td></td>
<td>1. Day before appointments: Adrienne eCW to look up Adult Medicine appts and list female pt 21-64 who have not had pap in 3+ years</td>
</tr>
<tr>
<td></td>
<td>2. Give MD notice to put in order for Pap and direct pt to Adrienne at conclusion of appointment or while waiting for appointment</td>
</tr>
<tr>
<td></td>
<td>3. Adrienne collects pap sample and submits to lab; possible short survey in order to determine barriers to screening</td>
</tr>
<tr>
<td>08/05-09/2013</td>
<td>99% pap results received within one week of collection</td>
</tr>
<tr>
<td></td>
<td>Begin templates for data analysis and evaluation of trial</td>
</tr>
<tr>
<td>08/12/2013-completion</td>
<td>Data analysis and presentation of results</td>
</tr>
<tr>
<td></td>
<td>Brainstorm for Cycle 2 (TBD based on Cycle 1 data)</td>
</tr>
</tbody>
</table>
CERVICAL CANCER

BASIC INFORMATION

DESCRIPTION
Cervical cancer is cancer of the cervix. The cervix is about an inch long and is the narrow end of the uterus where it meets the vagina. This cancer develops slowly over time. The cervical cells first go through precancerous changes (called dysplasia). In these early stages, there are usually no symptoms. That is why cervical cancer screening is important. Abnormal cells can be found before cancer develops. Average age at diagnosis is 50 to 55, but it can affect women of all ages.

FREQUENT SIGNS & SYMPTOMS
- As the cancer progresses, the following may occur:
  - Heavy or longer menstrual periods. Bleeding occurs between periods, after intercourse, or after menopause.
  - Vaginal discharge that has an odor.
  - Pelvic discomfort or pain during intercourse.
  - Later stages or advanced disease:
    - May have appetite and weight loss or fatigue.
    - Swelling in one leg. Pain in the back, pelvis, or legs.
    - Bloody urine, constipation, and other symptoms.

CAUSES
Human papillomavirus (HPV) plays a role. There are many different types of HPV. It is a sexually transmitted disease and a woman can have it for many years and not know it. Most HPV infections heal on their own and most women with HPV do not develop cancer. Other factors are involved in addition to an HPV infection that trigger cancer cells to grow.

RISK INCREASES WITH
- Early age of first intercourse.
- Multiple sex partners or sex with men who have had multiple sexual partners.
- Multiple pregnancies.
- Human papillomavirus infection.
- Use of oral contraceptives (birth control pills).
- Family history of cervical cancer.
- Weak immune system due to illness or drugs.
- Having sexually transmitted diseases.
- Low income women. Poor nutrition. Smoking.
- Daughters of mothers who took DES (diethylstilbestrol) to prevent miscarriage between 1938 and 1971.

PREVENTIVE MEASURES
- Avoid the risks listed above as much as possible.
- Limit the number of sexual partners.
- Use condoms when you have sexual intercourse.
- Get regular pelvic exams, Pap smears, and HPV tests.
- Quit smoking or never start smoking.
- HPV vaccine (for ages 11–26). It protects against most, but not all, HPV types that cause cancer. It is most effective when given before first sexual contact.

EXPECTED OUTCOMES
- Usually curable with early diagnosis and treatment.

POSSIBLE COMPLICATIONS
- Complications often occur from treatments.
- Cancer may recur. Advanced cancer can spread to other parts of the body, which can be fatal.

DIAGNOSIS & TREATMENT

GENERAL MEASURES
- Your health care provider will do a physical exam and a pelvic exam. Medical tests will be done to diagnose the cancer and to see if it has spread (called staging).
- Treatment will depend on the stage.
- Surgery may be done to remove the cancerous area. During early cancer stages, this may involve only a small area of the cervix. This will still allow childbearing. The surgery is usually done as an outpatient.
- The cancer cells may be frozen (cryotherapy), cut out with an electrical loop, burned away by laser, or removed in a cone biopsy. Your health care provider will explain these options and any risk factors involved.
- Advanced stages may require removing the reproductive organs and other tissue (hysterectomy).
- Chemotherapy and radiation therapy (internal, external, or both) are other treatments for advanced cancer.
- To learn more: American Cancer Society; (800) ACS-2345; website: www.cancer.org or National Cancer Institute; (800) 4-CANCER; website: www.cancer.gov.

MEDICATION
- Anticancer drugs (chemotherapy) may be prescribed.

ACTIVITY
- Limits on activities will depend on treatment. You will be advised when you can resume sexual activity.

DIET
- Eat a well-balanced diet. Nutritional supplements may be needed if regular food cannot be tolerated.

NOTIFY OUR OFFICE IF
- You or a family member has symptoms of cervical cancer.
- New symptoms develop after treatment.
- You need to schedule a pelvic exam or Pap smear.

Special notes:

We highly recommend you schedule a full annual gynecological exam with our OB/Gyn provider. To make your appointment, please call: (323) 568-3000.

More notes on the back of this page

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CANCER CERVICAL
(Cervical Cancer)

INFORMACION BASIC

DESCRIPCION
El cáncer cervical es cáncer del cuello uterino. El cuello uterino mide alrededor de una pulgada de largo y es el extremo angosto del útero que desemboca en la vagina. Este cáncer se desarrolla lentamente con el tiempo. Las células cervicales primero pasan por cambios precancerosos (llamados displasias). En sus primeras etapas, normalmente no manifiestan síntomas. Por lo tanto, es importante que todas las mujeres se hagan pruebas cervicales. Se pueden encontrar células anormales antes de que el cáncer se desarrolle. La edad promedio de diagnóstico es 50 a 55 años, pero puede afectar a mujeres de todas las edades.

SIGNOS & SINTOMAS FRECUENTES
- Conforme el cáncer avanza, lo siguiente puede ocurrir:
  - Periodos menstruales pesados o más largos. Sangrado ocurre entre los periodos después del coito o después de la menopausia.
  - Secreción vaginal con mal olor.
  - Molestia en la pelvis o dolor durante el coito.
  - Atas posterior o enfermedad avanzada:
    - Puede haber pérdida del apetito y de peso o fatiga.
    - Hinchazón de una pierna. Dolor en la espalda, pelvis o piernas.
    - Orina con sangre, estreñimiento y otros síntomas.

CAUSAS
El virus del papilloma humano (HPV, por sus siglas en inglés) juega un papel. Hay muchas clases diferentes de HPV. Es una enfermedad transmitida sexualmente y una mujer la puede tener por muchos años sin saberlo. La mayoría de las infecciones de HPV se curan por sí mismas y la mayoría de las mujeres con HPV no desarrollan cáncer. Además del HPV, otros factores involucrados desencadenan el crecimiento de las células de cáncer.

EL RIESGO AUMENTA CON
- Relaciones sexuales a una edad precoz.
- Multiples parejas sexuales o relaciones sexuales con hombres que han tenido múltiples parejas sexuales.
- Multiples embarazos.
- Infección con el virus de papiloma humano.
- Uso de anticonceptivos orales (píldoras anticonceptivas).
- Antecedentes familiares de cáncer cervical.
- Sistema inmunológico debilitado debido a enfermedades o medicamentos.
- Tener enfermedades de transmisión sexual.
- Mujeres con bajos ingresos. Mala nutrición. Fumar.
- Hijas de madres que tomaron DES (dietilestrolestro) para prevenir abortos espontáneos entre 1958 y 1971.

MEDIAS PREVENTIVAS
- Evite los riesgos enumerados arriba tanto como sea posible.
- Límitese el número de sus parejas sexuales.
- Use condones cuando tiene relaciones sexuales.
- Obtenga exámenes pélvicos regularmente, pruebas de Papanicolaou y pruebas de HPV.
- Deje de fumar o nunca empiece a fumar.
- La vacuna contra el HPV (para los 11-26 años de edad). Protege contra la mayoría, pero no todos, los tipos de HPV que causan el cáncer. Es más efectiva cuando se administra antes del primer contacto sexual.

RESULTADOS ESPERADOS
Generalmente curable con diagnóstico y tratamiento tempranos.

COMPLICACIONES POSIBLES
- Las complicaciones a menudo ocurren como resultado de los tratamientos.
- El cáncer puede reaparecer. El cáncer avanzado se puede propagar a otras partes del cuerpo, lo que puede ser fatal.

DIAGNOSIS & TRATAMIENTO

MEDIDAS GENERALES
- Su proveedor de salud le hará un examen físico y un examen pélvico. Se le harán pruebas clínicas para diagnosticar el cáncer y determinar si se ha propagado (llamada estadificación).
- El tratamiento dependerá de la etapa.
- Se puede realizar cirugía para extraer el área cancerosa. Durante las etapas tempranas del cáncer, eso puede involucrar solamente un área pequeña del cuello uterino. Bajo el permiso puede tener hijos. Generalmente la cirugía se hace como paciente ambulatorio.
- Las células de cáncer pueden ser congeladas (crioaurupenia), cortadas con un circuito eléctrico, quemadas con un laser o extraídas con una biopsia en cono. Su proveedor de salud le explicará todas las opciones y cualquier factor de riesgo involucrado.
- Tras avanzadas pueden requerir la extracción de los órganos reproductivos y otros tejidos (histerectomía).
- Otros tratamientos para un cáncer avanzado son la quimioterapia y la radioterapia (interna, externa, o ambas).

MEDICAMENTOS
Se le pueden prescribir medicamentos anticancerígenos (quimioterapia).

ACTIVIDAD
Los límites en las actividades dependerán del tratamiento. Se le informará cuando puede reunirse con las relaciones sexuales.

DIETA
Consuma una dieta bien balanceada. Puede necesitar suplementos nutricionales si no puede tolerar los alimentos regulares.

AVISENOS AL CONSULTORIO SI
- Usted o un miembro de su familia tiene síntomas de cáncer cervical.
- Se desarrollan nuevos síntomas después del tratamiento.
- Necesita hacer una cita para un examen pélvico o la prueba de Papanicolaou.

NOTAS ESPECIALES:
Le recomendamos que procure una evaluación ginecológica con nuestro proveedor de OB/Gin lo más pronto posible para completar su examen pélvico anual. Para una cita, llame al (323) 568-3000.

Notas adicionales al dorso de esta página

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Appendix D. WHCC Cervical Cancer Screening Trial PDSA Cycle 1 Data

### Reminder System Set-up Data Jan-June 2013

<table>
<thead>
<tr>
<th>Department</th>
<th>#</th>
<th>% total qualifying pt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Pap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ob/Gyn</td>
<td>1260</td>
<td>55.43</td>
</tr>
<tr>
<td>Adult Med.</td>
<td>172</td>
<td>7.57</td>
</tr>
<tr>
<td>No Pap Received</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ob/Gyn</td>
<td>102</td>
<td>4.49</td>
</tr>
<tr>
<td>Adult Med.</td>
<td>739</td>
<td>32.51</td>
</tr>
</tbody>
</table>

n= 2273 100

*w/o correction for 12 patients b/c <1%

Qualifying patient: female between ages 21 and 64 who have not received a pap smear in 3+ years

### Cervical Cancer Screening Jan-June 2012 vs. 2013

![Cervical Cancer Screening Jan-June 2012 vs. 2013 chart](chart1.png)

### % Increase in Cervical Cancer Screenings January-June 2012 to 2013

![% Increase in Cervical Cancer Screenings January-June 2012 to 2013 chart](chart2.png)
Number of Patients Receiving Pap Cervical Cancer Screening Within SPA6 Zip Code

- 2012: 2231
- Projected 2013: 2880

% Result Date Within 1 week
2012, Jan-June 2013

- 2012
- Jan-Jun 2013
Appendix E. WHCC Cervical Cancer Screening Trial PDSA Cycle 2 Data

<table>
<thead>
<tr>
<th>Adult Medicine Cervical Cancer Screening Trial Data:</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Female patients age 21-64 encounters</td>
<td>26</td>
</tr>
<tr>
<td>Female patients age 21-64 surveyed with no history hysterectomy</td>
<td>23</td>
</tr>
<tr>
<td>Surveyed patients who received pap smear within 3 years</td>
<td>18</td>
</tr>
<tr>
<td>Surveyed patients who received last pap smear more than 3 years ago</td>
<td>5</td>
</tr>
<tr>
<td>Surveyed patients who received pap smear &gt;3yrs ago who received following adult medicine appointment</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix F. Adult Medicine Cervical Cancer Screening Trial Workflow

Adult Medicine Cervical Cancer Screening (August 2-8, 2013)
Workflow
Adrienne NH Baksh (AB), GE-NMF PCLP Scholar, Summer 2013
Mauricette Montredon, Director of Clinic Operation, WHCC

1. Patient arrives for Adult Medicine (AM) appointment.

2. AB looks patient data in EMR Medical History for “Date of Last Pap Smear” or checks Lab Results.
   - If date of last pap <3yrs: recorded for records.
   - If date of last pap >3yrs: “sticky note” in EMH that says “CHECK DATE OF LAST PAP, IF 3+ YEARS SEND TO ROOM L FOR PAP.”
   - If date unknown: survey patient while waiting before appointment, if date of last pap >3yrs, give note that says “Date of Last Pap: [date]. Please send to Room L for PAP.”

3. AM provider completes Progress Note, orders, billing, etc. per normal procedure and leaves chart open.

4. Provider or AB orders pap smear under treatment in EMR. (V76.2 Pap smear for cervical cancer screening, Lab order SUREPATH PAP)

5. Pt visits AM Room L to receive pap smear.

6. AB collects pap smear, writes name and DOB on collection tube, prints order and places in plastic bag with order slip and collection tube

7. In Progress Note under Treatment: “Pap smear taken. –ANhB.”

8. In Education Note: “Patient received cervical cancer education materials and recommendation to follow-up with complete annual gynecological exam in Ob/Gyn department. Contact information for appointment included with education materials. -ANhB”

9. Patient leaves AM appointment

10. Provider reviews pap smear documentation, completes note if necessary, submits billing, and locks note to complete
10. Provider reviews pap smear documentation, completes notes, submits billing, and locks note to complete encounter.

↓

11. AB submits pap specimen to lab

↓

12. Lab sends lab result to AM provider.

↓

13. RESULTS:

<table>
<thead>
<tr>
<th></th>
<th>Negative:</th>
<th>Positive:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM provider reviews normal results and enters result to reset CDSS (EHR)</td>
<td>AM provider transfers patient with abnormal results to Dr. Gonzalez (Ob/Gyn); no review necessary, Dr. Gonzalez will do complete intervention</td>
</tr>
<tr>
<td></td>
<td>alert for 3 years</td>
<td></td>
</tr>
</tbody>
</table>
Appendix G. Billing Codes and Procedures for Cervical Cancer Screening

**Adult Medicine Cervical Cancer Screening Trial**

*July 29-August 9, 2013*

Adrienne NH Baksh, GE-NMF-PCLP Scholar, Summer 2013
Mauricette Montredon, Director of Clinical Operation, WHCC

**BILLING AND COVERAGE PROCEDURE/WORKFLOW:**

<table>
<thead>
<tr>
<th>COVERAGE</th>
<th>PROCEDURE</th>
<th>BILLING CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HWLA UNMATCHED</strong></td>
<td>Every Woman Counts/CDP</td>
<td>V76.2 (Pap)</td>
</tr>
<tr>
<td><strong>BPHC</strong></td>
<td>1. AB: fill out CDP/Every Woman Counts paperwork</td>
<td>V76.10 (Breast CNCR Screen)</td>
</tr>
<tr>
<td><strong>WHC PPP CCEP</strong></td>
<td>a. DCP Clinical Breast Examination form</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. CDP Gynecologic History and Pelvic Examination form</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Refer pt to MCH with referral slip and completed forms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. MHC approves pt for CDP/EWC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Pt returns to AM for Pap and CBE w/ EWC card to verify coverage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Pap collected and documented per trial procedure/workflow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. CBE performed and documented ; pt educated about breast cancer screening and referred for mammogram by MHC if 40+ and have not received one in the past year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. CDP paperwork sent to MCH for scanning into chart at end of day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o For CDP, make sure pt does not have medical insurance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Eligibility determined by income and age</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Covered; no need for additional procedures beyond trial workflow</strong></td>
<td>V76.2 (Pap)</td>
</tr>
<tr>
<td><strong>HWLA MATCHED</strong></td>
<td>Medical-managed care (see attached chart)</td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH NET</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRIVATE INSURANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAMILY PACT</strong></td>
<td>1. Need note related to discussion of family planning method (V25.09)</td>
<td>V25.09 (Family Planning) V76.2 (Pap)</td>
</tr>
<tr>
<td></td>
<td>a. What method using</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Sexual Hx</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Reproductive health plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Referred to Ob/Gyn for follow-up</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Proceed per trial procedure/workflow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Green FP card</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Patient must be using birth control method</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o No medical insurance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o If FM from other clinic, can be recertified in MCH</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o 40+ annual mammogram</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES
9 Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology. Key Indicators of Health by Service Planning Area; March 2013.
12 Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology. Key Indicators of Health by Service Planning Area; March 2013.