



Benefits, Barriers, and Challenges: Caring for Women in a Community Clinic Setting

**The Women's Health Center Evaluation Project
Final Project Report**

Kamella Tate, M.F.A., Ed.D.

with

Dennis Hocevar, Ph.D. & Melissa Wallman



ETSNER PEDIATRIC & FAMILY MEDICAL CENTER

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Women's Health Center Evaluation Project
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EXECUTIVE SUMMARY

One need look no further than the local paper to read about the healthcare crisis in America: Soaring costs, decrements in quality, fewer employers offering insurance benefits, fewer insurers offering affordable coverage – issues affecting all of us but ones that place particular burdens on our already-vulnerable neighbors. Neighbors who are poor, uneducated, minorities . . . and female. Recent studies paint a disturbing picture of barriers to access, gender- and ethnicity-specific disparities in quality, and financial disadvantages that threaten the physical and emotional well-being of women of all ages.

Women-Focused Care: The Same But Different

Women are not simply variations on men. Both groups need, and have the right to, targeted approaches and choices that enable them to realize and maintain the highest possible levels of health and well-being. While anatomical, biological, and physiological differences between men and women are the most obvious indicators that healthcare policy and practice need to be responsively differentiated, contributory factors such as economic status, availability of social supports, and cultural expectations and norms have tremendous influence on the quality and accessibility of healthcare resources for women.

- Poverty, in particular, is associated with women's decreased use of health services and poor outcomes. Low-income women tend to delay seeking care and go without drugs or other therapies because of concerns about costs (Salganicoff et al., 2005).
- Social disadvantages, cultural values, discrimination, lack of culturally appropriate services, and inadequate childcare and transportation are just a few of the indirect barriers women must overcome to access medical care. (Brittle & Bird, 2007)

The Women's Health Center: A Case Study In Making A Difference

In 2004, California Hospital Medical Center (CHMC) embarked on a multi-year plan to divest its portfolio of community clinics – including the Keith P. Russell Women's Health Clinic, started over 20 years previously as an outpatient department. Eisner Pediatric & Family Medical Center's (EPFMC) proposal to acquire the Clinic was accepted and by 2007, the renamed Women's Health Center (WHC) was "in residence" at EPFMC's Olive Street campus.

- **Choosing Care: WHC Services** In 2009/10, the WHC provided 21,326 clinical, educational, and ancillary visits. Approximately 30 percent of appointments are made for gynecological exams and well-woman care, and 70 percent for pre-conception, pregnancy, and hospital-based labor and delivery services.
- **Seeking Care: WHC Patients** EPFMC's highly urbanized service area encompasses several communities in downtown and South Los Angeles, with most patients coming from Los Angeles County Department of Public Health Service Planning Areas 4 (SPA 4, 32 percent) and 6 (SPA 6, 68 percent). Demographically, WHC patients reflect the target population for the entire agency: Low- and very low-income (98 percent live at or below 1.5 FPL), cultural and ethnic minorities (Latino, 86.3 percent; African American, 11.6 percent), uninsured (44 percent), and young (42 percent are less than 24 years old).
- **Giving Care: WHC Providers** In 2009/10, the WHC roster included 15 CNMs (full- and part-time and contracted), 10 board-certified OB/GYNs (full- and part-time and contracted), and 17 enabling professionals (MAs, RNs, educators, and counselors).

The WHC Evaluation Project

Purposes and Objectives

As part of a larger capital grant made in 2008, The California Endowment provided support for a large-scale assessment and outcomes evaluation of the WHC. Conceived and designed as a mixed-methods assessment of dimensions of clinical and operational quality, the project was guided by three improvement-driven purposes:

1. Formative: To identify strengths and weaknesses; to support quality improvement plans and accountability systems; to identify current and emerging opportunities
2. Summative: To document achievements and challenges relative to baseline data; to demonstrate value relative to local, state, and national standards
3. Knowledge Generation: To identify promising practices; to describe model(s) of quality care and delivery systems; to contribute to policymaking and reform

What the Evidence Shows

Quality in any large-scale endeavor is related to a significant number of inputs: People, settings, equipment, training, feedback mechanisms, pay scales, motivation, and rates of compliance, to name just a few. A review of the literature uncovered four broad dimensions of effectiveness relevant to the WHC's institutional and strategic goals: Processes of care, health outcomes, patient satisfaction, and provider satisfaction.

Processes of Care

- ✓ Annual/biannual PAP tests: The Center performed better than its peers at both the state and national levels at providing recommended gynecological exams.
- ✓ Initiation of prenatal care: 87 percent of WHC perinatal patients started care in their first trimester – compared with 77 percent statewide and 68 percent nationally.
- ✓ APNCU Index: Rates of Adequate/Adequate Plus prenatal care (Kotelchuck, 1994): The WHC met the rate reported for the county while bettering that for the city and California.

Health Outcomes

- ✓ Preterm Delivery: In 2010, less than 7.1 percent of WHC patients delivered prematurely, in comparison to 10.9 percent statewide, 11.9 and 11.7 in the city and county of Los Angeles respectively, and 12.7 nationally.
- ✓ Low Birthweight Births: The WHC's LBW rate of 5.4 percent compares favorably to that achieved by three key comparison groups: EPFMC Service Area (7.8 percent), 118 California FQHCs (5.6 percent), and 1131 U.S. FQHCs (7.2 percent).
- ✓ NICU Admissions: The WHC NICU admissions rate of 4.9 percent (women initiating care at the WHC, including multiple births) bests the 6.1 percent reported by the 19 states that reported in 2006 using the new birth certificate.

Patient Satisfaction

- ✓ With Prenatal/Childbirth Education Classes: Average patient score for items coded "General Satisfaction": 1.96 on a scale with a theoretical mean of 1.
- ✓ With Prenatal Care Experience: Average patient score for items coded "General Satisfaction": 2.42 on a scale with a theoretical mean of 1.5.
- ✓ With Hospital Experience: Average patient score for items coded "General Satisfaction": 2.32 on a scale with a theoretical mean of 1.5.

Provider Satisfaction

- ✓ Overall, satisfaction among providers of perinatal care through and at the WHC outweighed dissatisfaction in 72 percent of items on a questionnaire developed for the study. Explanatory factors include a **positive workplace culture** that encourages **collaboration** between providers, staff, and patients, and fosters a strong sense of **personal pride** and **shared commitment**.

Implications: Practice and Policy

Promising Practices

What practices were brought to light by the WHC evaluation project that might be feasible strategies for policymaking and program building in similar environments?

- The WHC is committed to **culturally responsive care and relationships**, including having **linguistically competent** support staff and medical assistants available.
- The WHC's marketing and patient recruitment efforts draw on **community knowledge and community-based outreach**.
- The WHC is **proactive and persistent about patient follow-ups** to ensure they keep appointments, understand treatments, and stay connected.
- The WHC emphasizes both "**high touch**" **relationships** between patients and providers and **visible and congenial collaborations** between clinicians and staff.

Recommendations

By employing a **data-driven systems model** as an evaluative lens, providers and clinical practices will be able to better identify and understand effectiveness. Building knowledge of what works, why, and how to improve operations at every level requires:

- Fostering organizational "cultures of evidence"
- Implementing single- or multi-agency (colocated) programs of practitioner research
- Designing, integrating, and using high quality data management systems
- Committing to systematic QI strategies that include benchmarking and goal setting

"With the Least Harm"

A rational model of medical care should be evidence based and constructed on the principle of "effective care with the least harm" (Sakala, 2008, p. 68). The logic of evidence-based care offers the most feasible and affordable alternative to the expensive, confusing maze that too many patients confront when attempting to access healthcare in America. If the goals of administrators, providers, and policymakers are to maximize the good and minimize the bad, models such as the Women's Health Center suggest ways to optimize the allocation of scarce public and private resources to benefit even the most vulnerable populations.

After a decade of erosion in employer-sponsored coverage, rapidly rising health care costs, and persistent growth in the number of the uninsured, health reform has reemerged as a national policy issue. Women have much at stake in this national debate in their roles as health care consumers, mothers, caregivers, and as an integral part of the health care workforce. (Salganicoff, 2007, p. 275)

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EISNER PEDIATRIC & FAMILY MEDICAL CENTER: 90 YEARS OF CARING

Eisner Pediatric & Family Medical Center is a quality-focused, nonprofit community health center dedicated to improving the physical, social, and emotional well-being of people in the communities we serve, regardless of income. (Mission statement)

History

Founded in 1920, the Anita M. Baldwin Hospital for Babies – as Eisner Pediatric & Family Medical Center (EPFMC) was first known – occupied three beds on the campus of California Hospital. By 1945, the organization was opening the first preschool dental clinic in the western United States while overseeing 30 inpatient pediatric beds at its own facility and under a new name: California Babies' and Children's Hospital.

When the Center's current President and CEO, Carl E. Coan, took over the agency in 1990 (by then known as the Pediatric & Family Medical Center), he inherited a busy, growing company that offered adult and pediatric dental care, adult medical care, infant, toddler, and preschool day care, mental health services, and a variety of wellness education programs. The Eisner name was added in 2002 to recognize a \$2.5 million gift from the Eisner Foundation for a capital project that added over 30,000 square feet to the Center's campus at 1530 South Olive Street in downtown Los Angeles

Designated a Federally Qualified Health Center (FQHC) in 2004, EPFMC's growth continued in 2007 with the repurposing of existing space in the Annenberg Medical and Dental Pavilion into a dedicated home for the newly acquired Women's Health Center (WHC).

A Medical Home Model

Over the decades, EPFMC has strategically grown its portfolio of programs and services to address more fully the diverse challenges and unmet needs that characterize its client community. Working within a "medical home" model, staff and providers are encouraged to organize their departments and manage their tasks with an eye on the whole individual – to pay attention not only to physical health and well-being, but also to social, economic, psychological, and cultural dimensions of their patients' lives.

Studies indicate that a relationship with a medical home is associated with better health, on both the individual and population levels, with lower overall costs of care and with reductions in disparities in health between socially disadvantaged subpopulations and more socially advantaged populations.

(Starfield & Shi, 2004, p. 1497)

High quality, affordable medical services lead to lower healthcare costs, whether those costs are borne by individuals or public or private insurers and providers. When accessed through a community-based medical home, primary and specialist care; disease prevention, early detection and treatment; prenatal, birth, and postpartum services; and self-care education and management not only improve health outcomes but lessen reliance on over-burdened and expensive systems of emergency care.

In 2009, the Center's 208 FTE physicians, midwives, nurses, therapists, social workers, psychologists, and support personnel provided clinical care and health education to 24,741 patients accessing services that included: Adult and Pediatric Medical Clinics (primary,

episodic, chronic care); Women's Health Center (family planning, prenatal, maternity, gynecology); Dental Clinic (screening, diagnosis, treatment, oral health instruction); Mental Health Department (individual and group therapy, parenting classes); School-Based Health Centers (Los Angeles Senior High, Abram Friedman Occupational Center, Metropolitan High School); Early Intervention Services (developmental and physical disabilities); and supplemental programs such as Reach Out and Read, a full-service pharmacy, health fairs, and community screenings.

Caring for a Community at Risk

EPFMC's highly urbanized service area encompasses several neighborhoods in downtown and South Los Angeles, with most patients coming from Los Angeles County Department of Public Health Service Planning Areas 4 (SPA 4, 32 percent) and 6 (SPA 6, 68 percent). Over 750,000 people reside in the 13 zip codes called "home" by two-thirds of the Center's client community, areas distinguished by high population density, overcrowded schools, high rates of crime and gang-related disturbances, high concentrations of un- and underemployment, and low levels of literacy and formal schooling. Overall, the Center's target population is younger, less educated, and poorer than residents of any other area in Los Angeles (Census 2000).

- In 2009, EPFMC provided 107,852 clinical visits.
- Of patients who report their income level, 98 percent live below 150% of the Federal Poverty Level (in 2009, 10 percent failed to report).
- Eighty-seven percent of the Center's patients are Latino/Hispanic, 7 percent African-American, 1 percent Asian/Pacific Islander, and 5 percent White and Other.
- Sixty-eight percent are female, 32 percent male.
- Infants/Toddlers (0-5) make up 20 percent of the patient population, with children (6-12) comprising 13 percent, youth (13-18) 16 percent, adults (18-54) 45 percent, and older adults (55+) 6 percent.
- Nearly 40 percent of all patients report being best served in a language other than English (primarily Spanish).

Barriers to Care

One need look no further than the local paper to read about the healthcare crisis in America: Soaring costs, decrements in quality, fewer employers offering insurance benefits, fewer insurers offering affordable coverage – issues affecting all of us but ones that place particular burdens on the already-vulnerable and marginalized. The difficulties faced by both insured and uninsured Americans attempting to access basic healthcare are exacerbated for the Center's target population.

- Located in both State Assembly and Senate districts identified as having the highest levels of non-elderly uninsured (Assembly 46th – 34% uninsured; Senate 22nd – 33% uninsured [UCLA Center for Health Policy Research, 2009]), nearly 60 percent of the neighborhoods EPFMC serves have been designated as Medically Underserved Areas (MUA), with many closest to its Olive Street facility 100 percent MUA-designated. A significant number are also Health Professional Shortage Areas (HPSA).

While availability is certainly a problem, a wide range of difficult-to-overcome barriers further hinders patients' access to medical care. Cost is central, but transportation and childcare issues, poor understanding of health issues, high levels of unemployment (13.1%), severe educational deficits (one-half of adults over 25 have not completed high school), weak English skills, sociocultural disruption, and institutional discrimination all contribute to the paucity of help-seeking behaviors observed in the Center's client community.

ABOUT THE WOMEN'S HEALTH CENTER

In 2004, California Hospital Medical Center (CHMC) embarked on a multi-year plan to divest the organization of its portfolio of community clinics – including the Keith P. Russell Women's Health Clinic, started over twenty years previously as an outpatient department of the hospital. By 2006, the newly named Women's Health Center (WHC) became the last entity to be released through a competitive RFP process, with EPFMC's proposal accepted as the winning bid.

Although EPFMC has provided quality women-focused healthcare since its founding in 1920, the acquisition and development of the WHC was seen as representing a forward-looking opportunity not only to maintain valuable and much-needed medical services within the communities the agency serves, but also to consolidate and develop already-existing perinatal and well-woman programs.

The Same But Different

The health care needs of women are unique, reflecting the influence of complex and challenging economic, social and biological factors. Traditionally, women's health has referred to issues concerning reproduction and fertility; however, it is now recognized that women have a multitude of other health concerns including heart disease, cancer and depression. In addition, women are often the primary caretakers and health care decision makers for the entire family; therefore the health and well-being of women are important factors in the health of the entire family. (Los Angeles County Department of Public Health, Office of Women's Health, 2007)

While anatomical, biological, and physiological differences between men and women are the most obvious indicators that healthcare policy and practice need to be responsively differentiated, contributory factors such as economic status, availability of social supports, and cultural expectations and norms have tremendous influence on the quality and accessibility of healthcare resources for women.

In other words, women are not just variations on men. Both groups need, and have the right to, targeted approaches and choices that enable them to realize and maintain the highest possible levels of health and well-being. For example, both men and women develop heart disease, but *experience* different symptoms, *respond* differently to treatments, and *achieve* different levels and qualities of outcomes. The task of designing women-focused medical options that address gender-specific characteristics and social dimensions of both men's and women's lives has, in the last 30 years, gone from being considered a specialty to being recognized as a professional field.

Males and females have different patterns of illness and different life spans . . .
Dissimilar exposures, susceptibilities, and responses . . . result in variable
responses to pharmacologic agents and the initiation and manifestation of diseases
. . . Understanding the bases of these sex-based differences are important to

developing new approaches to prevention, diagnosis, and treatment. (Institute of Medicine, 2001, p. 4)

Choosing Care: WHC Services

Regardless of practice area or level, WHC providers and staff embrace a common "philosophy of care" organized around three beliefs.

1. Having a baby is a natural, healthy event.
2. Women desire to give birth in a caring environment
3. Women have a right to be heard regarding their healthcare needs.

Approximately 30 percent of WHC appointments are made for gynecological exams and well-woman care (including family planning services), 70 percent for pre-conception, pregnancy, and labor and delivery services. Many women in their reproductive years flow from one group to another, starting as primary care patients in adolescence, returning later as soon-to-be mothers, and then continuing to access well-woman services after they have stopped having children.

Gynecology and Well-Woman Care

Most of the medical care a woman will receive during her lifetime is designed to help her maintain day-to-day health and well-being. Along with basic gynecological services, annual well-woman exams may include tests for STIs, flu shots or other immunizations, screenings for heart disease, high blood pressure, diabetes, high cholesterol, and thyroid disease, and help with weight control and dietary changes. In addition to "regular" gynecology such as PAP tests, pelvic and breast exams, reproductive counseling, and peri- and postmenopausal medicine, the WHC is also equipped to provide a range of procedures and services that includes colposcopies, cryosurgeries, biopsies, hysterectomies, DNCs, and others.

Pregnancy Care

From pre-conception counseling to post-partum support and instruction, the WHC's foremost priority is caring for mothers-to-be throughout their pregnancies. A comprehensive list of services illustrates the depth of attention and breadth of expertise WHC staff and providers bring to the exam room.

- **Preconception Exams:** Preconception exams include risk assessments and initiation of appropriate interventions for behaviors, functional conditions, infectious diseases, and relevant genetic disorders that typically lead to poor outcomes for the mother and/or her fetus. Clinical evaluations of physical and psychosocial health support effective risk management and mitigation.
- **Prenatal/perinatal Care and Classes**
 - *Certified Nurse-Midwifery Program.* Staffed by 16 full- and part-time Certified Nurse-Midwives (CNM), the program works with low- to moderate-risk pregnancies under the direction of board-certified obstetricians.
 - *High-Risk Special Care Clinic.* Fully equipped for hard-to-manage pregnancies, whether those are linked to diabetes, hypertension, maternal age, physiological malformations, genetic markers, or endocrine disorders (staffed by residents and fellows from Cedars-Sinai).

- *Comprehensive Perinatal Services Program.* In addition to standard obstetric services, women enrolled in Medi-Cal's CPSP receive enhanced education and attention in the areas of nutrition, psychosocial support, and healthy lifestyles.
- Clinical and educational services by trimester.
 - First: Updates of risk profiles, physical exams, laboratory tests, prenatal vitamins, screening for STIs, maternal immunizations and chemoprophylaxis if indicated.
 - Second: Physical exams, obstetrical ultrasounds, fetal heart tones, laboratory tests, re-evaluative risk assessments, ongoing evaluation of psychosocial and lifestyle stressors.
 - Third: Physical exams for mother and fetus, confirmation of fetal position, group B streptococcus culture, cervix exams, nutritional and lactation assessments.
- Pregnancy seminars, maternity tours; childbirth preparation and Lamaze; nutrition workshops with a registered dietician and prenatal vitamins; ultrasound and fetal testing when necessary.
- The WHC is a certified provider of *Comenzando Bien*, a widely used bilingual/bicultural prenatal curriculum designed by the March of Dimes and the National Alliance for Hispanic Health. *Comenzando Bien* stresses the importance of a mother's health in the prevention of birth defects and infant mortality and increases access to perinatal care and postpartum counseling.
- As an alternative to traditional clinical care, mothers-to-be can access prenatal services through the WHC's *CenteringPregnancy® Program*. Women with roughly similar due dates join groups that meet regularly through the early postpartum period to engage in self-care activities and work one-on-one with a physician and/or CNM to complete standard assessments and discuss concerns.
- **Labor and Delivery.** The WHC includes the EPFMC OB Panel, an on-call, on-site partnership with California Hospital Medical Center that allows women seeking comprehensive childbirth and antepartum services or emergency care to be seen by a qualified practitioner whenever such care is needed. Physicians and midwives are available 24 hours a day, seven days a week.
 - At the OB Panel, the WHC partners with USC's residency programs in Obstetrics and Family Practice and with Cedar Sinai's residency program in Obstetrics.
 - The OB Panel delivers over a third of the babies born every year at CHMC.
 - Approximately half of the women whose babies are delivered by the OB Panel are WHC patients; the other half have received their prenatal care from the WHC's roster of MOU clinics that includes St. John's Well Child & Family Center, South Bay Family Health Care Center, T.H.E. (To Help Everyone) Clinic, and Clinica Monsignor Oscar Romero.
- **Postpartum Care** (continues for two months after a baby is born) encompasses recovery and self-care education, infant health/development, and breastfeeding and lactation classes (hospital grade breast pumps are available for rent).

Delivery of Services

In 2009/10, the WHC provided 21,326 clinical, educational, and ancillary visits.

- Provider visits (65.5 percent of the total) include appointments for obstetrics and gynecological exams, initial checkups, pregnancy tests, and family planning visits.
- Ancillary services (17.8 percent of the total) include childbirth and prenatal classes, dental exams for prenatal clients, reassessment visits, nutritional consults, new patient intake and registration appointments, and mental health counseling.
- Hospital visits (16.7 percent of the total) include gynecological procedures, labor and delivery care, triage for acute and episodic conditions, and fetal non-stress tests.

Seeking Care: WHC Patient Community

The women coming to the WHC for their primary and pregnancy care demographically reflect the target population for the entire agency: Low- and very low-income, cultural and racial/ethnic minorities, un- and under-insured, and young. For the purpose of the current study – determining effectiveness relative to guidelines and similar populations – a comparison of the WHC patient community on key characteristics is useful to better understand differences in processes and outcomes. As shown in Figure 1, EPFMC serves women who are significantly poorer than those visiting FQHCs both in California and nationally.

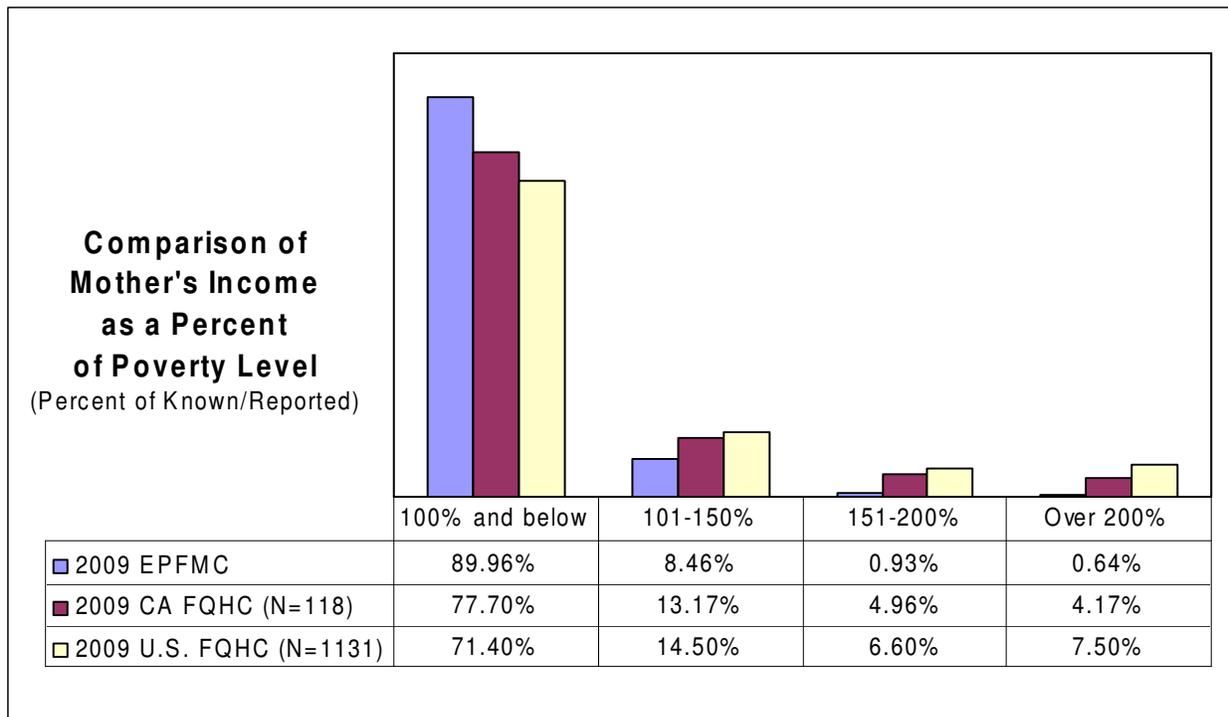


Figure 1. Comparison of Income as a Percent of Poverty Level

Figure 2 shows where EPFMC falls in terms of proportion of patients who are uninsured and who do not apply/cannot qualify for reimbursement programs such as Medicaid or public and private insurance plans. Although EPFMC somewhat better stateswide rates, California FQHCs generally report higher numbers of uninsured patients than those seen at the national level.

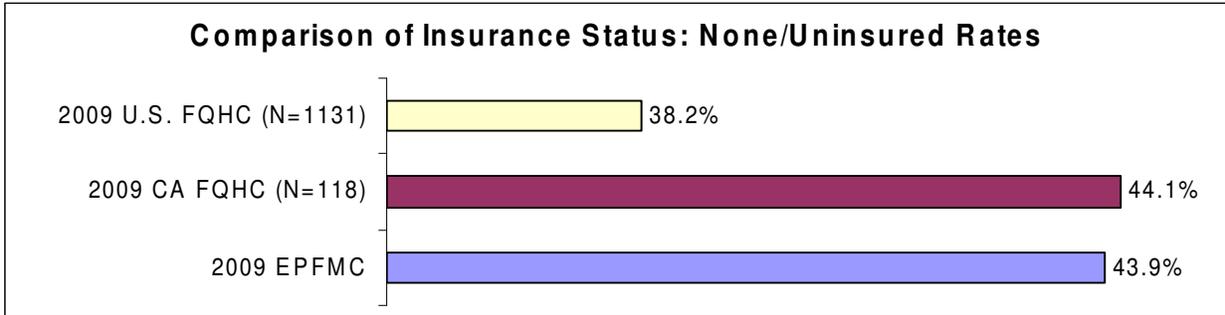


Figure 2. Comparison of Insurance Status

Finally, race/ethnicity has been identified as a risk factor for poor health outcomes, with preterm and low birthweights persistently high for both Hispanic/Latino and African American women. Below (Figure 3), we compare the proportion of WHC patients from both of these subgroups with that from 1) EPFMC overall and 2) women from the Center's service area who gave birth in 2009.

- Nearly 98 percent of the WHC's client population is either Hispanic/Latino or African American – versus 94 percent of patients served by all of EPFMC and 93 percent of new mothers in the Center's service area.
- Also, note the difference between EPFMC and the WHC in proportion of African American women served – 6.6 percent of all patients for the former versus 11.6 percent for the latter.

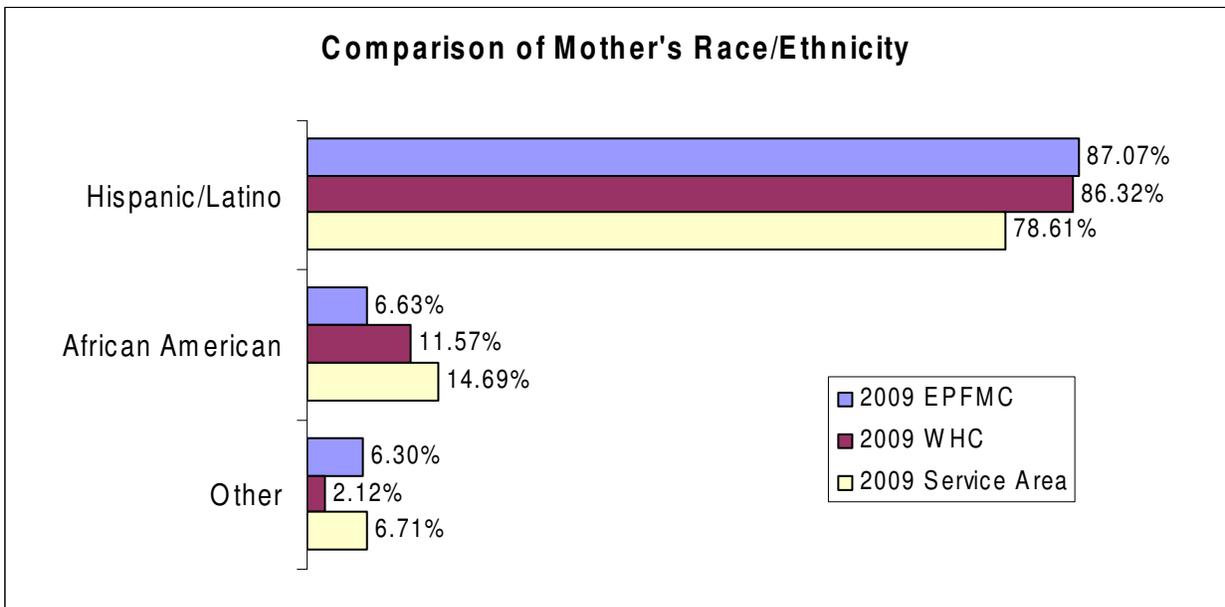


Figure 3. Comparison of Mother's Race/Ethnicity

Barriers to Care: Women Fall Further, Faster

In addition to the barriers to access discussed above, women coming to the WHC are at even greater risk due to the lasting – and pernicious – effects of a variety of sex-based factors that

correlate with inferior outcomes. Recent studies (see, for example, *Literature Review on Effective Sex- and Gender-Based Systems/Models of Care* [Brittle & Bird, 2007] and *Health Indicators for Women in Los Angeles County* [L.A. County Office of Women's Health, 2007]) – paint a disturbing picture of institutionalized discrimination, gender- and ethnicity-specific disparities in quality, and financial disadvantages that threaten the well-being of women.

- The quality of care women receive is typically worse than men receive, especially for acute conditions.
 - Although somewhat mitigated by women's more frequent use of preventive care, "the fact that women's higher rates of healthcare utilization do not carry over into better treatment in general is particularly striking" (Brittle & Bird, 2007, p. 45).
- "Ethnic minorities tend to receive a lower quality of healthcare than non-minorities, even when access-related factors, such as patients' insurance status and income, are controlled" (Smedley, Stith, & Nelson, 2003, p. 1).
 - Blame lies in a complex blend of discrimination, racial and SES differences in both prevalence of certain diseases and availability of treatment, cultural values, characteristics of the setting, and lack of continuity of care in an often-confusing healthcare system.

Furthermore, there is a strong tendency for economically disadvantaged women who lack insurance to delay seeking care until very advanced stages of disease (Adams & Barnes, 2004).

- Women's incomes are often lower than men's are, yet their out-of-pocket and overall medical costs are proportionately higher. Women require more care: They visit the doctor more (Bertakis et al., 2000), and take more medications (Correa-de-Araujo, 2005). "Women [are more] sensitive to differences in co-pay amounts, thus contributing to poorer quality of care and reduced outcomes" (Brittle & Bird, 2007, p. 77).

As California's economy continues to deteriorate, it is likely there will be further compromises in availability and access to care for underserved women. Our expectation is that, as in the past, women will be most adversely affected by the deepening crisis: While conscientious about obtaining care for their families, many women fail to seek the attention and treatment needed to achieve and maintain their own health.

Health Status: Unmet Needs, Poor Outcomes

A sizable minority of women face considerable challenges in accessing even basic health care services. Latinas, in particular, consistently are more likely to report that they encounter numerous barriers, such as limited access to childcare and transportation services, poorer continuity of care, and inability to receive specialty care. (Wyn, Ojeda, Ranji, & Salganicoff, 2004, p. 6)

Each patient comes to the WHC with her own set of challenges and supports; however, barriers to access and availability frame the overall community as not only medically vulnerable, but also facing a profoundly insecure future with diminished social, economic, and educational prospects. A comparison of key indicators (Table 1) reveals the extent to which these women have been and continue to be left behind.

	WHC Service Area (SPA or matched zip codes)	Comparison Data
Access to Care % of adults having trouble accessing care	33.3 SPA 4 38.8 SPA 6	27.3% (L.A. County)
Diabetes rate % of adults diagnosed with Type I or II	9.5% SPA 4 12.3% SPA 6	8.7% (L.A. County)
Obesity % of adults who are overweight or obese	52% SPA 4 73.4% SPA 6	58.1% (L.A. County)
Incidence of AIDS new cases per 100,000	31.5 SPA 4 16.4 SPA 6	12.8 (L.A. County)
Late prenatal care % of women starting care in 2 nd or 3 rd trimester or none	17.68%	8.9% (L.A. City)
Low birth weight % of live births under 2500 grams	7.81%	7.4% (L.A. City)
Infant mortality number per 1000 live births	5.4 SPA 6	4.8 (L.A. City)
Teen pregnancy % of live births to mothers under 20 years	13.08%	4.0% (L.A. County)

Table 1. Indicators of Health Status

Giving Care: WHC Staff and Providers

In 2009/10, the WHC roster included 15 CNMs (full- and part-time and contracted), 10 board certified OB/GYNs (full- and part-time and contracted), and 17 enabling professionals (MAs, RNs, educators, and counselors).

- CNMs are advanced practice nurses trained and licensed to provide a range of primary care services for women of all ages, focusing particularly on pregnancy, childbirth, the intrapartum and postpartum periods, infant care, and family planning and reproductive health. Under the supervision of and in consultation with licensed clinicians, CNMs manage low-to-moderate risk clients and attend cases of normal childbirth.
- Of the 63.29 FTE Certified Nurse-Midwives working in California's 118 Federally Qualified Health Centers in 2009, almost 17 percent were on staff at the WHC.

Physician oversight of WHC operations and clinical care is provided by WHC Medical Director and Keck School of Medicine Visiting Assistant Professor Dr. Laila Al-Marayati, M.D. Dr. Al-Marayati received her M.D. from University of California, Irvine and completed her residency in obstetrics and gynecology at the LAC-USC Women's Hospital. She is Board certified in her specialty and is a Fellow of the American College of Obstetrics and Gynecology (ACOG).

Dr. Al-Marayati works in close partnership with Direct of Nurse-Midwives Elizabeth Jenkins, M.P.H, C.N.M. Ms. Jenkins manages the WHC's CNM program, in addition to supplying clinical and administrative support for the physicians staffing the OB Panel. She is a certified OB/GYN

Nurse-Practitioner and Nurse-Midwife (USC) with additional training in public health programs and policy-making (CSULA, UCLA).

With a degree in elementary education and multiple professional certifications (Childbirth/Lactation Education, Family Planning and Sterilization, Comprehensive Perinatal Health Worker), Perinatal Education Specialist Maria Magdalena Estrada, I.C.C.E., I.B.C.L.C., develops and manages the WHC's Pregnancy Care and Education services.

WHC physicians include three licensed OB/GYNs "in residence" at the WHC, with another nine available and/or on-call at California Hospital Medical Center. Additionally, the High Risk Special Care Clinic is staffed by faculty supervisors, residents, and fellows from Cedars-Sinai Medical Center who specialize in various aspects of high-risk pregnancy. All physicians rotate through both the WHC and the OB Panel.

THE WHC EVALUATION PROJECT

Purposes

Conceived and designed as a mixed-methods assessment of dimensions of quality (clinical and operational), the project was guided by three distinct yet complementary purposes.

1. Formative: Grant Objectives III.1, 3, 4
 - a. To identify strengths and weaknesses
 - b. To support quality improvement plans and strategies
 - c. To support accountability systems
 - d. To identify current and developing opportunities
2. Summative: Grant Objectives III.4, 5, 6
 - a. To document effectiveness relative to baseline data and organizational knowledge
 - b. To document achievements and challenges
 - c. To demonstrate value relative to achievement of local, state, and national standards
3. Knowledge Generation: Grant Objectives III.5, 6
 - a. To identify emergent and promising practices
 - b. To describe organizational and programmatic model(s) of quality care and delivery systems
 - c. To contribute to current healthcare policy making and reform

Questions

Although the most pressing "need to knows" for health care providers involve outcomes – did the treatment work? is there an improvement? – an initiative such as the WHC offers an opportunity to choose amongst a far broader selection of interests and concerns. Knowledge of effectiveness is important, but so is knowledge of processes, attitudes, policies, resource availability, satisfaction levels, and more.

Many overlapping questions appeared and evolved – and were rejected – during the project's planning stage. In the end, we selected the simplest ones because, by not locking stakeholders into rigid expectations, they could be adapted and refined in response to emergent issues and increasing understanding.

- **Descriptive questions:** What is happening? Who is being served? Who is not being served? What does success look like? How is/are the WHC program/s different from or similar to other models?
- **Quasi-experimental questions:** What is working and what is not working? Is the WHC model effective relative to selected benchmarks and standards? That is, do outcomes and measures of processes of care meet or exceed those achieved by "like" institutions?
- **Process and mechanism questions:** Why are/are not WHC practices, policies, and procedures effective? What appears to contribute to the conditions that underlie effectiveness?

LITERATURE REVIEW

The literature review was conducted primarily during February-April, 2010, although the nature of the research design required ongoing searches for resources related to questions, interests, and concerns that emerge during the entirety of the 11-month study. While some topics – for example, birth centers, patient-level behavioral risk factors, gender studies, the status of midwives – were broadly attractive to stakeholders, it was decided early on to limit the review to first, women's health care policy; second, the four dimensions of effectiveness (see below); and third, comparative data from similar groups or practices.

Searches were performed on databases that included JSTOR, ProQuest Research Library, PsycInfo, PubMed, and ScienceDirect; as well as at data collection sites such as March Of Dimes (PeriStats, <http://tiny.cc/vnrh>), U.S. Department of Health and Human Services Health Resources and Services Administration (HRSA, <http://tiny.cc/9dy3p>), the Centers for Disease Control and Prevention (National Vital Statistics System, <http://tiny.cc/c33qw>), California Office of Statewide Health Planning and Development (<http://tiny.cc/0rj8c>), and the Department of Health and Human Services Office on Women's Health (<http://tiny.cc/74gj8>).

Key search words reflected the focus of the evaluation on pregnancy care and reproductive services: "prenatal," "perinatal," "post-partum," "labor and delivery," "midwifery," "nurse-midwives," "obstetrics," "obstetricians," "VBAC," "birthweight," "gestational age," "childbirth," "labor management," "neonatal mortality," "trimester." More broadly, the search also emphasized words and phrases such as "physician satisfaction," "patient-provider relationship," "patient satisfaction," "health disparities," "women's health care," "quality of care guidelines," "systems of care," "patient survey," and "low-income women."

The blended scholar-practitioner review that developed within the described boundaries encompasses seven categories of resources.

1. Models of practice settings, relationships, and collaborations
2. Existing datasets and statistics
3. Performance metrics and indicators (stand-alone or compared with physicians)
4. Extant surveys, questionnaires, information sheets
5. Standards of care
6. Cornerstone publications
7. Published evaluations or descriptive analysis of similar programs and organizations – scholarly, practitioner inquiry, white papers, research briefs

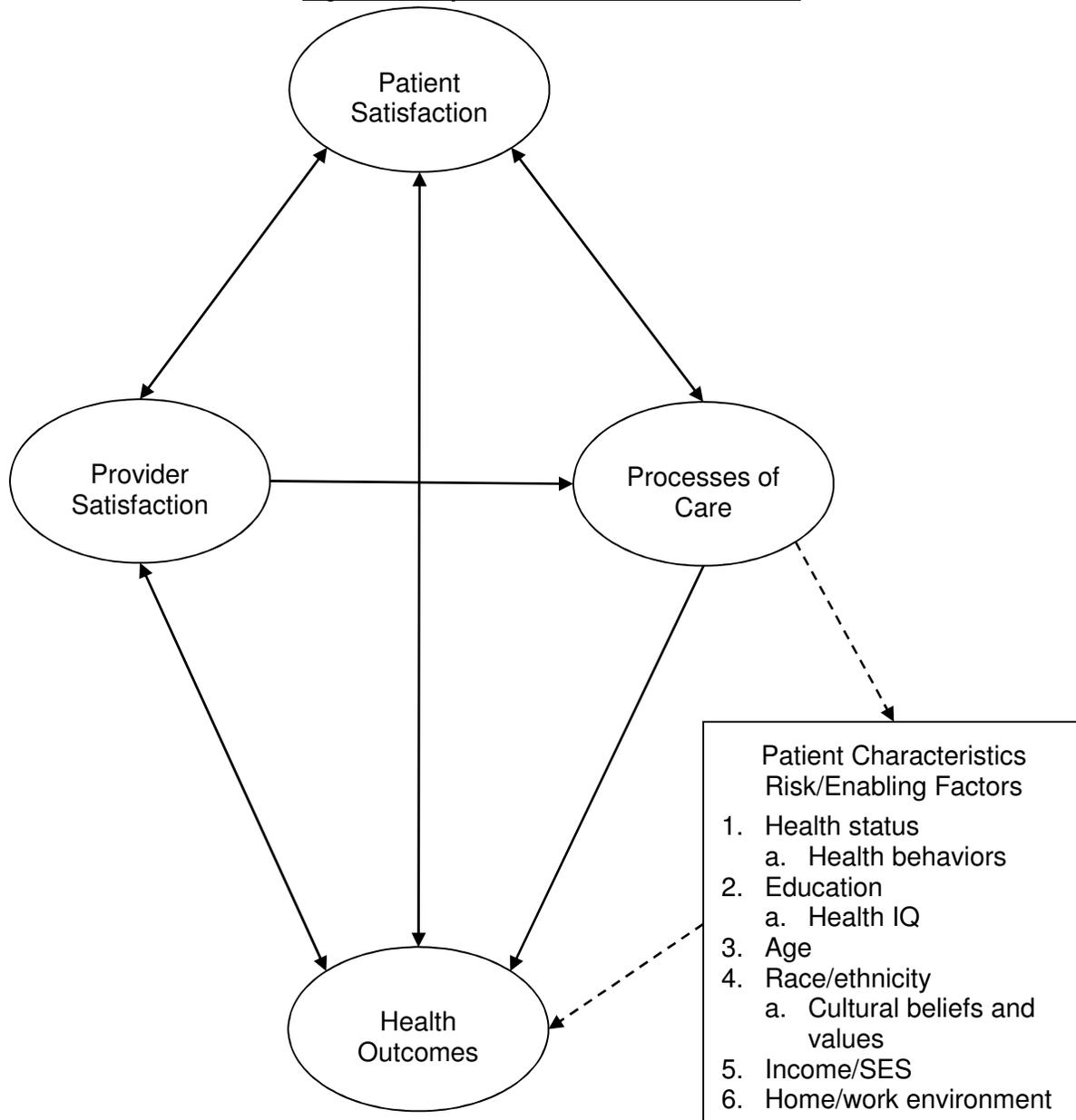
The first stage of the search collected somewhat over 350 articles, papers, editorials, and datasets that were then reviewed, culled, and annotated for inclusion in a Resource Bank – along with a searchable bibliography, the 200 plus items in the Bank will be distributed to providers at the end of the study for their personal use. EndNote was used to store bibliographic information and to facilitate sharing of resources among researchers and providers.

A Systems Model of Effectiveness

Quality in any large-scale endeavor is related to a significant number of inputs: People, settings, equipment, training, feedback mechanisms, pay scales, motivation, and rates of compliance, to

name just a few. For the current project, utility and feasibility were paramount – first, what information would be most useful to WHC and EPFMC clinicians and staff and second, how could and should researchers optimize their use of resources provided by the project funder (The California Endowment)?

Figure 4. A Systems Model of Effectiveness



Our review of the literature uncovered four broad dimensions of effectiveness in healthcare that are relevant to the WHC's institutional and strategic goals: Processes of care, health outcomes patient satisfaction, and provider satisfaction. A "systems model" (Figure 4) was devised for the project as an advance organizer, and subsequently used as a framework for instrument development, data collection, analysis, and documentation, and reporting of findings. (Dashed

arrows to and from "Patient Characteristics" indicate mediating and moderating relationships, the strength of which were not analyzed for this evaluation).

Why Not Simply Measure Outcomes?

Obvious problems arise when health outcomes are used as a proxy for effectiveness due to the unpredictable influence of intervening and/or interfering characteristics of the patient population (Murata, McGlynn, Siu, & Brook, 1992). Behaviors, lifestyles, home and work environments, education and income – measurable or not, all will be factors in whether a program, treatment, counseling session, workshop, or care plan leads to improved health outcomes.

- If risk factors are not identified and mitigated, they will diminish the expected/predicted positive effects of care on health outcomes.
- Enabling factors help to ensure the expected/predicted positive effects of care on health outcomes, but can be weakened or strengthened by a random events, interactions, and personal choices.
- Some factors can be and are influenced in positive ways by the provider and the clinical environment, but the patient must be willing, responsive, motivated, compliant, and participative in care regimens for risks to be eliminated and enablers to be reinforced.

The Processes of Care Dimension

Professional organizations (such as American College of Obstetricians and Gynecologists, American College of Nurse Midwives, and American Academy of Pediatricians), government offices and agencies (such as U.S. Preventive Services Task Force, U.S. Department of Health and Human Services, National Institutes of Health, and Agency for Healthcare Research and Quality), and private or university-based research groups (such as RAND, Johns Hopkins University, PAC-LAC, and New York Urban League) have all contributed to the literature on the content, value, and appropriateness of women-focused processes of care.

In this study, we have organized our investigations around the following two aspects of quality.

- **Receiving Care aspect:** Did female patients at EPFMC and WHC receive timely and appropriate care as recommended by professional standards and guidelines?
- **Receiving Adequate Care aspect:** Was that care adequate – based again on professional standards and guidelines – to support quality health outcomes?

The Health Outcomes Dimension

The United States provides the world's most expensive maternity care but has worse pregnancy outcomes than almost every other industrialized country. (Rooks, 1997, p. 385)

While the WHC does provide comprehensive well-woman services (preventive and episodic care, chronic disease management, family planning, and health education), a longitudinal assessment of the outcomes of primary care is beyond the resources and scope of the current study. More suitable – and more fitting to our focus on usability and feasibility – is a closer investigation of a practice specialty within the field of women's health: Pregnancy care and education. "An important indicator of the health of a population is its infant morbidity and mortality rates" (Murata, McGlynn, Siu, & Brook, 1992, p. 1).

The literature, while largely careful to note the relationship is correlational rather than causal, shows that "women who receive better prenatal care, measured in terms of frequency and timing of prenatal visits, have better pregnancy outcomes" (p. 15). Although a straight line cannot be drawn from processes of perinatal care to improved infant and maternal health and well-being, there is consensus among the same professional organizations noted previously that a handful of key outcomes *can* and *should* be affected by the quality, quantity, and timing of prenatal care. For the current study, three of these are both relevant and measurable using patient data already being collected by the WHC.

- Low birthweight births (LBW, less than 2500 grams)
- Preterm delivery (gestational age less than 37 weeks)
- Admission to the neonatal intensive care unit (NICU)

The Patient Satisfaction Dimension

Many clinicians, however, appear skeptical of the usefulness of satisfaction measures. This may, in part, reflect a belief that as an indicator of health care quality, satisfaction is an administrative issue and not something that is of interest or use to clinicians who are often more immediately concerned with the effectiveness of their treatment interventions than with how patients feel about the cost or accessibility of services, the parking and food at the hospital, or their interpersonal relationships with health care professionals. (Hudak & Wright, 2000, p. 3167)

Given the central role of the patient in determining both individual outcomes and the overall success of a practice or provider group (Ferris, 1992), a significant amount of research has been done to pinpoint just what patients are looking for, what characteristics of the practice setting support their compliance with clinical recommendations, and what can drive them away from the healthcare system. (Although a full discussion is beyond the scope of this project, the seminal work of Hulka et al [1970] and Ware, Davies-Avery, and Stewart [1978] are valuable, with later works by authors such as Hudak and Wright [2000], Marshall and Hays [1994], and Raube, Handler, and Rosenberg [1998] offering fresh perspectives and practice-area expertise.)

The Provider Satisfaction Dimension

Empowering workplace environments and motivating relationships have been linked to several high-value management goals, including improved performance and outcomes, higher rates of retention, reduced turnover, and decreased institutional risk (Collins, 1990; Conway, 2007; Konrad, et al., 1999; Laschinger & Finegan, 2005; Lichtenstein, 1984; Loke, 2001). Although typically well paid and respected, providers must contend with a unique variety of stressors and claims on their time that may be perceived as unfair and unsupportable in both managed care systems and clinic-based employment situations (Linzer, et al., 2000).

Comparison Groups

While no comparison groups were used for either satisfaction scales, data on processes of care and health outcomes would be of little value unless weighed against data from reasonably similar populations. Noting that birthweights for WHC patients do not meet HealthyPeople 2010 goals may be correct but irrelevant, considering the significant and pervasive risk factors that mark the WHC's client community.

Credible information on "reasonably similar populations" is more difficult to assemble than might be thought. While large-scale datasets exist (for example, the National Vital Statistics System's linked birth-death files), we found no single source that includes all of the variables called for in the project design while also enabling both 1) stratification based on risk factors, demographics, and care history, and 2) sorting by census tract or zip code.

Our solution was to draw on a number of datasets, reports, and secondary sources to build a picture of how well the WHC is performing with *this* group of women, living in *this* environment, contending with *this* set of circumstances. As appropriate to each dimension, we measured effectiveness relative to the following:

- EPFMC year-over-year records [Source: 2009 Uniform Data System Report (UDS)]
- EPFMC patient records and databases (Sources: HealthPort Practice Management System, perinatal screens; hard copy files and charts)
- All 2009 California FQHCs (Source: <http://www.hrsa.gov/data-statistics/health-center-data/StateData/2009/2009CATOTsumdata.html>; N=118)
- All U.S. FQHCs (Source: <http://www.hrsa.gov/data-statistics/health-center-data/NationalData/2009/2009nattotsumdata.html>; N=1131)
- National FQHC benchmark goals (Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, <http://www.hrsa.gov/about/budget/index.html>)
- Birth statistics for EPFMC's service area (Source: California Department of Public Health, Birth Profiles by Zip Code, <http://www.cdph.ca.gov/data/statistics/Pages/BirthProfilesbyZIPCode.aspx>; zip code matching for top 66 percent of EPFMC patients)
- Local and regional health data (Sources: County of Los Angeles Public Health Department Maternal, Child & Adolescent Health Programs)
- City-, county-, state-, and -level perinatal statistics (Sources: March of Dimes PeriStats, <http://www.marchofdimes.com/PeriStats>; National Vital Statistics System, <http://www.cdc.gov/nchs/nvss.htm>; National Center for Health Statistics, <http://www.cdc.gov/nchs/>)

METHODS

Though broad, the scope of the project was not unlimited. Within each dimension, choices had to be made regarding what could *probably* be undertaken, what could *possibly* be undertaken, and what was *unlikely* to be undertaken. The WHC is an extremely busy practice, with an often mobile or transient client population that can be non-compliant with health guidance, and is coping with barriers and challenges not typically encountered by more affluent communities.

Preliminary Interviews

The evaluation project was conceived and designed to be a "utilization-focused evaluation" (Patton, 1997). Such an approach begins with the premise that "evaluations should be judged by their *utility and actual use* . . . Use concerns how real people in the real world apply evaluation findings and experience the evaluation process" (emphasis added, p. 20). Utilization-focused evaluation is an approach to participative action research that takes as its roadmap the needs and concerns of stakeholders and users, as opposed to an academic or commercial agenda driving the process.

Reflecting the concerns of the evaluation team that project findings support improvement and advocacy, preliminary interviews with stakeholders (staff and providers) were used to help determine and clarify the project's scope and limitations; to identify audiences and intended users; to explore priority questions, interests, and evaluative criteria; and to note any barriers or concerns that should be resolved before data collection began. Two issues were raised in every interview, namely 1) the agency's still-awkward data management infrastructure and 2) potential challenges associated with the WHC's target population (i.e., availability, participation, language, and education).

- There is a pressing need for both infrastructure and knowledge related to data collection, analysis, documentation, and reporting. The WHC project was useful as a platform for exploring and developing strategic activities related to quality management and practitioner inquiry
- Providers noted that they have long wanted to design and deploy a targeted patient satisfaction survey. Such an instrument – based on input from clinicians and staff – was piloted in the current study and there are plans to bring it to scale and used year-round.

Approaching the Four Dimensions

Significant research exists on the four dimensions: Reliable, valid surveys for patients and providers, agree-upon care standards and protocols, and desired medical outcomes that correlate with continued health and well-being. The challenges for the current study were not only of logistical and utilitarian – writing items, collecting data, controlling variables, identifying criteria – but also practical and pragmatic. What kinds of surveys would be possible with this population? What level of participation would be probable with this group of busy providers? What data – whether demographics, birthweights, service delivery numbers, or gestational ages – could be drawn from EPFMC's records, records not yet transferred to a full-scale Electronic Medical Records system?

Measuring Processes of Care

Measuring processes of care can be thought of as measuring the timing, appropriateness, adequacy, and quality of recommended preventive and primary care services. By saying that all

four factors need to be in play for care to be of the highest caliber, it becomes clear that a significant responsibility for the effectiveness of care as revealed in health outcomes lies with the patient – a provider or agency cannot force a patient to stop smoking, take prenatal vitamins, or keep a post-partum appointment. Assessing the processes themselves, then, implies a focus on the provider side of the outcomes equation.

- Taking into account a patient's personal characteristics, circumstances, and lifestyle choices, is she being offered – and if need be, persuaded to access – enough of the right care at the right time? (*Receiving Care* aspect)
- To what extent are providers abiding by professional standards and clinical guidelines? (*Receiving Adequate Care* aspect)
- What internal controls and expectations are integrated into the organization culture to ensure all appropriate and necessary services are consistently available and provided in a caring and health-full environment? (both aspects)

Receiving Care Aspect

Two key indicators of timely and appropriate provision of medical services for women are frequency of PAP tests and trimester of entry into prenatal care. In establishing performance targets for Federally Qualified Health Centers (FQHC) funded through the U.S. Department of Health and Human Services Health Resources and Services Administration (HRSA), has linked improved outputs (i.e., numbers) with improved outcomes (i.e., better health).

- PAP Tests – Long Term Objective: Promote effectiveness of healthcare services
 - FQHC Desired Output: Increase the number of unduplicated female clients who receive a PAP test.
 - Significance: "Cervical Intraepithelial Neoplasia (CIN) refers to cellular changes in the cervix, thought to be precursors of cervical cancer that can be detected with PAP screening. Researchers conclude that HIV+ women are three times as likely as HIV negative women to have CIN. Women with HIV are more likely to develop cervical cancer than other women. The possibility increases to 30 times as likely if a woman has HIV and HPV, the human papilloma virus" (HRSA, 2010, p. 93).
- Prenatal Care Initiation – Long Term Objective: Increase the utilization of preventive health care and chronic disease management services, particularly among underserved, vulnerable, and special needs populations.
 - FQHC Desired Output: Increase percentage of pregnant Health Center patients beginning prenatal care in the first trimester
 - Significance: Research has shown that women who have access to high quality, affordable prenatal care have healthier babies with fewer complications (Brittle & Bird, 2007).

Data and analyses. Using 2009 Uniform Data System (UDS) records for EPFMC and, for comparison, both California and national FQHCs (N=118 and N=1131 respectively), we analyzed data on both PAP tests and trimester of first known prenatal visit during the reporting

year. WHC data for the latter were retrieved from the Center's HealthPort Practice Management System.

Sample – PAP tests. As noted on the UDS Summary Report: "Number of female patients aged 24-64 who had at least one PAP test performed during the measurement year or during one of the previous two years." State and national data for UDS consisted of an estimated number of patients tested; EPFMC data for UDS reports consisted of the number of patients tested out of a random chart sample (N=70).

Sample – Trimester of entry into prenatal care. For the current investigation, we were most interested in women who initiated care at the WHC; although the Center is a referral site for a number of MOUs, and also accepts women who simply want to change providers for personal or non-medical reasons, our priority was measuring the range and effectiveness of start-to-finish care supplied by the WHC. Accordingly:

- Perinatal patient data for the first six months of 2010 drawn from HealthPort yielded 246 records that included information in the "Trimester Care Began" field.
- Based again on the UDS Summary Reports for California and the U.S. (Table 6B, Section B.a), the comparison sample was comprised only of "women having first visit with grantee."

Receiving Adequate Care Aspect

Without complete electronic medical records, there is no efficient way to investigate whether WHC providers are achieving high rates of compliance with prenatal care standards and recommendations (chart extracts by hand being beyond the resources available for the evaluation).

However, the Adequacy of Prenatal Care Utilization Index (APNCU) (Kotelchuck, 1994) – while not appropriate as a direct measure of quality of care processes – can be used as a proxy for the probability that appropriate standards and guidelines for screenings, exams, tests, and treatments were followed by providers. The APNCU assigns a scale (Adequate Plus, Adequate, Intermediate, and Inadequate) to the ratio between the number of prenatal care visits a woman actually had to the number the American Congress of Obstetricians and Gynecologists (ACOG) recommends she should have had given the gestational age at birth and the month in which prenatal care started.

Using the APNCU as a stand-in measurement of quality of care processes carries a certain risk. We are assuming that WHC practitioners with years of experience, training and education, certifications, and reputations consistently will provide all routine and non-routine services considered appropriate and necessary at each stage of a woman's pregnancy. That is, we are assuming if a woman receives 12 of 14 recommended prenatal visits that the care at each of those visits will be suitable, medically necessary, caring, and standards-based. Optimally, future quality management strategies will include random chart reviews using IT-supported data collection and analysis.

Data and analyses. Being comfortable in our assessment of the quality of WHC personnel and the probability that credentials and experience correlate strongly with quality of care processes, we prepared an Excel workbook with formulas designed to:

1. Sort WHC perinatal data based on gestational age at initiation of care and calculate the stage (months 1-2, 3-4, 5-6, or 7-9, as per Kotelchuck, 1994) of initiation;
2. Based on ACOG recommendations, calculate the number of prenatal care visits the patient *should* have had based on the gestational age at birth, and then count the appointments the patient *actually attended* (using billing codes); and finally,
3. Generate a 4X4 grid showing the percentage of WHC patients in each adequacy category.

Sample. As before, the sample was limited to women who received all their prenatal care at the WHC, whose pregnancies resulted in live singleton births, and whose charts were complete enough for the calculations required by the APNCU Index. Taken together, these limitations generated a sample of 232 patient records.

Measuring Health Outcomes

The HealthPort dataset used to analyze trimester of entry into care was also used to measure the three health outcomes considered indicators of quality in perinatal practices:

1. Rates of low birthweight births (less than 2500 grams)
2. Rates of preterm delivery (gestational age less than 37 weeks)
3. Rates of admission to a neonatal intensive care unit (NICU)

Sample

Again, for evaluative purposes we were only interested in pregnancy outcomes for women who had received their care primarily or exclusively from the WHC. After filtering for missing data, there were 241 patient records with data available in all three fields.

Measuring Patient Satisfaction

Beginning in April 2010, the research team began working with WHC staff to identify areas of concern and interest, assess and select from an item pool that reflected both current research and questions specific to the WHC's population and organizational needs, and build the pilot instrument.

The Instrument

Selected from an initial pool of 248 items, the instrument's 39 mixed-format questions were drawn from or based on the PSQ-18 (Marshall & Hays, 1994) the Prenatal Satisfaction Questionnaire (Grogan et al., 2000), the Listening to Mothers Survey (Declercq et al, 2002), and the Labor and Delivery Satisfaction Index (Lomas, Dore, Enkin, & Mitchell, 1987). The survey was organized around the following four broad areas of interest:

1. Community Outreach (CO). Developed in response to a request from WHC leadership, the CO section consisted of three Yes/No items with corresponding short-answer questions (nested according to initial answers).
2. Prenatal/Childbirth Education Classes (PC). The PC section of the survey consisted of eight scaled items and two Yes/No items with nested short-answer questions, ungrouped. Five answer options were available to respondents:
 - a. Yes (scored 2/0, indicating significant satisfaction)
 - b. Maybe a little/Somewhat (scored 1, indicating moderate satisfaction)
 - c. No (scored 0, indicating dissatisfaction)

- d. Don't know/Can't remember (scored NA)
 - e. Declined to answer (scored NA)
3. Prenatal Care Experience (PCE). PCE questions measured patients' prenatal care experience using 19 scaled items; 13 positively scored, six negatively. Six answer options were available to respondents:
 - a. Strongly agree (scored 3/0, indicating significant satisfaction/significant dissatisfaction)
 - b. Agree (scored 2/1, indicating some satisfaction/some dissatisfaction)
 - c. Disagree (scored 1/2, indicating some dissatisfaction/some satisfaction)
 - d. Strongly disagree (scored 0/3, indicating significant dissatisfaction/significant satisfaction)
 - e. Don't know/Can't remember (scored NA)
 - f. Declined to answer (scored NA)
 4. Hospital Experience (HE). The seven HE items included four that were positively scored and three negatively, with six answer options available to respondents:
 - a. Strongly agree (scored 3/0, indicating significant satisfaction/significant dissatisfaction)
 - b. Agree (scored 2/1, indicating some satisfaction/some dissatisfaction)
 - c. Disagree (scored 1/2, indicating some dissatisfaction/some satisfaction)
 - d. Strongly disagree (scored 0/3, indicating significant dissatisfaction/significant satisfaction)
 - e. Don't know/Can't remember (scored NA)
 - f. Declined to answer (scored NA)

Additionally, the 19 items designed to elicit information about patients' "experience" with prenatal care (PCE) borrowed from and reflected Ware's (Ware, Snyder, Wright, & Davies, 1983) foundational work on aspects and consequences of patient satisfaction. Below are the seven Core Themes and associated questions identified as being of interest to WHC providers.

1. Facility and Resources: What is the patient's perception of the WHC's physical resources and clinical environment? Did it seem like the WHC was fully equipped? Were waiting areas pleasant and comfortable?
2. Communication: What is the patient's perception of how attentive her providers were to her questions and concerns? Did they explain things so that she understood what was happening in her pregnancy?
3. Access and Convenience: What is the patient's perception of the user-friendliness of the WHC? Was it difficult to get an appointment at a suitable time? Did she have to wait too long in the waiting area or exam room? Did she usually get to see the provider she wanted to see?
4. Technical Skills: What is the patient's perception of competence? Did she believe her providers were skilled and capable; that they were thorough; that their guidance and diagnoses were "correct"? Did they appear to know what they were doing?
5. Time Spent with Provider: What is the patient's perception of how much time she had with her providers? Did it seem like enough at most or all appointments, or did the providers often seem rushed, over-scheduled, or hurrying to the next exam?

6. Interpersonal Aspects: What is the patient's perception of how her providers interacted with her? Did they seem genuinely concerned? Were they consistently friendly, respectful, and courteous?
7. General Satisfaction: Global satisfaction with the care provided and with aspects of the clinical setting.

Finally, participants were given the opportunity to share personal thoughts about the quality of care they received, as well as about any WHC personnel who were exceptionally attentive or helpful during their pregnancies. Furthermore:

- Demographic characteristics were recorded in the survey's last section: Age, race/ethnicity, self-reported monthly household income, self-reported household size supported by that income, and highest grade level completed. This data was extracted from patient charts by interviewers only when a patient participated in the survey.
- The survey document also included a tear sheet with space for contact information, Medi-Cal status, notes on calling attempts, and patient number (PN). This was separated from the response pages both to ensure confidentiality and as the "ticket" in the drawing for one of three \$50 gift cards that were offered as incentives.

Training and Piloting

Following six hours of testing by the research team, training of the staff member assigned to the project began on August 6. Three weeks of two-hour sessions allowed for iterative revisions of items, delivery format, and interview script, as well as for organizing files and storage protocols, sticky labels for patient charts, rules for chart pulls in compliance with HIPAA regulations, and scheduling of calling sessions.

Interviews

English- and Spanish-language versions of the final instrument were ready by the end of August, and calls began September 14. Sixty-four hours of interviews were conducted at EPFMC through October 28. Calls were placed to 150 patients; 74 successful contacts were made for a response rate of 49.3 percent. Interviews ranged from 7.75 to 20.0 minutes, with an average length of 12.0 minutes.

The team also tried two ad hoc approaches in an attempt to reach more participants and ensure a representative sample. First, the interviewer asked patients visiting the Center for a post-partum appointment if they would like to participate while on-site; and second, two members of the research team made 44 hours of initial and follow-up calls from their homes on random evenings and weekends through November 7.

Incomplete Calls

An analysis of reasons for rejection or removal from the pool (Figure 5) shows that nine percent of patients declined to take the survey. Factors reflective of high mobility, work and childcare schedules, lack of home or personal phones, and use of disposable or prepaid cell phones in the target population contributed significantly to the rate of incomplete calls.

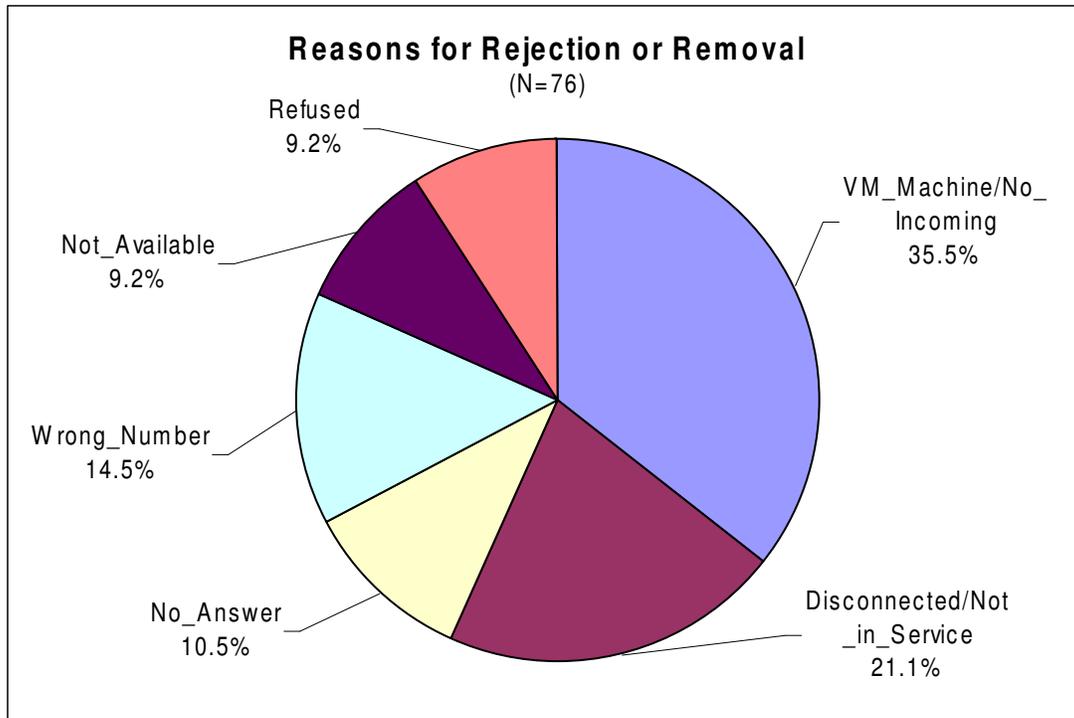


Figure 5. Reasons for Rejection or Removal from the PSS Pool

Respondent Sample

The sample was generated using random chart pulls for women who had delivered anytime during the 2010 calendar year. Patients who received more than half their care from a signatory MOU or other provider were excluded, as were those who miscarried; whose babies had died; who aborted during their pregnancies; or who were living in group homes. The final 74 participants were all covered by Medi-Cal. Additionally:

- Average age was 26.5 years (range 16-37).
- Six were African-American, 65 Hispanic/Latina, one American Indian, two identified as mixed race, and one did not report her race.
- Average self-reported monthly income was \$897 (range \$100-\$2,400 per month), supporting an average household size of 3.4.
- Slightly over 46 percent of those whose charts indicated educational level (N=71) had graduated from high school. Tenth was the highest grade completed by the sample on average – 21% had an eighth grade education or less.
- Four had enrolled in and completed the WHC's *CenteringPregnancy*® program.
- Two had been cared for in the WHC's *High Risk Special Care Clinic*.

Measuring Provider Satisfaction

Beginning in April 2010, the research team began compiling a dataset of items drawn from existing research. Initially, the plan included 6-8 interviews – however, due to both staff availability and utility relative to available resources, a decision was made to limit data

collection to a comprehensive on-line questionnaire organized around Core Themes of interest to stakeholders.

- LimeService, the delivery platform for LimeSurvey (<http://www.limesurvey.org/>), was selected as the online host for the completed instrument. LimeSurvey is a widely used open source application for survey development, deployment, analysis, and reporting.
- The platform allows for multiple invitations and reminders; an expansive set of answer options and question formats; complete respondent anonymity through the use of randomly assigned tokens; export of mailing lists and responses to both database and analysis applications; email address checking; and other data storage, retrieval, and statistical analysis functions.

The Instrument

The research team narrowed a preliminary pool of 291 items to 48: 37 with a 6-point Likert scale and a Not applicable/Declined to answer choice; 2 with a 3-point Likert scale with a Not applicable/Declined to answer choice; one short-answer space for "Last Thoughts"; and eight multiple choice demographic questions. The latter included years of experience, years at EPFMC and in which department, job title(s), gender, age, educational achievement, and race/ethnicity.

Referencing determinants of satisfaction from the Physician Worklife Survey (Williams et al., 1999), Job Satisfaction Measure (Lichtenstein, 1984), Index of Work Satisfaction (Stamps, Piedmont, Slavitt, & Haase, 1978), and a study of the job satisfaction of CNMs (Collins, 1990), the final 48 items were grouped into ten Core Themes (37 6-point, 2 3-point).

1. Experience of Professional Autonomy: "Having say" over workplace issues and medical decision-making; input into actions and activities that affect practices; setting the pace; independence and initiative permitted and valued.
2. Experience of Supervision and Administration: Confidence in the competence of supervisor(s) and his/her direction of practices and procedures.
3. Experience of Working with Staff and Colleagues: Supportive colleagues working together in a culture of collaboration and mutual respect; sense of confidence in medically and administratively competent peers and subordinates
4. Experience of Personal and Family Time: How significantly do work activities and duties encroach on "down time" and family responsibilities?
5. Experience of Patient Care and Relationships: Opportunity and time to connect personally with patients in the context of providing clinical care; motivational effects of strong/good or weak/poor patient interactions
6. Experience of Compensation and Rewards: Salary issues and consistency of recognition/feedback for a job well done; perception of fairness in compensation plans, including pay scales and bonuses
7. Experience of Communications: How well important information flows within the WHC and EPFMC; how well or poorly patient contacts are managed; if everyone seems "on the same page" regarding purposes and practices

8. Experience of Procedures and Resources: Procedural "red tape" is/is not burdensome; physical, medical, and administrative supplies are provided in sufficient amounts to support quality care; adequate time is allowed for administrative procedures
9. Global Job Satisfaction: Overall sense that one's job is rewarding, despite concerns and issues; personal feeling of "being in the right place at the right time"
10. Current Position: Satisfaction with present position and job duties at EPFMC; how that position compares with expectations and prior interest

The 37 6-point items included 19 positively scored and 18 negatively scored. Seven answer options were available to respondents:

1. Strongly agree (scored 5/0, indicating significant satisfaction/dissatisfaction)
2. Agree (scored 4/1, indicating satisfaction/dissatisfaction)
3. Agree somewhat (scored 3/2, indicating some satisfaction/some dissatisfaction)
4. Disagree somewhat (scored 2/3, indicating some dissatisfaction/some satisfaction)
5. Disagree (scored 1/4, indicating dissatisfaction/satisfaction)
6. Strongly disagree (scored 0/5, indicating significant dissatisfaction/satisfaction)
7. Not applicable/Decline to answer (scored NA)

The two multiple choice items each had three answer options representing three levels of satisfaction with and expectations for the position currently held by the respondent at EPFMC and were scored using 3 for high satisfaction and 1 for low.

Testing and Activation

The PSQ was built and tested by the research team during August and September 2010. Names and emails of all WHC OB/GYNs, Adult Clinic physicians who provide OB services, Nurse-Midwives, and key support staff were obtained from WHC and Adult Clinic directors, who were also asked to send "pre-invitations" alerting providers to the upcoming survey and requesting their participation. The first round of invitations was sent on October 10; reminders went out on the 18th and 30th; and the questionnaire was closed on November 7.

Respondent Sample

Of the 42 invitations sent, 29 providers participated in the survey for a response rate of 69 percent.

- Twenty-three (79%) worked primarily or exclusively for the WHC, while six reported as working mainly in the Adult Clinic or hospital (21%).
- Average tenure at EPFMC was somewhat over three years (range 0-19 years), while average experience in the healthcare field was 17.4 years.
- Of the 27 who selected an answer, 21 were women (78%) and 6 were men (22%); their average age was 43.3 years (minimum 30, maximum 70).
 - Some bias in the results may be attributable to the preponderance of female respondents. Of the 42 providers sent invitations, 16 (38 percent) were male. Furthermore, of the 13 non-respondents, fully eight (62 percent) were male. Future iterations of the PSQ might include items specifically designed to elicit perspectives on gender issues and values associated with "women caring for women."

Position, educational attainment, and race/ethnicity are shown in Table 2.

Respondent Characteristic	Number of Respondents	Percentage of Respondents
Position at EPFMC		
Physicians (Board- and Non-Board-Certified OB/GYNs and Family Physicians)	13	44.83%
Nurse-Midwives (Certified and Non-Certified)	13	44.83%
Enabling Professionals & Other	3	10.34%
Total Respondents	29	100.00%
Educational Attainment		
Associate's/Bachelor's degree	3	11.54%
Graduate or professional degree	23	88.46%
Total Respondents	26	100.00%
Race/Ethnicity		
Asian	4	16.00%
Black/African American	2	8.00%
Hispanic/Latino	3	12.00%
White	14	56.00%
Other	2	8.00%
Total Respondents	25	100.00%

Table 2. PSQ: Respondent Position, Education, and Race/Ethnicity

FINDINGS

As a snapshot evaluation, the current project was more broad than deep, aiming to highlight effectiveness while revealing areas where improvement may be needed and further study is warranted. Although we have grouped the findings presented here into dimensions of effectiveness, none is truly separate from the others within the clinical setting. "Quality" is always a function of multiple inputs and variables interacting in a complex and highly technical ballet of physiology, psychology, environment, and human relationships.

Processes of Care

Previously, we noted two questions around which we organized data collection and analysis strategies:

1. Did female patients at EPFMC and WHC receive timely and appropriate care as recommended by professional standards; and
2. Was that care adequate – based again on professional standards – to support quality health outcomes?

To answer the first, we looked at indicators reported by all FQHCs: PAP tests and trimester of entry into prenatal care. For the second, we used Kotelchuck (1994) Adequacy of Prenatal Care Utilization Index (APNCU) to measure the quantity and duration of prenatal care provided relative to American Congress of Obstetricians and Gynecologists (ACOG) guidelines.

Receiving Care

In calendar year 2009, EPFMC reported that out of 70 random chart pulls, 47 women aged 24-64 "had at least one PAP test performed during the measurement year or during one of the two previous years" (2009 UDS Report, Table 6B.D). As shown in Figure 6, the Center performed better than its peers at both the state and national levels (although the state difference is slight).

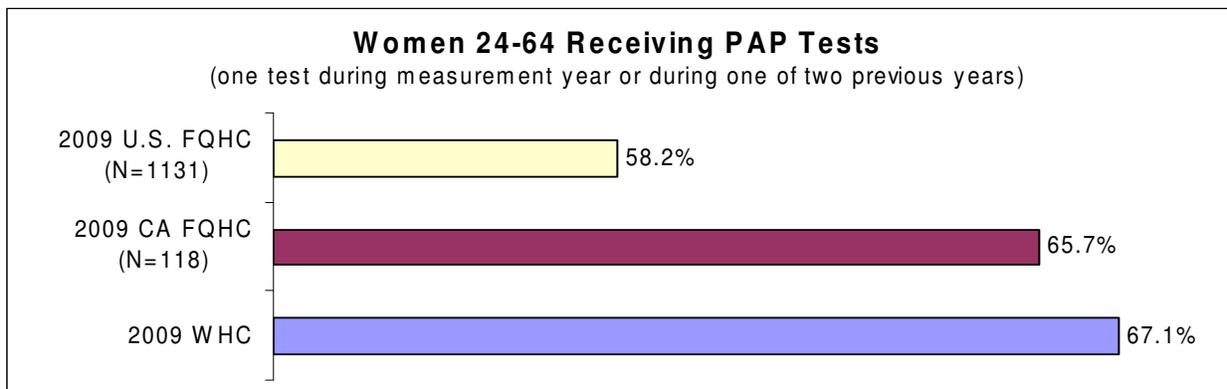


Figure 6. Percentage of Women 24-64 Receiving PAP Tests

Data on prenatal care initiation is even stronger strong (Figure 7). Our analysis of WHC data from the first six months of 2010 shows over 87 percent of patients starting care in the first trimester – compared with 77 percent statewide and 68 percent nationally.

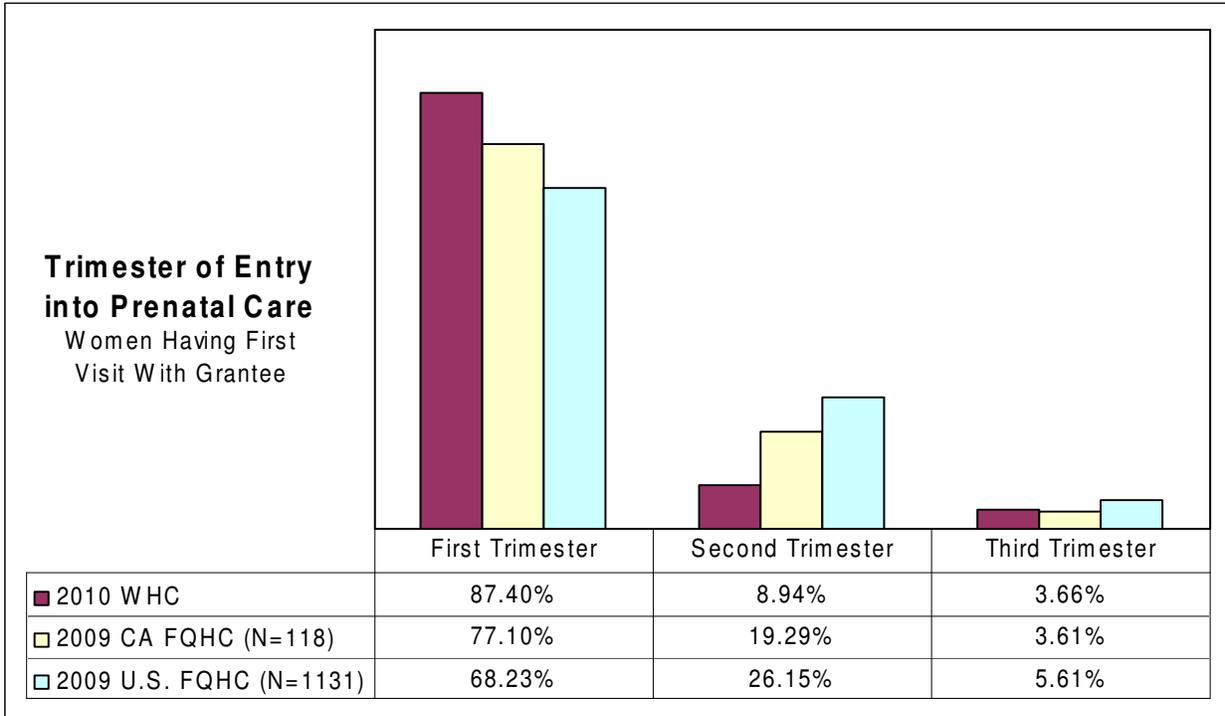


Figure 7. Prenatal Care Initiation for Women Having First Visit at the WHC

Receiving Adequate Care

The APNCU (Kotelchuck, 1994) combines month of initiation of care with number of prenatal visits in an interpretative matrix (Figure 8) that readily reveals the proportion of patients receiving adequate amounts of prenatal care as defined by ACOG.

The four levels of adequacy are:

1. Adequate Plus: Prenatal care begun by the fourth month and 110 percent or more of ACOG recommended visits received from initiation to delivery.
 - Example: A patient with a 40-week pregnancy (14 visits recommended) had her first visit in month 3. She had 14 visits, making up the two she missed (months 1 and 2): $14/12 = 117$ percent of ACOG recommended visits.
2. Adequate: Prenatal care begun by the fourth month and 80 to 109 percent of ACOG recommended visits received from initiation to delivery.
 - Example: A patient with a 36-week pregnancy (10 visits recommended) had her first visit in month 2. She had 9 visits, not making up the one she missed (month 1): $9/10 = 90$ percent of ACOG recommended visits.
3. Intermediate: Prenatal care initiated by the fourth month and 50 to 79 percent of ACOG recommended visits received from initiation to delivery.
 - Example: A patient with a 41-week pregnancy (15 visits recommended) had her first visit in month 4. She had 7 visits, not making up the three she missed (months 1, 2, and 3): $7/12 = 58$ percent of ACOG recommended visits.

4. Inadequate: Prenatal care begun after the fourth month or less than 50 percent of ACOG recommended visits received from initiation to delivery.
 - Example: A patient with a 38-week pregnancy (12 recommended visits) had her first visit in week 18/month 5. She had 4 visits, not making up the 4 she missed (months 1, 2, 3, and 4): $4/8 = 50$ percent of ACOG recommended visits.

Adequacy of Initiation	7-9 Month	0 0.0%	0 0.0%	4 1.7%	6 2.6%	Inadequate 10.3%	
	5-6 Month	3 1.3%	3 1.3%	2 0.9%	2 0.9%		Intermediate 6.9%
	3-4 Month	1 0.4%	3 1.3%	56 24.1%	23 9.9%		Adequate 63.8%
	1-2 Month	3 1.3%	13 5.6%	92 39.7%	21 9.1%		Adequate Plus 19.0%
		Under 50%	50-79%	80-109%	110%+		
		Adequacy of Received Care					

Figure 8. Adequacy of Prenatal Care Utilization Matrix (2010 WHC N=232)

Context for understanding these results comes from PeriStats, an on-line resource for researchers and the public developed by the March of Dimes (MOD). Primarily derived from birth certificate information available from the National Center for Health Statistics (<http://www.cdc.gov/nchs/>), PeriStats provides data on multiple aspects of pregnancy care and education at the city, county, state, and national level (<http://www.marchofdimes.com/PeriStats>).

Figure 9 compares the APNCU rates generated from 2010 WHC data (all perinatal patients who received care during the period January 1 through June 30, 2010, N=232) with rates for California and the city and county of Los Angeles as reported at the PeriStats site. (National rates are currently available only through 2002 due to varied schedules for state-level adoption of the new birth certificate.)

- Adequate/Adequate Plus: Using data unweighted for patient characteristics, the WHC meets the rate reported for Los Angeles county while bettering that for Los Angeles city and the state as a whole. Considering that the three comparison groups include all live births regardless of SES, minority status, or other recognized risk factors, it appears that the WHC was successful both in providing adequate levels of care and motivating patients to comply with visit recommendations and adhere to care regimens.
- Intermediate and Inadequate: Although WHC Intermediate rates were nominally better than those achieved by the comparison groups, it appears that those were balanced by higher rates at the Inadequate level than those achieved by the county and city.

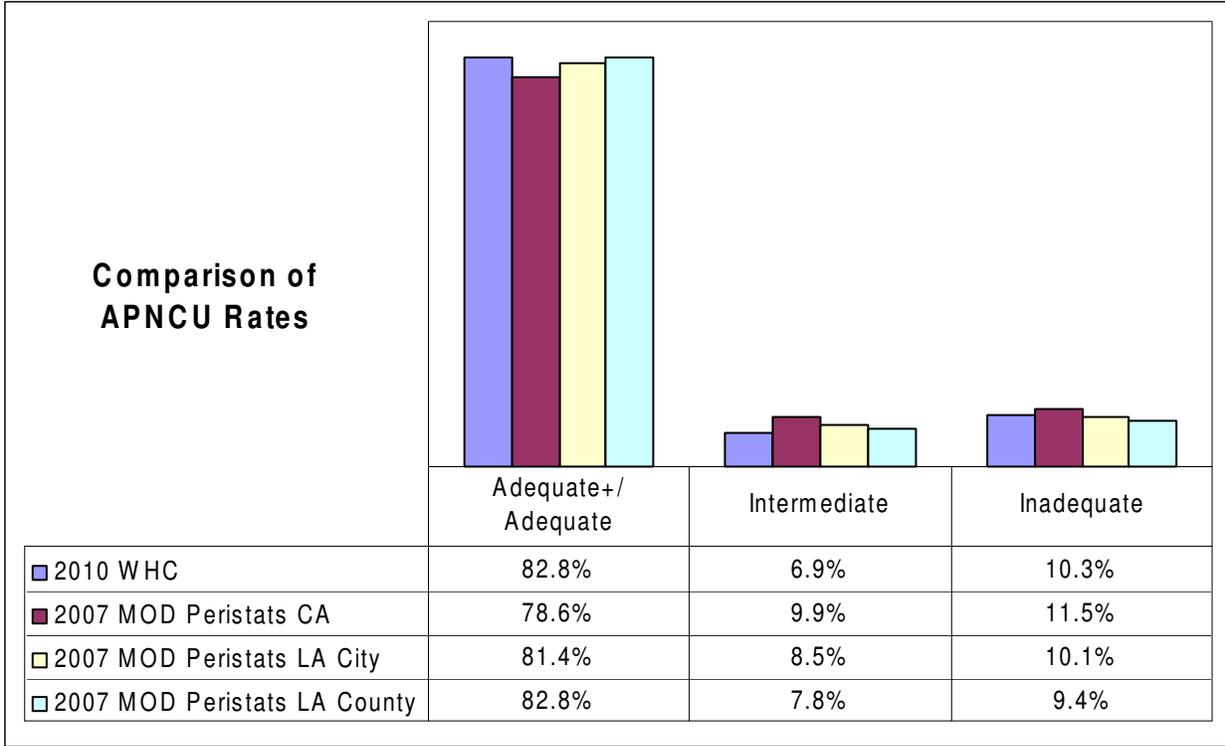


Figure 9. Processes of Care: Comparison of APNCU Rates

Health Outcomes

"Variations in the outcomes of pregnancy provide the most compelling evidence of differences in the quality of prenatal care" (Murata et al., 1992, p. v). Of the handful of key outcomes known to be affected by timely and appropriate pregnancy care and education (perinatal mortality, low birthweight, preterm delivery, admission to the neonatal intensive care unit, neonatal complications, and maternal complications), sufficient data were available on WHC patients to measure rates of low birthweight births (LBW, less than 2500 grams), preterm deliveries (fewer than 37 weeks gestation), and Neonatal Intensive Care Unit (NICU) admissions.

As before, in considering these results one should also take into account two critical risk factors that characterize the WHC patient population: Income and race/ethnicity.

- 98 percent of EPFMC's patients live at or below 150 percent of the poverty level, compared with other FQHCs in California at 91 percent and nationally at 86 percent.
- LBW and preterm birth rates are higher for both Hispanic/Latino and African American women. These two groups comprise 98 percent of the WHC's perinatal patients – compared with 93 percent of those in the Center's service area, 58 percent in California, 71 percent in Los Angeles County, and 39 percent in the U.S.

Low Birthweight and Preterm Births

Despite the increased risk of poor outcomes due to poverty and minority status, LBW rates for WHC patients (N=241; Figure 10) compare very favorably to those achieved by three key comparison groups: "EPFMC Service Area" (zip codes where at least 66 percent of the agency's patients live) and 118 California and 1131 national FQHC clinics with UDS reports for 2009.

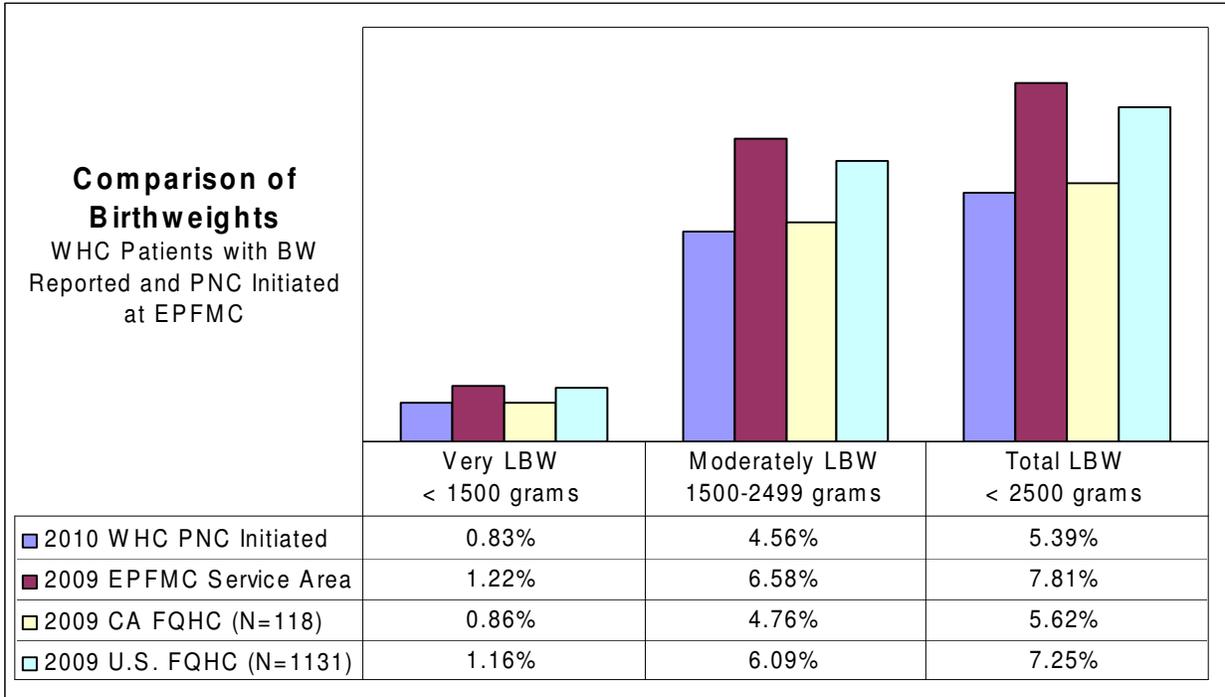


Figure 10. Comparison of Low Birthweight Births

Furthermore, although we would expect the inclusion of higher risk pregnancies in the WHC's patient population to result in higher rates of preterm births than those seen in comparison groups, this again (Figure 11) is not the case in our sample (N=241).

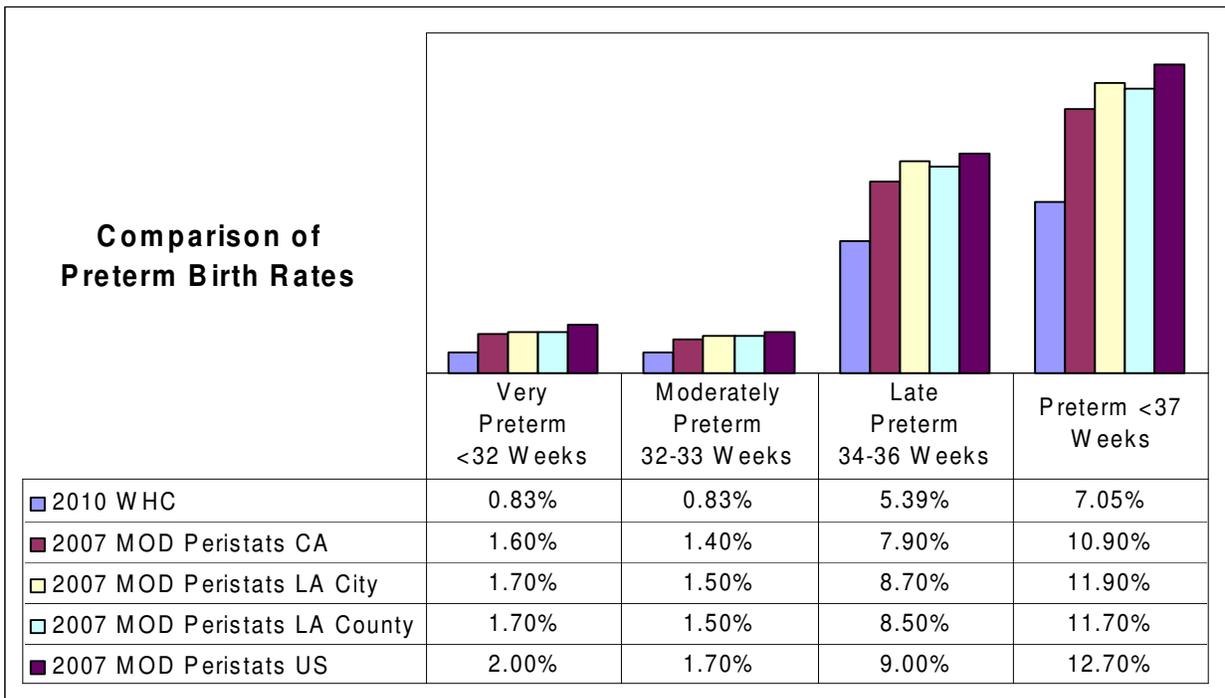


Figure 11. Comparison of Preterm Birth Rates

With the WHC performing better than similar groups both locally and nationally, what should be its goals relative to these two key health outcomes? As seen in Figure 12, having met the Healthy People 2010 standard for preterm births (7.6 percent), the next challenge is to meet the HP2010 standard for LBWs – 5.00 percent.

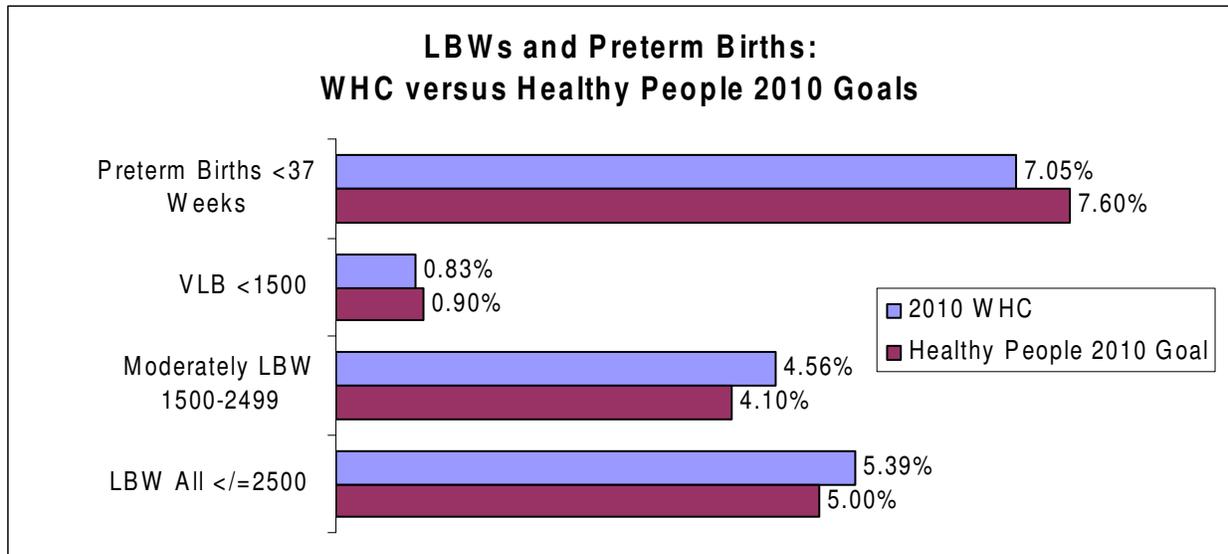


Figure 12. LBWs and Preterm Births: WHC and HP2010 Goals

NICU Admission Rates

In 2003, new checkbox items were added to the U.S. Standard Certificate of Live Birth – by 2006, 19 states had implemented the new certificate. One new category is "Abnormal Conditions of the Newborn," and includes a checkbox for "NICU Admission" (see Osterman, Martin, & Menacker, 2009, for a full discussion). [Although "results for this limited reporting area are not generalizable to the country as a whole because they are not a random sample of all births" (p. 3), alternative comparison rates are difficult to come by – except for those generated by insurance companies performing cost-effectiveness studies.]

Because the most recent available National Vital Statistics Report (NVSR) on NICU admissions (Osterman, Martin, & Menacker, 2009) includes all infants regardless of factors such as multiple births or maternal characteristics, we have analyzed NICU rates for WHC patients based on two variables (Figure 12).

1. Prenatal care: "PNC Only" refers to patients who received all of their prenatal care from the WHC; "All" refers to all patients whether their prenatal care came from WHC providers or elsewhere.
2. Number of babies: Multiples (twins, triplets, etc.) are generally considered high-risk, and can account for many of the NICU admissions made by a provider or clinic.

In three of the four combinations shown in Figure 13, the WHC had a significantly lower NICU admission rate than that of the 19 states that reported using the new birth certificate in 2006. (Interestingly, the "PNC Only" subgroup with the set of twins had a slightly lower rate than the "PNC Only" singletons subgroup, as neither of the twins was admitted to the NICU.) The only

WHC group that exceeded the NVSR figure was "WHC All" – a set that included not only 365 patients who received some or most of their prenatal care elsewhere but also seven sets of twins.

Although the differences are slight, there are two observations worth making here.

1. Relative to the NVSR analysis, the prenatal and maternity care provided by the WHC for singleton births appears effective regardless of whether a woman went there for all of her care or transferred there sometime during her pregnancy.
2. The "2010 WHC All" sample has a 3.8 percent rate of multiples (seven sets of twins in 372 live births) – higher than the rates reported by the city (2.8 percent), county (3.0 percent), state (3.1 percent), and the U.S. (3.4 percent) in 2007. These patients would likely have been enrolled in the WHC's *High-Risk Special Care Clinic*, and may have had other risk factors (for example, diabetes, obesity, or hypertension) that contributed to their less-than optimal birth outcomes.
 - a. Further investigation that includes more detailed and consistent data collection (especially related to patient characteristics and health status) should be undertaken to build understanding of the policies, processes, and mechanisms that underlie NICU admissions and what might be done to improve such outcomes among the most vulnerable subgroups.

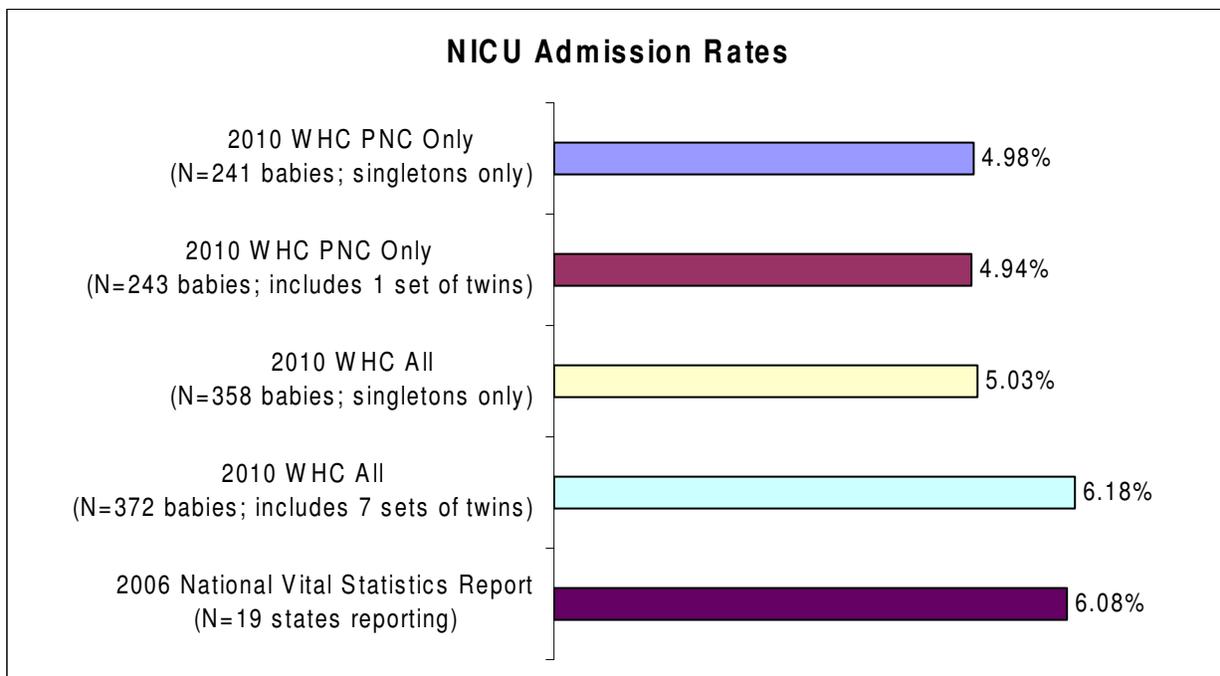


Figure 13. Comparison of NICU Admission Rates

Patient Satisfaction

For our primary purposes, as well as those of the evaluation funder (The California Endowment), only scaled items were scored and analyzed. Analysis of the Community Outreach section and short-answer questions will be done as part of an ongoing quality management project involving all perinatal providers and pregnancy care at EPFMC.

Prenatal/Childbirth Education Classes (PC)

Out of the sample of 74 respondents, 49 had participated in prenatal and/or childbirth education classes at the Center (66 percent). Results from the entire survey are illustrated in Figure 14; mean scores and standard deviations for each item can be found in Appendix A, Table 3.

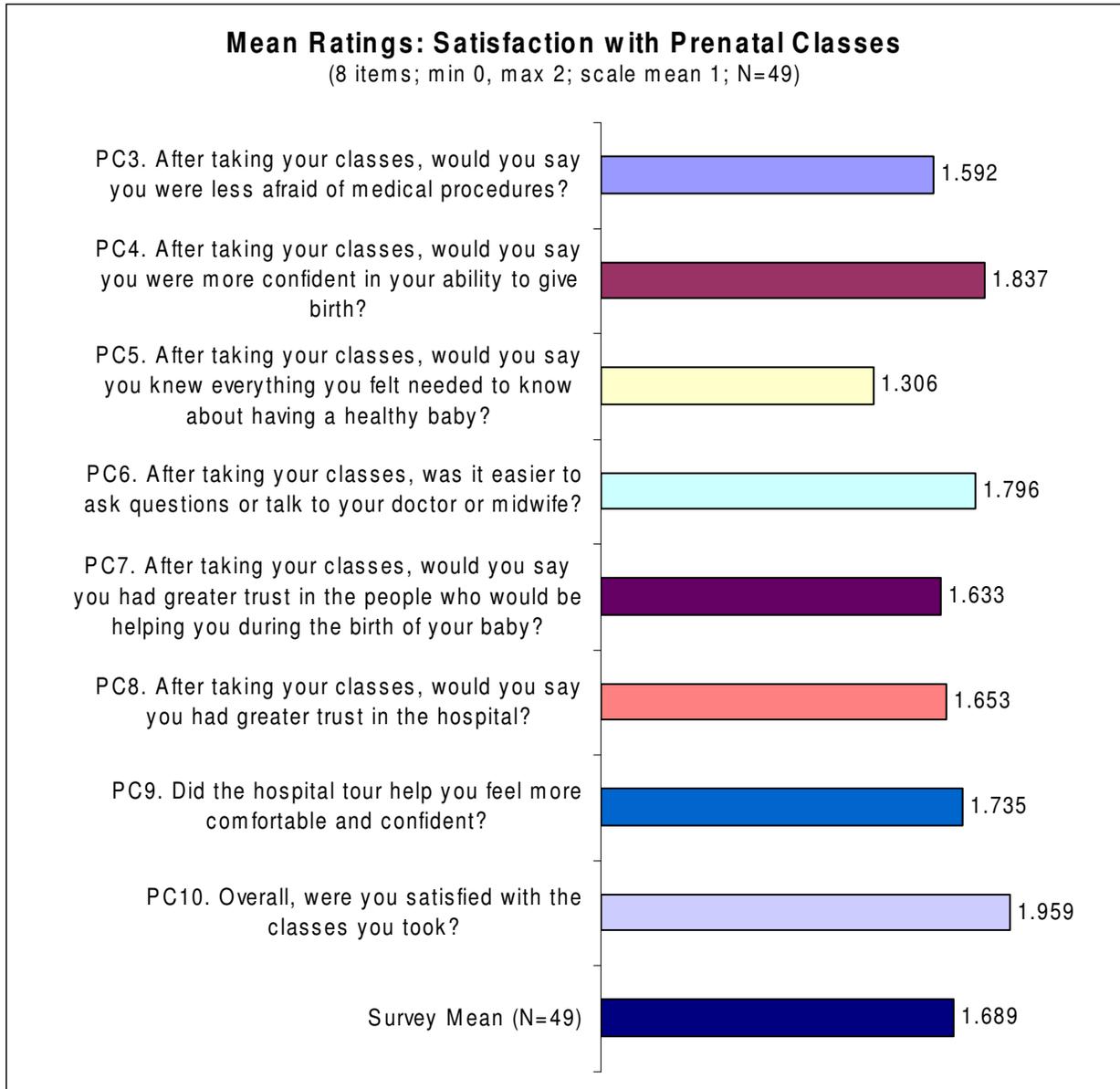


Figure 14. PSS: Satisfaction with Prenatal Classes Mean Ratings

Prenatal Care Experience (PCE)

With items groups around the seven Core Themes, Figure 15 demonstrates how the mean rating of each Theme compares with the others, making clear relative strengths and weaknesses as reported by respondents (item means and standard deviations appear in Appendix A, Table 4).

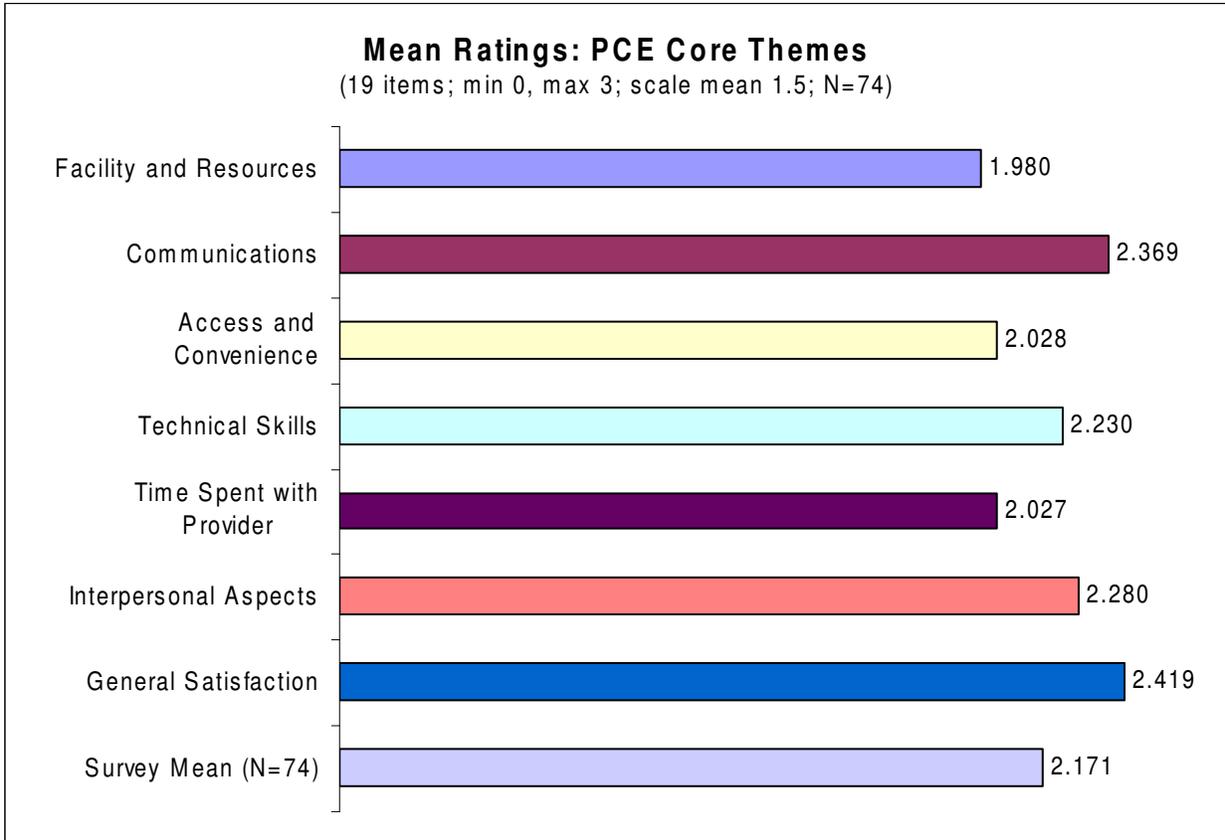


Figure 15. PSS: Satisfaction with Prenatal Care Experience Core Themes Mean Ratings

The mean scores for each of the 19 PCE items are shown in Figure 16 – further illustration of interrelationship of individual factors that influence both patient satisfaction and dissatisfaction with aspects of care.

As seen with the ratings for prenatal/childbirth classes, WHC patients generally report high levels of satisfaction with their physicians and midwives, the Center staff, and the clinical environment. The marks for interpersonal aspects, perception of provider skills and knowledge, and communications point toward the central strengths of both the WHC and EPFMC: Skilled care provided in a respectful, attentive, and community-oriented setting.

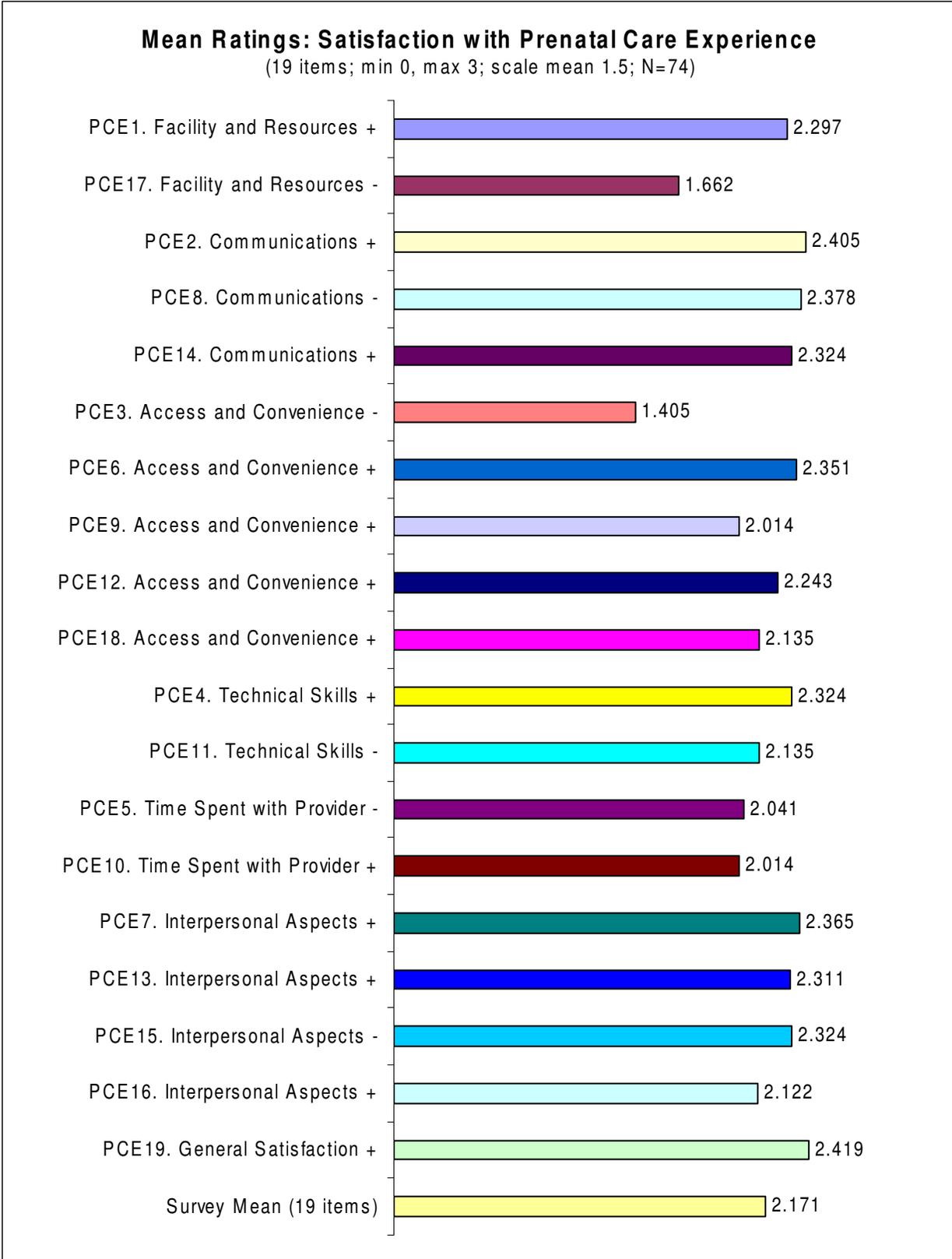


Figure 16. PSS: Satisfaction with Prenatal Care Experience Item Mean Ratings

Hospital Experience (HE)

Although tangential to understanding "what's happening" and "what works" at the WHC, interagency relationships and patient interactions with hospital personnel both contribute to overall satisfaction with care in meaningful and important ways. The WHC's OB Panel is on-site at California Hospital Medical Center (CHMC), and WHC OB/GYNs and CNMs provide labor and delivery services for not only WHC prenatal care clients but for CHMC patients, walk-ins, and emergencies. The agencies are closely allied in terms of populations, community needs, referral pathways, shared personnel, long-term professional relationships, and geography – the two, along with several other physician groups and service providers, essentially constitute multi-block healthcare campus that anchors the southern end of downtown Los Angeles.

Seventy-two of the 74 respondents provided information about their stay at CHMC; one patient went into labor early and had to be taken to a different facility, while another delivered in while visiting another state. Figure 17 provides a comparison of ratings for the 7 survey items and the section overall, with item means and standard deviations shown in Appendix A, Table 5.

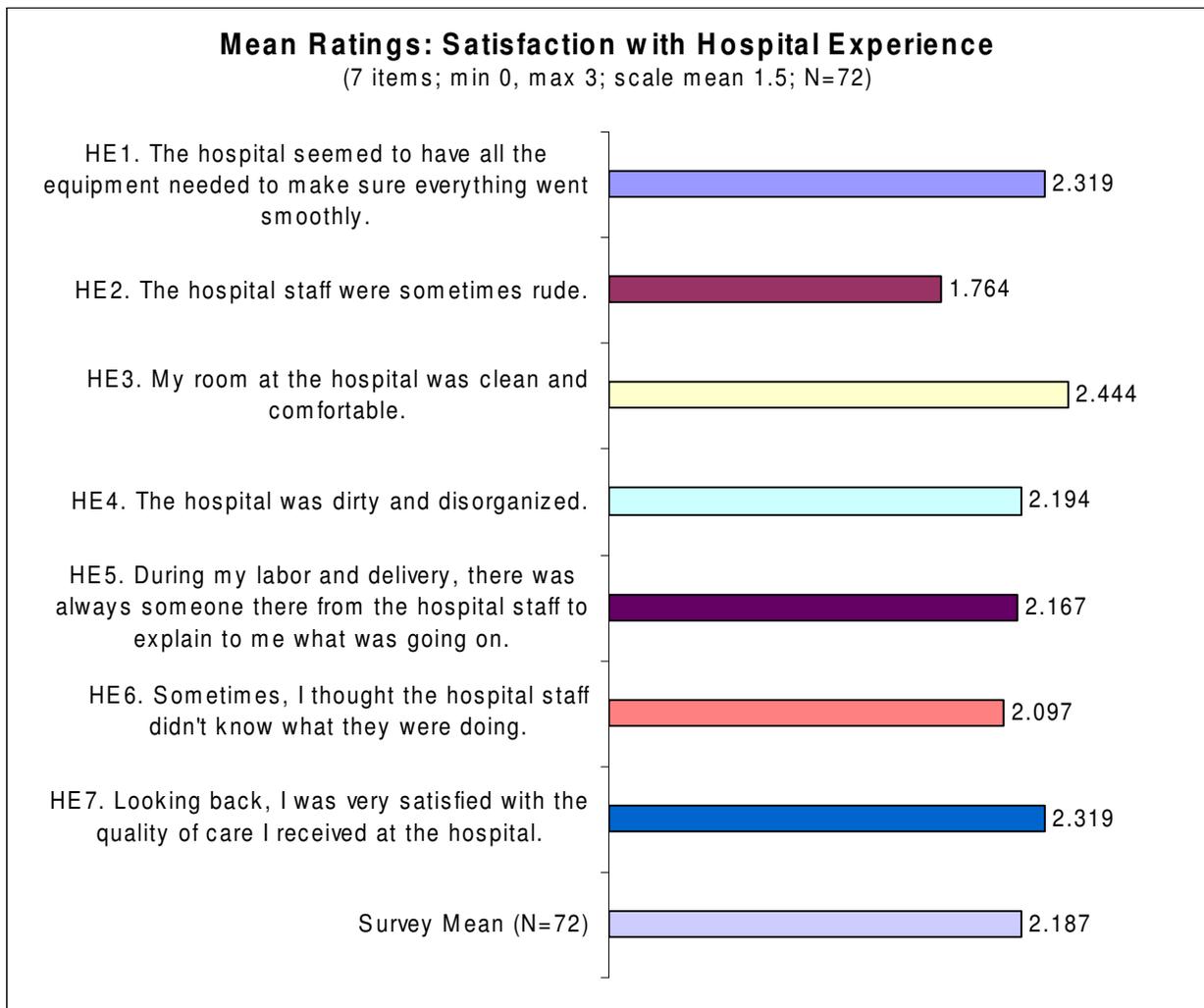


Figure 17. PSS: Satisfaction with Hospital Experience Mean Ratings

Generally quite favorable, the two lowest scoring items (HE2, "The hospital staff were sometimes rude," and HE6, "Sometimes, I thought the hospital staff didn't know what they were doing") reference personnel issues not under WHC control. Responses to HE2 show the greatest variability, though, and in view of the small number of items and limited sample of respondents to conclude that hospital staff members were overall lacking in courtesy or competence would be less than accurate.

Provider Satisfaction

Examining first (illustrated here in Figure 18, with data reported in Appendix A, Table 6) the mean ratings for nine of the Core Themes (Current Position was scaled differently and is discussed at the end of this subsection), it appears most providers who took the survey were overall satisfied with and motivated by their jobs, relationships, and work environment: Mean ratings for all nine Themes are higher than the scale average of 2.5.

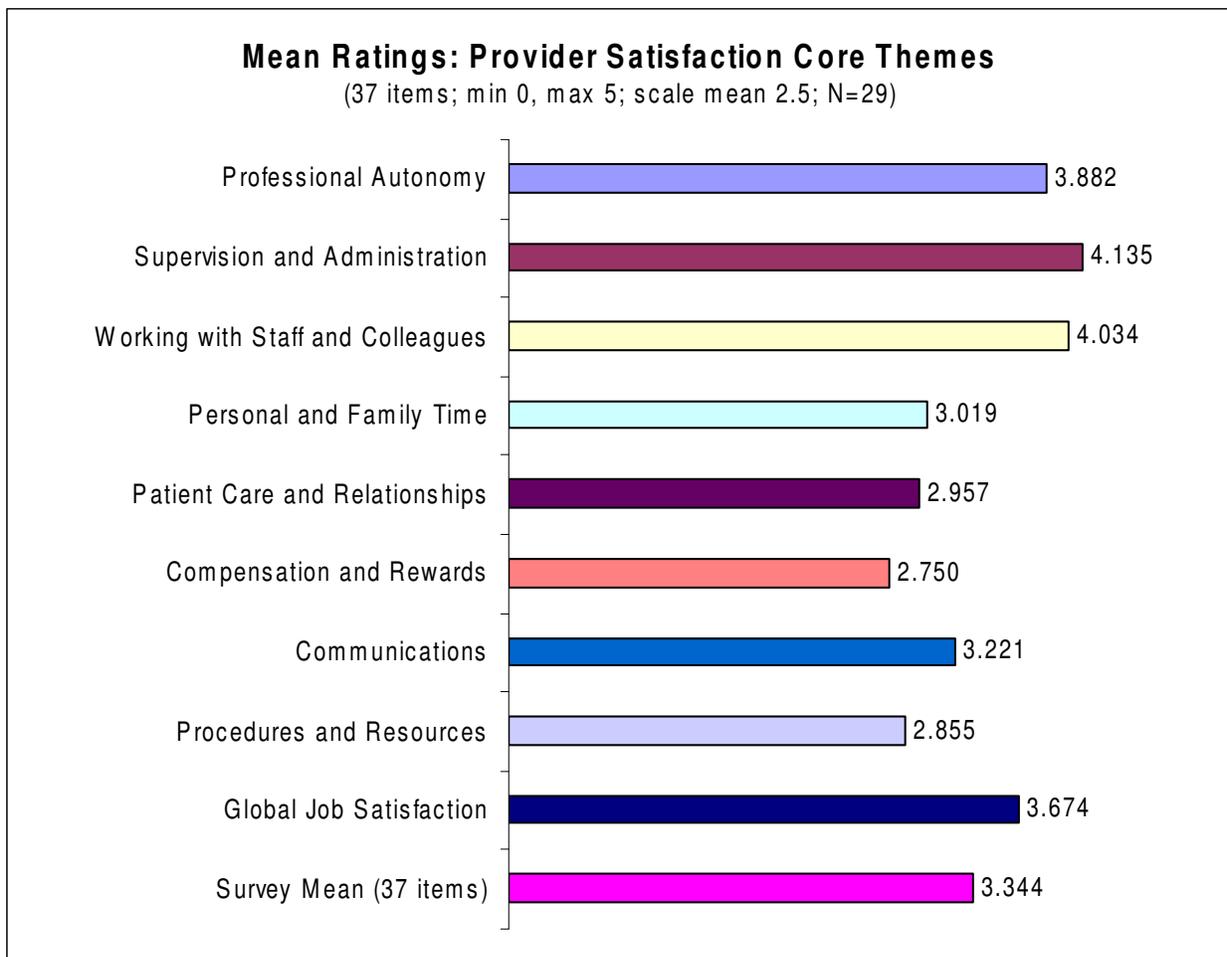


Figure 18. PSQ: Mean Ratings for Core Themes

A closer look at the individual items (Appendix A, Table 7; illustrated in Figures 19 and 20), reveals the issues of greatest concern, those where ratings hover at or below the scale average of 2.5.

Mean Ratings: Provider Satisfaction Questionnaire Items

(37 items; min 0, max 5; scale mean 2.5; N=29)

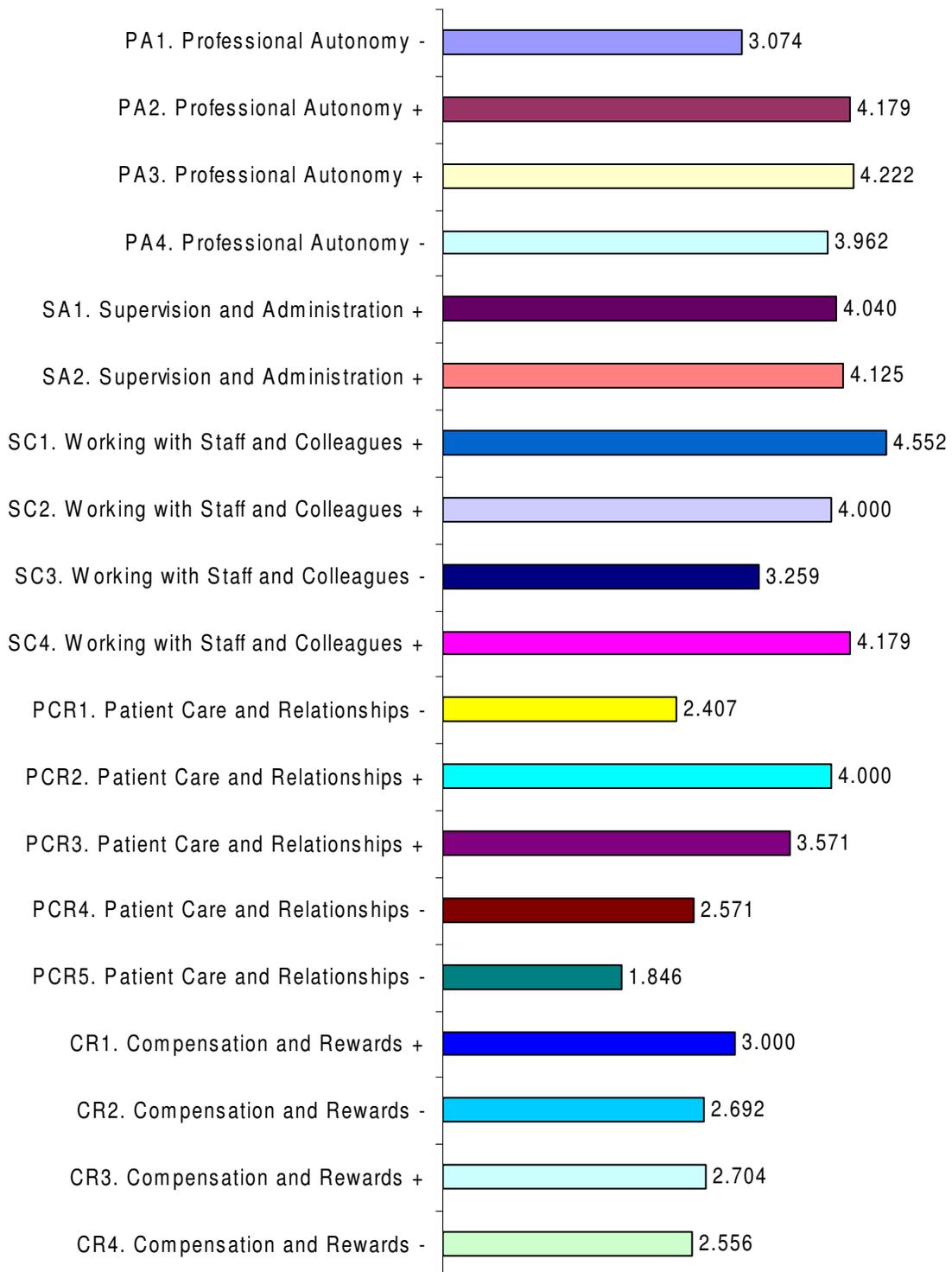


Figure 19. PSQ: Provider Satisfaction Items Mean Ratings

Mean Ratings: Provider Satisfaction Questionnaire Items

(37 items; min 0, max 5; scale mean 2.5; N=29)

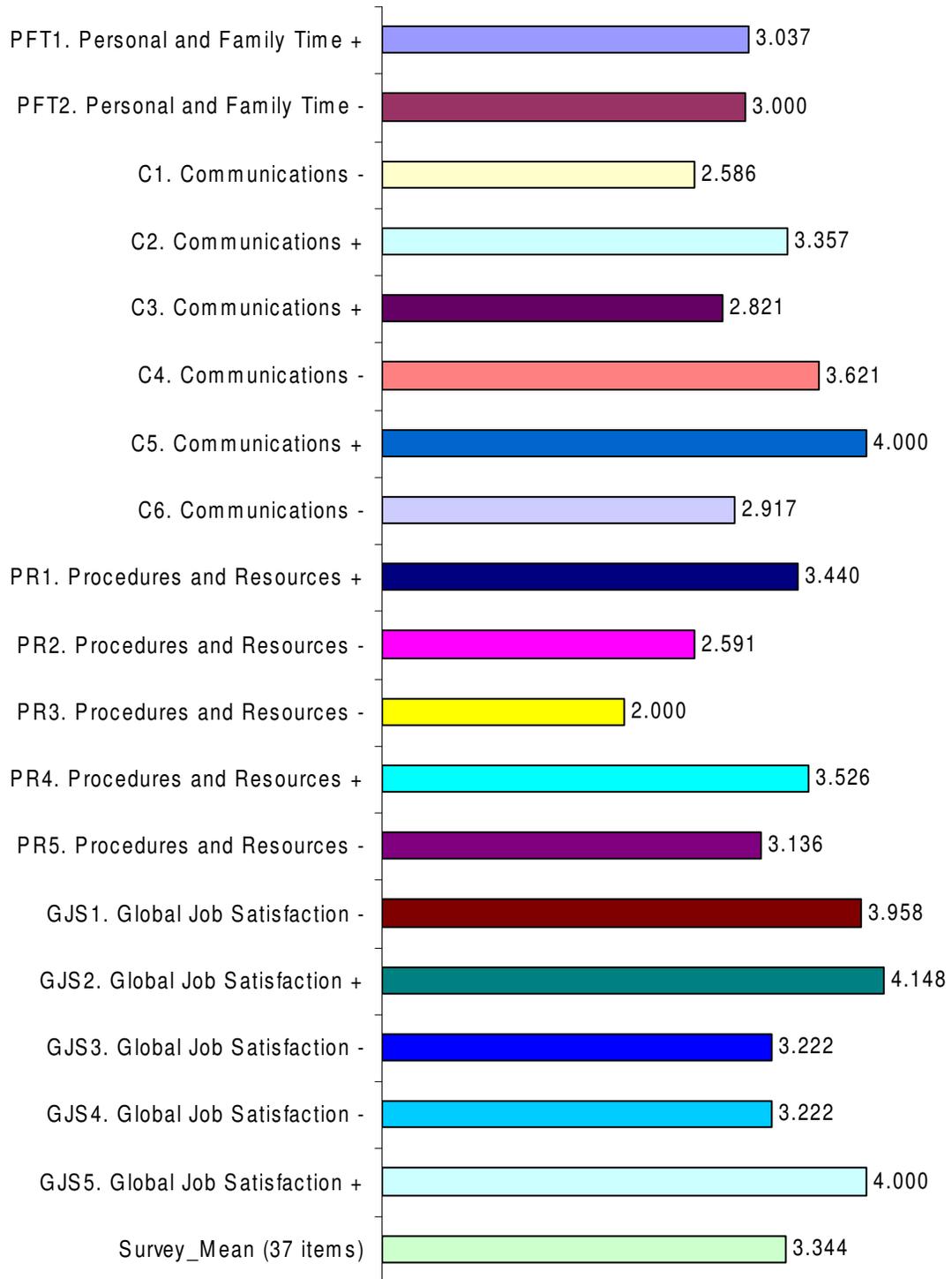


Figure 20. PSQ: Provider Satisfaction Items Mean Ratings

"Current Position" is a measure that correlates significantly with employee retention and motivation (Lichtenstein, 1984). As seen in Figures 21 and 22 (item means and standard deviations in Appendix A, Table 8), most respondents reported being highly satisfied with the jobs they hold at EPFMC (CP1). Furthermore, a significant number of those who noted a mismatch between what they were looking for originally and their current position reported feeling positive about the latter by the time they took the survey (CP2).

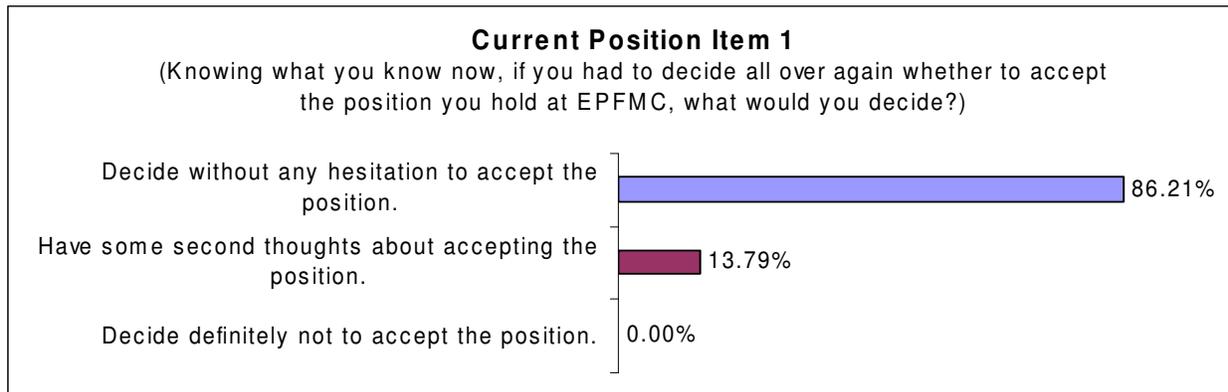


Figure 21. PSQ: CP1 Percentages

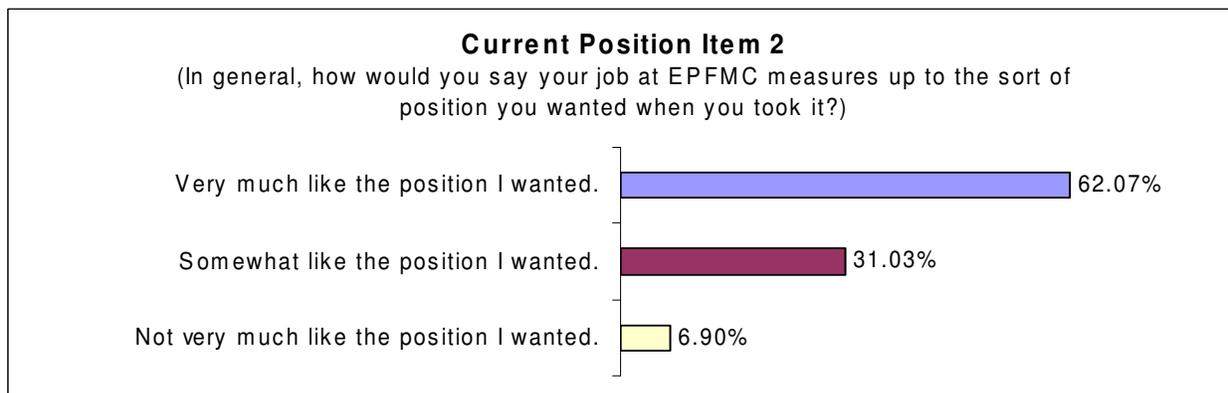


Figure 22. PSQ: CP2 Percentages

Challenges to Provider Satisfaction

Unpacking the data further by dichotomizing – grouping the six Agree/Disagree answer options into two categories indicating "more satisfaction" or "less satisfaction" relative to whether an item was negatively or positively scored – allows for a better understanding of where improvements should be made to ensure quality of care and provider retention. In Figure 23, we have singled out items with dichotomized scores corresponding to "less satisfaction" from more than one-third (33.3 percent) of respondents. Challenges that need attention include:

- Time pressures (PCR4, PCR5): Perceived lack of time with patients produced the most serious dissatisfaction, with "more time" equated with higher quality of care.
- Patient needs and support (PCR1, PR2, PR3): Over half the providers reported feeling overwhelmed by the needs of their patients, and nearly the same percentage would like

more support staff available; 71 percent said they could be more effective if their schedules were not so full.

- Compensation/rewards (CR2, CR3, CR4): Half of the respondents felt there was a discrepancy between their job performance and their salary level(s); forty percent would like more recognition for quality work; and a significant number noted a lack of sufficient appreciation for the work of nurses and midwives.
- Agency knowledge and understanding (C1, C3, C6): Although 61 percent of respondents felt that communications were good within EPFMC, nearly half reported not knowing "what is going on within the organization generally" and 46 percent believed there are problems with communications between the WHC and the hospital.

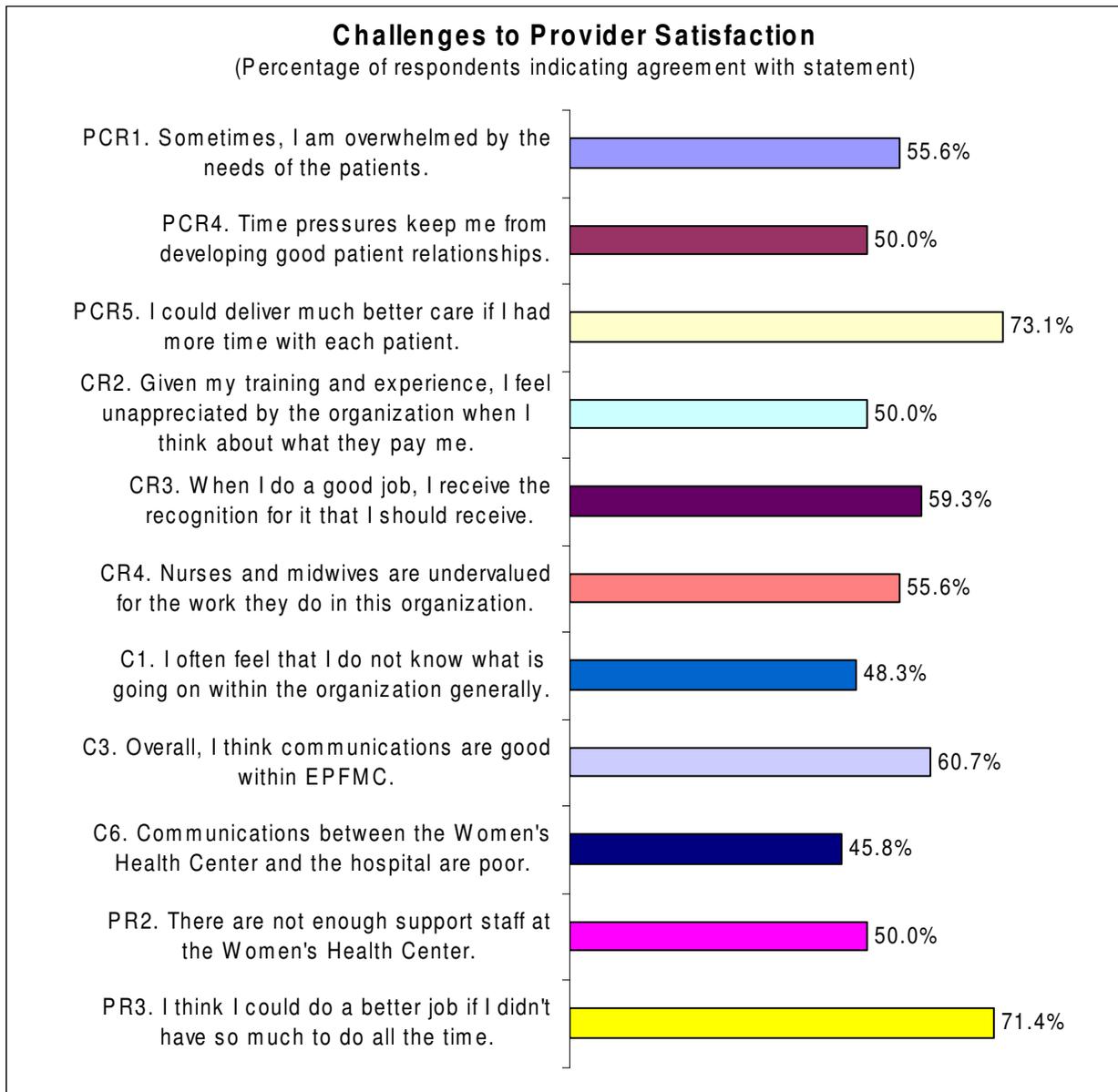


Figure 23. PSQ: Challenges to WHC Provider Satisfaction

DISCUSSION

Summary

Placing a well-defined focus on women's health concerns and issues improves outcomes for both the women and those they care for: Women make the vast majority of medical choices not only for themselves but also for their families. Furthermore, research indicates substantial benefits accrue from primary and specialty care provided by integrated medical homes such as EPFMC, especially those located in neighborhood settings. Cultural and linguistic competency, consistency and accessibility, a focus on prevention and self-care management – all promote effective communication between stakeholders and lead to better outcomes, quality of life measures, and health status levels than those achieved by irregular episodic or emergency care.

Despite the heightened risks and barriers faced by most of its patients – among them social and educational disadvantages, poverty, discrimination, and inadequate childcare and transportation – the evidence presented here shows the Women's Health Center performing extremely well on multiple indicators of clinical and operational quality. Through measurably consistent provision of high-value, high impact care, the WHC is not only meeting rigorous performance goals but also exceeding those achieved by its peers serving less at-risk communities.

Furthermore, much of the care is being planned, supplied, and directed by Certified Nurse-Midwives. Large-scale Certified Nurse-Midwifery programs are not commonly found at FQHCs, whether in California or elsewhere – only 11 percent of all CNMs in the U.S. provide care through or at a community clinic. Increased attention to CNMs does not diminish the care provided by OBs: The two groups work collaboratively at the WHC, in relationships that deserve further scrutiny.

Patients and providers work together to ensure processes of care lead to healthy outcomes. Each case is different, true, but well-being is a result of innumerable choices, events, circumstances, and relationships. By employing a systems model as an evaluative lens, we were better able to identify and understand effectiveness (did the treatment work?), causes and processes (why did it work?), and promising practices and policies (can it work in other settings?).

Processes of Care

Focusing on processes of care as a cornerstone dimension of quality is necessary considering that "adverse outcomes in pregnancy are relatively rare events, [making] the ability to detect clinically meaningful differences" (Murata et al., 1994, p. 41) in and between groups very difficult. Additionally, as suggested by the systems model introduced earlier (Figure 4, p. 16), health status and treatment outcomes always "result from a complex interaction of medical care and genetic, environmental, and behavioral factors" (p. 42). Because such factors can be only imperfectly controlled, the most useful approach – especially to practitioners – is to attempt to measure the qualities of quality care. Hence our two questions:

1. Did female patients at EPFMC and WHC receive timely and appropriate care as recommended by professional standards?
2. Was that care adequate (as per professional standards) to support quality health outcomes?

Based on the measures selected – PAP tests, trimester of initiation of prenatal care, and adequacy of prenatal care utilization – both EPFMC and the WHC are performing well; exceptionally so in terms of getting women into care during the first three months of pregnancy.

[As noted previously, the APNCU is not a direct measure of quality of care – we have assumed that if a woman keeps her prenatal appointments she will receive all recommended and appropriate exams, screenings, and diagnostic tests. Further investigation using a comprehensive medical record abstraction process (i.e., Roth et al., 1993) should be conducted for a finer-grained picture of provider compliance with and adherence to clinical guidelines and standards.]

Health Outcomes

In view of the desirability – and policy implications – of linking improvements in practice to better outcomes, two issues should be weighed when reviewing the findings presented here.

- One limitation on making salient inferences from the data is the small sample – although appropriate relative to the total number of deliveries handled by the WHC (Isaac & Michael, 1991), the rareness of pregnancy complications necessitates the use of very large datasets (i.e., cohorts the size of a state) for recognizable patterns and clusters. "Perinatal mortality occurs so infrequently (less than 11 per 1,000 live births nationally) that large epidemiologic studies would be necessary to detect differences in perinatal mortality rates among groups" (Murata et al., 1992, p. 14).
- Another serious challenge is the lack of systematic, comprehensive demographic data on a variety of potential comparison groups. Each source used in the current study includes a selection of patient characteristics, but none includes all – and even attributes of what should be standard characteristics vary from source to source. Furthermore, the levels of data available vary enormously, from census tract to zip code to county to national.

While keeping both of these concerns in mind, the evidence shows that WHC perinatal patients have better health outcomes than patients receiving care from agencies serving roughly similar populations. The low birthweight birth rate is of particular importance, as it is both an indicator of effectiveness and a predictor of infant (and possibly life-long) health. "Efforts to reduce perinatal morbidity and mortality must be directed toward the prevention of low birthweight (LBW) births. The most cost-effective means of preventing LBW births is adequate prenatal care" (Murata, McGlynn, Siu, & Brook, 1992, p. 1).

Considering the risk factors at play in EPFMC's client community – poverty, transiency, low levels of education and "health IQ," lack of insurance, too-few providers – the quality of health outcomes achieved by the WHC are even more striking. Two possible mechanisms that have attracted the notice of researchers deserve further investigation, especially studies focused on effects and experiences specific to the WHC's target population and practice setting.

- Research has shown that CNMs are more rigorous about following practice guidelines (Baldwin, Raine, Jenkins, Hart, & Rosenblatt, 1994; MacDorman & Singh, 1998), and as noted above typically do not manage the most clinically difficult pregnancies. Does the noticeably high quality of care provided at the WHC, combined with lower medical risk in the CNM patient population, result in the healthier birthweights, longer average gestational periods, and fewer NICU admissions seen in the sample population?
- Collaborative practice models such as that seen between CNMs and OB/GYNs in the WHC are receiving increasing attention in both scholarly research and program evaluations [see Miller & King, (1998) for an excellent bibliography of resources]. What characteristics of such models map to WHC practices to enhance strengths and mitigate risk factors, resulting in outcomes that match or exceed those achieved by peer providers?

Patient Satisfaction

What does it mean when patients are satisfied with their providers and the care they receive? Positive experiences with providers, settings, and support staff has been shown to correlate strongly with behaviors that support clinical effectiveness and improved outcomes: Compliance with self-care regimens (Hudak & Wright, 2000), keeping appointments and managing medications (Carr-Hill, 1992), referring friends and family (Ware, 1988), and consistent use of medical services and health information (Ferris, 1992). Simply put, "satisfied and dissatisfied patients behave differently" (p. 1728).

Using the Patient Satisfaction Survey (PSS) developed for this study, we found the sample of WHC patients surveyed to be very happy with the prenatal care, health education, and maternity services they had received. Strengths are seen in the high ratings given to patient-provider interactions and communications, in the trust patients expressed in their physicians and/or midwives, and in reports of positive hospital experiences.

The aspects patients were least happy with – wait times and intake processes (PCE3, PCE9), a crowded and uncomfortable waiting area (PCE17), not enough time with providers (PCE5, PCE10), unpleasant interactions with CHMC staff (HE2) – are challenges in many medical offices, clinics, and large hospitals regardless of demographics or socioeconomic status. Considering how strong the relationships are between such issues and both patient compliance with treatment and her retention within the healthcare system, what kinds of cost-effective improvements might be made that would enhance an already-successful patient experience?

- Might a portion of capital resources be directed toward upgrading patient waiting areas?
- Might a time-flow study be done that includes benchmarking promising solutions to the problem of excessive or inconsistent wait times?
- How might technology or self-directed health education opportunities be integrated into the appointment cycle to minimize the *perception* of waiting?
- What might be done to mitigate the effects of poor "customer service" practices or training at a partnering facility?

Provider Satisfaction

WHC providers report substantial levels of satisfaction in areas critical to ensuring and supporting quality care, employee retention, and motivation. They are strongly committed to patients, and report a deep connection to their practice areas and their EPFMC peers and colleagues. Good communications and a sense of autonomy, of "having say" over patient care and workflow, are paired with confidence in both the organization and the supervisory structure in ways that appear to stimulate and reward – personally and professionally – the majority of survey respondents.

Concerns about time are common workplace issues (Linzer et al., 2000) – however, considering the impacts reported by Provider Satisfaction Questionnaire respondents, "time with patients" and "time to complete job duties" are areas we recommend for review by senior management. Patients themselves do not appear significantly dissatisfied with the amount of time spent with providers (see above section on Patient Satisfaction); rather, their complaints are about waiting times and personal comfort. Questions that deserve additional study and analysis would include:

- Where are the bottlenecks in the appointment cycle that cause providers to feel rushed or possibly unable to complete procedures?
- What do providers want to be doing more of that they feel they cannot do now?
 - Would those activities improve patient compliance, satisfaction, and retention, health outcomes, or other indicators of quality?

The modest dissatisfaction expressed over compensation and rewards merits some examination as well. Initiating a public review of salary levels relative to job duties, hours, and additional contributions to the organizational community would help people understand where they stand and why, as well as support management's efforts to make fair adjustments where needed.

- Where do job category compensation levels at EPFMC and the WHC fall relative to peer clinics and the healthcare industry generally?
- How do salaries for individuals at equivalent institutions with similar educational and professional backgrounds compare with EPFMC?
- Could a recognition program be designed that acknowledges individual achievements in areas valued by the providers themselves? "Meeting our numbers" is important, but documenting and appreciating day-to-day successes is more closely tied to job satisfaction, motivation, and employee retention (Clark & Estes, 2002).

Overall, although based on a small sample, satisfaction among providers of perinatal care through and at the WHC outweighed dissatisfaction in 72 percent of items on the PSQ (two-thirds or more of respondents indicated "more satisfied than dissatisfied" on 28 out of 39 items). Explanatory factors include a positive workplace culture – good relationships and communications, modest stress, rewarding responsibilities – that fosters a strong sense of personal pride and encourages collaboration between providers, patients, and staff.

Next Steps

In addition to recommendations made throughout the report, we wish to highlight several "next steps" that might be undertaken in order to sustain current achievements, to grow and advance the WHC and EPFMC as new challenges emerge, and to document and disseminate research on promising practices.

1. Benefits would be realized through the fostering of a "culture of evidence" throughout the organization, one that works to identify and remove barriers and mitigate patient- and community-level risk factors by prioritizing data-driven planning and decision making.
2. An agency-wide program of ongoing research and evaluation would generate data and analyses for funders, partners, and supporters; for providers interested in publishing; for quality improvement/assurance efforts; and for ongoing improvement of operations, policies, and practices.
 - Targeted program evaluations – cornerstones of quality improvement and accountability – will reveal areas that need attention and services that should be expanded, thus raising the quality of care and improving outcomes overall.
3. Better data management systems, especially those that emphasize health information technology, will allow such activities as statistical matching and disaggregation based on

patient and provider characteristics – knowledge critical to making sure differences are real and significant.

4. "Fit for the purpose and right the first time": Systematic quality improvement (QI) strategies that include benchmarking and goal setting would maximize outcomes while reducing waste, achieving efficiency savings, and improving productivity. "Quality improvement . . . emphasizes system and processes indicators, rather than individuals, and examines objective data to improve these processes, even when high standards of performance appear to have been met. Benchmarking is a part of the quality improvement process" (emphasis added, Collins-Fulea, Mohr, & Tillett, 2005, p. 462).
 - Continuous improvement goals will require the development of policies, processes, and procedures that 1) build consensus on desired performance, 2) identify, authenticate, and quantify problems and gaps, 3) generate evidence-based interventions that will close the gaps, 4) implement, manage, and monitor interventions, and 5) evaluate changes in data-driven indicators.
5. Contacts and connections – surveys, marketing materials, "just in time" health education, etc. – made when patients are at the Center would ensure the collection of more representative data and more of a very transitory community is reached.
6. Qualitative interviews and focus groups would help refine understanding of the needs and desires of both patients and providers.

A rational model of medical care should be evidence based and constructed on the principle of "effective care with the least harm" (Sakala, 2008, p. 68). Effective care that is provided by well-trained and compassionate clinicians and other professionals; that takes into account patients' cultural and family contexts, education, personal values, and economic resources; and that is available at times and accessible in places suited to the characteristics of the community being served.

This is not to say that such approaches and perspectives can eradicate all risks, motivate all providers, retain all patients, or avoid all bad outcomes. However, it is the "least harm" logic of evidence-based care – in both practice and policy – that offers the most feasible and affordable alternative to the expensive, confusing maze that too many patients confront when attempting to access America's healthcare system. If the goals of administrators and providers are to maximize the good and minimize the bad, models such as the Women's Health Center suggest ways to optimize the allocation of scarce public and private resources to benefit even the most vulnerable populations.

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APPENDIX A: DATA TABLES

Table 3. PSS: Satisfaction with Prenatal Classes Item Scores and SDs

	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC_Means
Mean	1.592	1.837	1.306	1.796	1.633	1.653	1.735	1.959	1.689
Std. Dev.	0.705	0.373	0.508	0.456	0.487	0.481	0.531	0.200	0.160

Table 4. PSS: Satisfaction with Prenatal Care Experience Items, Scores, and SDs

Core Theme	Mean	SD
Facility and Resources	1.980	0.383
PCE1. I think the Women's Health Center has everything that's needed to provide complete prenatal care. (FR+)	2.297	0.460
PCE17. The waiting room for the Women's Health Center is crowded and uncomfortable. (FR-)	1.662	0.668
Communication	2.369	0.377
PCE2. The doctors and midwives were good about explaining the reasons for exams and tests. (C+)	2.405	0.571
PCE8. Sometimes, my doctor or midwife ignored what I was saying. (C-)	2.378	0.566
PCE14. The doctors and midwives were really good about answering my questions. (C+)	2.324	0.471
Access and Convenience	2.028	0.371
PCE3. I often had to sit for a long time in the waiting area. (AC-)	1.405	0.810
PCE6. I was almost always able to get an appointment that was at a convenient time. (AC+)	2.351	0.607
PCE9. When I first signed up as a patient at the Women's Health Center, the registration process was quick and easy. (AC+)	2.014	0.391
PCE12. I was usually able to get an appointment with the doctor or midwife I wanted to see. (AC+)	2.243	0.841
PCE18. Getting in touch with the Women's Health Center by phone was easy. (AC+)	2.135	0.532
Technical Skills	2.230	0.462
PCE4. The doctors and midwives were careful to check everything when examining me. (TS+)	2.324	0.500
PCE11. Sometimes, I wasn't sure the doctor or midwife examining me knew what they were doing. (TS-)	2.135	0.648
Time Spent with Provider	2.027	0.460
PCE5. The doctors and midwives sometimes hurried too much when they examined me. (TSP-)	2.041	0.629
PCE10. My doctor or midwife usually spent plenty of time with me. (TSP+)	2.014	0.585

Interpersonal Aspects	2.280	0.370
PCE7. The people at the Women's Health Center treated me in a friendly and respectful manner. (IA+)	2.365	0.610
PCE13. The nurses at the Women's Health Center were always courteous and helpful. (IA+)	2.311	0.547
PCE15. Sometimes, the doctors and midwives were too cold and impersonal. (IA-)	2.324	0.643
PCE16. The receptionists at the Women's Health Center were always courteous and helpful. (IA+)	2.122	0.522
General Satisfaction		
PCE19. Overall, the care I received from the Women's Health Center during my pregnancy was just about perfect. (GS+)	2.419	0.574
Survey Mean (N=74)	2.171	0.275

Table 5. PSS: Satisfaction with Hospital Experience Item Scores and SDs

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE_Means
Mean	2.319	1.764	2.444	2.194	2.167	2.097	2.319	2.187
Std. Dev.	0.470	0.722	0.528	0.493	0.628	0.479	0.601	0.340

Table 6. PSQ: Core Themes Mean Ratings and SDs

	Mean_Rating	SD
Professional Autonomy	3.882	.842
Supervision and Administration	4.135	.965
Working with Staff and Colleagues	4.034	.573
Personal and Family Time	3.019	.802
Patient Care and Relationships	2.957	.782
Compensation and Rewards	2.750	1.136
Communications	3.221	.647
Procedures and Resources	2.855	.755
Global Job Satisfaction	3.674	.924
Survey_Mean (37 items)	3.344	.546

Table 7. PSQ: Provider Satisfaction Items, Means, and SDs

Core Theme	Mean	SD
Professional Autonomy	3.882	.842
PA1. I find that administrative decisions and policies often interfere with patient care at the Women's Health Center. -	3.074	1.328
PA2. I feel I have sufficient input into the care plan for each of my patients. +	4.179	1.056
PA3. At the Women's Health Center, I'm allowed a great deal of independence in my work. +	4.222	1.086
PA4. I am supervised more closely than I feel is necessary. -	3.962	1.038
Supervision and Administration	4.135	.965
SA1. My supervisor at the Women's Health Center is quite competent in doing his/her job. -	4.040	1.020
SA2. My supervisor at the Women's Health Center treats me fairly. +	4.125	.992
Working with Staff and Colleagues	4.034	.573
SC1. I get along well with my colleagues at the Women's Health Center. +	4.552	.506
SC2. My co-workers are an important source of personal support. +	4.000	.920
SC3. At times I think my job is harder to do well because some of the people I work with are not as competent as they should be. -	3.259	1.347
SC4. At the Women's Health Center, there is a good deal of teamwork and cooperation between staff, midwives, and physicians. +	4.179	.670
Patient Care and Relationships	2.957	.782
PCR1. Sometimes, I am overwhelmed by the needs of the patients. -	2.407	1.448
PCR2. I feel a strong personal connection with the patients at the Women's Health Center. +	4.000	.845
PCR3. The gratitude displayed by the patients keeps me going. +	3.571	1.136
PCR4. Time pressures keep me from developing good patient relationships. -	2.571	1.399
PCR5. I could deliver much better care if I had more time with each patient. -	1.846	1.567
Compensation and Rewards	2.750	1.136
CR1. My total compensation package is fair. +	3.000	1.074
CR2. Given my training and experience, I feel unappreciated by the organization when I think about what they pay me. -	2.692	1.379
CR3. When I do a good job, I receive the recognition for it that I should receive. +	2.704	1.203
CR4. Nurses and midwives are undervalued for the work they do in this organization. -	2.556	1.672
Personal and Family Time	3.019	.802
PFT1. My work schedule leaves me enough time for a satisfying personal life. +	3.037	1.315
PFT2. The interruption of my personal life and family time by work is often a problem. -	3.000	1.109
Communications	3.221	.647
C1. I often feel that I do not know what is going on within the organization generally. -	2.586	1.376
C2. Overall, I think communications are good within the Women's Health Center. +	3.357	1.129

C3.	Overall, I think communications are good within EPFMC. +	2.821	1.188
C4.	EPFMC's mission and goals are not clear to me. -	3.621	1.321
C5.	Overall, I think communications between me and the patients I work with at the Women's Health Center are quite good. +	4.000	.720
C6.	Communications between the Women's Health Center and the hospital are poor. -	2.917	.974
Procedures and Resources		2.855	.755
PR1.	At the Women's Health Center, medical supplies and equipment are available when I need them. +	3.440	.917
PR2.	There are not enough support staff at the Women's Health Center. -	2.591	1.333
PR3.	I think I could do a better job if I didn't have so much to do all the time. -	2.000	1.247
PR4.	At California Hospital Medical Center, medical supplies and equipment are available when I need them. +	3.526	1.172
PR5.	Many of the policies and procedures we have to follow at the hospital make providing quality care very difficult. -	3.136	1.283
Global Job Satisfaction		3.674	.924
GJS1.	My current responsibilities at the Women's Health Center are a major source of frustration in my life. -	3.958	.806
GJS2.	Overall, I feel a real sense of pride in doing my job. +	4.148	.718
GJS3.	I find my work at the Women's Health Center stressful almost all the time. -	3.222	1.188
GJS4.	Sometimes I feel isolated in my job. -	3.222	1.423
GJS5.	I find my work at the Women's Health Center to be personally rewarding. +	4.000	.693
6-Point Core Themes Only (37 items; 9 themes; scale mean 2.5)		3.344	.546

Table 8. PSQ: Current Position Items, Means, and SDs

Core Theme	Mean	SD
Current Position	2.707	0.412
CP1. Knowing what you know now, if you had to decide all over again whether to accept the position you hold at EPFMC, what would you decide?	2.862	0.351
CP2. In general, how would you say your job at EPFMC measures up to the sort of position you wanted when you took it?	2.552	0.632

APPENDIX B: LIST OF ACRONYMS

ACOG: American Congress of Obstetricians and Gynecologists

APNCU: Adequacy of Prenatal Care Utilization (Kotelchuck, 1994)

CNM: Certified Nurse-Midwife

FQHC: Federally Qualified Health Center

HIPAA: Health Insurance Portability And Accountability Act

HPSA: Health Professional Shortage Area

HRSA: Health Resources and Services Administration (U.S. Department of Health and Human Services)

IOM: Institute of Medicine

MOD: March of Dimes

MOU: Memorandum of Understanding

MUA: Medically Underserved Area

NVSR: National Vital Statistics Report

NVSS: National Vital Statistics System

OB/GYN: Obstetrician-Gynecologist

PSS: Patient Satisfaction Survey

PSQ: Provider Satisfaction Questionnaire

SPA: Los Angeles County Department of Public Health Service Planning Areas

STI: Sexually Transmitted Infection

UDS: Uniform Data System