The 2007 Family PACT Medical Record Review: Assessing the Quality of Services

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Email: FamPACT@cdph.ca.gov
www.familypact.org

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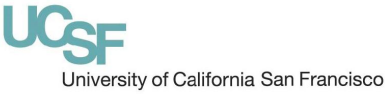

Philip Darney, MD, MSc
Principal Investigator

Heike Thiel de Bocanegra, PhD
Co-Principal Investigator

Project Manager
Daria Rostovtseva, MS

Editors
Carrie Lewis, MPH
Diane Swann

Chapter Contributors
Mary Menz, PHN, BSN
Leslie Watts, MS
Aileen Barandas, MSN, NP
Sarah Hendlish, MPH
Joan Chow, MPH DrPH
Diana Greene Foster, PhD
Michael Policar, MD, MPH
Christine Dehlendorf, MD

Programmers
Jaycee Karl
Mary Bradsberry
Glenn Wright, MPA

Administrative Support
Satin Khera
Mariah Crail
Tanya Farrar

Consultants and Contractors
Barbara Aved Associates

Table of Contents

Executive Summary – 2007 Medical Record Review

Introduction

In December 1999, the Family PACT (Planning, Access, Care and Treatment) Program received a federal Medicaid 1115 Family Planning Waiver for a demonstration project to support family planning and reproductive health service delivery and to expand access to adolescent, male and underserved female populations. The terms and conditions of the waiver require an evaluation of the program's progress in meeting the goals set forth in the demonstration project.

As part of this evaluation, the Bixby Center for Global Reproductive Health at the University of California, San Francisco (UCSF) conducts a medical record review (MRR) every three to four years to assess the quality of clinical care in the Family PACT Program. This report presents findings from the 2007 MRR which provides a third data point to the 1999 and 2002 MRRs. The goal of the review was to assess whether the services provided were consistent with the Family PACT Program Standards, whether the quality of services delivered varied over time, and whether there are differences in scope and quality of services by client and provider characteristics.

The 2007 MRR is a retrospective review of medical charts for 4,136 Family PACT clients served in 2005. The charts were abstracted from 201 provider sites in 13 counties representative of the program. The seven client samples included the Female General, Male General, Female Longitudinal, Female Chlamydia Positive, Male Chlamydia Positive, IUC Insertion and IUC Removal Samples. Analyses were performed by provider sector (public vs. private) and primary specialty (Family Planning/Women's Health vs. Primary Care/Multi-specialty).

Contraceptive Services to Female Clients

Family PACT monitors adoption of highly effective contraceptive methods among its clients as their use leads to fewer unintended pregnancies and births. The 2007 MRR found Family PACT services to have a substantial positive impact on female clients' contraceptive use. At the end of the first abstracted visit, the majority of women had opted for higher efficacy contraceptive methods compared to the methods they used prior to the visit. White women were more likely to exit the visit using a high-efficacy method than any of the other racial/ethnic groups. The most frequently stated reasons for a visit given by female clients were birth control, pregnancy testing and sexually transmitted infection (STI) related concerns.

Contraceptive Services to Male Clients

The proportion of male clients using a method of contraception increased as a result of a visit with a Family PACT provider. However, documentation of contraceptive use was

incomplete; in a quarter of the male charts there was no documentation on contraceptive method use and in only one percent was it documented that men relied on their partner's method. The three most frequently reported reasons that motivated a visit by males were interest in STI testing or treatment, experiencing symptoms, and desire to obtain or discuss birth control. New male adolescent clients were significantly more likely than adults to report birth control as their reason for the visit.

Longitudinal Analysis of Program and Contraceptive Method Continuation

Most women rely on Family PACT services for an extended period of time, with an average program participation of 16 months. A number of variables were found to increase the likelihood that a woman had additional Family PACT visits, including use of high-efficacy contraceptive methods and having a negative pregnancy test. Contraceptive method continuation in Family PACT showed significant differences by contraceptive method, with intrauterine contraception (IUC) having the longest duration of use and condoms the shortest.

Referrals for Specialized Family PACT Services

In general, providers were more likely to reschedule a specialized service than to refer the client to another provider. Natural family planning/fertility awareness methods (NFP/FAM) were the most frequently rescheduled service as well as the service with the highest proportion of repeat referrals/rescheduled appointments for both women and men. Referrals and rescheduled appointments for Family PACT services often did not have a corresponding claim in the database, suggesting a lack of follow-through, in particular on referrals for sterilization, IUC, management of cervical abnormalities, endometrial biopsy and mammography services.

IUC Services to Family PACT Women

IUC services were evaluated based on cohort data for two client samples: clients who received an IUC insertion who were followed forward, and clients who received an IUC removal followed back in time. IUC insertions were disproportionately provided by Family Planning/Women's Health providers. Overall, providers applied very conservative selection criteria for IUC insertion candidates; insertions for nulliparous women, teens, and women with past history of STI were very few. Slightly over half of the women returned after the insertion, with about one-half of these women having reported a known side effect or other symptom. The frequency and type of reported side effects were similar among women who had their IUC removed within 18 months and those women who did not have their IUCs removed. Complementing the chart information with information from claims data, the continuation rate of the original IUC at 18 months is estimated to be 69%. There was no statistically significant difference between ParaGard® and Mirena® users in the rate of IUC removals within 18 months of insertion.

In contrast to IUC insertion, IUC removal services were provided by a wide spectrum of Family PACT providers, particularly for women whose first Family PACT visit was the IUC removal visit. Among females the duration of IUC use in the IUC Removal Sample ranged from two weeks to 13 years with an average duration of three years. Discomfort with the method or desire to switch to a different method were indicated as the main reasons for removal. Other major reasons for removal were the desire to get pregnant and IUC expiration. A third of the IUC Removal Sample clients left the visit using condoms or other low-efficacy methods or no method at all. Information of the type of IUC removed and the patients' plans for pregnancy or contraception was often missing.

Pregnancy Testing and Follow Up

The proportion of women who received a pregnancy test in at least one abstracted visit decreased since the 2002 MRR, suggesting less unnecessary routine pregnancy testing. However, overutilization of pregnancy testing still needs monitoring, as slightly over a quarter of visits that recorded no indication for a pregnancy test documented that the test was performed. Family PACT Standards on follow-up of positive pregnancy tests, such as options counseling, and referrals and of negative pregnancy tests, such as contraceptive counseling, were nearly universally met.

Chlamydia Screening and Treatment

About half of the clients had a documented STI risk assessment in the past year. Chlamydia testing for females ages 25 and under increased slightly, but females older than 25 years were just as likely to be screened as younger females. The majority of male clients (70%) were tested for chlamydia. Complemented by laboratory test result data, the MRR chlamydia prevalence estimates were 4% among females age 25 and under, 2% among females over age 25, and 9% among all males. Nearly all of the medical records for chlamydia cases contained documentation of treatment. The proportion of females receiving timely treatment within 14 days has declined since the 2002 MRR and was lower for women than for men. Documented partner management also decreased and re-testing was rarely found in charts although re-test claims were found in the database. Positive chlamydia cases were not universally reported to the local health jurisdiction although the proportion of reported cases increased compared to the 2002 MRR.

Cervical Cancer Screening and Follow-Up of Abnormal Results

The annual cervical cancer screening rate has decreased compared to the 2002 MRR, suggesting providers reduced annual Pap tests in accordance with national screening guidelines, which recommend longer screening intervals for most women. Nine percent (9%) of Pap test results were considered abnormal. An HPV test was recorded for 3% of all visits with a Pap test. Complementing the chart information with claims data found that at least 61% of Pap smear tests with ASC-US results were appropriately followed up; the data on follow-up of the remaining 39% was inconclusive.

Education and Counseling Services

The proportion of clients who had at least one visit with documentation of an education and counseling service increased by 10 percentage points to 76% since the 2002 MRR. The increase was among all counseling topics, including the two core services – method use/options and STI/HIV prevention. Consistent with the program's focus on teen education, visits with adolescent clients were more likely to have documentation of counseling than visits with adult clients. However, counseling to sub-groups such as clients who adopted a new contraceptive method at the visit and clients who presented with an STI concern should be universal and could be improved through provider training. Few charts had documentation of counseling specific to preconception care, but nearly half had documentation of education and counseling on health subjects which may be addressed in the context of planning a pregnancy, such as weight management and diabetes control. Over a quarter of the visits matched to a claim for education and counseling lacked chart documentation to justify reimbursement, suggesting the need for quality improvement intervention.

Primary Care Services and Referrals

In most cases, the Family PACT provider was the usual source of care for non-reproductive concerns. Documentation on usual source of care was not found in 38% of the charts. Only a few clients were referred to another provider for primary care services. Eight percent of visits had documentation of the provision of general primary care services at the time of the Family PACT visit. Few clients had chart documentation of referrals or were rescheduled for specialized services such as substance abuse counseling, domestic violence and other psychosocial conditions.

Quality of Services to Clients with Limited English Proficiency

About half of the 1,915 visits that included documentation of the type of interpreter used noted that these services provided by a bilingual provider (language-concordant or LC) and in half of the visits a third person, mainly a bilingual staff member, provided interpretation (language-discordant or LD). Selected quality indicators were compared for these two groups. Chlamydia testing rates were similar in both groups. However, women in the LD group were significantly less likely to have documentation of an STI risk assessment, a pregnancy test or follow up to a positive pregnancy test than women in the LC group. LD visits were also significantly less likely than LC visits to contain

documentation of the provision of education and counseling services. This suggests that key aspects of reproductive health care are compromised when an interpreter is being used.

Completeness and Quality of Documentation

Compared to the 2002 MRR, both retention of the Client Eligibility Certification (CEC) forms in the chart and completeness of CEC forms have substantially decreased. Retention of informed consents for invasive procedures remained high. Medical history checklists contained personal and family medical history and to a lesser extent contraceptive and sexual history. Providers who served new clients met the minimum standard of obtaining a sexual and medical history 78% of the time.

Discussion and Conclusion

Overall, Family PACT providers are delivering services consistent with the program standards with some differences noted by provider sector and specialty. Most, but not all, quality indicators improved over time. However, the 2007 MRR identified opportunities for improvement such as improving the quality of documentation, facilitating the provision of high efficacy contraception, improved quality of medical records and documentation, and better follow-through on referrals. New areas, such as assessment of usual source of care and quality of care to clients with Limited English Proficiency, will warrant further attention and monitoring in future medical record reviews.

Chapter 1. Introduction

The State of California's family planning program, Family PACT (Planning, Access, Care and Treatment), was implemented in January 1997 by legislative mandate to provide access to family planning and reproductive health care services at no cost to California's low-income women and men. California residents are eligible for the program if they are at risk of pregnancy or of causing pregnancy, have a gross family income at or below 200% of the Federal Poverty Level (FPL), have no other source of health care coverage for family planning services, and are up to 55 years of age for females and 60 years of age for males. In fiscal year (FY) 2005-06, Family PACT served over 1.6 million low-income Californians. Approximately 20% of clients served each year are adolescents under 20 years of age and about 11% are males.

The California Department of Public Health, Office of Family Planning (OFP) administers Family PACT. Medi-Cal providers from both the public and private sector are eligible to participate in the program. In FY 05/06, 2,110 enrolled providers served clients and another 700 Medi-Cal providers provided services on referral.

The program's scope of services is limited to family planning and reproductive health care services. Covered services include the provision of contraceptive methods, testing and treatment of sexually transmitted infections (STI), confidential HIV testing, cervical and breast cancer screening, and education and counseling services based on individual client assessment. Pregnancy testing and options counseling based on test results are also covered, while abortion and prenatal care services are beyond the scope of the program.

To insure the delivery of high quality services under the program, OFP developed the Family PACT Program Standards. The standards focus on seven areas: informed consent, confidentiality, linguistic and cultural competence, access to care, availability of covered services, clinical and preventive services, and education and counseling services. See Appendix A: Family PACT Program Standards.

In December 1999, the Centers for Medicare and Medicaid Services (CMS) granted California an 1115 Medicaid Waiver to support Family PACT service delivery and to expand the efforts to reach adolescent, male and under-served female populations. The waiver terms and conditions require an evaluation of the program's progress in meeting the goals set forth in the waiver application. The Bixby Center for Global Reproductive Health at the University of California, San Francisco (UCSF) monitors service utilization through the analysis of administrative claims data and evaluates service delivery and outcomes through special studies, such as client exit interviews, provider surveys, and birth rate analysis.

To measure the quality of clinical care, every three to four years UCSF conducts a medical record review (MRR) of a sample of Family PACT client charts. The MRR provides a comprehensive description of delivered services, which guides OFP in policy development and the design of interventions to improve quality of care and enhance program performance.

The 1999 MRR provided an early snapshot of service delivery under Family PACT. The 2002 MRR provided an expanded view of these services and described the changes in service delivery over time. Data from these two MRRs were analyzed by UCSF to answer a range of evaluation questions, including the evaluation of provider adherence to the program standards, differences between public and private sector providers, the level of client retention, and rates of contraceptive method continuation. This report presents findings of the 2007 MRR. It builds on the 1999 and 2002 MRRs and provides a third data point towards evaluating quality of care and describing changes in service delivery over time.

Goals

The goal of the 2007 MRR was to assess the quality of services delivered through Family PACT and to answer the following Family PACT evaluation questions:

- Were family planning and reproductive health care services provided under Family PACT consistent with the program standards?
- Did the scope and quality of delivered services differ by provider or client characteristics?
- Has the quality of services delivered under the program changed over time?

Medical Record as a Data Source

Medical records provide a rich source of clinical data to answer questions about appropriateness, process, and outcomes of care.[1] Chart abstraction is attractive for its accessibility, relative logistical simplicity, flexibility, and efficiency. Perhaps the greatest advantage of the medical record review methodology is that the data on the provider-patient interaction are already recorded and are available for collection.[2]

Chart reviews vary in scale from small quality of care reviews and mid-size clinical studies to large epidemiological surveys.[1,3] Besides assessing the overall quality of care, chart reviews have been used to evaluate patient treatment options for specific conditions and to explore disparities in care based on the patient's socioeconomic status and race. They have also been used to validate the data supplied by other sources, such as medical claims and patient self-reports.[4-10] In certain research fields, medical record reviews are very common. For instance, in the field of emergency medicine, they are estimated to comprise 25% of all published scientific studies.[2]

In the field of family planning and reproductive health, medical record review methodology is regularly used to evaluate specific contraceptives and procedures. Examples are studies that evaluated barriers in access to sterilization,[11] barriers to the use of intrauterine contraception,[12] side effects of oral contraceptives,[13] administrative protocols for Depo-Provera,[14] and the recurrence of dysplasia after loop electrosurgical excision procedure (LEEP).[15] These chart reviews were limited to patient populations of a single medical center or a small number of outpatient clinics and were based on the review of a modest number of patient charts (range: 43-526 charts).

The only known large-scale evaluations of family planning programs that applied medical chart abstraction are those of California's Family PACT Program and of the federal Title X Program. The designs of these two evaluations are very different.

The Title X Program is monitored by conducting periodic site visits at each Delegate Agency site every three years and also through the Family Planning Councils of America (FPCA) "Family Planning Performance Measurement System".[16,17] During site visits, trained medical specialists review randomly selected charts for Title X regulation compliance. For the Family Planning Performance Measures, the clinic staff use a standardized tool to abstract data on a set of performance indicators from a sample of client charts and report the aggregated results to a central location. This monitoring is required every three years for each clinical site. Once fully implemented, all Title X clinics will be required to participate in this activity.

In contrast, the 1999 and 2002 medical record reviews of the Family PACT Program were conducted with representative samples of providers. Trained chart abstractors collected the data, which were then aggregated and analyzed at a central location. Both the Title X and the Family PACT Programs use their chart reviews to improve the quality of services. In Title X, the emphasis is on staff review of results at the individual clinic level. In Family PACT, the findings are presented to providers at stakeholder meetings and inform program-level quality improvement activities initiated by OFP.

Medical records contain crucial information for the evaluation of quality of care that often cannot be obtained from administrative data, such as patient diagnosis, symptoms and medication side effects. However, charts report the content of the provider-patient interaction as it is perceived by the provider and hence do not represent the process of patient care in its entirety. Large amounts of missing data for certain indicators can be problematic in interpreting the quality of a medical encounter.[1,2]

Another limitation of medical chart documentation is the over- and under-reporting of the provision of care. In a study comparing medical records to standardized ("mystery") patients, Luck et al. (2000) found that certain steps taken by practitioners were not reflected in medical records, while some steps not taken by them were recorded in patient charts as if they had occurred. The degree of bias was distributed unequally. Data on topics such as preventive services and counseling were found to be underreported at especially high rates, while data on medication prescriptions and referrals to specialists tended to be recorded reliably.

Peabody et al. (2004) used mystery patients and medical charts to evaluate the quality of administrative data and to determine the relative contributions of patients, providers and the system towards inaccuracies in administrative data. Mystery patients took notes on the office visit interactions, which were then compared with the records in the chart and computerized administrative databases. The researchers found that administrative data on patient diagnoses were accurate in 57% of cases. In the remaining cases, (1) the diagnosis was recorded in the medical record incorrectly (13%), (2) the diagnosis was recorded correctly but the encounter form was missing or incomplete (8%), or (3) the diagnosis was recorded correctly and while the encounter form was complete, it was filled out incorrectly (22%).

The level of agreement between claims and medical records data vary depending on the items evaluated. For example, Pap smear status as documented in claims data was found to correspond highly with the medical record.[18] In contrast, the rate of screening for prenatal syphilis was considerably underestimated by Medicaid administrative data when compared to medical charts.[19] A comparison of Family PACT claims data with medical charts abstracted in the 2002 Medical Record Review also found that the level of agreement varied greatly between the items abstracted. Among services provided to female clients, the percentage of matching records between the MRR and claims data was high for pregnancy tests, Pap smear tests and most STI tests (82%-88%) but low for HPV tests (16%). Among contraceptive methods provided to female clients, the percentage of matching records was the highest for oral contraceptives (84%) but varied between 38% and 78% for other methods. For male clients, the percentage of matching records was fairly high both for STI tests (77%-83%) and contraceptive methods provided (76% for condoms and 91% for vasectomy).

The differences in completeness and accuracy of data across data sources may be explained by the fact that medical charts serve a variety of purposes. Besides documenting patient treatment, charts are also used as a legal record, justification of treatment decisions, and a source for billing information, and these different uses of the data influence how the data are recorded.[20]

Besides cross-validation of data sources, matching medical chart data to claims and administrative databases provides complementary information to achieve a more complete representation of the services provided. In the 2002 Family PACT MRR, the match of STI screening information from the chart with data from laboratory administrative databases allowed for assessing the timeliness and appropriateness of STI services. Similarly, claims data can be used to evaluate completion of referrals to specialists or prescription pick-up at pharmacies.

In conclusion, medical record review is a widely utilized methodology for collection of clinical and quality of care data in family planning and reproductive health settings. Chart reviews allow access to information that is often unavailable from other data sources. In combination with claims data and client self-reports, chart reviews can provide valuable insights in the quality of care in a family planning program. However, in reading chart review findings, the reader should keep in mind that reliability and validity of medical record review data vary depending on the data element, and that incomplete or inaccurate

documentation may impact the quality of data on specific data elements, particularly counseling, referrals, and preventive services.

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Chapter 2. Methodology

Description of the Study

The 2007 Medical Record Review (MRR) is a retrospective review of medical charts for 4,136 Family PACT clients served in 2005. The charts were abstracted for seven independent client samples from 201 provider sites in 13 designated counties. The client samples included the Female General, Male General, Female Longitudinal, Female Chlamydia Positive, Male Chlamydia Positive, IUC Insertion and IUC Removal Samples.

The Male and Female General Samples were used to assess the overall service delivery under the Family PACT Program and are based on records about services provided to male and female clients in 2005. The Female Longitudinal Sample was used to assess contraceptive method initiation and continuation and is based on records about services provided during 2002-2005 to female clients who received Family PACT services in 2002. The IUC Insertion and IUC Removal Samples evaluated services related to the provision of intrauterine contraception (IUC) and are based on services to female clients who had an insertion or removal of an IUC in 2005. The Male and Female Chlamydia Positive (CT) Samples were used to evaluate chlamydia control services based on services to Family PACT clients who tested positive for chlamydia in 2005. See Table 2.1. The Female and Male General, Longitudinal and Chlamydia Positive Samples were collected in the 2002 MRR. The IUC Samples were new to the 2007 MRR.

Table 2.1. General Description of the 2007 MRR Samples

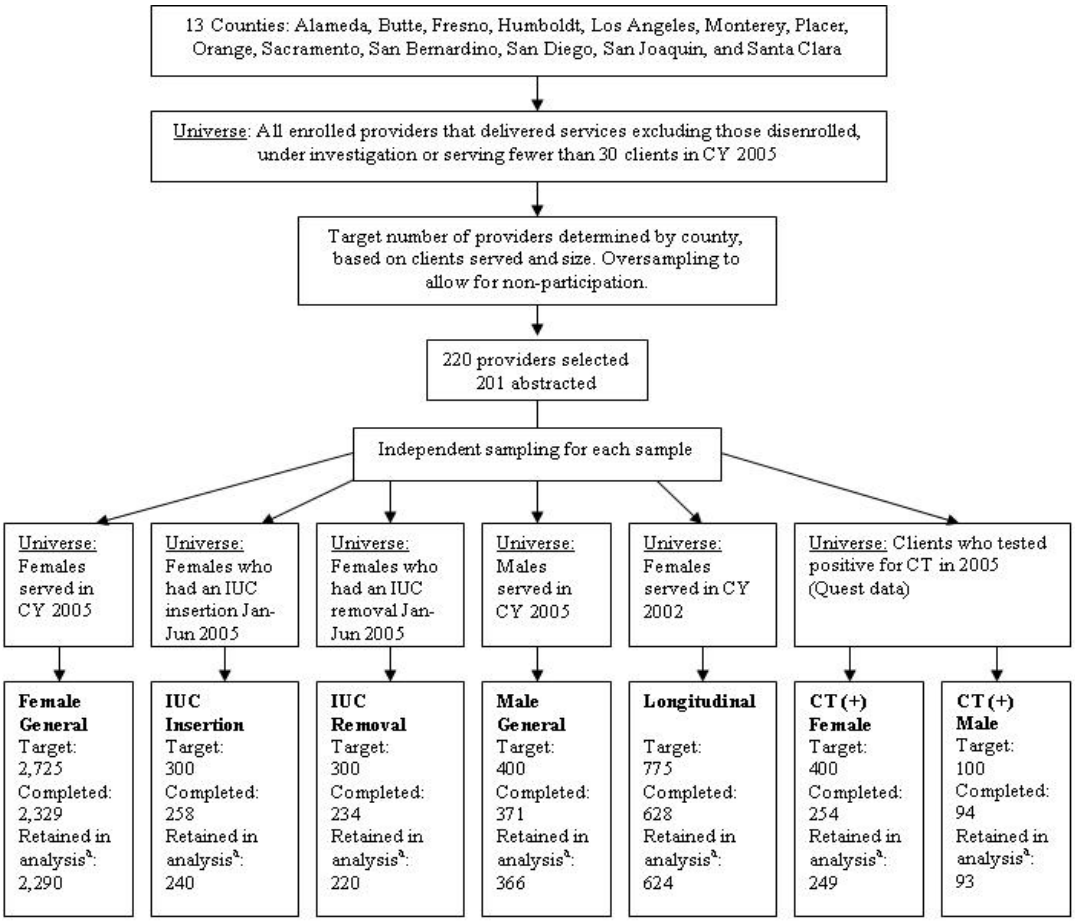
Samples	Goals	Subjects
Female General Male General	To assess the overall service delivery and adherence to Family PACT Standards	Female and male clients served in 2005
Female Longitudinal	To assess contraceptive initiation and continuation over a four-year period	Female clients served in 2002, followed for four years
IUC Insertion	To assess services related to the provision of intrauterine contraception	Female clients who received IUC insertion in 2005
IUC Removal	To assess services related to the removal of intrauterine contraception	Female clients who received IUC removal in 2005
Chlamydia Positive Female Chlamydia Positive Male	To assess chlamydia control services	Female and male clients who tested positive for chlamydia in 2005

The study framework, data abstraction tool design, sampling, data preparation and analysis were conducted by staff from the University of California, San Francisco (UCSF) Bixby Center for Global Reproductive Health. Staff from the California Department of Public Health (CDPH), Sexually Transmitted Disease Control Branch, contributed to the analysis of chlamydia control services. Data collection was conducted by Barbara Aved Associates (BAA), including the design of the data entry software, recruitment and training of the professional nurse abstractors and coordination of all fieldwork activities. Quality assurance was conducted by both UCSF and BAA.

Sampling Methodology

Sampling for this study was done on the basis of administrative enrollment and claims data. We employed a multi-level stratified sampling design (see Figure 2.1). We started with selecting a sample of counties representative of the Family PACT Program client population. From those counties, we selected a sample of enrolled clinician providers who served at least 30 clients in 2005. The provider sample was selected in proportion to the number of clients they served in 2005. We sampled 10% more providers than the target number to allow for potential non-participation due to clinic closures and other circumstances. Clients were drawn from the universe of clients served by the selected providers according to criteria described later in this chapter.

Figure 2.1. 2007 MRR Sampling Algorithm



[a] Generally, records with at least one abstracted visit were retained in the analysis. Additional reasons for exclusion or inclusion of records are described in corresponding chapters.

Source: 2007 Family PACT Medical Record Review

County Selection

The 2007 MRR was conducted in the same 13 counties as the 2002 MRR: Alameda, Butte, Fresno, Humboldt, Los Angeles, Monterey, Placer, Orange, Sacramento, San Bernardino, San Diego, San Joaquin, and Santa Clara. These counties were found to be generally representative of the Family PACT Program population for FY 2004-05. See Table 2.2.

Table 2.2. Comparison of the 2007 MRR Counties to the Family PACT Client and Provider Population, FY 2004-05

	MRR Counties %	Family PACT %
Proportion of Private Sector Providers[a]	73%	61%
Proportion of Clients Served		
Females	88%	89%
Adolescents	18%	19%
Latinos	67%	64%
Whites	16%	20%
Spanish as Primary Language	53%	50%
English as Primary Language	42%	45%
Clients Served by Private Sector Providers	45%	36%

[a] Includes only providers who served 30 or more clients in FY 2004-05

Source: Family PACT Claims Data

Provider selection

The target number of provider sites was set at 200. To compensate for potential non-participation, 220 providers were randomly selected from the 13 counties through proportionally weighted sampling to give a higher chance of selection to providers who served larger numbers of clients in 2005. Providers who were disenrolled, under Special Claims Review (SCR) or served fewer than 30 clients in 2005 were excluded from the sample.

The number of providers for each county was set in proportion to the number of clients served. Due to the vast number of providers in the Los Angeles County, that sample was reduced from 106 to 88 providers to allow for greater geographic diversity in the sample. The final datasets include data from site visits with 201 providers. See Table 2.3. Data for the longitudinal clients who saw more than one provider in the abstraction period were supplemented by records obtained by fax or mail from an additional 155 providers.

Table 2.3. Provider Selection by County, 2007 Family PACT Medical Record Review

County	Clients Served in County, 2005 No.	Providers Selected No.	Providers Who Participated[a] No.
Alameda	41,914	6	6
Butte	18,625	3	3
Fresno	45,941	7	7
Humboldt	11,511	2	2
Los Angeles	837,761	88	78
Monterey	19,674	3	3
Orange	239,201	35	28
Placer	9,337	1	1
Sacramento	106,163	16	16
San Bernardino	90,002	13	13
San Diego	171,098	25	24
San Joaquin	29,120	4	4
Santa Clara	112,379	17	16
Total	1,732,726	220	201

[a] Includes only providers who contributed records through site visits and excludes the additional 155 providers who sent records for longitudinal clients by mail or fax.

Source: 2007 Family PACT Medical Record Review and Family PACT Claims Data

Client selection

Client selection for each of the seven samples was conducted independently and clients selected for participation in multiple samples were treated independently. The total target number of abstractions was set at 5,000. A power analysis was conducted to ensure that the number of clients per sample was sufficient to answer major research questions.

Based on completion rates in the 2002 MRR, the number of charts selected for abstraction in the 2007 MRR was set at approximately 111% of the target. The resulting sample included 5,575 unique clients, with 47 clients selected for two different samples and one client selected for three different samples.

We identified clients eligible for selection based on administrative paid claims data. Criteria for client selection for each sample are shown in Table 2.4. A clinician visit was defined as any date of service for a claim with an office visit, counseling visit or medical supply or procedure representing a face-to-face encounter with a clinician. Pharmacy, laboratory or radiology services alone were not considered clinician visits.

Table 2.4. Client Selection Criteria by Sample, 2007 Family PACT Medical Record Review

Sample	Client Selection Criteria
Female General	▪ Female ▪ At least one claim for clinician visit in 2005
Male General	▪ Male ▪ At least one claim for clinician visit in 2005
Longitudinal	▪ Female ▪ At least one claim for clinician visit in 2002
IUC Insertion	▪ Female ▪ At least one claim for IUC insertion procedure and/or device in January-June 2005
IUC Removal	▪ Female ▪ At least one claim for IUC removal procedure in January-June 2005
CT Positive Female	▪ Female ▪ Positive chlamydia test in 2005 according to Quest Diagnostics laboratory data ▪ At least one claim for chlamydia test within 2 weeks before or 2 weeks after the Quest diagnosis
CT Positive Male	▪ Male ▪ Positive chlamydia test in 2005 according to Quest Diagnostics laboratory data ▪ At least one claim for chlamydia test within 2 weeks before or 2 weeks after the Quest diagnosis

The resulting target sample sizes, actual sizes of the samples drawn and completed, and completion rates are shown in Table 2.5.

Table 2.5. Client Sample Size and Completion Rates by Sample, 2007 Family PACT Medical Record Review

Sample	Sample Drawn[a] No.	Abstraction Target No.	Charts Abstracted No.	Completion rate	
				Target Sample %	Actual Sample %
Female General	3,062	2,725	2,329	85%	76%
Male General	450	400	371	93%	82%
Longitudinal	901	775	628	81%	70%
IUC Insertion	337	300	258	86%	77%
IUC Removal	337	300	234	78%	69%
CT Positive Female	428	400	254	64%	59%
CT Positive Male	109	100	94	94%	86%
Total	5,624	5,000	4,165[b]	83%	74%

[a] Number of selected charts in sample; sample is greater than the target due to adjustment based on past completion rates.

[b] The total is greater than the number of unique records (4,136) because 29 records were abstracted for two different samples.

Visit selection

Abstractors were provided a list of dates of service to abstract from each chart. The dates were determined based on dates of service for paid and denied claims found in administrative databases according to criteria described in Table 2.6. To compensate for potential problems with legibility and data entry errors by provider staff, abstractors were instructed to substitute visits at their discretion if the date of service supplied for

abstraction could not be found in the chart but a family planning visit within a few days of the supplied date or what appeared to be a transposed date value was available.

For Female and Male General, IUC Insertion and Removal, and Male and Female Chlamydia Positive Samples, up to five visits per client were selected. For the Longitudinal Sample, up to 10 visits per client were selected.

For the Female and Male General Samples, the first 5 visits in 2005 were selected. For the IUC Insertion Sample, an index visit was defined as the date of service in which the insertion occurred; the dates of service for abstraction included the index visit followed by up to four subsequent visits in the 18-month period after the insertion. For the IUC Removal Sample, an index visit was defined as the date of service in which the IUC removal took place; the dates for abstraction included the index visit and up to four visits in the 18-month period preceding the removal. For the Chlamydia Positive Samples, the date of a positive chlamydia test was identified from Quest Diagnostics records; the dates for abstraction included the date of positive test and all visits two weeks prior and up to 60 days after the test date. For the Longitudinal Sample, all clinician visits in 2002-2005 were selected; for clients with more than 10 visits in the abstraction period, the first and last visit were selected and the remaining eight visits were spread evenly over time. See Table 2.6.

The client's original provider was defined as the provider from the list of the 220 providers from whom the client was originally selected. For all samples except the Longitudinal, only visits with the original provider were abstracted, even if the client saw more than one provider during the abstraction period.

Table 2.6. Criteria for Visit Selection by Sample

Sample	Selection Criteria
Female General Male General	First 5 clinician visits in 2005.
Longitudinal	Up to 10 clinician visits with the original and all additional providers in 2002-2005. For clients with more than 10 visits in 2002-2005, the first and last visits were selected and the remaining 8 selected visits were spread evenly over time.
IUC Insertion	Index visit with a claim for IUC insertion procedure or device in January-June 2005 and up to 4 clinician visits up to 18 months following the index visit.
IUC Removal	Index visit with a claim for IUC removal procedure in January-June 2005 and up to 4 clinician visits up to 18 months prior to the index visit.
CT Positive Female CT Positive Male	All visits 2 weeks prior and up to 60 days following the Quest Diagnostics date of a positive chlamydia test. If the Quest date did not match a claim date of service it was included in the list of selected visits as a stand alone visit date.

Source: 2007 Family PACT Medical Record Review

Since 29% of clients (258 out of 901) included in the Longitudinal Sample saw more than one provider during the abstraction period of 2002-2005, we decided to collect data on visits with the original provider and all additional enrolled Family PACT providers seen by the client during the period. For these clients, visits with the original provider were abstracted during a site visit, while visits with additional providers were obtained by

mail or fax and abstracted separately. Visits with non-enrolled providers seeing clients on referral were not abstracted.

The number of visits abstracted per client closely follows the number of visits sampled from claims data. See Table 2.7. A small number of clients had no abstracted visits. For those clients, a chart was located but records for the sampled dates of service or suitable substitutions could not be found in the chart.

Table 2.7. Completion of Visits by Sample, 2007 Family PACT Medical Record Review

	Abstracted Visits	Clients without Visits Abstracted	Average Number of Visits per Client[a]	
			Sampled	Abstracted
Female General	4,365	39	2.0	1.9
Male General	574	5	1.6	1.6
Longitudinal	2,511	12	4.0	4.1
IUC Insertion	518	4	2.1	2.0
IUC Removal	516	3	2.4	2.3
CT Positive Female	478	5	2.0	1.9
CT Positive Male	137	2	1.5	1.5

[a] Based on clients with at least one abstracted visit.

Abstraction Methodology, Data Collection and Quality Control

The accuracy of data obtained through medical record reviews is affected by two groups of factors. The first group pertains to the nature of the chart as a data source. The limitations intrinsic to medical charts should be acknowledged but cannot be completely avoided. See Chapter 1 for the methodological background on medical charts as a data source.

The second group of factors is related to the process of chart abstraction and may be controlled by the researcher through appropriate data abstraction protocols, calibration of the data abstraction tools, training of abstractors and monitoring of their performance throughout the data collection stage, blinding of abstractors to the research hypothesis, and other measures.[1-8] The quality control measures described here were directed at mitigating the biases typically introduced during data collection in the field.

The data abstraction tools were adapted from those used in the 2002 MRR and expanded to include new programmatic evaluation questions. Data were entered directly into a laptop on-site. BAA developed the data entry software for data entry in the field. The software was fine-tuned after being pilot tested at two provider sites in the San Francisco Bay Area.

Data security measures were developed by BAA. Encryption software was installed on abstraction laptops, and procedures were implemented for saving the data on encrypted thumb drives. The thumb drives containing encrypted data were mailed periodically to the BAA main office through a secure carrier.

Prior to the start of data collection, UCSF obtained human subjects research approvals for the study from the UCSF Committee for Human Research and the California Health and Human Services Agency Institutional Review Board. Provider letters were sent out on behalf of the Office of Family Planning to the selected providers announcing the study and requesting their participation.

Data collection was conducted over the four-month period of February-May 2007 by ten licensed nurses experienced in medical chart abstraction. Data collection occurred at the provider site. For clients in the Longitudinal Sample who saw more than one provider during the abstraction period, data on visits with additional providers were collected by UCSF staff from providers by mail and fax and then forwarded to BAA for abstraction. Data on 54 charts that arrived late were abstracted by a trained UCSF nurse and then merged to the datasets provided by BAA.

Prior to entering the field, all abstractors received a one-day training. The training was conducted collaboratively by BAA and UCSF and included a description of the study goals, samples and tools, instructions on specific sections and questions, instructions on the use of the data entry software, and required security measures.

Following the training, all abstractors were required to submit a paper-based abstraction of one standardized training chart. The abstractions were evaluated by UCSF resulting in a 92% average agreement score. BAA also conducted weekly telephone conference calls and followed up individually with abstractors to provide guidance for special circumstances.

During the first month of data collection, two BAA lead abstractors conducted re-abstraction of a sample of charts according to a standardized protocol. The average agreement score was 93%. Midway through the abstraction period, a UCSF nurse conducted monitoring visits with eight abstractors who were still in the field at the time, performed re-abstraction of a sample of charts, discussed disagreements and re-educated abstractors as necessary.

Abstractors kept a record of problems and deviations from the research protocol by recording them in the Exceptions Log. Abstractors completed an exceptions log entry for 895 (21%) of the abstracted charts. The most frequent entries pertained to charts being unavailable for abstraction, substituted or added visit dates and client names not matching the name on the list. These entries into the Log provided important background information for data validation.

Data Cleaning and Preparation

The first step in data cleaning and preparation involved identifying and correcting all client and provider IDs which did not match the original sample. The vast majority of necessary corrections were due to data entry errors upon chart abstraction. Data for a small number of clients mistakenly abstracted into the wrong sample were moved to the correct sample whenever possible. Duplicate records within the same sample were removed.

Further, all data elements were examined. Values outside of range were corrected or replaced with missing values if correction was not possible. Missing values in key elements were filled in with imputed values if sufficient corroborating information was available in other fields. For example, if Question #38 in the IUC Insertion tool ("Which of the following procedures was performed at the visit?" with response options: 1=IUC Insertion, 2=IUC Removal, 3=IUC Removed/Reinserted, 4=None of the Above) had a missing value but questions on contraceptive methods before and after the visit suggested that the client came and left with the same method and no information on IUC insertion or removal was found elsewhere in the record, code 4 was assigned.

Text responses in free-text fields were examined and coded into existing fields whenever possible. New fields were created for frequently occurring categories that could not be matched to an existing field.

Data were further examined for consistency. Conflicting values were highlighted and corrected if the record provided sufficient information for the correction. Information obtained from administrative claims data was used to resolve some conflicts. For example, we used the information on IUC insertion procedure or device claims to replace some missing values for the duration of IUC use, which was frequently unavailable from the charts.

Once data cleaning was complete, two archival data files were prepared for each sample: a demographic file and a visits file. The demographic file contains one record per client and includes client and provider demographic information. The visits file contains multiple records per client and includes data on services provided on specific dates for the client. Demographic files include a small number of records for which there were no corresponding visit file records. Visit files include only records that have a corresponding record in the demographic file.

Data Analysis

Data were processed and analyzed using SAS 9.1 and Stata SE v8.2 statistical software. We used Chi-square and t-test statistics to conduct statistical significance testing for selected issues with programmatic implications. Differences that were found to be statistically significant and their associated p-values are noted in the text. Use of other statistical analysis techniques, such as Survival Analysis, is explained in detail in the chapters where they were applied. For data presentation we applied standard rounding rules; percentages in the tables and figures may not add up to 100% where they should due to rounding.

Challenges and Data Limitations

The 2007 Medical Record Review study was extremely complex in planning and execution. It encompassed a large number of research questions, seven independent samples and several hundred data elements that were collected from over four thousand patient charts at provider sites throughout California. The project required substantial staff resources, thorough planning and collaboration between OFP, UCSF, BAA and

providers. Considering the complex nature of this project, some difficulties were hard to avoid.

Due to problems encountered in the field, completion rates in this MRR were lower than anticipated. The problems primarily pertained to technical issues with the data entry equipment and the logistics of obtaining records for abstraction. Due to the encryption software malfunctioning, data from ten provider sites (not included in the provider count) were not saved on the thumb drive. Several sites had purged records for previous years and stored them off-site. In some cases, sites were reluctant to retrieve charts from storage because of the time and cost involved. This particularly affected data collection for the early years of the Longitudinal Sample. Despite these problems, the resulting overall completion rate was 83% of the target sample size and 74% of the actual sample drawn, which was found adequate for analysis.

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Chapter 3. Demographics

This chapter provides a detailed description of provider and client samples included in the 2007 MRR. The MRR data were supplemented by data from the program administrative records during analysis, as necessary.

Provider Sample

Any enrolled Medi-Cal provider in good standing can enroll in the Family PACT Program if the site meets the criteria outlined in the Policies, Procedures and Billing Instructions (PPBI) manual. Providers have to attend a provider orientation session and agree to abide by program policies and administrative practices, including the provision of the full scope of family planning services, either directly or by referral, consistent with the program standards.

The term "provider" can refer to a solo practitioner or a clinic with a number of clinicians. Of the 2,110 enrolled Family PACT providers in FY 2005-06, 776 were characterized as public sector providers, usually governmental and non-profit organizations. The remaining 1,334 clinician providers were private sector providers, which generally includes physician groups and solo practitioners.[1]

Similar to the 2002 MRR, the 2007 MRR provider sample was not weighted by provider sector. Providers selected for participation included 129 (59%) private and 91 (41%) public providers, reflecting a high number of private providers selected in the Los Angeles, Orange and San Bernardino Counties. The final sample included 115 (57%) private and 86 (43%) public providers.

The 2002 MRR identified several areas where the quality of care varied by provider sector. In order to identify potential gaps in quality of care by provider type and maintain comparability to the 2002 MRR, we present analyses in the chapter text by provider sector wherever relevant.

In order to provide OFP with additional information on the types of providers that are part of the Family PACT Program, the 2007 MRR also collected information from providers on three additional dimensions of the practice: 1) office practice type, 2) primary specialty of the site, and 3) primary care provision at the site. This information was obtained by abstractors from provider staff in the field and standardized across client records for each site during data cleaning.

The majority of the 201 providers in the 2007 MRR categorized their office practice as being a solo or group medical practice (59 and 48 providers, respectively). Another large segment was community clinics, neighborhood health centers and free clinics (49). The remaining providers were Planned Parenthood clinics (14), hospital-based clinics (13), Federally Qualified Health Clinics (FQHC) or Rural or Indian Health Centers (12), and student health centers or county or city health department clinics (6). The most common primary specialties were General Primary Care (97) and OB/GYN/Women's Health (57),

followed by Multi-Specialty (23), Family Planning (19), Pediatrics/Adolescent Medicine (4), and other (1). Almost three-quarters of providers reported that they provide primary care services on-site. See Table 3.1.

Table 3.1. 2007 MRR Provider Sample Characteristics

	No.	%
Provider Sector		
Private	115	57%
Public	86	43%
Office Practice Type		
Solo Medical Practice	59	29%
Group Medical Practice	48	24%
Community Clinic/Neighborhood Health Center/Free Clinic	49	24%
Planned Parenthood	14	7%
Hospital-Based Outpatient Clinic	13	6%
FQHC/RHC/Indian Health Center	12	6%
College-Based Student Health Center	3	1%
High School-Based Student Health Center	2	1%
County or City Health Department Clinic	1	0%
Primary Specialty		
General Primary Care[a]	97	48%
OB/GYN/Women's Health	57	28%
Multi-Specialty	23	11%
Family Planning	19	9%
Pediatrics/Adolescent medicine	4	2%
Other	1	0%
Primary Care Available On-Site		
Yes	149	74%
No	52	26%
Total	201	100%

[a] Includes Family Practice, Internal Medicine and General Practice sites.

Source: 2007 Family PACT Medical Record Review and Provider Enrollment Records

The Family PACT administrative data currently only allows for categorizing providers by sector. However, OFP has frequently wanted to know more details about providers and has begun to discuss possibilities for categorizing providers differently, in a way that captures more informative details about providers in the network.

After reviewing the additional information collected on provider characteristics, we found that provider office practice types were strongly related to provider sector categories. Nearly all solo and group medical practices fell into the private sector category and the remaining office practice types predominantly fell into the public sector category. Due to this overlap and to maintain comparability with prior MRRs, in this report we present selected results by provider sector and present results by office practice type only when there was a need to highlight a trend unique to a particular office practice type.

In contrast, the provider primary specialty classification offered a truly new way to classify providers, as provider specialties were found to be largely independent of provider sector. To facilitate the analysis, we aggregated provider specialties into two

categories based on the range of services offered on-site. In this report, we used the aggregated provider specialties to present selected results whenever it was considered to add important detail to the analysis. The aggregated specialty categories are defined as follows:

Family Planning/Women's Health category includes family planning, obstetrics and gynecology, and women's health providers. These providers comprise 38% of the 2007 MRR provider sample.

Primary Care/Multi-Specialty category includes pediatrics, adolescent medicine, general primary care, and multi-specialty providers. These providers comprise 62% of the MRR provider sample.

As shown in Table 3.2, while provider specialties were found to be largely unrelated to provider sector, they appear to be strongly predictive of the availability of primary care on-site. Nearly all providers in the Primary Care/Multi-Specialty category reported that they provide primary care on-site, compared to only 34% of providers in the Family Planning/Women's Health category.

Table 3.2. Provider Specialty by Provider Sector and Availability of Primary Care On-Site (n=201)

	Family Planning/ Women's Health (n=76)		Primary Care/ Multi-Specialty (n=125)	
	No.	%	No.	%
Provider Sector				
Public	36	47%	50	40%
Private	40	53%	75	60%
Primary Care Available On-Site				
Yes	26	34%	123	98%
No	50	66%	2	2%

Source: 2007 Family PACT Medical Record Review

Client Demographics[1]

The 2007 MRR collected data on a number of client demographic characteristics that were not collected in the 2002 MRR, including race/ethnicity, place of birth, and primary language. The data elements were collected from medical records based on the information recorded in the Client Eligibility Certification (CEC) form. If the CEC was not available or the information on the CEC was missing, abstractors were instructed to obtain it from other parts of the chart, if possible.

Seventy-two (72) countries of clients' birth and 19 primary languages were reported across samples. We aggregated places of birth as the USA, Mexico, Latin America and other, and primary languages as Spanish, English and other. See Table 3.3.

[1] This section is based on clients with at least one abstracted visit and excludes client for whom only the demographic information was available with no abstracted visits. We also excluded 16 clients from the IUC Insertion and 11 from the IUC Removal sample who had abstracted visits but lacked sufficient information on the IUC insertion or removal.

Table 3.3. Aggregation of Race/Ethnicity, Place of Birth and Primary Language Categories

Aggregated	Original
Race/Ethnicity	
Latino/Latina	Latino/Latina (with or without another race/ethnicity)
Asian/Pacific Islander	Asian, Filipino or Pacific Islander, non-Latino
White	White, non-Latino
Black	Black, non-Latino
Other	Native American, Other or non-Latino Multi-Racial
Place of Birth	
USA	USA, Guam, Puerto Rico
Mexico	Mexico
Latin America	Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Peru
Other	Armenia, Belarus, Belize, Cambodia, Canada, China, Czech Republic, Egypt, England, Fiji Islands, Germany, Hong Kong, India, Indonesia, Iran, Iraq, Jamaica, Japan, Jordan, Korea, Kurdistan, Kuwait, Laos, Lebanon, Malaysia, Morocco, Netherlands, Pakistan, Philippines, Poland, Russia, Saudi Arabia, Senegal, South Korea, Spain, Sweden, Syria, Taiwan, Thailand, Tonga, Trinidad, Ukraine, Vietnam, and all unspecified foreign countries (e.g. “Africa”, “other”)
Language	
Spanish	Spanish
English	English
Other	Armenian, Cantonese, Egyptian, Farsi, Hmong, Japanese, Khmer/Cambodian, Korean, Kurdish, Mandarin, Polish, Portuguese, Russian, Samoan, Tagalog, Thai, Vietnamese, and all unspecified languages (e.g. “Asian,” “not stated”)

Source: 2007 Family PACT Medical Record Review

The most numerous ethnic group in all samples was Latinos. The Female and Male General and the IUC Samples had a higher proportion of Latino clients than in the population of clients served in FY 2004-05. The Longitudinal Sample also had a higher proportion of Latinas than the population of female clients served in FY 2001-02. Both the male and female Chlamydia Positive Samples had a lower proportion of Latinos and a higher proportion of Whites and Blacks than the General Samples. See Table 3.4. Note, however, that direct comparisons to the program population cannot be made because the MRR allowed for abstraction of multiple race/ethnicities whereas the client enrollment file stores only one race/ethnicity. In addition, race/ethnicity information was not available for 2%-13% of client charts depending on the sample.

The majority of clients were born in Mexico or the US, with exact percentages varying across samples from 25% to 75% for Mexico and from 13% to 67% for the US. The Female General, Longitudinal and IUC Samples had larger proportions of clients born in Mexico, while the Male General and Chlamydia Positive Samples had larger proportions of clients born in the US. Note that the information on client place of birth was not available for 6% to 24% of clients across samples. See Table 3.4.

Over one-half of clients in the Female and Male General Samples, over two-thirds of clients in the IUC Insertion Sample and 83% of clients in the IUC Removal Sample indicated Spanish as their primary language. See Table 3.4. The proportion of Spanish-speaking clients in the 2007 MRR was substantially higher than that in the

Family PACT population served in FY 2005-06.[1] Primary language was not collected for the Chlamydia Positive and Longitudinal Samples.

Table 3.4. Client Race/Ethnicity, Place of Birth and Primary Language, by Sample

	Female General (n=2,290)		Male General (n=366)		IUC Insertion (N=240)		IUC Removal (n=220)		CT Positive Female (n=249)		CT Positive Male (n=93)		Longitudinal (n=624)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Race/Ethnicity														
Latino	1,496	75%	234	68%	170	78%	179	88%	141	58%	39	45%	410	75%
Asian/Pacific Islander	109	5%	17	5%	6	3%	5	2%	25	10%	2	2%	52	10%
Black	87	4%	34	10%	3	1%	3	1%	30	12%	20	23%	18	3%
White	225	11%	44	13%	32	15%	14	7%	40	16%	24	28%	53	10%
Multi-Racial/Other	66	3%	13	4%	6	3%	2	1%	7	3%	2	2%	14	3%
Missing/Not Recorded	307		24		23		17		6		6		77	
Place of Birth														
Mexico	931	49%	138	43%	112	58%	143	75%	58	25%	22	25%	234	49%
USA	683	36%	144	44%	55	28%	25	13%	140	61%	58	67%	149	31%
Latin America	145	8%	28	9%	12	6%	14	7%	12	5%	4	5%	41	9%
Other	125	7%	14	4%	15	8%	8	4%	18	8%	3	3%	51	11%
Missing/Not Recorded	406		42		46		30		21		6		149	
Primary Language														
Spanish	1,281	60%	187	55%	150	68%	170	83%						
English	765	36%	135	39%	64	29%	32	16%						
Other	89	4%	21	6%	8	4%	4	2%						
Missing/Not Recorded	155		23		18		14							

Source: 2007 Family PACT Medical Record Review

The age distribution[2] of clients in the Female and Male General Samples approximated that of the Family PACT population served in FY 2005-06,[1] with a median age of 25 years for both females and males and the ranges of 13-55 and 13-60 years, respectively. The age distribution of clients in the Longitudinal Sample closely followed that of clients served in FY 2002-03.[2] Clients in the IUC Insertion and IUC Removal Samples were, on average, older than clients in the Female General Sample, with median ages of 28 and 29 years, respectively. Clients in the Chlamydia Positive Samples were, on average, younger than clients in the General Samples, with median ages of 22 and 23 years for females and males, respectively. See Table 3.5 for age distributions by sample type.

Clients in the Female General, IUC Insertion and IUC Removal Samples on average had larger reported family sizes with a median family size of three for the Female General, 3.5 for IUC Insertion and four for IUC Removal Sample. Clients in the Male General and Male and Female Chlamydia Positive Samples had lower average family sizes with a median family size of 1 for all three of these samples. See Table 3.5 for the family size distributions by sample. The family size was not abstracted for the Longitudinal Sample.

[2] Client age was calculated as the difference between the date of the first abstracted visit and the client date of birth. Due to a number of missing and out of range values in the date of birth collected in the MRR, client date of birth used in the calculation of age was obtained from the Family PACT administrative records.

Table 3.5. Client Age and Family Size, by Sample

	Female General (n=2,290)		Male General (n=366)		IUC Insertion (n=240)		IUC Removal (n=220)		CT Positive Female (n=249)		CT Positive Male (n=93)		Longitudinal (n=624)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Age Group (years)[a]														
19 and under	410	18%	70	19%	14	6%	9	4%	77	31%	17	18%	89	14%
20 to 24	610	27%	108	30%	64	27%	46	21%	91	37%	42	45%	173	28%
25 to 29	504	22%	68	19%	63	26%	71	32%	42	17%	23	25%	127	20%
30 to 34	335	15%	47	13%	50	21%	49	22%	21	8%	8	9%	115	18%
35 and over	431	19%	73	20%	49	20%	45	20%	18	7%	3	3%	120	19%
Family Size														
1	606	32%	187	58%	28	15%	17	9%	129	55%	62	77%		
2-3	667	35%	82	26%	68	35%	73	39%	60	26%	10	12%		
4+	628	33%	51	16%	96	50%	97	52%	45	19%	9	11%		
Missing/Not Recorded	389		46		48		33		15		12			

[a] Calculated as of the earliest abstracted visit.

Source: 2007 Family PACT Medical Record Review and Family PACT administrative records.

About two-thirds of clients in the Female General and about one-half of clients in the Male General and IUC Removal Samples were served by private sector providers, while clients in the IUC Insertion and Chlamydia Positive Samples were predominantly served by public sector providers. See Table 3.6.

Clients served by Primary Care/Multi-Specialty providers comprised about two-thirds of the Female General, three-quarters of the Male General, one-half of the Chlamydia Positive and only about one-third of the IUC Samples, with the remainder of clients served by Family Planning/Women's Health providers. See Table 3.6.

The length of time with a provider was calculated as the difference between the date of the first abstracted visit and the date of initial visit with the clinic/office. The majority of clients in the Male General and Chlamydia Positive Male Samples were new clients, whereas the majority of clients in the Female General, IUC Insertion and Removal, and Chlamydia Positive Female Samples were returning clients. See Table 3.6.

The length of time in Family PACT was calculated as the difference between the first date of service found in paid or denied claims and the date of the first abstracted visit. The majority of clients in the Male General and Chlamydia Positive Male Samples were new to Family PACT on the first abstracted visit, while about one-third of clients in the Female General, IUC Removal, Chlamydia Positive Female and Longitudinal Samples and only 9% of clients in the IUC Insertion Sample were new. See Table 3.6.

Provider specialty and sector and the length of time with a provider are not reported for the Longitudinal Sample because for clients who saw more than one provider during the abstraction period, the data were collected from multiple providers but only a single - the most complete - demographic record was retained per client.

Table 3.6. Client's Provider Sector, Provider Specialty and Time with Provider and the Program, by Sample

	Female General (n=2,290)		Male General (n=366)		IUC Insertion (n=240)		IUC Removal (n=220)		CT Positive Female (n=249)		CT Positive Male (n=93)		Longitudinal (n=624)[b]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Provider Sector														
Private	1,437	63%	193	53%	70	29%	106	48%	43	17%	8	9%		
Public	853	37%	173	47%	170	71%	114	52%	206	83%	85	91%		
Provider Specialty														
Primary Care/ Multi-Specialty	1,465	64%	278	76%	78	33%	93	42%	127	51%	51	55%		
Family Planning / Women's Health	825	36%	88	24%	162	68%	127	58%	122	49%	42	45%		
Time with Provider[a]														
New client	917	41%	253	70%	25	11%	81	39%	91	37%	75	82%		
Under 1 year	462	21%	61	17%	119	50%	42	20%	45	19%	7	8%		
1-3 years	503	22%	28	8%	59	25%	40	19%	57	23%	9	10%		
Over 3 years	358	16%	20	6%	35	15%	47	22%	50	21%	0	0%		
Missing/Not Recorded	50		4		2		10		6		2			
Time in Family PACT[a]														
New client	800	35%	269	74%	21	9%	68	31%	84	34%	75	82%	214	35%
Under 1 year	424	19%	50	14%	80	34%	34	16%	41	17%	6	7%	128	21%
1-3 years	554	24%	32	9%	63	26%	52	24%	58	23%	7	8%	148	24%
Over 3 years	502	22%	11	3%	74	31%	65	30%	65	26%	4	4%	123	20%
Missing/Not Recorded	10		4		2		1		1		1		11	

[a] Calculated as of the earliest abstracted visit.

[b] Provider sector, specialty and client's time with provider are not reported because longitudinal records were obtained from multiple providers seen by the client during the abstraction period.

Source: 2007 Family PACT Medical Record Review and Family PACT administrative records.

Pregnancy History

For clients in the Female General, IUC and Chlamydia Positive Female Samples, pregnancy history was collected as recorded at the last abstracted visit. For the Longitudinal Sample, pregnancy history was collected as recorded at each of the abstracted visits and is not reported in this chapter.

In the Female General Sample, 28% of women were documented as never having been pregnant, 43% as having had one or two pregnancies, and 29% as having had three or more pregnancies. About one-third (37%) had never given birth and 82% had never had an abortion, according to the medical record. See Table 3.7. Compared to the 2002 MRR, the proportion of nulliparous female clients served by the program has increased by four percentage points.

Women in the IUC Samples, on average, had a higher gravidity and parity than women in the Female General Sample, reflecting a higher average age and a desire to use a long-term contraceptive method. Women in the Chlamydia Positive Sample had a lower average gravidity and parity than women in the Female General Sample, reflecting their lower average age. See Table 3.7.

Table 3.7. Pregnancy History, by Sample

	Female General (n=2,290)		IUC Insertion (n=240)		IUC Removal (n=220)		CT Female (n=249)	
	No.	%	No.	%	No.	%	No.	%
Gravidity (number of pregnancies)								
0	603[b]	28%	10	4%	3	1%	99	42%
1-2	908	43%	122	52%	110	53%	86	36%
3+	624	29%	102	44%	94	45%	51	22%
Missing/Not Recorded	155		6		13		13	
Parity (number of births)								
0	800	37%	19	8%	6	3%	127	54%
1-2	927	43%	143	62%	133	65%	81	34%
3+	410	19%	70	30%	67	33%	27	11%
Missing/Not Recorded	153		8		14		14	
Induced Abortions								
0	1,631	82%	152	73%	150	79%	160	76%
1-2	311	16%	46	22%	36	19%	45	21%
3+	40	2%	9	4%	3	2%	6	3%
Missing/Not Recorded	308		33		31		38	

[a] As measured at the latest abstracted visit.

[b] 18 women categorized as nulliparous had a positive pregnancy test in at least one of the abstracted visits, suggesting potential inconsistency in the abstraction of pregnancy history.

Source: 2007 Family PACT Medical Record Review

Discussion

Female and Male General Samples are generally representative of the population of clients served in FY 2005-06, with potential over-representation of Latinos and clients served by private sector providers.

The Longitudinal Sample is generally representative of female clients served in FY 2002-03, with possible over-representation of Latinas.

The IUC Samples are comprised of females who are older, more likely to be of Latina origin and have higher gravidity and parity.

Clients in the Chlamydia Positive samples are generally younger, with higher proportions of Blacks and Asian/Pacific Islanders and lower proportions of Latinos than in the Family PACT population served in FY 2005-06.

Reference List

1. Bixby Center for Global Reproductive Health *Family PACT Program Report, FY 05/06*; UCSF: Sacramento, CA, 07.

2. Bixby Center for Global Reproductive Health *Family PACT Program Report, FY 02/03*; UCSF: Sacramento, CA, 04.

Chapter 4. Contraceptive Services

4.1. Contraceptive Services to Female Clients

Introduction

The objectives of the Family PACT Program are to increase the use of effective contraceptive methods, improve reproductive health and promote access to family planning services as well as to reduce the rate, overall number and the cost of unintended pregnancies among low-income residents in California. Providers are expected to offer all Family PACT-approved family planning methods either on-site or by referral. The vast majority of resources under the program are dedicated to the provision of contraceptive methods. While claims data provides information on methods dispensed to clients, they lack information on contraceptive methods that clients used prior to the visit, symptoms and complaints reported at the visit, and other clinically relevant details. Medical record data provides a unique opportunity to assess contraceptive method use, continuation, and switching while placing them in the clinical context of the visit.

The use of highly effective contraception leads to fewer unintended pregnancies and births; therefore Family PACT monitors adoption of highly effective contraception among its clients. The 2002 MRR assessed contraceptive use and found that, on average, new clients adopted more effective contraceptive methods at the end of their first Family PACT visit compared to the methods they used prior to the visit. However, some disparities were noted between clients of different age and race/ethnicity groups and between clients served by public and private sector providers.

This chapter builds and expands on the analyses conducted in the 2002 MRR by focusing on the following questions:

- What contraceptive methods did women in Family PACT use and how did method use vary by client age, race/ethnicity and provider characteristics?
- Did the use of effective methods increase among new and returning clients as a result of a Family PACT visit?
- How did side effects and contraceptive counseling relate to method switching?
- How often did providers utilize the Quick Start approach when initiating new methods with clients?
- What were the patterns of dual method use?
- What were the patterns of the provision of emergency contraception?
- What reasons did clients report for their visits?

This chapter is based on the analysis of services provided to 2,290 women included in the Female General Sample for whom there was at least one abstracted visit. Women for whom only the demographic information was available but no visits were excluded from the analysis. Although up to five visits per woman were abstracted, to provide a cross-sectional view of service utilization under the program, we focused on service provision at the first abstracted visit. Compared to reporting the results by visit, this approach eliminates over-reporting of contraceptive methods requiring return visits (such as injectable contraception) and prevents over-representation of clients who are frequent users of services. To explore the instances of a particular behavior, such as switching to lower-efficacy methods, failure to adopt a high-efficacy method of contraception, or receipt of emergency contraception, we analyzed all visits where such behavior was observed, regardless of whether it was the initial or return Family PACT visit and did not limit the analysis to one visit per client.

In our cross-sectional analyses, we separately assessed services to clients who were new to Family PACT in 2005 and to those who were returning to the program. To determine whether the client was new or returning to Family PACT, we compared the earliest date of service found in paid or denied claims to the date of the first abstracted visit. Out of 2,290 women included in the Female General Sample, 802 were new to the program at the first abstracted visit, 1,481 clients were returning clients, and for 7 clients, we could not determine whether they were new or returning clients due to a possible error in the recorded visit date. Where appropriate, we also compared trends in contraceptive use by client race/ethnicity and age. We grouped clients by age into adolescents (13-19 years) and adults (20 years and older).[3]

Contraceptive use was abstracted as recorded at the start and end of each visit. The data abstraction tool allowed for entering multiple contraceptive methods at each visit. To assess contraceptive use in the Female General Sample, we ranked methods according to their contraceptive efficacy.[1] For clients using multiple methods, the method with higher contraceptive efficacy was assigned as the primary method. In the following sections, we present contraceptive use based on assigned primary methods, unless otherwise noted.

Findings

Use of Contraceptive Methods

At the end of the first abstracted visit, 44% of women used[4] hormonal contraception, including oral contraceptive pills, patch and ring, 26% relied on condoms as their primary method, 11% used injectable contraception, 4% used intrauterine contraception (IUC), 1% relied on sterilization, 7% left without a method of contraception, and 5% were pregnant or seeking pregnancy. See Table 4.1.1.

[3] In Family PACT, the upper age limit for women is 55 years.

[4] For the analyses in this chapter, we assume that clients left their visit with a contraceptive method they intended to use after the visit. Medical record data cannot provide information about whether clients actually used that particular method of contraception.

Table 4.1.1. Primary Contraceptive Method at the End of the First Abstracted Visit (n=2,290)

	No.	%
Long-Acting and Permanent Contraceptive Methods[a]		
Tubal Ligation	10	1%
Vasectomy (Partner)	2	0%
IUC	84	4%
Injection	218	11%
Hormonal Contraceptives		
OC	513	26%
Patch	323	16%
Ring	32	2%
Barrier Methods[b]		
Male Condoms	516	26%
Female Condoms	2	0%
Behavioral and Other Methods		
FAM/LAM/NFP/Withdrawal	6	0%
Abstention	19	1%
Other	4	0%
No Method	136	7%
Pregnant/Seeking Pregnancy	94	5%
Missing/Not Recorded	331	

[a] There were no clients for whom contraceptive implant was the primary method at the end of the first abstracted visit.

[b] There were no clients for whom spermicide, diaphragm or cervical cap was the primary method at the end of the first abstracted visit.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Primary Contraceptive Method Use by Client and Provider Characteristics

To facilitate the analysis of contraceptive method use within subgroups, we aggregated primary contraceptive methods into five mutually exclusive tiers as described in Table 4.1.2. The definition of tiers was adapted from Nelson et al. (2006).[2] The first two tiers comprise high-efficacy methods and Tier 3 comprises low-efficacy methods. Clients were categorized based on the most efficacious method used.

Table 4.1.2. Tiers of Contraceptive Methods

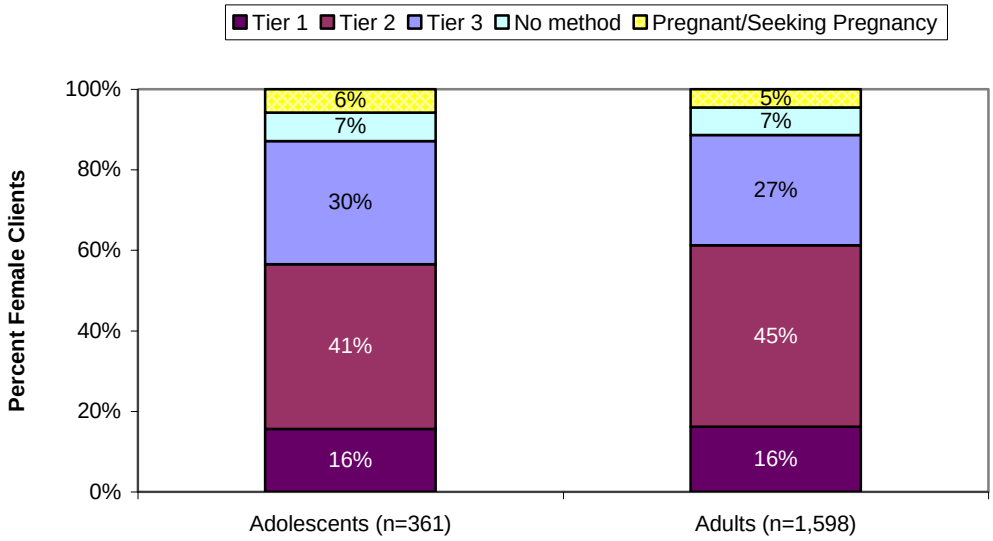
Tier 1	Sterilization, intrauterine contraception (IUC), contraceptive implant, and injectable contraceptives
Tier 2	Oral contraception, patch and ring
Tier 3	Condoms and other barrier methods, Fertility Awareness Method/ Lactation Amenorrhea Method/ Natural Family Planning (FAM/ LAM/ NFP), abstention and other methods
No Method	No method
Pregnant/ Seeking Pregnancy	Pregnant/Seeking pregnancy

Source: Adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

The majority of adolescent and adult women exited their first abstracted visit with a method of contraception. See Figure 4.1.1. Adults were slightly more likely than adolescents to leave the visit with a Tier 2 method, while adolescents were more likely

than adults to exit with a Tier 3 method, although the differences are not statistically significant.

Figure 4.1.1. Primary Contraceptive Method at the End of the First Abstracted Visit, by Age (n=1,959)[a, b]



[a] Clients for whom the contraceptive method at the end of the first abstracted visit was not documented were excluded from the analysis (n=331).
[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.
Source: 2007 Family PACT Medical Record Review, Female General Sample

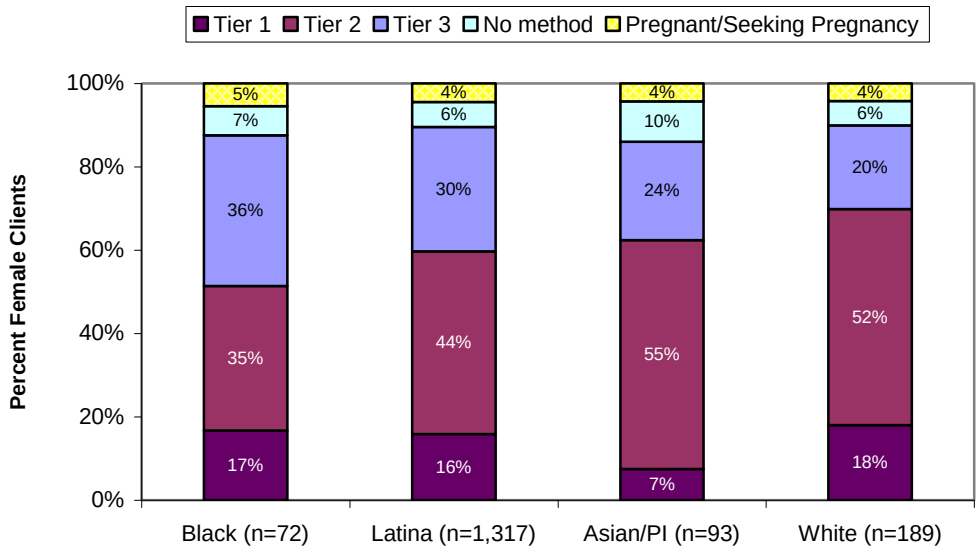
There were notable differences in the efficacy of methods used at the end of the visit among the four major racial/ethnic groups. See Figure 4.1.2. Seventy percent (70%) of White women exited the visit using a high-efficacy method (Tiers 1 and 2), compared with 62% for Asians/Pacific Islanders, 60% for Latinas and 52% for Black women. The differences between groups were statistically significant at $p<0.001$. The proportion of women exiting the visit with a long-acting or permanent contraceptive method (Tier 1) was the highest among White women (18%), followed by Black (17%), Latina (16%) and Asian/Pacific Islander women (7%). This trend is different from that found in claims analysis, which has consistently shown that Latina women utilize long-acting contraceptive methods slightly more when compared with women of other groups.[3,4]

Among the four major racial/ethnic groups, there were significant differences in the efficacy of methods used prior to the visit ($p<0.001$), with 56% of White women reporting using high-efficacy methods of contraception (Tiers 1 and 2) prior to the visit, compared with 47% for Asian/Pacific Islanders and Latinas, and 30% for Black women (not shown in Figure 4.1.2).

These findings are consistent with results of the 2002 MRR, which found Black and Latina women to be less likely to leave the visit with a high-efficacy method of contraception. We could not assess potential reasons for the continued disparity in the

adoption of high-efficacy methods between racial/ethnic groups based on the 2007 MRR data.

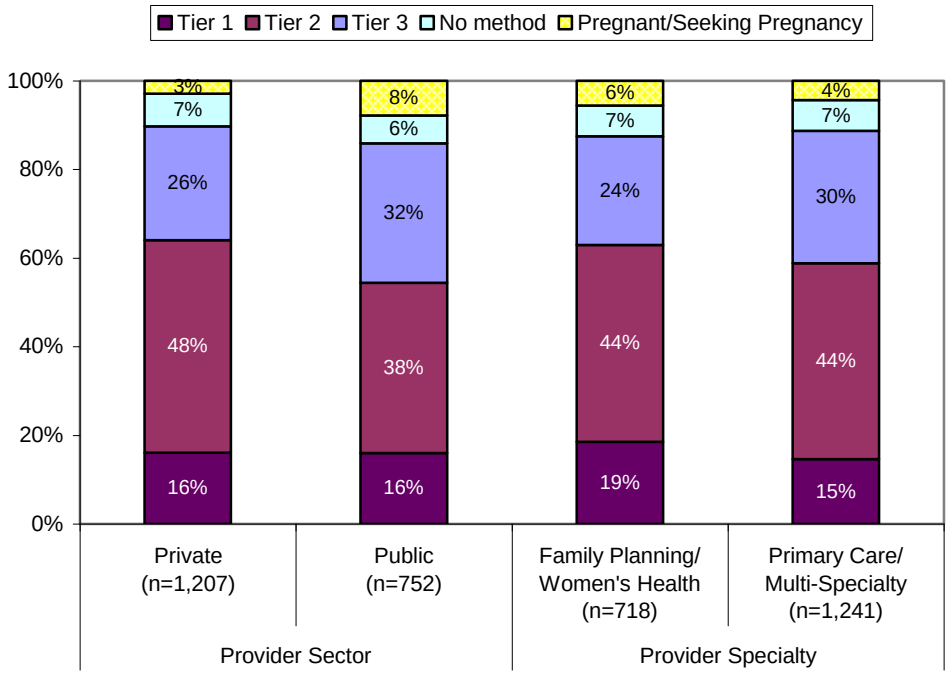
Figure 4.1.2. Primary Contraceptive Method at the End of the First Abstracted Visit, by Race/Ethnicity (n=1,671)[a, b]



[a] This analysis was limited to clients of the four major race/ethnicity groups for whom the information on contraceptive method after the visit was available. Multi-racial clients, clients with other or unknown ethnicity and clients for whom contraceptive method at the end of the visit was not documented were excluded from the analysis (n=619).
[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.
Source: 2007 Family PACT Medical Record Review, Female General Sample

When analyzed by provider characteristics, clients served by private sector providers were more likely to exit the first abstracted visit with Tier 2 methods and less likely to exit with Tier 3 methods compared to those served by public sector providers ($p<0.01$). Clients served by Family Planning/Women's Health providers were less likely to rely on Tier 3 methods at the end of the first abstracted visit compared to those served by Primary Care/Multi-Specialty providers ($p<0.05$). There were no significant differences in the proportion of clients exiting without a method of contraception by provider sector or specialty. See Figure 4.1.3. Some clients who left the first abstracted visit without a method had documentation of a method of contraception at the end of one or more subsequent visits.

Figure 4.1.3. Primary Contraceptive Method at the End of the First Abstracted Visit, by Provider Sector and Specialty (n=1,959)[a, b]



[a] Clients for whom the information on contraceptive method after the visit was not available were excluded from the analysis (n=331).
[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.
Source: 2007 Family PACT Medical Record Review, Female General Sample

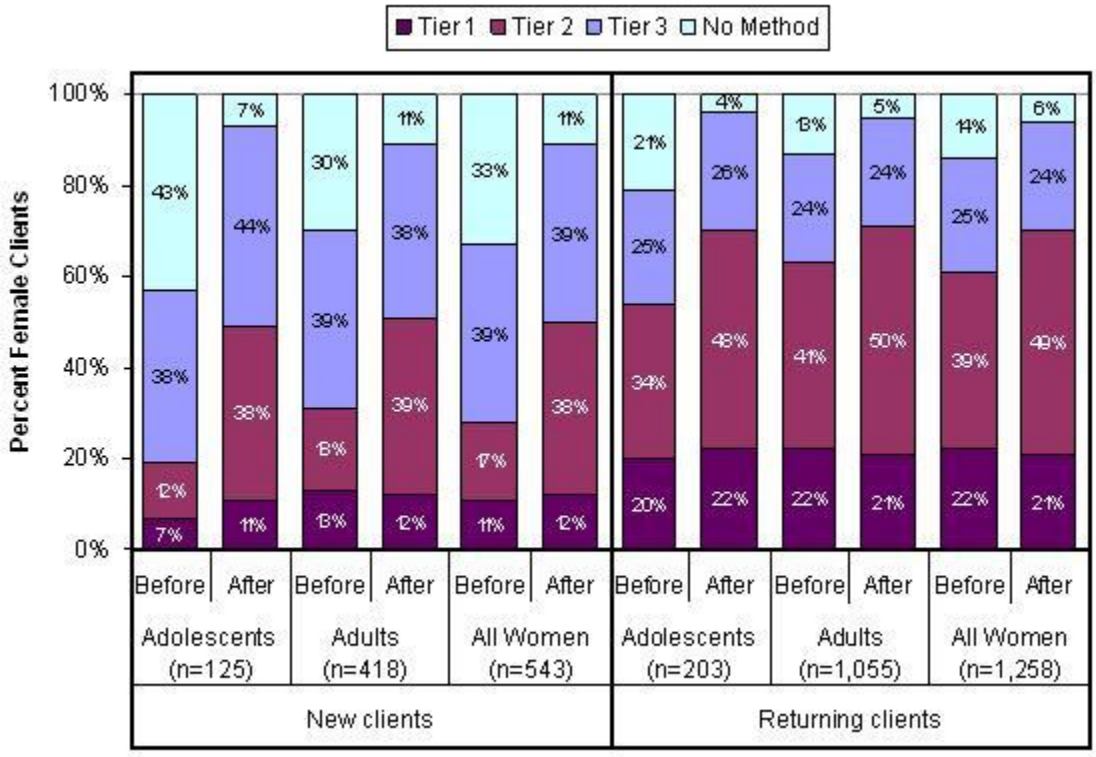
Method Adoption among New and Returning Clients

Adoption of contraceptive methods among non-users and switching to more effective methods among existing users plays an important role in preventing unintended pregnancy and is one of the main goals of the Family PACT Program. The 2002 MRR found the initial Family PACT visit to have a substantial positive effect on the adoption of contraceptive methods by non-users. To assess the impact of the initial and return visits on contraceptive use, we compared methods used before and after the first abstracted visit among new and returning clients. To provide reliable comparisons of contraceptive method adoption, this analysis was limited to clients who were not pregnant or seeking pregnancy and had complete information on contraceptive methods before and after the visit.

The first Family PACT visit had a substantial effect on contraceptive method adoption among new clients. See Figure 4.1.4. The proportion of women using any method of contraception increased from 67% to 89% and the proportion of women using effective methods (Tiers 1 and 2) increased from 28% to 50%. Among new adolescent clients, 57% of women entered and 93% exited the visit using a method of contraception. Among new adult clients, 70% entered and 89% exited the visit using a method. The largest gain in method use among new clients was observed for Tier 2 methods (OC, patch and ring) for both adolescents and adults.

Returning clients, on average, also improved the efficacy of their contraceptive methods as a result of their visit. The proportion of women using high-efficacy methods (Tiers 1 and 2) increased from 61% to 70%, while the proportion of women not using a method decreased from 14% to 6%. Among both returning adolescent and adult clients, the gain in method use was observed only for Tier 2 methods, while the proportions of women using Tier 1 and Tier 3 methods remained steady.

Figure 4.1.4. Primary Contraceptive Method Before and After the First Abstracted Visit, for New and Returning Clients, by Age (n=1,959)[a, b]



[a] Clients who were pregnant/ seeking pregnancy, those for whom contraceptive method before or after the visit was not documented, and those whose new/returning status could not be determined were excluded from the analysis (n=489).
[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.
Source: 2007 Family PACT Medical Record Review, Female General Sample

Improvement in method efficacy among returning clients suggests continued positive effect of the program on women's contraceptive use. However, the proportion of returning women who reported using contraception at the beginning of their return visit was smaller than the proportion of new female clients who exiting their first Family PACT visit with a method, particularly among adolescents. This suggests that the effect of the first visit may not be entirely sustained, although this analysis is cross-sectional and may not reflect the trajectory of an individual client. Trends in method continuation over time are examined in a longitudinal cohort of clients followed for four years and are described in detail in Chapter 5.

Method Switching

Cross-sectional analysis of methods used before and after the visit suggests improvement in method efficacy among both new and returning clients as a result of their visit with a Family PACT provider. However, it does not show specifically what kind of method switching occurred among clients during a visit and whether any clients switched to less effective methods. To address these issues, we analyzed method switching among new and returning clients from the start to the end of the first abstracted visit.

Table 4.1.3. Method Switching at the First Abstracted Visit (n=1,693)[a, b]

		Method after Visit						
		Tier 1 Sterilization, IUC, Implant, Injection	Tier 2 OC, Patch, Ring	Tier 3 Barriers and Low-Efficacy Methods	No Method	Pregnant/ Seeking Pregnancy	Total	
		Row %	Row %	Row %	Row %	Row %	No.	Row %
Method before Visit	**New Clients**							
	Tier 1 Sterilization, IUC, Implant, Injection	74%	20%	7%	0%	0%	61	100%
	Tier 2 OC, Patch, Ring	4%	86%	4%	3%	2%	94	100%
	Tier 3 Barriers and Low-Efficacy Methods	3%	26%	67%	1%	2%	216	100%
	No Method	5%	30%	31%	26%	8%	194	100%
	Returning Clients							
	Tier 1 Sterilization, IUC, Implant, Injection	81%	12%	4%	1%	2%	248	100%
	Tier 2 OC, Patch, Ring	1%	94%	3%	0%	1%	442	100%
	Tier 3 Barriers and Low-Efficacy Methods	4%	22%	72%	2%	1%	271	100%
	No Method	5%	31%	28%	25%	11%	167	100%

[a] Women for whom the contraceptive method before or after the visit was not documented and those who were pregnant/seeking pregnancy at the beginning of the visit were excluded from the analysis (n=597).

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Among new and returning clients using high-efficacy methods (Tiers 1 and 2), the vast majority continued to be in the same tier at the end of their visit; 74% of new clients who were in Tier 1 remained in Tier 1, while 86% of new clients in Tier 2 stayed with methods in Tier 2. See Table 4.1.3. Among returning clients, 81% of those who were in Tier 1 remained in Tier 1 and 94% of those who were in Tier 2 remained in Tier 2. Most barrier and low-efficacy method (Tier 3) users who switched methods adopted hormonal contraception from Tier 2; among new clients who were in Tier 3, 26% adopted a method from Tier 2, and among returning clients who were in Tier 3, 22% adopted a method from Tier 2.

New and returning clients who used no method at the beginning of the visit were most likely to adopt methods in Tier 2 or Tier 3. However, among new and returning female clients using low-efficacy methods (Tier 3), over two-thirds continued to rely on these methods at the end of the visit. In addition, among women who used no method at the

beginning of the visit, about one-quarter exited the visit still without a method of contraception.

Symptoms and Counseling Associated with Method Switching

To investigate potential reasons for method switching and the extent to which method-related symptoms may be associated with switching to less effective methods, we explored symptoms and complaints reported at visits in which women did not switch methods, switched to methods of equal efficacy, switched to more effective methods or switched to less effective methods. Women who were pregnant or seeking pregnancy or for whom the information on contraceptive methods before or after the visit was incomplete were excluded from the analysis. We also limited our analysis to symptoms that may be related to a contraceptive method.

Table 4.1.4. Symptoms and Complaints Reported at the Visit, by Type of Method Switch (n=3,241)[a, b]

	Did Not Switch Methods at the Visit (n=2,401)		Switched Methods within Tier (n=108)		Switched to a Higher Efficacy Tier (n=569)		Switched to a Lower Efficacy Tier (n=163)	
	No.	%	No.	%	No.	%	No.	%
Amenorrhea	106	4%	4	4%	35	6%	17	10%
Abnormal Vaginal Bleeding/Spotting	99	4%	12	11%	31	5%	23	14%
Pelvic/Abdominal Pain	74	3%	4	4%	13	2%	14	9%
Breast Problem	50	2%	5	5%	4	1%	6	4%
Headaches/Migraines	34	1%	9	8%	8	1%	6	4%
Nausea/Vomiting/Dizziness	32	1%	10	9%	10	2%	6	4%
Mood Change/Irritability/Decreased Libido	19	1%	4	4%	2	<1%	4	2%
Acne/Skin/Hair Change	19	1%	5	5%	0	0%	2	1%
Cramping/Dysmenorrhea	18	1%	3	3%	13	2%	7	4%
Weight Change	12	<1%	2	2%	3	1%	4	2%
Any Method-Related Symptom	397	17%	38	35%	97	17%	61	37%

[a] Includes up to five visits per client. Visits at which women where pregnant or seeking pregnancy and visits with incomplete data on method use were excluded from the analysis (n=1,124). Totals are greater than 100% due to multiple responses.

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, Female General Sample

The most frequently reported symptoms across all visits in which women switched methods – both up and down in efficacy – were amenorrhea, abnormal bleeding patterns and pelvic/abdominal pain. See Table 4.1.4. Method-related symptoms were most frequently reported in visits when women switched to less effective methods (37% of visits). However, since the majority of visits in which women switched to less effective methods had no documentation of a method-related symptom, possible reasons for switching to lower efficacy methods appear not to be limited to method side-effects. Other reasons, such as changes in personal situation or personal choice could not be assessed with the 2007 MRR data.

Counseling about contraceptive options was documented in the majority of visits. Such counseling was most frequently recorded at visits in which women switched to more effective methods (80%) or to a method of comparable efficacy (79%), and less frequently in visits in which women switched to less effective methods (66%). See Table 4.1.5. In visits with counseling, women were more than twice as likely to switch to a method in a higher efficacy tier compared to visits that did not include counseling (22% vs. 10%, p<.0001, not shown in Table 4.1.5). At the subset of visits in which no method-related symptoms were reported, women switching to less effective methods received contraceptive counseling 70% of the time (not shown in Table 4.1.5).

Table 4.1.5. Provision of Method-Related Counseling, by Type of Method Switch (n=3,241)[a,b]

	Visits with Documentation of Counseling		Total Visits
	No.	%	No.
Did not Switch Methods at the Visit	1,417	59%	2,401
Switched Methods within Tier	85	79%	108
Switched to a Higher Efficacy Tier	457	80%	569
Switched to a Lower Efficacy Tier	107	66%	163

[a] Includes up to five visits per client. Visits at which women where pregnant or seeking pregnancy and visits with incomplete data on method use were excluded from the analysis (N=1,124).

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Counseling Provided to Women Continuing with Low-Efficacy Methods

To explore whether counseling was provided to women who continued to use low-efficacy methods at the end of the visit, we identified 571 visits in which women who were not pregnant or seeking pregnancy entered and exited the visit using Tier 3 methods (barrier and other low-efficacy methods), and 150 visits in which women entered and exited the visit using no method.

In visits when women entered and exited the visit with low-efficacy methods, counseling about contraceptive options was documented 69% of the time. Adolescent clients continuing with low-efficacy methods received counseling 80% of the time, while adults received it 67% of the time ($p<0.05$). Specific reasons for continuing with low-efficacy methods, such as personal choice, episodic nature of sexual activity, or perceptions and stereotypes could not be determined from the MRR data.

In visits when women entered and exited the visit without a method of contraception, counseling about contraceptive methods or infertility was documented only 37% of the time. Women who entered and exited the visit without a method of contraception were less likely than the sample as a whole to report birth control as a reason for the visit (17% versus 54% across all visits) and more likely to report pregnancy test as their reason for the visit (31% versus 14% across all visits). In addition, infertility-related reasons were reported in 6% of the visits in which clients entered and exited without a contraceptive method.

Even in visits where the woman herself reported birth control as her reason for the visit but entered and exited the visit without a method of contraception (n=26), counseling about contraceptive options was documented 62% of the time (16 visits). In one additional visit, the woman was rescheduled for a tubal ligation. Although the number of women in this analysis is small and the findings may be unstable, it is unclear why method-related counseling was not documented in the remaining 9 visits.

Use of the Quick Start Approach

The conventional method of OC initiation requires the woman to wait until menses to start the cycle of pills. With the Quick Start approach, she takes the first pill in the pill pack on the day of her office visit as long as she is between day 7 and day 28 of her cycle, is not pregnant, and does not require emergency contraception. If the woman needs emergency contraception (EC), the Quick Start approach presumes that she will take EC on the day of the visit and start the OC pills on the following day. Quick Start is considered preferable because it does not leave a gap between the time the client is prescribed the pills and the time she is intended to start taking them.[5] In addition to OCs, this method is applicable to the patch and vaginal ring.

To assess the extent to which the Quick Start approach is utilized by clinicians in Family PACT, we examined instructions given to clients whose reported last menstrual period started 7 to 28 days prior to the visit in which they switched to oral contraceptive pills (102 visits), the patch (59) or ring (8) from low-efficacy methods or no method. Abstractors recorded whether there were documented instructions for the women to start the method on the day of the visit, next day, first day of next period or first Sunday of next period. We interpreted instructions to start the method on the day of the visit or the following day as Quick Start and considered instructions to start on the first day or first Sunday of next period as the conventional approach.

According to this definition, Quick Start was utilized in 13% of all abstracted pill, patch and ring initiations, while the conventional approach was utilized in 83% of the cases for which the data were available. See Table 4.1.6. Provider training in Family PACT regarding Quick Start did not begin until 2006, therefore these results will provide a baseline measure for future evaluations. Also note that these results should be treated with caution because the data on instructions to clients were not documented in 60% of selected visits.

Table 4.1.6. Instructions to Clients Switching from Low-Efficacy and No Method to OC, Patch or Ring (n=169)[a]

Begin Contraceptive on:	No.	%
Day of the Visit (Quick Start)	7	10%
Next Day (Quick Start)	2	3%
First Day of Next Period	17	25%
First Sunday of Next Period	39	58%
Other	2	3%
Missing/Not Recorded	102	

[a] Analysis was limited to women eligible for Quick Start. Visits to women whose date of last menstrual period was unknown or was less then 7 or greater than 28 days from the date of the visit were excluded (n=173).

Source: 2007 Family PACT Medical Record Review, Female General Sample

Dual Method Use

Dual method use refers to using male or female condoms in addition to a high-efficacy method, defined as sterilization, IUC, implant, injection, OC, patch or ring. In this situation, condoms serve as protection against STIs and as a back-up in the event of failure of the primary method. Analysis of dual method use was limited to visits in which the contraceptive method after the visit was known (3,720 visits). In contrast to all other sections in this chapter, this section considers not only the primary method used by the client but all reported and documented methods. As condoms are widely available and can be obtained elsewhere as a non-Family PACT benefit, our results may underestimate the actual dual method and condom use.

The Female General Sample clients exited the visit using dual methods in 412 out of 3,720 (11%) visits included in the analysis. In an additional 822 visits (22%), clients left with condoms but without a higher-efficacy method, bringing the overall condom use across visits to 33%. The proportion of dual method users was slightly higher for the visits in which clients were new to the provider, with 97 out of 795 (12%) new clients exiting with dual methods.

Dual method use is especially appropriate for clients who are at risk of acquiring an STI. We considered a client to be at risk of an STI if she reported an STI-related reason for the visit, had documented history of recent STIs, reported new or multiple partners, or was diagnosed and/or treated for an STI. According to this definition, 1,589 out of 3,720 visits (43%) were to clients at risk of an STI. The proportion of visits with documented dual method use at the end of the visit was higher in this group than in the overall sample (248 out of 1,589, or 16% of visits). In another 429 visits (27%), clients at risk of an STI left the visit using condoms but without a higher-efficacy method, bringing the overall documented condom use among clients at risk of an STI to 43%.

Documented dual method use was significantly higher among adolescent clients compared to adult clients (21% versus 9%, $p<0.01$), particularly among clients at risk of an STI (27% for adolescents at risk versus 12% for adults at risk, $p<0.001$), but there were no significant differences between race/ethnicity groups.

Emergency Contraceptive Services

Emergency contraception (EC) is effective if taken within 5 days of unprotected intercourse[6] and is an important option for women to have in the event of method failure or unprotected sex. EC has been available since inception of the Family PACT Program. Prior to 1999, standard packages of OC pills were used as EC. On November 1, 1999, the first dedicated EC product, Preven™, became a Family PACT benefit but was discontinued by the manufacturer as of May 2004. PlanB® became a Family PACT benefit on February 1, 2001. According to paid claims, dispensing of dedicated EC products has been increasing steadily over time, with 3% of women receiving it in FY 2000-01, 11% in FY 2002-03, and 21% in FY 2005-06.[3]

PlanB® is currently the primary product used for emergency contraception in Family PACT. Combined OCs are still used as EC but the extent of such use cannot be determined from claims data. The dedicated EC product PlanB® is considered preferable to the use of OCs as EC because it is less likely to induce nausea and vomiting. Also, both pills in PlanB® may be taken simultaneously, while the doses of OCs used as EC must be separated by 12 hours, a factor which may compromise the client's completion of the regimen. However, if the provider is unable to dispense PlanB® on-site, in some circumstances it may be preferable to dispense OCs as EC rather than to give the client a prescription for PlanB®, depending on the clinician's assessment of how likely the client is to pick up the prescription and the accessibility of pharmacies dispensing PlanB®.

Over the past few years, OFP conducted several interventions to increase EC utilization. A Clinical Practice Alert about EC was released in December 2005, which highlighted advance provision of emergency contraception. During 2006 and 2007, the information about EC dispensing limits and billing was integrated in provider orientation and training materials. Client education materials regarding EC have been updated. The information on EC trends presented in this report will therefore provide a baseline for evaluating these interventions in future MRRs.

To explore EC dispensing trends in the MRR, we identified 196 visits in which dedicated EC products or OCs used as EC were dispensed or prescribed, according to medical records. This comprised 4% of all visits included in the analysis. The visits represented 167 of 2,290 (7%) unique clients in the sample, with 19 clients having received EC or a prescription for EC at two visits and five clients having received EC or a prescription for EC at three visits. We cannot reliably distinguish from the medical record whether EC was provided based on current need or in advance of need.

The 2007 MRR allowed for estimating how often combined OCs were used as EC. The type of EC dispensed or prescribed was available for 178 out of 196 (91%) EC visits. In visits with known type of EC, the dedicated EC product PlanB® was dispensed or prescribed 88% of the time, while combined oral contraceptives were used as EC 12% of the time. No occurrence of IUC use as EC was documented in charts. This suggests that although PlanB® is dispensed or prescribed in the majority of cases, provision of combined OCs as EC still comprises a substantial part of EC services and that the overall amount of EC use is underestimated by paid claims data.

As shown in Table 4.1.7, PlanB® was about as frequently dispensed on-site as prescribed. Combined OCs were more frequently dispensed as EC on-site than prescribed, although the numbers for combined OC are very low and may be unstable. In about one-fifth of cases, EC was both dispensed at the visit and prescribed.

Table 4.1.7. Emergency Contraception Visits, by Product Type and Mode of Acquisition (n=157)[a]

	Product Type						Total	
	Plan B		Combined OC		Unknown[b]			
Mode of Acquisition	No.	%	No.	%	No.	%	No.	%
Dispensed	51	40%	7	58%	8	44%	66	42%
Prescribed	52	41%	3	25%	6	33%	61	39%
Both Dispensed and Prescribed	24	19%	2	17%	4	22%	30	19%

[a] Excludes 39 visits in which the mode of acquisition was not recorded or not abstracted.

[b] Product type not recorded in the chart or not abstracted.

Source: 2007 Family PACT Medical Record Review, Female General Sample

As seen from Table 4.1.8, clients served by public sector providers were more likely to receive EC or prescription for EC than clients served by private sector providers ($p<0.001$). Clients served by providers with a Family Planning/Women's Health specialty were more likely to receive EC or prescription for EC at the visit ($p<0.001$) than those served by other specialty types.

Table 4.1.8. Visits with Emergency Contraception Dispensing/Prescription, by Provider Sector and Specialty

	Visits with Emergency Contraception Dispensed or Prescribed		Total Visits
	No.	%	No.
Provider Sector			
Private	84	3%	2,841
Public	112	7%	1,524
Provider Specialty			
Family Planning/ Women's Health	94	6%	1,524
Primary Care/ Multi-Specialty	102	4%	2,841
Total	196	4%	4,365

Source: 2007 Family PACT Medical Record Review, Female General Sample

Analysis of EC services by client demographics showed that adolescents were significantly more likely to receive EC services at the visit than adults, with EC dispensed or prescribed to adolescents in 10% of visits compared to 3% for adults ($p<0.001$). In addition, 14 out of 24 (58%) clients with multiple EC visits were adolescents, which is a substantially higher proportion of adolescents than found in the overall Female General Sample (18%). However, there were no notable patterns in EC services by client race/ethnicity.

Further, analysis of EC services in relation to client contraceptive use revealed that about two-thirds of clients who received EC or prescription for EC at the visit relied on low-

efficacy methods or did not use a method of contraception at the beginning of the visit. At the end of the EC visit, 60% of clients left with high-efficacy methods and only one client left without a method of contraception. See Table 4.1.9. In 156 out of 196 EC visits (80%), the chart contained documentation of counseling about methods of contraception. These findings suggest that, on average, providers used EC visits as an opportunity to counsel clients about contraceptive options and help them choose a method to protect themselves from unintended pregnancy.

Table 4.1.9. Client's Primary Method of Contraception Before and After the Visit at Which Emergency Contraception Was Dispensed or Prescribed

	Before Visit		After Visit	
Primary Contraceptive Method[a]	No.	%	No.	%
Tier 1 Sterilization, IUC, Implant, Injection	6	4%	4	2%
Tier 2 OC[b], Patch, Ring	48	28%	106	58%
Tier 3 Barriers and Low-Efficacy Methods	49	29%	72	39%
No Method	65	38%	1	1%
Pregnant/ Seeking Pregnancy	1[c]	1%	0	0%
Missing/ Not recorded	27		13[d]	

[a] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

[b] Clients in Tier 2 after the visit may be overcounted if they received OC as Emergency Contraception.

[c] The client received an abortion on the day of the visit and left with patch as her primary method.

[d] Includes one client who had a positive pregnancy test at the visit. No paid claims for Emergency Contraceptive pills were found for the date of service. Emergency Contraception dispensing/prescription may represent a charting or data entry error.

Source: 2007 Family PACT Medical Record Review, Female General Sample

The proportion of clients who received EC according to the MRR was substantially lower than the program-wide trends based on paid claims, which may be explained by the following reasons. First, EC dispensing is characterized by substantial geographic variation, with Los Angeles County being among the lowest in the proportion of clients dispensed EC in FY 2004-05.[4] The MRR data confirmed this result, as the proportion of visits in which EC was dispensed or prescribed abstracted in Los Angeles County was significantly lower than that in other counties (2.6% versus 6%, $p<0.001$). Since 42% of all charts in the Female General Sample were abstracted in Los Angeles County, the low level of dispensing in this county appears to have affected the proportion of women who received EC or a prescription for EC found in the MRR.

Second, according to paid claims, 80% of EC dispensing in FY 2004-05 was done on-site by public providers, 20% through pharmacies and less than 1% on-site by private providers (ibid.). As noted in Chapter 3 of this report, the MRR data over-represents private providers, which may have also affected the proportion of clients dispensed EC found in the MRR. Third, prescriptions for EC initiated by pharmacists were not captured by the MRR data, which likely further decreased the MRR proportion, depending on the volume of such prescriptions. Finally, anecdotal evidence suggests that recording of EC dispensing and prescriptions in client charts may be incomplete. For instance, EC may not be documented when a prescription is called in to the pharmacy by on-call staff

during non-business hours or when EC is dispensed in an emergency situation to a drop-in client. Thus, the trends in EC services presented in this section may not be representative of the program as a whole and should be treated with caution.

Client-Reported Reason for Visit

In this section, we focus on the reasons that clients reported for seeking care, as recorded in the chart. Reasons for a visit are important to understand as they give an indication of potential entry points into Family PACT services and the issues that motivate clients to visit a provider. However, the stated reason motivating the visit may differ from the resulting focus of the visit. For example, for a client coming in reporting an STI concern as reason for the visit, services provided may include not only STI testing, but also contraceptive counseling and dispensing of contraceptive supplies.

Among both new and returning female clients, the most frequently stated reason for a visit was birth control, with 56% of new and 60% of returning clients reporting it at the first abstracted visit. See Table 4.1.10. Pregnancy test was the reason for a visit reported by 23% of new clients compared with 14% of returning clients. STI-related reasons were reported by 17% of new clients compared to 10% of returning clients.

Client-reported reasons for a visit showed some variation by client age. Adolescents, particularly those who were new to the program, were more likely than adult clients to report pregnancy test and emergency contraception as a reason for the visit. In contrast, adult clients were more likely to report symptoms as a reason for the visit.

Table 4.1.10. Reasons for the Visit Reported at the First Abstracted Visit[a]

	New Clients						Returning Clients					
	All Women (n=802)		Adolescents (n=197)		Adults (n=605)		All Women (n=1,481)		Adolescents (n=211)		Adults (n=1,270)	
Reason for the Visit	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Birth Control	446	56%	108	55%	338	57%	867	60%	131	63%	736	59%
Symptoms	216	27%	51	26%	165	28%	407	28%	52	25%	355	29%
Pregnancy Test	181	23%	67	34%	114	19%	206	14%	38	18%	168	14%
STI-Related	136	17%	36	18%	100	17%	141	10%	25	12%	116	9%
Emergency Contraception	24	3%	9	5%	15	3%	53	4%	18	9%	35	3%
Other (exclusive of the above)[b]	99	13%	13	7%	86	14%	226	16%	24	11%	202	16%
Missing/ Not Recorded	11		2		9		32		2		30	

[a] Totals are greater than 100% due to multiple responses. Seven clients for whom new/returning status could not be determined were excluded from the analysis.

[b] Initial exam, Annual Exam and Follow-up Visit response options were not counted as reasons if Birth Control, Pregnancy Test, Symptoms, STI or Emergency Contraception were mentioned as a reason for the visit; they were counted as Other if Birth Control, Pregnancy Test, Symptoms, STI or Emergency Contraception were not listed as a reason for the visit.

Source: 2007 Family PACT Medical Record Review, Female General Sample

There was also considerable variation in reasons for the visit between racial/ethnic groups in both new and returning clients. Among new clients, Latinas were the most likely to report birth control as a reason for the visit (60%), followed by White (51%), Asian (43%) and Black women (38%). The difference was statistically significant at $p<0.01$. In contrast, new Black female clients were the most likely to report symptoms as a reason for the visit (43%), followed by White (29%), Latina (27%) and Asian women (9%),

$p<0.02$. Among returning clients, Latinas were also the most likely to report birth control as a reason for the visit (64%), followed by White (56%), Asian (52%) and Black women (47%), $p<0.01$. STI check, testing or treatment was most frequently reported as a reason for a return visit by Black women (24%), followed by Asian (17%), Latina (9%) and White women (4%), $p<0.01$.

Thus, a desire to obtain or maintain a method of birth control appears to be the leading reason for accessing Family PACT services for new and returning female clients, and a lower frequency of pregnancy test and STI-related reasons among returning clients may suggest that their prior services had a positive impact on their ability to protect themselves from unintended pregnancy and STIs. Variation in reasons for the visit by client age and race/ethnicity was not assessed in prior studies and may inform future outreach efforts.

Discussion

This analysis indicates the positive effect of the Family PACT Program on contraceptive use among its female clients. New clients showed substantial improvement in the efficacy of contraceptive methods used at the end of the visit compared to methods used prior to the visit, including a 22% reduction in the number of women not using a method of contraception. Returning clients showed continued improvement in the efficacy of methods they adopted by the end of the visit. There appears to be an association between contraceptive counseling and adoption of higher efficacy methods. However, due to the nature of a medical record, direct causal relationship between counseling and method use cannot be ascertained as chart documentation may not fully reflect services provided and because the temporal relationship between counseling and method adoption cannot be established within the same visit (see Chapter 1).

Among female clients exiting a Family PACT visit, 16% adopted long-acting methods of contraception, 44% adopted hormonal contraception, including oral contraceptives, the patch and ring, and 26% intended to rely on barrier or behavioral methods. Non-White women were less likely to exit the Family PACT visit with a high-efficacy method than White women. Further research should evaluate the reasons for continued racial/ethnic disparities in the adoption of high-efficacy contraception. Future research should also evaluate why the trends in adoption of highly effective methods among Latinas found in the MRR differed from those found in claims data.

Despite the overall improvement in the efficacy of methods used, there remains room for improvement, as the majority of clients entering the visit with low-efficacy methods continue to rely on those methods after the visit, and one-quarter of clients entering the visit without a method of contraception also exit without a method.

In addition, the proportion of returning women who reported using contraception at the beginning of their return visit was smaller than the proportion of new female clients who exiting their first Family PACT visit with a method, particularly among adolescents, which suggests that the effect of the program may not be entirely sustained. Although to some extent discontinuation in the use of contraception may be due to intermittent sexual

activity, retention efforts may be necessary to ensure that women continue to use contraception consistently to prevent unintended pregnancy.

Method-related symptoms and complaints were more frequently reported by women switching to less effective methods than by other women. However, method side effects only partially explain why some women switch to less effective methods. Further research should evaluate the reasons for switching to less effective methods.

Future studies should also assess barriers to adoption of effective methods for women continuing to rely on low-efficacy contraception or use no method. Provider-focused interventions may be warranted to increase contraceptive counseling for women who do not use highly effective contraception. The Quick Start approach for initiation of hormonal contraception appeared to be underutilized during the abstraction period. Future MRRs should assess the impact of provider training on the use of this approach.

Although condom use was found to be high among clients at risk of an STI, dual method use may be underutilized in this population. Therefore, provider and client-focused interventions may be warranted to increase dual method use among clients at risk for an STI. However, it is possible that medical records do not accurately capture dual method use as condoms are widely available outside of Family PACT. Comparisons with other data sources, such as Client Exit Interviews and claims, may be necessary to validate our findings.

Clients receiving emergency contraception substantially improved the efficacy of their contraceptive methods at the end of the visit, and the vast majority of them received contraceptive counseling, suggesting that providers use EC dispensing as an opportunity to educate clients and help them choose a method of contraception that suits their needs. However, disparities in EC use by provider sector and specialty suggest that EC is underutilized by private sector and primary care providers. The actual frequency of EC provision may be underestimated by this MRR and the utilization of advance provision of EC could not be reliably assessed. The 2007 Client Exit Interview will provide an alternative estimate of EC provision as well as an estimate of the proportion of clients who are provided EC in advance of the need.

Reference List

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4.2. Contraceptive Services to Male Clients

Introduction

One of the federal waiver objectives of the Family PACT Program has been to increase access to family planning services among low-income men. In FY 2004-05, male clients comprised 11% of the Family PACT Program population, a proportion that has been nearly constant over the years.

Men's needs for reproductive health care and family planning have historically been neglected compared to the resources invested in serving women. Currently, Family PACT is one of the few family planning waiver programs in the United States that provides family planning services to men. Recognizing the important role of men in family planning, Healthy People 2010 Objective 9-6 aims to increase male involvement in pregnancy prevention and family planning efforts.[1] Providing high quality, culturally appropriate and comprehensive reproductive health services to men is one way to reach this objective.

Claims analyses of contraceptive service utilization by males in Family PACT have been conducted since the inception of the program. The 2002 MRR provided a description of clinical and education and counseling services male clients received, but the results on contraceptive use and method adoption among male clients were not reported. The 2007 MRR is therefore the first MRR to evaluate the quality of contraceptive services provided to male clients as they are documented in medical records. An advantage of the MRR data over claims data is that it allows us to look not only at the contraceptive methods male clients adopted at the visit, but also at the methods they used prior to the visit.

In this chapter, we focused on the following questions to describe male clients' contraceptive service utilization:

- What contraceptive methods did male clients in Family PACT use and how did method use vary by client age and race/ethnicity?
- To what extent did contraceptive use among male clients increase as a result of Family PACT services?
- What were the reasons new and returning male clients gave for accessing Family PACT services?

This chapter is based on the analysis of services provided to the 366 men included in the Male General Sample, for whom there was at least one abstracted visit. Clients for whom only the demographic information was available but no visits were excluded. The analyses presented here are cross-sectional and are based on contraceptive methods reported at the first abstracted visit. Similar to the analysis of contraceptive services to females, we looked at services to new (n=269) and returning male clients (n=97) and at services to adolescent (13-19 years) and adult (20 years and older) male clients.

Findings

Contraceptive Use among Male Clients

Male clients' contraceptive use was assessed at the start and end of each abstracted visit. The data abstraction tool allowed for entering multiple methods of contraception. Method combinations reported as used before or after the visit included condoms used concurrently with one of the following methods: periodic abstention, withdrawal, spermicide and vasectomy. The primary method was assigned based on the following order of priority: vasectomy, condoms, abstention, withdrawal and spermicide. The following sections analyze contraceptive use by the primary, most efficacious method clients used.

Of the 366 male clients included in the analysis, 265 (72%) had documentation of the method they were going to use after the first abstracted visit. Of those, 87% exited the visit with condoms as their primary method, 1% exited with vasectomy, and 9% left without a method of contraception. Among clients with documented contraceptive methods, adolescents were significantly more likely than adults to use condoms at the end of the visit (96% versus 84%, $p<0.05$). There were no notable differences in contraceptive use between racial/ethnic groups.

Table 4.2.1. Primary Contraceptive Method at the End of the First Abstracted Visit (n=265)[a]

Primary Method[b]	No.	%
Non-Reversible Contraception		
Vasectomy	3	1%
Condoms and Other Methods		
Male Condoms	230	87%
Abstention	1	0%
Spermicide	1	0%
Relying on Partner's Method	3	1%
Attempting Pregnancy	4	2%
No Method	23	9%

[a] Excludes 101 clients for whom the method was not recorded.

[b] For clients using multiple methods, the more effective method was assigned as the primary method.

Source: 2007 Family PACT Medical Record Review, Male General Sample

Method Adoption by New and Returning Clients

To assess the impact of the first Family PACT visit on contraceptive use among males, we compared methods used before and after the first abstracted visit by new and returning clients. Both new and returning clients improved their contraceptive use[5] at the visit. See Table 4.2.2. The proportion of clients using a method of contraception

[5] For the analyses in this chapter, we assume that clients who left their visit with a method intended to adopt the method for contraception. Medical Record Review data cannot provide information about whether clients actually used that particular method of contraception with a partner subsequent to their date of service.

increased from 65% to 87% among new clients and from 81% to 91% among returning clients. However, the proportion of returning clients not using contraception at the beginning of the visit (19%) is greater than the proportion of new clients not using a method at the end of their first visit (11%), which suggests that the effect of the first Family PACT visit may not be entirely sustained. Although to some extent contraceptive discontinuation may be due to episodic sexual activity or changes in the client's personal situation, retention efforts may be necessary to ensure that male clients remain protected against causing an unintended pregnancy and acquiring STIs. Also, note that this analysis is cross-sectional and may not reflect contraceptive method adoption and continuation by individual male clients.

Table 4.2.2. Primary Contraceptive Methods Before and After the First Abstracted Visit for New and Returning Clients[a]

	New Clients (n=152)				Returning Clients (n=48)			
	Before Visit		After Visit		Before Visit		After Visit	
Primary Method	No.	%	No.	%	No.	%	No.	%
Non-reversible contraception								
Vasectomy	0	0%	0	0%	0	0%	1	2%
Barrier and Other Methods								
Condoms	96	63%	130	86%	37	77%	41	85%
Abstention	1	1%	0	0%	1	2%	0	0%
Spermicide	0	0%	0	0%	0	0%	1	2%
Relying on Partner's Method	2	1%	2	1%	1	2%	1	2%
Attempting Pregnancy	4	3%	4	3%	0	0%	0	0%
No Method	49	32%	16	11%	9	19%	4	8%

[a] Clients with incomplete information on contraceptive use before or after the visit were excluded from the analysis (n=166).

Source: 2007 Family PACT Medical Record Review, Male General Sample

Client-reported Reason for Visit

In this section, we focus on the reasons that male clients reported for seeking care. Similar to how the Female General Sample was abstracted, abstractors recorded the reasons that male clients reported for coming to the clinic/office. Abstractors could record more than one reported reason per visit. For both new and returning male clients, the three most frequently reported reasons motivating a visit were STI testing or treatment, symptoms, and desire to obtain or discuss birth control. See Table 4.2.3. Reasons related to testing or treatment of an STI were the most common, with 77% of new clients and 56% of returning clients reporting these reasons at the first abstracted visit. Birth control was mentioned as a reason for the visit by about one-third of new and returning clients. However, birth control was reported as a reason without a concurrent STI-related reason by only 11% of new and 18% of returning clients (not shown in Table 4.2.3).

The client's reported reasons for scheduling the visit showed substantial differences between new adult and new adolescent male clients. New adolescent clients were significantly more likely than adults to report birth control as their reason for the visit (42% versus 27%, $p<0.05$); they were also less likely than new adult clients to report an STI-related reason for the visit (69% versus 79%), although the difference was not

statistically significant. The number of returning adolescent clients was too small (n=14) for any meaningful comparisons between returning adults and adolescents.

These findings suggest that for men, the primary personal motivation for accessing Family PACT services centers around their need for STI testing and treatment. It is important to clarify that the client's stated reason for a visit may differ from the resulting focus of the visit. For instance, a male client presenting with STI symptoms may exit the visit having received not only treatment for an STI condition but also with contraceptive supplies and counseling about STI and pregnancy prevention. Understanding men's own personal motivation for seeking reproductive health care is important knowledge for planning outreach and recruitment strategies to target men, and ultimately, for increasing men's involvement in family planning.

Table 4.2.3. Reason for Visit Reported by Client at the First Abstracted Visit (n=360)[a]

	New Clients (n=266)		Returning Clients (n=94)	
Reason for Visit	No.	%	No.	%
STI-Related	204	77%	53	56%
Symptoms	89	33%	28	30%
Birth Control	81	30%	26	28%
Physical Exam	39	15%	8	9%
Follow-Up	3	1%	19	20%
Other (exclusive of the above)[b]	12	5%	4	4%

[a] Excludes 6 clients for whom the reason for a visit was not recorded or not abstracted. Totals are greater than 100% due to multiple responses.

[b] Initial Visit and Other Reason was not counted as reasons for the visit if STI-related, Symptoms, Birth Control, Physical Exam or Follow Up were also reported as a reason for the visit. Initial Visit was counted as Other if STI-related, Symptoms, Birth Control, Physical Exam or Follow Up were not mentioned as a reason for the visit.

Source: 2007 Family PACT Medical Record Review, Male General Sample

Discussion

This analysis indicates the positive effect of Family PACT services on male clients' contraceptive use. Although only a minority of male clients stated birth control as their reason for the Family PACT visit, 89% left the visit using a method of contraception. The majority of new and returning clients who did not use a method of contraception prior to the visit had adopted a method by the end of the visit. However, retention efforts may be needed to ensure uninterrupted contraceptive use, as the proportion of male clients who reported using contraception was lower among returning clients at the beginning of the visit compared to new clients at the end of their first Family PACT visit.

An important limitation of the contraceptive services data for the Male General Sample is substandard documentation of contraceptive use. Contraceptive methods used prior to the first abstracted visit were not documented for 144 out of 366 (39%) clients and methods used after the first abstracted visit were not documented for 101 out of 366 (28%) clients. In comparison, method use before the first abstracted visit was not documented for 20% of clients in the Female General Sample and methods after the first abstracted visit were

not documented for 14% of clients. The proportion of men documented as relying on their partner's method was particularly low, suggesting that this circumstance is not well documented in charts. There were no notable differences in the amount of missing documentation by provider sector or specialty.

Deficiencies in chart documentation limit our ability to assess the program's success in increasing males' contraceptive use. In the context of a family planning program, the large amount of missing documentation of male clients' contraceptive methods warrants additional provider training regarding the program's expectations on medical record documentation.

Reference List

1. U.S.Department of Health and Human Services Healthy People 2010: Understanding and Improving Health and Objectives for Improving Health; 2nd ed.; U.S. Government Printing Office: Washington, DC, 2000; Vol. I and II.

Chapter 5. Longitudinal Analysis of Program and Contraceptive Method Continuation

Introduction

Longitudinal analysis of contraceptive method use and program continuation in Family PACT is important for understanding the patterns of service utilization over time. While the cross-sectional analysis of contraceptive services based on the Female General Sample gives a snapshot of contraceptive utilization, the longitudinal analysis more adequately represents contraceptive use over time, revealing patterns that may not be apparent from a cross-sectional analysis.

The 2002 MRR included an analysis of program and contraceptive method continuation over a three-year period among a cohort of 544 female clients who received at least one Family PACT service in FY 1998/99. The analysis discovered substantial differences in continuation by method of contraception, with the longest duration of use observed for IUC and oral contraception.

This analysis updates the results of the 2002 MRR and focuses on the following evaluation questions:

- What were the patterns of program continuation among women in the Longitudinal Sample?
- What were the patterns of contraceptive method continuation over time by method?

The 2007 Longitudinal Sample includes data abstracted from medical records for 624 women who received Family PACT services in 2002. Women for whom only the demographic information was available but no visits were abstracted were excluded from the analysis. The women were tracked for four years starting with the first date of service in 2002.[6] We attempted to collect data from all providers the women saw over the four-year period of 2002-2005. See Chapter 2 for additional details about provider, client and visit selection.

Findings

Program Continuation

One-third (214, or 34%) of the women in the Longitudinal Sample were new to Family PACT at the first abstracted visit, and 64% (399) of the women were returning clients who had been receiving Family PACT services, on average, for 26 months. We were unable to determine whether the remaining 11 women (2%) were new or returning to the program at the first abstracted visit.

[6] Twelve percent (12%) of women in the sample were missing abstracted chart data on their first visit billed in 2002 but were retained in the analysis.

On average, the women had 4.1 visits across the four years, spanning an average period of 16 months across the four year study timeframe. New clients had 3.4 visits and returning clients had 4.6 visits. Women who exited the first abstracted visit with a high-efficacy method of contraception from Tiers 1 or 2 were more likely to return again than those who left with a barrier or low-efficacy method (80% and 81% compared to 76%). Women who left the first abstracted visit using no method and those who were pregnant/seeking pregnancy were the least likely to return for another visit over the four-year abstraction period (61% and 62%). Women whose first abstracted visit included a negative pregnancy test were more likely to return than women with a positive pregnancy test (78% compared to 47%). See Table 5.1.

Table 5.1. Program Continuation 2002-2005, Longitudinal Sample (n=624)

	Proportion with More than One Visit	Average Number of Abstracted Visits	Average Follow-Up Time, in Months	No.	%
All women	75%	4.1	16.3	624	100%
Status at the Earliest Abstracted Visit					
New client	68%	3.4	12.7	214	34%
Returning client	79%	4.6	18.1	399	64%
Unable to determine	55%	4.0	16.9	11	2%
Age					
Under 20	73%	3.7	16.6	89	14%
20-24	77%	4.2	15.7	173	28%
25-29	80%	4.7	19.0	127	20%
30-34	69%	3.8	14.7	115	18%
35 and older	73%	4.2	15.3	120	19%
Race/ Ethnicity					
Asian/Pacific Islander	60%	3.5	15.9	52	8%
Black	61%	3.2	13.2	18	3%
Latina	80%	4.4	17.6	410	66%
White	74%	4.1	16.1	53	8%
Multiracial/Other	64%	3.3	8.5	14	2%
Missing/Not recorded	66%	3.4	11.7	77	12%
Primary Method at the End of the Earliest Abstracted Visit[a]					
Tier 1: Sterilization, IUC, implant, injection	80%	4.8	18.3	122	20%
Tier 2: OC, patch, ring	81%	4.6	18.8	187	30%
Tier 3: Barrier and low-efficacy methods	76%	3.6	14.1	159	25%
No method	61%	3.2	9.8	38	6%
Pregnant/ Seeking pregnancy	62%	4.0	16.0	21	3%
Missing/ Not Recorded	63%	3.6	14.9	97	16%
Outcome of Pregnancy Test at the Earliest Abstracted Visit					
Negative	78%	4.5	15.6	154	25%
Positive	47%	2.5	11.2	19	3%
Test not done	75%	4.1	16.7	451	72%

[a] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, Longitudinal Sample, and Family PACT Enrollment and Claims Data.

There was substantial variation in program continuation by race/ethnicity.[7] Latina and White women were the most likely to return after the first abstracted visit (80% and 74%). They also averaged a higher number of visits (4.4 and 4.1, respectively) spanning longer time periods than women of other race/ethnicities.

Clients under the age of 20 and those aged 30 and over were somewhat less likely to return after the first abstracted visit than women 20-29 years of age. Women ages 25-29 also had the highest number of visits and the longest follow-up time.

Contraceptive Method Continuation in Family PACT

The longitudinal MRR permits the study of continuation of contraceptive use from visit to visit. Method use is based on medical record reports of the method used prior to the visit and the method the client was using or intended to use at the end of the visit. The availability of information on the method used at the beginning of the visit is a key advantage of medical records data over claims data.

Survival analysis is a statistical tool used to analyze duration-specific data such as time between visits. Some technical comments are helpful in interpreting the results in this section:

For the calculation of contraceptive method continuation rates, the unit of analysis was the client, counted once for each method she used. If she had more than one nonconsecutive episode of use of one method, each episode was given a weight of 1/number of episodes.

Episodes of method use started at the last abstracted visit were not included in this analysis since we cannot know whether or when the use of the method was discontinued. Therefore, any woman with just one abstracted visit was not included in this analysis.

Our data on method use is continued up through the woman's last visit, at which point data on method continuation is censored. This creates a conservative estimate of continuation, particularly for methods that do not require return visits with providers, such as IUC and contraceptive implant.

Women who did not continue method use between one visit and the next are assumed to have switched methods halfway between the two visits.

Because some women were still using the method at the end of the abstraction period, it was not possible to calculate mean durations of use. Instead, we present quartile distributions, percentages of women still using their method at one year and graphs of method continuation.

The method continuation rates presented here are based solely on Family PACT contraceptive use. If a woman entered the program after a year of using oral

[7] For program continuation analysis, multiracial clients were assigned according to procedures described in Chapter 3. For the remaining analyses, the four women with more than one race recorded were assigned to an ethnic group based on this order of assignment: Asian, Black, Latina and White.

contraceptives and used the method for another six months, we only studied the six months of Family PACT use. In addition, for clients returning to the program at the first abstracted visit, contraceptive use prior to the first abstracted visit was not included in the analysis. For this reason, we cannot compare Family PACT method continuation rates to national rates since the Family PACT continuation rates rely on continuing participation in the Family PACT Program. Thus, the contraceptive continuation rates from this analysis are likely to be lower than the actual continuation rates, although the exact degree of underestimation is unknown. Reasons for discontinuation of particular contraceptive methods could not be determined from the MRR data.

The study of method continuation was restricted to the 467 clients (75%) who had more than one visit. For women who used multiple methods, the methods were not prioritized and continuation for each method was considered separately. Method use data for each woman was censored at her last visit. If a woman did not return for another visit, we cannot know whether she continued using the method of contraception. We do not know if she continued with her method and had no need for follow-up or if she discontinued after a short time. The implications of limiting the method continuation analysis to women with more than one visit are not known. Fourteen percent (14%) of visits among women who had at least two visits were missing data on the method used after the visit and 17% of the visits were missing data on the method used prior to the visit. These data were excluded from the analysis except in the case in which there were visits before and after the visit with missing data and where both prior and subsequent visits listed the same method. In this case, the missing data were assumed to be the same as the prior and subsequent visits.

Contraceptive method continuation in Family PACT showed significant differences by contraceptive method. Table 5.2 and Figure 5.1 show the pattern of method continuation over time. Only five methods had sufficient number of users to estimate continuation – IUC, injection, patch, OC and condoms. We present only the overall trends for these five methods as the modest sample size did not allow for analysis of each method by race/ethnicity or age.

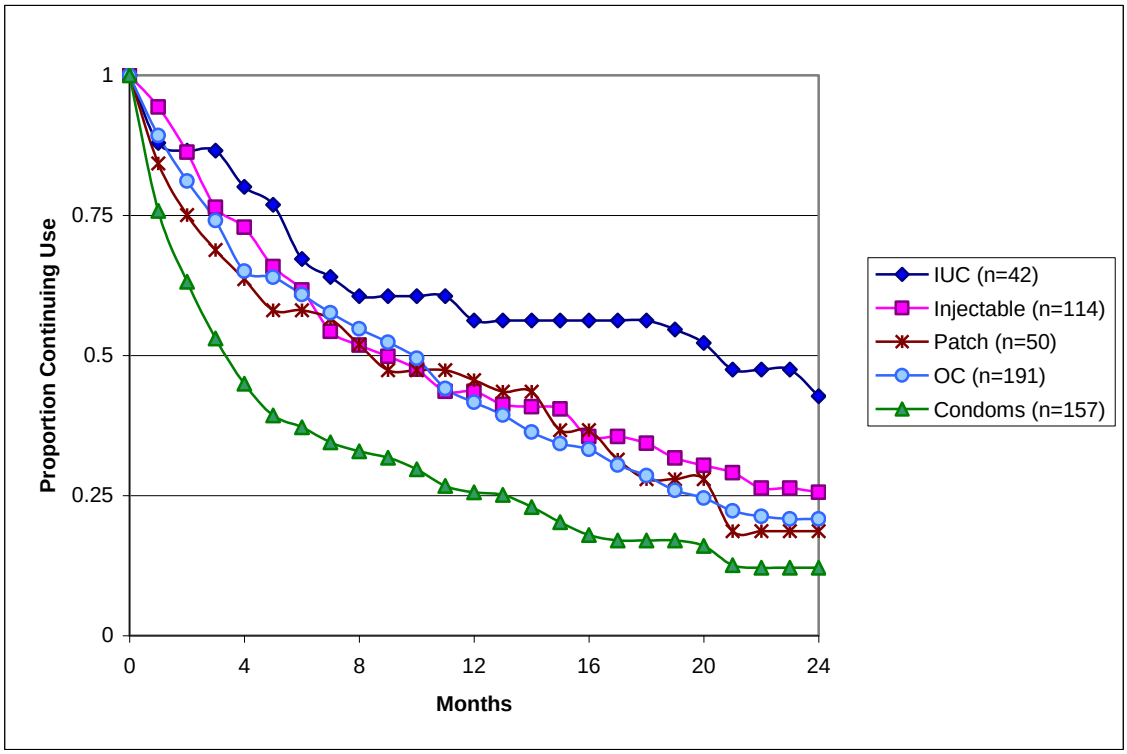
Table 5.2. Contraceptive Method Continuation (n=554)

	Client-Episodes of Use	Percentile of Duration of Use, in Weeks			Percentage Using at One Year
	No.	25%	50%	75%	
IUC	42	22	88	142	56%
Injection	114	15	38	105	43%
Patch	50	11	37	89	46%
OC	191	12	42	83	40%
Condoms	157	5	14	57	26%

[a] Multiple methods used by the same client are counted as separate client-episodes.

Source: 2007 Family PACT Medical Record Review, Longitudinal Sample

Figure 5.1. Continuation by Contraceptive Method (n=554)[a]



[a] Multiple methods used by the same client are counted as separate client-episodes.

Source: 2007 Family PACT Medical Record Review, Longitudinal Sample.

Women using condoms used their method for the shortest period of time; 50% discontinued within 14 weeks. Those who used IUC had the longest duration of use; 50% of these clients were still using their IUC after 88 weeks. The three hormonal methods (injection, patch, and OCs) showed very similar rates of continuation.

Another way to look at method continuation is the percentage of women who are still using the same method at one year. Over half (56%) of IUC clients were still using at one year. Among OC, injection and patch users, 40% to 46% were still using at one year. Just over a quarter (26%) of condom users were still using condoms at one year. These results roughly follow the results of the 2002 MRR, with the exception of OC use which showed a higher continuation rate at one year in the 2002 MRR (54%).

Note that for IUC in particular, the actual continuation rate may be underestimated because continued IUC use may not require follow-up visits. It is likely that most women who left their last abstracted visit using an IUC continued their use for some time after the visit. In addition, the IUC discontinuation typically requires a visit with clinician provider who removes the device. A lack of a record for a visit in which the woman switched from IUC to a different method or no method is thus suggestive of continued

IUC use. See Chapter 7.1 for an alternative calculation of the IUC continuation rate in Family PACT based on cohort data from the IUC Insertion Sample.

Discussion

The longitudinal data give us another source of data to look at program continuation and the patterns of method use in Family PACT.

The results of this analysis indicated that most women rely on Family PACT services for an extended period of time, with an average program participation of 16 months. This prolonged participation indicates that women's need for public funding of family planning is generally not transient and underlines the importance of these services.

There is considerable variation in continuation between different methods of contraception. Intrauterine contraception has the highest duration of use of any of the contraceptive methods analyzed. It is also among the most effective methods available to women and is very cost effective.[1] For these reasons, OFP should explore more ways to encourage women to consider this option.

Reference List

1. Foster, D. G.; Rostovtseva, D. P.; Brindis, C. D.; Biggs, M. A.; Hulett, D.; Darney, P. D. Cost Savings From the Provision of Specific Methods of Contraception in a Publicly Funded Program. *Am. J. Public Health* **2008**.

Chapter 6. Referrals for Specialized Family PACT Services[8]

Introduction

The Family PACT Standards encourage providers to refer clients to other Family PACT or Medi-Cal providers for services covered under Family PACT, particularly "if the practitioner lacks the specialized skills to provide invasive contraceptive procedures or sterilization, or [if] there is insufficient volume to ensure and maintain a high skill level" Providers may also reschedule the visit at the same site with a different clinician qualified to provide the service, or with the same clinician to allow for more time to provide the service.

Contraceptive services that can be referred are those related to contraceptive implants, intrauterine contraceptives (IUC), diaphragms, cervical caps, natural family planning and fertility awareness methods (NFP/FAM), and female and male sterilizations. Additionally, cervical abnormalities found on a Pap smear or physical exam may be referred for colposcopic evaluation. We refer to these services as specialized as they generally require the provider to maintain special equipment or training. We describe both referrals and rescheduled appointments for specialized services as both may be associated with delay, inconvenience, and other barriers to care for the client.

This chapter focuses on the following questions:

- For which specialized Family PACT services were clients rescheduled with the same provider or referred out?
- For which services did clients get repeatedly rescheduled or referred out?
- To what extent did clients follow through on referrals and rescheduled appointments?

This section is based on data for 2,656 clients included in the Female and Male General Samples, supplemented by administrative claims data.

Findings

Referrals and Rescheduling for Specialized Services

Across 4,365 visits abstracted for the Female General Sample, there were 78 documented referrals to another provider and 495 appointments rescheduled with the same provider for specialized Family PACT services. An additional four referrals and 38 rescheduled appointments across 574 visits were found in the Male General Sample. A total of 446 women and 31 men received a referral or were rescheduled for a specialized Family

[8] Referrals for primary care and other non-covered services are discussed in Chapter 9.2.

PACT service in at least one of the abstracted visits (19% and 8% of respective client samples).

For both female and male clients, the most frequently rescheduled service was Natural Family Planning / Fertility Awareness Methods (NFP/FAM), with 8% of visits among females and 3% of visits among males containing documentation of this service being rescheduled with the same provider. For women, the services most frequently referred out were complication management and mammography. For men, only complication management and vasectomy were ever referred out, while NFP/FAM was always rescheduled. See Table 6.1.

Table 6.1. Referrals and Rescheduled Appointments for Specialized Services[a]

	Visits with Rescheduled Appointment		Visits with Referral	
	No.	%	No.	%
Females (n=4,365) [b]				
NFP/FAM[c]	333	7.6%	16	0.4%
Management of Cervical Abnormalities[d]	75	1.7%	23	0.5%
Complication Management	50	1.1%	54	1.2%
IUC	13	0.3%	9	0.2%
Tubal Ligation	11	0.3%	5	0.1%
Mammography	6	0.1%	65	1.5%
Endometrial Biopsy	6	0.1%	6	0.1%
Cervical Cap/ Diaphragm	1	0.0%	0	0.0%
Males (n=574)				
NFP/FAM[c]	19	3.3%	0	0.0%
Complication Management	10	1.7%	2	0.3%
Vasectomy	9	1.6%	2	0.3%

[a] Services referred or rescheduled at multiple visits with the same client are counted as separate instances.

[b] Contraceptive implant was not available for insertion during the abstaction period. No referrals or rescheduled appointments were observed for services related to maintenance or removal of existing implants.

[c] Natural Family Planning/Fertility Awareness methods.

[d] Includes colposcopy, cervical biopsy, cryotherapy and LEEP.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

In general, providers were more likely to reschedule a specialized service than to refer the client to another provider. Exceptions were mammography services, which were referred out nine times out of ten, and complication management and endometrial biopsy for women, which were about as frequently rescheduled as referred. NFP/FAM, management of cervical abnormalities, IUC services, female and male sterilization, and complication management services for men were all more likely to be rescheduled than referred elsewhere, suggesting that providers have the capacity to provide these services on-site.

Repeated Referrals and Rescheduled Appointments for Specialized Services

Depending on the service, repeated referrals or rescheduled appointments may point to a problem with access to care, or merely reflect the nature of the service or the specialty of the provider. For most specialized services, clients were referred or rescheduled only once across their visits during the abstraction period. Exceptions are NFP/FAM, complication management for women, and management of cervical abnormalities. About

one-third (29%) of women in need of cervical abnormality services and 16% of women in need of complication management services were referred or rescheduled at more than one visit. See Table 6.2. Since complication management and management of cervical abnormalities often require multiple visits, it is possible that repeated referrals and rescheduled appointments were due to clinical reasons and may not indicate a problem with access to care. We are unable to determine from the MRR data whether subsequent referrals were done for necessary follow-up care or for the initial service.

Table 6.2. Repeat Referrals and Rescheduled Appointments for Specialized Services

Services Referred or Rescheduled	Clients by Number of Referrals or Rescheduled Appointments						Total Distinct Clients with Referral or Rescheduled Appointment
	One		Two		Three or More		
	No.	%	No.	%	No.	%	No.
Females [a]							
NFP/FAM[b]	110	54%	62	31%	31	15%	203
Complication Management	73	84%	11	13%	3	3%	87
Management of Cervical Abnormalities	49	71%	11	16%	9	13%	69
Mammogram	67	97%	2	3%	0	0%	69
IUC	20	95%	1	5%	0	0%	21
Tubal Ligation	16	100%	0	0%	0	0%	16
Endometrial Biopsy	12	100%	0	0%	0	0%	12
Cervical Cap/ Diaphragm	1	100%	0	0%	0	0%	1
Males							
NFP/FAM[c]	7	64%	2	18%	2	18%	11
Vasectomy	7	78%	2	22%	0	0%	9
Complication Management	8	89%	1	11%	0	0%	9

[a] Contraceptive implant was not available for insertion during the abstraction period. No referrals or rescheduled appointments were observed for the services related to the maintenance or removal of existing implant.

[b,c] Natural Family Planning/Fertility Awareness methods.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

NFP/FAM services had the highest proportion of repeat referrals and rescheduled appointments for both women and men: 93 out of 203 (46%) women and four out of 11 (36%) men in need of NFP/FAM services were repeatedly rescheduled or referred out. See Table 6.2. Repeat referrals or rescheduled appointments for NFP/FAM may indicate a problem with access to providers with specialized knowledge of these contraceptive methods or time to provide the necessary depth of counseling.

Clinically, NFP/FAM are methods of birth control but these services can also be offered to clients seeking pregnancy who experience problems with fertility. We did not ask directly whether the client was seeking pregnancy. However, based on proxy questions, including reasons for the visit, symptoms reported, referrals received and questions related to follow-up on a negative pregnancy test, we estimate that at least 39 out of 203 (19%) of female clients and one out of 11 (9%) male clients referred or rescheduled for NFP/FAM were seeking pregnancy, compared to 8% of females (193 out of 2,290) and 6% of males (24 out of 366) in the sample as a whole.

Follow-Through on Referred and Rescheduled Services

Failure to receive referral or rescheduled services may point to barriers in access to care. To assess the level of follow-through on referrals and rescheduled appointments, we searched paid and denied Family PACT claims to determine whether clients received the services for which they were referred or rescheduled. We combined referrals and rescheduled appointments for management of cervical abnormalities and endometrial biopsy, as each could have resulted in the same range of procedure codes. Due to the limitations of claims data, we were unable to assess follow-through on referrals and rescheduled appointments for complication management and NFP/FAM.

For each specialized service included in this analysis, we established a clinically reasonable period during which clients were expected to receive the necessary service for which they were referred or rescheduled. This period was measured as the number of days between the date the client was referred or rescheduled and the date of service on the claim. We allowed a maximum period of six months for receipt of IUC services and twelve months for receipt of mammograms, female and male sterilizations, and cervical caps. Referrals and rescheduled appointments for management of cervical abnormalities and endometrial biopsy were considered completed if a claim for colposcopy, LEEP, cryotherapy or endometrial biopsy was found within six months, or a claim for a Pap smear was found between three and six months of the date on which the client was referred or rescheduled. See Table 6.5. We considered each time the client was referred or rescheduled as a separate event. These events were followed individually regardless of whether there were repeat referrals or rescheduled appointments for the same service. Due to the small number of recorded referrals, and because claims from different providers could be counted as follow-through on the same referral or rescheduled appointment, we were unable to calculate separate follow-through rates for referred and rescheduled services and only present a combined rate.

Receipt of referred and rescheduled services varied widely by the type of service. See Table 6.3. Clients were the most likely to receive the necessary services after a referral or rescheduled appointment for vasectomy (64%) and management of cervical abnormalities/ endometrial biopsy (63%). Referrals or rescheduled appointments were the least likely to be completed for IUC (41%), tubal ligation (25%), and mammography services (24%).

Note, however, that Family PACT covers screening mammograms only for women who are between 40 and 55 years of age. Since 17 out of 71 referrals for mammography services were to women who were younger than 40 years of age, their mammography services would not have been covered by Family PACT. Thus, the actual receipt of referred or rescheduled mammography services may be underestimated by our results.

Table 6.3. Receipt of Referred or Rescheduled Specialized Services[a]

Referred/ Rescheduled Service	Reasonable Period Definitions		Results		
	Type of Claims Indicating Service Received[b]	Maximum Period from Date the Service Referred/ Rescheduled, in Months	Referrals/ Rescheduled Appointments Found in Charts No.	Service Received No.	Service Received %
Females					
Management of Cervical Abnormalities/ Endometrial Biopsy[c]	Colposcopy, LEEP, cryptherapy, endometrial biopsy; repeat Pap smear	8 mo.[d]	107	67	63%
Mammogram	Mammogram	12 mo.	71	17	24%
IUC	IUC insertion, removal, or device	6 mo.	22	9	41%
Tubal Ligation	Tubal ligation	12 mo.	16	4	25%
Cervical Cap	Cervical cap device	12 mo.	1	0	0%
Males					
Vasectomy	Vasectomy	12 mo.	11	7	64%

[a] Referrals and rescheduled appointments for NFP/FAM and complication management were excluded due to a lack of reliable proxy in claims data.

[b] Based on paid and denied claims data.

[c] Referrals and rescheduled appointments for management of cervical abnormalities and endometrial biopsy were combined due to the nature of the service. Three visits had documentation of referrals for both services.

[d] Up to 6 months for colposcopy, LEEP, cryotherapy and endometrial biopsy; 3-8 months for repeat Pap smear.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Discussion

Consistent with findings from other Family PACT evaluation studies, including the 2005 Client Exit Interview[1] and the 2002 MRR, our current analysis found the number of referrals for specialized reproductive health services in Family PACT to be very low. Rescheduling for these services, which was not assessed by previous studies, was found to be more common than referrals to other providers, with the exception of mammography and complication management services for women. This suggests that providers have the capacity to provide most specialized services on-site.

Repeat referrals and rescheduled appointments for NFP/FAM may point to a challenge with access to these services. Although NFP/FAM are methods with high failure rates – as high as 25% under typical use,[2] women who desire to use these methods are entitled to timely information and counseling on this method under the Family PACT Program Standards. Anecdotal evidence suggests that NFP/FAM counseling is difficult to teach in a clinical setting because of the time required. The same observations suggest that there is a shortage of clinicians qualified to provide this service. To compensate, one option towards facilitating client access to this method would be making information on use of cycle beads easily accessible. Cycle beads are a tool that helps women monitor their fertile periods using a simple color-coded ring of beads. They are particularly useful for teaching this method to low-literacy clients and those with limited English proficiency. To ensure that clients interested in using NFP/FAM have access to these methods, provider training and technical assistance may be warranted to increase capacity to deliver NFP/FAM services.

Claims analysis shows that the proportion of clients who received the specialized services for which they were referred or rescheduled varied by service type. Of concern are referrals and rescheduled appointments for tubal ligation and IUC services, which resulted in a claim only 25% and 41% of the time, respectively. Provider-focused interventions and capacity building may be warranted to ensure that clients receive the service for which they are referred or rescheduled.

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Chapter 7. Contraceptive Services – Special Topics

7.1. IUC Insertions among Family PACT Women

Introduction

Intrauterine contraception (IUC) offers women convenient, highly effective, and reversible contraception. Additionally, it is a very cost-effective family planning method, as long as women keep the IUC for at least 18 months.[1] The Family PACT Program benefits include two FDA approved intrauterine contraceptive devices: the copper containing IUC (T 380A, known under the trade name ParaGard®), covered since program inception in 1997, and the levonorgestrel intrauterine system (LNG IUS, trade name Mirena®), covered since 2001. The Progestasert® IUC was available as a Family PACT benefit from 1997 to 2001 when it was removed from the market by the manufacturer. Occasional invoices with this code were reimbursed after that time to allow use through the remaining shelf-life of the product, until the code was discontinued in 2005, the year we collected data on for the 2007 MRR.

In the Family PACT Program, only 1.6% of all female clients received an IUC insertion in FY 2005-06 and the proportion of women who received IUC-related services has been consistent since program inception at 5%[2]. In addition to the low initiation rates of IUCs as a contraceptive method, IUC continuation rates appeared to be low in the Family PACT Program. Findings of the 2002 Medical Record Review[3] suggested that the proportion of women who had an IUC removed within 18 months of insertion was higher than comparable national statistics. However, the sample of women who received an IUC insertion was too low (n=23) to allow for reliable estimates. To provide a more comprehensive analysis of IUC services in the program, the 2007 MRR sample design included a separate cohort of women who received an IUC insertion.

In this chapter we wanted to answer the following evaluation questions:

- What were the demographic characteristics of women who received an IUC insertion? Which types of providers were likely to insert IUCs?
- Which contraceptive methods did women use prior to IUC insertion and after IUC removal?
- What proportion of providers had documentation that they followed the clinical guidelines when inserting IUCs, including pre-insertion bimanual pelvic exam and documentation of the IUC lot number?
- What proportion of women had follow-up visits within 18 months after insertion? What proportion of women reported side effects and complaints at those visits? What were the side effects and complaints that these women reported?
- Which side effects were associated with premature removal of an IUC?

- What was the IUC continuation rate at 18 months after insertion?

We selected a cohort of women who had received an insertion between January and June 2005 and abstracted the IUC insertion visit and up to four additional visits during the 18 months after the insertion, or until removal of the IUC, whichever came first. A total of 258 women had an abstracted office visit that could be matched to a claim charged with an IUC insertion code. Of these, 18 women were excluded from the analyses: in nine of the excluded cases, the IUC use could not be confirmed because the chart indicated that the women used other contraceptive methods at the end of the IUC insertion visit; in three cases the method could not be determined from the chart; in two, none of the required visits could be found in the chart; and in the remaining four cases, the IUC use was confirmed but the IUC insertion date could not be determined from the chart. The records of the remaining 240 women had documentation that the method of contraception at the end of the visit was IUC and the insertion date was confirmed by medical records. This chapter is based on the analysis of services to these 240 women.

Findings

Provider Characteristics

A 2005 survey of Family PACT providers showed that Family Planning/Women's Health providers were more likely to insert IUCs than Primary Care and Family Practice providers and that public sector providers were more likely to insert IUCs than private sector providers.[4] This trend was reflected in this chart review. While only 38% of the 2007 MRR provider sample were Family Planning/Women's Health providers, this group accounted for two-thirds of charts randomly selected for the IUC Insertion Sample (65%). The IUC Insertion Sample charts were also more likely to be abstracted at public sector providers: although public sector providers comprised only 43% of the MRR provider sample, they accounted for 71% of the IUC insertion charts included in the sample.

Client Demographics of the IUC Insertion Sample

Out of the IUC Insertion Sample clients for whom race/ethnicity information was available from the chart (n=217), the vast majority were Latina (78%), 15% were White, and 7% were of other race/ethnicity. This is a disproportionately higher proportion of Latina women than in the Family PACT population overall (65%).[2]

Among all women with information on place of birth, 58% were born in Mexico, 6% were born in other Latin American countries, and 28% were born in the US. See Table 7.1.1. The majority of clients in this sample (63%) indicated Spanish, 27% English, and 10% another language as their primary language.

Table 7.1.1. Client Place of Birth (n=194)[a]

Place of Birth	No.	%
US	55	28%
Mexico	112	58%
Latin America	12	6%
Other	15	8%

[a] Excludes 46 clients for whom the place of birth was missing or not recorded.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Method Use before IUC Insertion

Contraceptive methods used at the beginning of the IUC insertion visit were documented in 187 charts (78%). A third of the women who received an IUC (34%) were replacing an existing IUC or were switching from another high-efficacy method, such as oral contraception or injection. Twelve women (6%) did not use contraception but had had a delivery or pregnancy termination up to six weeks prior to the IUC insertion. The majority (60%) were using low efficacy methods such as condoms, other barrier or behavioral methods, or no method at all. See Table 7.1.2.

Table 7.1.2. Primary Contraceptive Method Prior to IUC Insertion (n=187)[a]

Primary Method[b]	No.	%
Tier 1: IUC, Injection	31	17%
Tier 2: OC, Patch, Ring	32	17%
Tier 3: Barriers and Low-Efficacy Methods	75	40%
No Method	37	20%
Up to 6 weeks postpartum/ postabortion	12	6%

[a] Excludes 53 women for whom the method before insertion was missing or not recorded.

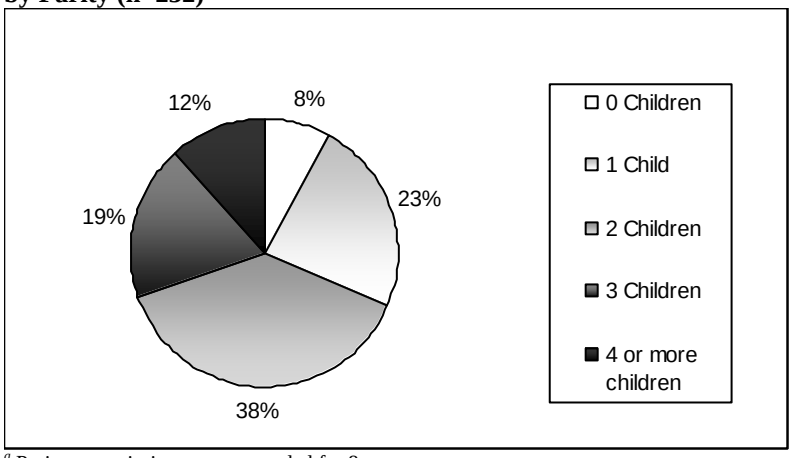
[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample.

Clinical Eligibility Criteria for IUC Insertion

Until relatively recently, intrauterine contraception guidelines recommended a conservative approach to client selection. Nulliparous and adolescent women or women with an STI history or at risk of an STI were considered to be inappropriate candidates for IUC insertion.[5] By 2004, clinical eligibility criteria for IUC insertions had become more inclusive.[6,7] However, as of 2005, few Family PACT providers appeared to have adopted these expanded criteria. Only a small number of women receiving an IUC (8%) were nulliparous and the remainder had either one child (23%) or two or more children (69%). See Figure 7.1.1. This is a significantly higher proportion of multiparous women when compared to the general Family PACT population, which is comprised of 46% nulliparous and 34% women with two or more children.

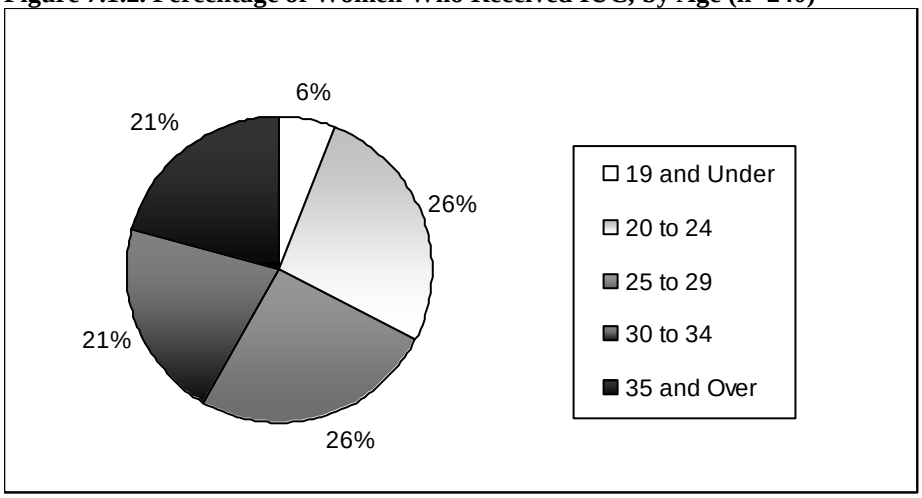
Figure 7.1.1. Percentage of Women Who Received IUC, by Parity (n=232)[a]



[a] Parity was missing or not recorded for 8 women.
Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

The average age of women who received an IUC insertion was higher (28.5 years, SD=6.9 years) than the average age of female clients in the 2005 Family PACT client population (mean 26.7 years, SD=8 years).[2] While the sample included women in all age groups, the proportion of women receiving an IUC who were younger than age 20 years was low (6%). See Figure 7.1.2.

Figure 7.1.2. Percentage of Women Who Received IUC, by Age (n=240)



Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample **.**

Traditionally, the presence of risk factors for an STI has been an important consideration in determining whether a woman is a candidate for IUC insertion.[8] Women who reported any STI history or risk factor were excluded from receiving IUC. More recently, studies have shown that IUC users do not have an increased risk of PID, when compared to non-users, except in the first three weeks after IUC insertion. Consequently, national clinical practice recommendations, and even the patient package insert of the ParaGard IUC, are now much more permissive in regard to IUC use in nulliparous women, those with a prior history of PID, and women with risk factors for sexually transmitted infections.[6,7]

To explore whether the older criteria for IUC insertion were still being used, we determined whether providers documented the client's STI history and the proportion of IUC clients that reported risk factors. STI risk assessment was nearly universal (89%). Eighty-three percent (83%) of charts had information on the client's STI history, and 65% had information whether the client had new or multiple partners. However, the proportion of women with a documented STI risk factor was very low in the IUC Insertion Sample: of charts with documented STI risk assessment, only five women (2%) had a history of an STI and 4% had documentation of a new or multiple partners. It is likely that clinicians refrained from recommending IUC insertions when a client had a history of STIs.

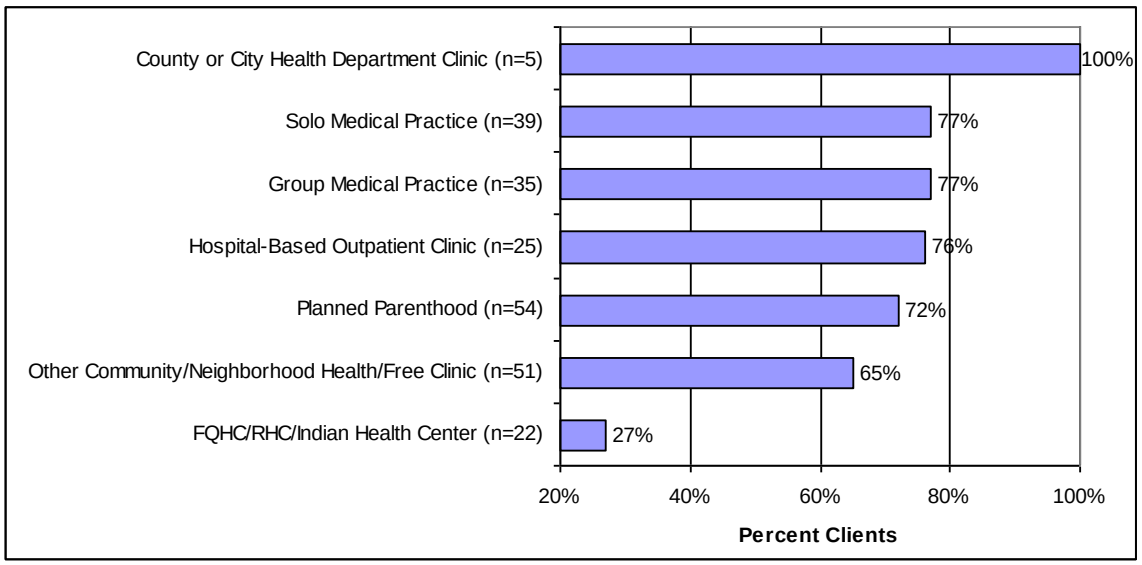
Of the 13 women who received a chlamydia test at the IUC insertion visit, one tested positive. Two charts documented that women had been diagnosed and treated for bacterial vaginosis, and one for candidiasis. In all three cases a follow-up plan was noted.

Information was not abstracted on STI testing that may have occurred prior to the IUC insertion visit or whether women with positive STI tests were counseled to choose a different contraceptive method. However, where information was available, data suggest that providers applied very conservative clinical eligibility criteria for IUC candidates and were not likely to insert/suggest IUC use to women with a history of an STI.

Adherence to Clinical Guidelines on IUC Insertion

The most common cause for perforation at the time of IUC insertion is undetected extreme posterior uterine position. Before insertion of an IUC, the clinician is expected to perform a bimanual pelvic examination to determine the size, shape, and axis of the uterus, and to evaluate the presence or absence of pelvic tenderness.[8] Documentation of this exam was found in only 69% of the charts. It was particularly low for charts maintained at FQHC/RHC/Indian Health Services (IHS) clinics (27%) and other community/neighborhood/free clinics (65%). See Figure 7.1.3. The proportion of providers who documented a pelvic exam did not vary by provider specialty.

Figure 7.1.3. Documentation of Pelvic Exam Prior to IUC Insertion, by Office Practice Type (n=231)[a]



[a] For 9 women the information on pelvic exam was missing or not recorded.
Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Family PACT providers must meet Medi-Cal regulatory requirements on record keeping in support of claims for services, including documentation of details about acquisition of devices and supplies furnished to clients (Title 22, California Code of Regulations [CCR], Code 51476 [a]). In addition to keeping this information in the medical chart they must keep a written log or an electronic record. Records must be maintained for at least three years from the date of IUC insertion to comply with the statute. We explored to what extent providers keep this information in the medical chart.

Documentation of the lot number was found in 70% of the charts. Documentation varied by provider sector and specialty. Charts of private sector providers were significantly less likely to document lot number (48%) than charts of public sector providers (73%, $p<0.01$). Charts of Primary Care/Multi-Specialty providers were also less likely (61%) to document the lot number than charts of Family Planning/Women's Health providers (75%, $p<0.05$). We did not assess whether these providers kept a master list or written log with the required information. Further research should examine whether Family PACT providers are keeping separate logs.

Return Visits after IUC Insertion

Women may return to the Family PACT provider for a routine post-insertion visit or because of side effects or complaints. Prior to October 2006, Family PACT had not issued any clinical guidelines on the scheduling of post-IUC insertion visits. The World Health Organization,[6] as well as the package inserts,[9,10] for the two available IUC products recommend a follow-up visit within three to six weeks or after the first menstrual period following insertion. A client who cannot feel her string after her menstrual period should be advised to schedule a visit to confirm that the strings are visible and to rule out expulsion, pregnancy or translocation.

Of the 240 women with an IUC insertion, 141 (59%) returned afterwards for a total of 248 visits. Many of the 101 visits that occurred eight weeks after IUC insertion appear to have been routine post-insertion follow-up visits. About one-half (52%) of women who returned for a follow-up visit reported a symptom or an IUC side effect in at least one of the follow-up visits. Women were equally likely to report a symptom or complaint within eight weeks and after eight weeks post-insertion. Abnormal vaginal bleeding was the most frequently reported complaint within eight weeks post-insertion. Among women who came back after eight weeks, the most frequently reported complaints were pelvic pain, abnormal vaginal bleeding, cramps and vaginal discharge. See Table 7.1.3.

Table 7.1.3. Symptoms/Complaints Reported Post-Insertion

	Women with Follow-Up Visits Within 8 Weeks (n=101)[a]		Women with Follow-Up Visits After 8 weeks (n=85)[a]		Total Women with Follow-Up Visits (n=141)	
Symptom/Complaint Reported	No.	%	No.	%	No.	%
Abnormal Vaginal Bleeding	26	26%	15	18%	35	25%
Pelvic Pain	3	3%	17	20%	19	13%
Cramping	9	9%	11	13%	17	12%
Vaginal Discharge	9	9%	10	12%	17	12%
IUC Problem (e.g. problem with string)	7	7%	5	6%	12	9%
Genital Itching	3	3%	9	11%	11	8%
Dysuria	4	4%	6	7%	10	7%
Amenorrhea	1	1%	9	11%	10	7%
Painful Intercourse	5	5%	2	2%	7	5%
Nausea	4	4%	2	2%	6	4%
Breast Problem	3	3%	1	1%	4	3%
Method Failure	1	1%	2	2%	3	2%
Headaches	2	2%	0	0%	2	1%
Genital Sores	1	1%	1	1%	2	1%
Mood Changes	1	1%	0	0%	1	1%
Fever	0	0%	1	1%	1	1%
Other Symptoms	7	7%	5	6%	12	9%
Any Symptom Reported	49	49%	43	51%	73	52%

[a] Women who had follow-up visits both within and after 8 weeks are counted in both columns.

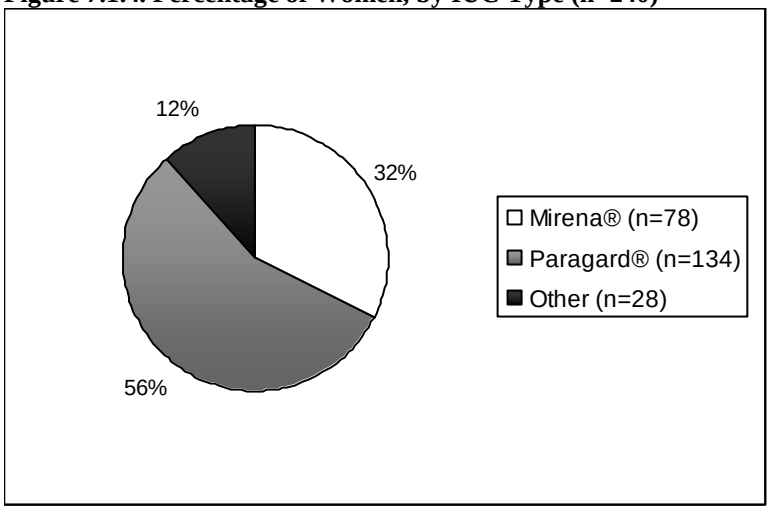
Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Very few women were diagnosed with sexually transmitted diseases after IUC insertion, which is consistent with the finding that this was a group with few or no reported risk factors for an STI. Out of the 141 women with a follow-up visit, 12 (9%) were diagnosed with bacterial vaginosis, seven (5%) with candidiasis, four (3%) with pelvic inflammatory disease (PID), two (1%) with cervicitis and one each with genital herpes and trichomoniasis. No women were diagnosed with chlamydia, gonorrhea, HIV or syphilis between IUC insertion and their follow-up visit. It should be noted that women were tested only when they presented symptoms or reported risk factors, so these numbers should not be compared with STI prevalence rates. The rate of PID is higher than that expected in either women who use IUCs or in the general population (one to two cases per thousand women per year),[11] but this figure may be biased by the small sample size of IUC insertions or by diagnosis bias, in which pelvic pain in a woman who uses an IUC is more likely to be diagnosed as PID than in one who does not use this method of contraception.

Utilization by Provider Category and IUC Type

Over half of the women received a ParaGard® (n=134; 56%) and 78 women received a Mirena® device (32%). In 12% of the cases, the type of IUC was not recorded or was documented using an older code that referred to an obsolete IUC device type. This code was deleted from the Family PACT benefits grid in August 2005 to avoid billing errors. See Figure 7.1.4.

Figure 7.1.4. Percentage of Women, by IUC Type (n=240)



Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

As ParaGard® and Mirena® have different clinical advantages and side effects, the client is asked to choose which product to have inserted. It is useful to see whether providers are likely to insert both IUC types in their practices and whether provider characteristics are related to the type of the IUC inserted.

There were no statistically significant differences between provider sectors in the proportions of clients who received Mirena® or ParaGard®. The proportion of clients who received ParaGard® was similar for Family Planning/Women's Health and Primary Care/Multi-Specialty providers. However, Primary Care/Multi-Specialty providers had a lower proportion of clients who received Mirena® (21%) than Family Planning/Women's Health providers (38%). It should be noted that 25% of the Primary Care/Multi-Specialty providers billed using an obsolete IUC code, which may have represented either a Mirena® or a ParaGard® or another type of device, compared to only 6% of the Family Planning/Women's Health providers. See Table 7.1.4

Table 7.1.4. Type of Inserted IUC, by Provider Sector and Specialty (n=240)

	Mirena®		ParaGard®		Other		Total
	No.	%	No.	%	No.	%	No.
Provider Sector							
Private	25	36%	34	49%	11	16%	70
Public	53	31%	100	59%	17	10%	170
Provider Specialty							
Family Planning / Women's Health	62	38%	91	56%	9	6%	162
Primary Care/ Multi-specialty	16	21%	43	57%	19	25%	78
Total	78	33%	134	56%	28	12%	240

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Clients Returning with Symptoms

We further compared the documentation of symptoms and complaints reported post-insertion by the 212 women for whom the IUC type (Mirena® or ParaGard®) could be ascertained. A higher percentage of women who received Mirena® (63%) returned with symptoms or complaints than among women who had received ParaGard® (58%) but the difference was not statistically significant. See Table 7.1.5

Table 7.1.5. Symptoms/Complaints Reported, by IUC Type

	Women with Mirena® (n=78)[a]		Women with Paragard® (n=134)[a]	
Symptom/Complaint Reported[b]	No.	%	No.	%
Abnormal Vaginal Bleeding	20	26%	20	15%
Pelvic Pain	10	13%	9	7%
IUC Problem (e.g. problem with string)	9	12%	5	4%
Genital Itching	8	10%	5	4%
Vaginal Discharge	8	10%	8	6%
Dysuria	6	8%	3	2%
Amenorrhea	5	6%	6	4%
Cramping	5	6%	14	10%
Nausea	3	4%	3	2%
Headaches	2	3%	0	0%
Method Failure	2	3%	1	1%
Breast Problem	1	1%	2	1%
Fever	1	1%	0	0%
Mood Changes	1	1%	0	0%
Painful Intercourse	1	1%	6	4%
Genital Sores	0	0%	1	1%
Other Symptom/Complaint	4	5%	5	4%
Any Symptom/Complaint	49	63%	78	58%

[a] Includes both women who did and who did not return for follow-up.

[b] Women may have reported multiple symptoms or complaints.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

IUC Removal within 18 Months Post-Insertion

For the 28 women for whom the IUC removal visit was one of the four post-insertion visits abstracted, the average length of time between the insertion and removal visits was five months (SD=3.6). Almost three-fourths (71%) of removals took place within six months after IUC insertion. See Table 7.1.6.

Table 7.1.6. Length of IUC Use (n=28)a

Length of IUC Use, Days	No.
Less than 30	3
31 - 90	8
91 - 180	9
181 - 365	7
366 - 545	1

[a] Includes women with an IUC removal visit within 18 months of insertion.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Only eleven of the 28 clients (39%) reported a side effect during the visit in which the IUC was removed. The most frequently documented side effect was pelvic pain, heavy bleeding and pain during intercourse. Women also mentioned problems with bleeding patterns and menses. See Table 7.1.7. This pattern is consistent with that among women who returned after the IUC insertion and did not have their IUC removed.

Table 7.1.7. Symptoms and Complaints Reported at IUC Removal Visit (n=28)[a]

Symptom/ Complaint Reported[b]	No.	%
Pelvic Pain	6	21%
Heavy Bleeding	5	18%
Pain During Intercourse	5	18%
Painful Menstruation	2	7%
Spotting	1	4%
No Menstruation/Amenorhea	1	4%
Intermenstrual Cramping	1	4%
Irregular Bleeding	1	4%
Any Side Effect	11	39%

[a] Includes women with an IUC removal visit within 18 months of insertion.

[b] Women may have reported multiple symptoms or complaints.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Reason for IUC Removal

The twenty-eight IUC removal visits which were abstracted and occurred within 18 months after the IUC insertion provide additional information about reasons for early removal. The majority of removals occurred because women experienced negative side effects such as cramps, abnormal vaginal bleeding, and pelvic pain. Twelve women (43%) indicated a desire to switch to a different method of contraception as a reason for IUC removal. Of these twelve, four women also reported side effects (two reported heavy/irregular bleeding and two reported pelvic pain or pain during intercourse). See Table 7.1.8.

Table 7.1.8. Reason for IUC Removal (n=28)[a]

Reason for IUC Removal[b]	No.	%
Desire to Switch to Different Method	12	43%
Abnormal Vaginal Bleeding/Spotting	9	32%
Cramps	7	25%
Pelvic Pain	6	21%
Desire to Get Pregnant	3	11%
Expulsion	3	11%
Discomfort with Sex	1	4%
Other	2	7%

[a] Includes women with an IUC removal visit within 18 months of insertion.

[b] Women may have reported more than one reason.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

Three women had the IUC removed because they desired pregnancy. The average time from IUC insertion to removal due to desire to get pregnant was 17 weeks. An additional three women had spontaneous expulsions of the IUC. One woman lost her IUC within 30 days after insertion, and the other two experienced an expulsion between 91 and 180 days. The length of time of IUC use varied widely for women who wanted to remove the IUC due to a desire to switch to another method. See Table 7.1.9.

Table 7.1.9. Length of IUC Use, by Selected Reasons for IUC Removal (n=18)[a]

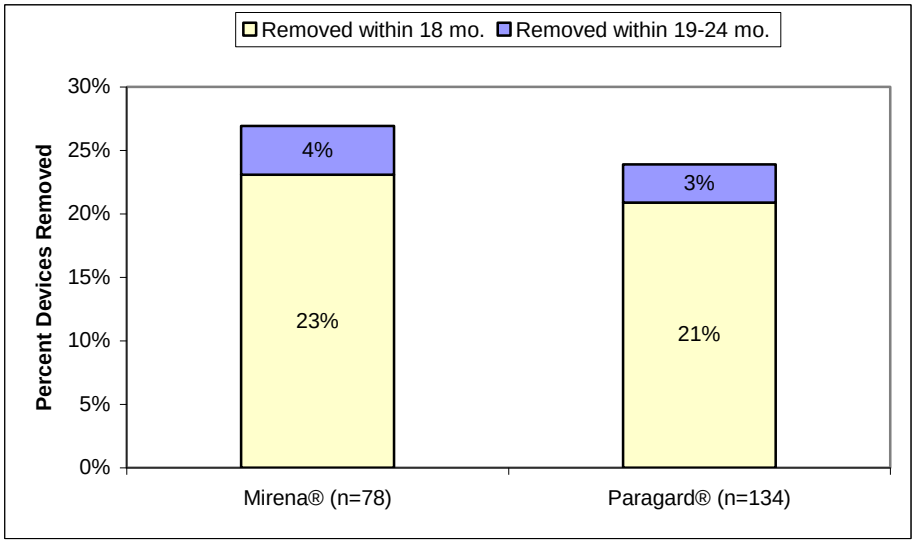
	Length of Use, in Days				
Reason for Removal	Less than 30 No.	31 - 90 No.	91 - 180 No.	181 - 365 No.	366 - 545 No.
Desire to Get Pregnant	0	0	1	1	1
Desire to Switch to Different Method	1	4	4	3	0
Expulsion	1	0	2	0	0

[a] Includes women with an IUC removal visit within 18 months of insertion who reported selected reasons for IUC removal.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

The difference between the proportion of ParaGard® and Mirena® removals was not statistically significant (p=0.7). See Figure 7.1.5.

Figure 7.1.5. Proportion of IUCs Removed, by 18 and 24 Months after Insertion, by IUC Type



Source: 2007 Family PACT Medical Record Review IUC Insertion Sample

As the IUC is one of the most effective contraceptive methods, it is important to monitor what type of method women choose after IUC removal. Women left the IUC removal visit with a variety of different methods such as oral contraceptives, patch, injection and ring. A large proportion (32%) used male condoms as their primary contraceptive method. See Table 7.1.10. One woman, who had an IUC removed because she wanted to become pregnant, left the visit with a contraceptive injection. It is not clear whether she wanted to delay pregnancy for a number of months or whether it is an error in the documentation or abstraction. Of the three women who experienced an IUC expulsion, one had another IUC inserted, one left the office with condoms and one indicated that she would use abstention as her primary family planning method.

Table 7.1.10. Primary Contraceptive Method after IUC Removal (n=25)[a]

Primary Method at End of IUC Removal Visit	No.	%
Condoms	8	32%
OC	5	20%
Patch	5	20%
Injection	1	4%
Ring	1	4%
IUC	1	4%
Abstention	1	4%
No Method	2	8%
Pregnant/ Attempting Pregnancy	1	4%

[a] Excludes three clients for whom the information was missing or not recorded.

Source: 2007 Family PACT Medical Record Review, IUC Insertion Sample

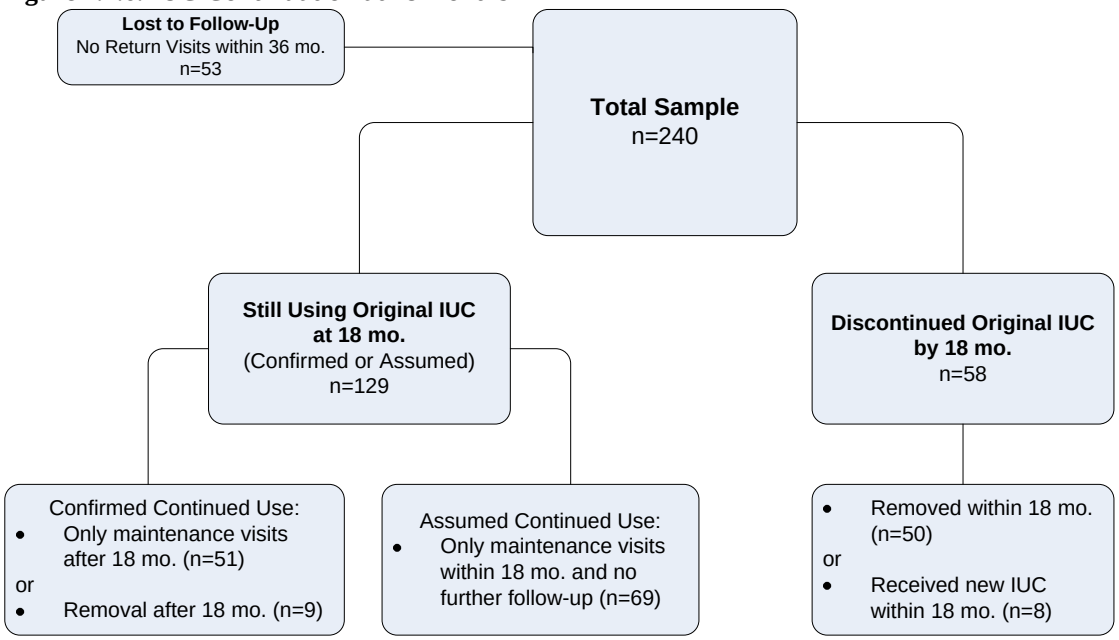
IUC Continuation at 18 Months

IUCs are very cost effective when they stay in place for at least 18 months after insertion. In order to estimate the IUC continuation at 18 months, we complemented the abstracted chart information with details from claims data. We searched claims data for any visit for IUC maintenance, a second IUC insertion, or an IUC removal within a period of up to thirty-six months after the original IUC insertion date and noted whether these visits indicated the original IUC was still in place 18 months after the insertion.

A total of 53 women did not return to Family PACT after their IUC insertion and are therefore considered lost to follow-up. For the remaining 187 women, IUC removal claims within 18 months after the insertion were found for 50 women. This number includes the 28 women with abstracted IUC removal visits discussed above, 12 women for whom the removal visit was not found in the chart and 10 women who had their IUC removed by a different Family PACT provider. For these 50 women, the average length between insertion and removal according to claims data was 6.44 months (SD= 5.6) and was nearly identical between users of Mirena® (mean: 6.6 months) and ParaGard® (mean: 6.5 months). We also identified eight women who had a second IUC insertion claim within 18 months post-IUC insertion. It is possible that they had an expulsion of the original IUC and received a replacement IUC.

For the remaining 129 women, it could be confirmed or reasonably assumed that they were continuing to use their IUCs 18 months post-insertion: 60 women had claims for IUC maintenance, removal or new insertion after 18 months and 69 women had an IUC maintenance visit before 18 months and no removal, insertion or any other contraceptive service claim within 36 months. The continuation rate of the original IUC at 18 months was therefore 69% (129/187). See Figure 7.1.6.

Figure 7.1.6. IUC Continuation at 18 months



Source: 2007 Family PACT Medical Record Review IUC Insertion Sample

Discussion

The findings provide important baseline data for the promotion of IUC utilization.

Women who receive IUCs as part of the Family PACT Program are to a large extent foreign-born Latina woman who already have two or more children. As IUC utilization rates are considerably higher in Mexico,[12] women born in that country may be more familiar and comfortable with this contraceptive method. To increase IUC utilization among Family PACT's female clients, OFP may want to target health education interventions to other demographic groups.

IUC utilization in Family PACT appears to be influenced by provider behavior. Providers seem to have unnecessarily conservative eligibility criteria for IUC which discourages wider promotion of IUC utilization. Insertions for nulliparous women, adolescent females, and women with past history of an STI were very low in this sample. This information is consistent with the findings of a Provider Survey done on IUCs in 2005.[4] Given the method's efficacy and cost-effectiveness, special efforts to increase IUC utilization are warranted. After 2005, IUC reimbursement rates increased and OFP issued a Clinical Practice Alert on IUC clinical guidelines and conducted IUC insertion trainings across California. In the next MRR, we hope to be able to observe implementation of broader clinical eligibility criteria for IUC insertions and an increase in IUC use.

Provider training should also address the importance of record keeping, such as accurately documenting which type of IUC was inserted and the lot number in case a recall were necessary. Primary Care/Multi-Specialty providers might particularly benefit from this training.

Completeness of documentation of pre-insertion pelvic exam varied by office practice type. It is possible that providers who use a check-list or pre-printed exam form that includes a question about a bimanual pelvic exam were more likely to document having done a bimanual pelvic exam. The use of pre-printed forms, including a question about a bi-manual pelvic exam, was found, but not assessed in this MRR. Where found, abstractors were able to easily locate information. It is possible that such forms may improve both documentation and ease of abstraction.

The 18-month continuation rates are high and similar to continuation rates reported in the literature.[5] Approximately half of the women (49%) who returned within an 18-month period reported a side effect or complaint but only a small proportion of these women had their IUC removed within 18 months after insertion. The main reasons cited for early IUC removals were side effects and the desire to change the contraceptive methods, which may have been in part related to side effects. The chart review does not allow us to assess whether these premature removals could have been avoided through better screening for IUC clinical eligibility, better advance counseling about side effects, or whether life and other external changes caused the women to change their plans to have children shortly after the IUC insertion.

The chart review does not assess the extent to which contraceptive decisions are influenced by provider bias or reflect client preference. However, the findings suggest that the IUC utilization rate in Family PACT may be increased through the promotion of expanded clinical eligibility criteria of candidates for IUC insertion. Once the IUC was inserted, women reported only a limited prevalence of side effects, and providers do not seem to remove IUCs prematurely.

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7.2. IUC Removals among Family PACT Women

Introduction

Intrauterine contraceptive devices (IUCs) are among the most effective reversible contraceptive methods available.[1] The levonorgestrel-releasing intrauterine system, Mirena®, is effective for up to five years and the ParaGard® copper IUD is effective up to 10 years. Of particular interest to Family PACT is the identification of reasons for IUC removal and barriers to method continuation. Claims data do not assess the context of IUC removals, such as reason for removal, length of IUC use, and whether the IUC was inserted by a provider outside of the Family PACT Program. In order to gain a better understanding of the context of IUC removals in Family PACT, we sampled women who had an IUC removed and abstracted the medical record for the removal visit and up to four prior Family PACT visits, if available.

We wanted to answer the following evaluation questions:

- What were the demographic characteristics of women who received IUC removal services? Which types of providers were more likely to remove IUCs?
- Did these women also receive their IUCs through the Family PACT Program?
- How complete is the information about IUC use documented in the chart?
- What were the reasons for the IUC removal? Were reasons for removal related to length of use, pregnancy intentions or side effects?
- Which contraceptive methods were chosen by women desiring contraception after IUC removals?

We selected a cohort of women who had an IUC removal between January and June 2005 and abstracted five visits: the removal visit and the preceding four visits, if available. Of the 234 IUC removal charts abstracted, 14 records were excluded from the analysis. Of the excluded records, two had demographic information but no abstracted visits, eleven had abstracted visits but the IUC removal could not be confirmed, and in one case the IUC use could not be confirmed. This chapter is based on the analysis of services provided to the remaining 220 women with a confirmed abstracted IUC removal visit. The information on duration of IUC use was supplemented with claims data.

Findings

Provider and Client Characteristics

Women received IUC removal services from a wider spectrum of providers than IUC insertion services. Nearly one-half of IUC removals (48%) were performed by private sector providers and 42% were performed by Primary Care/Multi-Specialty providers; whereas in the IUC Insertion Sample only 29% of IUC insertions were performed by private providers and 32% by Primary Care/Multi-Specialty providers. For 41 women (19%), the IUC removal visit was their first contact with the Family PACT Program. The remaining 179 (81%) women had, on average, 2.3 abstracted visits before the IUC removal visit, with the last visit prior to removal occurring an average of 133 days (range 1-515) before the removal visit.

The age of women in the IUC Removal Sample ranged from 16 to 49 years (median 29 years). Average parity was 2.2 (range 0-7). The majority of women in the sample were Latina (88%), were born in Mexico (75%) and indicated Spanish as their primary language (83%).

Primary Reason for IUC Removal

Abstractors were able to record multiple reasons for the IUC removal. During data analysis, a primary removal reason was assigned to charts listing multiple reasons based on clinical significance. The following hierarchy was used: (a) clinically urgent reasons such as expired IUC, IUC partially expelled or translocated, or pregnancy resulting from IUC failure, (b) desire to become pregnant, (c) side effects such as cramps, bleeding or discomfort, (d) desire to switch contraceptive method, (e) partner discomfort with method, and other clinical conditions. In 22 of the removal visits, information on the reason for removal was not recorded.

In the 198 visits with at least one recorded reason, the IUC had expired in 12 cases (6%), four women had expelled their IUC, one woman had a translocated IUC and one woman had pelvic inflammatory disease (PID). Four women (2%) were pregnant at the time of removal. Seventeen percent (17%) of women who had a removal stated that they desired to get pregnant. Eighty-two women (41%) reported discomfort with the method such as pelvic pain, cramps, or abnormal vaginal bleeding or spotting as the primary reason for removal. Nearly a quarter (23%) of the women wanted to switch to a different method of contraception, and seven women (4%) gave partner discomfort during sex as the primary reason for removal. Nine women (5%) had other reasons documented such as a positive chlamydia result, infection, abnormal Pap smear, rash or heart surgery. See Table 7.2.1. Most of these medical conditions do not require IUC removal and it is unclear from the chart whether the IUC removal was recommended by the provider or desired by the patient.

Some reasons for removal varied by age while others were consistently reported. Women ages 30 and older were more likely to have their IUCs removed because it had expired. Women under 30 years of age were more likely to have the IUC removed because they

desired a pregnancy. Reasons for removals such as side effects or desire to switch to a different method of contraception were equally distributed across age groups. See Table 7.2.1.

Table 7.2.1. Primary Reason for IUC Removal, by Age (n=198)[a]

Primary Reason for IUC Removal[b]	Age in Years								Total	
	Under 25		25 to 29		30 to 34		Over 34			
	No.	%	No.	%	No.	%	No.	%	No.	%
Expired IUC	0	0%	1	2%	5	11%	6	13%	12	6%
Expulsion/ Translocation/ PID	3	7%	1	2%	2	5%	0	0%	6	3%
Pregnant due to IUC failure	1	2%	2	3%	0	0%	1	2%	4	2%
Desire to get pregnant	8	20%	13	20%	7	16%	5	11%	33	17%
Side effect (e.g. cramps, bleeding, pelvic pain)	17	41%	28	42%	15	34%	22	47%	82	41%
Desire to switch to a different method	9	22%	14	21%	12	27%	10	21%	45	23%
Partner discomfort with IUC	1	2%	3	5%	2	5%	1	2%	7	4%
Other reason	2	5%	4	6%	1	2%	2	4%	9	5%
Total	41	100%	66	100%	44	100%	47	100%	198	100%

[a] The reason for removal was not recorded for 22 clients.

[b] Reasons were prioritized in the order listed. Only one primary reason is reported.

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

Documentation of IUC Type, Insertion Provider and Duration of Use

Over half of the charts (59%) did not have documentation on the IUC type that was removed. Of the 90 charts where IUC type was recorded, providers removed 59 (66%) Copper IUCs (ParaGard®)), 30 (33%) Levonogestrel IUCs (Mirena®) and one IUC of unknown type.

The information on who performed the IUC insertion was documented in only 91 (41%) of the charts. Of these 91 charts, the place of IUC insertion was most often documented as the provider site where the removal was performed (74%). In a small number of cases abstractors found documentation that the IUC had been inserted by another provider in the US (10%) or outside of the US (16%).

Duration of IUC use was available for less than two-thirds of clients (63%). The duration of use ranged from two weeks to 13 years with an average duration of nearly three years (35 months). Seventeen percent (17%) of women with a known insertion date had their IUC removed within six months of their IUC insertion and 31% between seven and 24 months. A quarter of the sample used their IUC for two to four years after insertion and another quarter had their IUC in place for more than four years. See Table 7.2.2.

Table 7.2.2. Duration of IUC Use, in Months (n=138)[a]

Table 7.2.2. Duration of IUC Use, in Months (n=138)[a]	No.	%
Up to 6 months	24	17%
7 to 24 months	43	31%
25 to 48 months	35	25%
49 months or more	36	26%

[a] Duration of use was missing for 82 clients.

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

Reasons for Removal by Length of Use

Primary reasons for removal varied depending on the length of IUC use. Women gave discomfort with the method as the reason for removal more frequently in the first four years of IUC use. Pregnancy intentions influenced women mainly between seven and 48 months post-insertion. The desire to use a different method of contraception and expiration of the IUC were most often given as reasons among women who had used the IUC for more than four years. See Table 7.2.3.

Table 7.2.3. Primary Reason for IUC Removal, by Length of Use (n=126)[a]

	Length of IUC Use, in Months				Total	
	Up to 6	7 to 24	25 to 48	49 or more		
Primary Reason for Removal[b]	No.	No.	No.	No.	No.	%
Expired IUC	0	0	0	8	8	6%
Expulsion/ Translocation/ PID	0	1	1	1	3	2%
Pregnant due to IUC failure	1	1	0	0	2	2%
Desire to get pregnant	1	7	9	4	21	17%
Side effect (e.g. cramps, bleeding, pelvic pain)	15	19	13	8	55	44%
Desire to switch to a different method	5	7	5	10	27	21%
Partner discomfort with IUC	1	2	1	0	4	3%
Other reason	1	2	2	1	6	5%
Total	24	39	29	32	126	100%

[a] Excludes 94 clients for whom the reason for removal or length of use was not recorded.

[b] Reasons were prioritized in the order listed. Only one primary reason is reported.

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

Documentation of IUC Use and Reasons for Removal by Provider Type and Specialty

Length of IUC use and reasons for IUC removal were not different among clients seen by public and private sector providers. There were also no statistically significant differences between public and private sector providers in the proportion of charts with documentation on the type of IUC removed (39% vs. 42%, p=0.56) or the place of insertion (46% vs. 37%, p=0.18).

Analysis of IUC documentation by provider specialty showed that Family Planning/Women's Health providers serve a higher proportion of women who seek IUC removals within two years after IUC insertion than Primary Care/Multi-Specialty providers (53% vs. 40%; p=0.1). Family Planning/Women's Health providers were also more likely to document the type of IUC that was removed (64% vs. 22%; p<0.0001) and the place where IUC was originally inserted (50% vs. 30%; p<0.005) compared to

Primary Care/Multi-Specialty providers. The distribution of reasons for removal was very similar across the two groups.

Pregnancy Intentions and Contraceptive Use after Removal

As IUCs are the most effective reversible method, it is important to evaluate the type of contraception women use after removal. Information about contraceptive method use or pregnancy intentions was not available in 28 charts (13%). Of the remaining 199 women, the majority decided to use hormonal contraception (47%) or condoms (26%). Only seven women (4%) continued using highly effective methods: five women received a new IUC at the same visit, one woman received a tubal ligation and one woman indicated that her partner received a vasectomy. Twenty-five women (13%) indicated that they planned to get pregnant or were already pregnant. Fourteen women (7%) left the office indicating abstinence or no contraceptive method. In the latter case, charts documented the client's intention to return for a contraceptive method (starting OC after period, getting injection) in only two cases. See Table 7.2.4

Table 7.2.4. Pregnancy Intentions and Contraceptive Use after IUC Removal (n=192)[a]

Primary Contraceptive Method[b] after IUC Removal	No.	%
Pregnancy Intention		
Pregnant	3	2%
Desire to get pregnant	22	11%
No Pregnancy Intention Reported		
Tubal Ligation	1	0%
Vasectomy (Partner)	1	0%
IUC (New)	5	4%
Hormonal Methods	91	47%
Condoms	49	26%
Abstinence, Spermicide, or FAM	6	3%
No Method	14	7%
Total	192	100%

[a] The information was not recorded or not abstracted for 28 clients.

[b] Methods were ranked in the order shown. Only one primary method is reported.

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

The reason for removal was associated with the contraceptive method that women chose at the end of the visit. Most women who had their IUC removed because they desired pregnancy left the visit without a contraceptive method. Women who had the IUC partially expelled, translocated or removed because of PID chose hormonal contraception or condoms, as did the women who desired to switch to another method of contraception. Additionally, women who had their IUC removed because it had expired chose to get another IUC or indicated that their partner had a vasectomy. Most of the women who had their IUC removed because of side effects, chose hormonal methods but some women selected condoms, another IUC or tubal ligation. See Table 7.2.5.

Table 7.2.5. Primary Reason for Removal by Pregnancy Intentions and Method After IUC Removal (n=198)[a]

Primary Reason for IUC Removal	Contraceptive Method[b] After IUC Removal												Total
	Tier 1 Sterilization, IUC, Implant, Injection		Tier 2 OC, Patch, Ring		Tier 3 Barriers and Low-Efficacy Methods		No Method		Pregnant/ Seeking Pregnancy		Missing/ Not Recorded		
	No.	Row %	No.	Row %	No.	Row %	No.	%	No.	Row %	No.	Row %	No.
Expired IUC	4	33%	4	33%	3	25%	0	0%	0	0%	1	8%	12
Expulsion/Translocation/PID	0	0%	3	50%	1	17%	0	0%	0	0%	2	33%	6
Pregnant due to IUC failure	0	0%	0	0%	0	0%	1	25%	3	75%	0	0%	4
Desire to get pregnant	0	0%	1	3%	5	15%	5	15%	20	61%	2	6%	33
Side effect (e.g. cramps, bleeding, pelvic pain)	6	7%	41	50%	23	28%	3	4%	0	0%	9	11%	82
Desire to switch to a different method	1	2%	26	58%	14	31%	1	2%	0	0%	3	7%	45
Partner Discomfort	1	14%	1	14%	4	57%	0	0%	0	0%	1	14%	7
Other Reason	0	0%	4	44%	2	22%	0	0%	0	0%	3	33%	9
Total	12	6%	80	40%	52	26%	10	5%	23	12%	21	11%	198

[a] Reason for removal was not recorded for 22 clients.

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

Women Whose First Family PACT Visit Was a Removal Visit

For nearly a fifth of the women in the sample (19%) the IUC removal visit was the first contact with the Family PACT Program. Therefore, we were interested to know whether the reason of removal and contraceptive choice after removal was different in this group. Women whose first Family PACT visit was for IUC removal were more likely to be seen by private providers (54%) and at Primary Care/Multi-Specialty providers (61%) than the overall IUC Removal Sample.

Reasons for IUC removal and contraceptive choice among this subgroup were similar to those in the overall IUC Removal Sample. In nearly two-thirds of these charts (63%), the reasons for removal were side effects or the desire to change contraceptive method. Fourteen percent (14%) of the charts indicated clinical reasons such as expired IUC or pregnancy/pregnancy intentions. After the IUC removal, the majority of the women in

this subgroup chose either hormonal contraception (34%) or condoms (24%) as their method.

STI Risk Assessment and STIs

In women with an IUC removal, only 51% had an STI risk assessment documented in the chart. This is slightly lower than the proportion of female clients with a risk assessment in the past year in the General Sample (57%) and much lower than assessment of women in the IUC Insertion Sample (89%).

At the time of IUC removal, 19 women (9%) had infections diagnosed or treated. Minor vaginal infections can often be treated without the need to remove the IUC. Symptoms or complaints in women with an infection at the time of IUC removal were evaluated for trends or evidence of unnecessary removals. We found that while diagnosis of vaginal infections such as bacterial vaginosis (BV) and candidiasis were coincident with the decision to remove an IUC, they were usually accompanied by other reasons for removal such as abnormal bleeding or pain with intercourse. The exception to this finding is that two out of five women with candidiasis and one woman with BV had no other symptoms or reason for removal listed. Increased provider training may encourage treatment of minor vaginal infections without the removal of an otherwise desired IUC. See Table 7.2.6

Table 7.2.6. Infections Diagnosed at IUC Removal Visit (n=19)

Infection Diagnosed at IUC Removal Visit	Clients No.
Bacterial Vaginosis	8
Candidiasis	5
Pelvic Inflammatory Disease	2
Cervicitis	1
Syphilis	1
Other	2
Total	19

Source: 2007 Family PACT Medical Record Review, IUC Removal Sample

Discussion

As expected, a wider variety of providers remove IUCs than insert them. IUC removals are usually simple and require much less training than IUC insertions. However, it is important to note that Family PACT providers of all types, including private and primary care-oriented providers, serve women who might be interested in using IUCs. In FY 2005-06, a third (30%) of Family PACT providers who had IUC insertion and/or removal claims, invoiced *only* for IUC removals. In an effort to increase access to IUC insertion services, OFP may consider identifying providers who exclusively remove IUCs and target them with an invitation to attend provider education on IUC counseling and insertion.

A large number of charts, particularly among primary care providers, lacked documentation of details about the IUC in place at the time of removal such as where it

was inserted, what type had been inserted, and how long the woman had been using it. Since women may not remember those details at later visits, better documentation at the time of insertion may enable clinicians to tailor their contraceptive counseling in future visits.

Women tended to use IUCs for long time intervals and removals due to side effects were less common than expected. Contrary to expectation, primary care providers had a lower proportion of clients who had an IUC removal within two years of insertion than Family Planning/Women's Health providers. In order to promote IUC use, providers may want to encourage women to talk about their positive experiences with this method to their friends and family.

Most women who had their IUC removed switched to hormonal contraception and, to a lesser extent, condom use after IUC removal. However, there was a sizable group of women who did not intend pregnancy and did not receive any method or indicated abstention as method. The intent to initiate contraception in the future was documented in only two of the 14 cases where women left the IUC removal visit without a contraceptive method. Nearly one in five women (17%) stated that a desire to get pregnant was the reason for the IUC removal. Providers should be encouraged to discuss and document plans for contraceptive use after IUC removal or to provide preconception care counseling to those women who intend to become pregnant.

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Chapter 8. Non-Contraceptive Clinical and Preventive Services

8.1. Pregnancy Testing and Services

Introduction

Pregnancy testing services are an integral part of the delivery of family planning services. Family PACT Standards require that pregnancy testing be provided when clinically indicated and in conjunction with education and counseling services. Pregnancy tests are clinically indicated under certain circumstances such as delayed menses, amenorrhea, abnormal vaginal bleeding, physical pregnancy symptoms, acute pelvic pain, and "off cycle" initiation of hormonal contraceptives. The Family PACT Standards state that the indication for pregnancy testing should be documented in the medical record. "Screening" pregnancy tests are those routinely performed on all or most contraceptive clients, irrespective of indicators, and are considered to be unnecessary in women who are asymptomatic and do not have any of the findings listed above.

Chart reviews allow for evaluation of clinical appropriateness of pregnancy testing and the delivery of services subsequent to testing, as well as stratification of data by pregnancy test result -- information that is not available from administrative claims data. The 2007 MRR seeks to evaluate the quality and appropriateness of pregnancy testing services.

This chapter examines the following evaluation questions:

- What was the pattern of pregnancy testing service utilization in the program? How did it vary by provider and client characteristics?
- What contraceptive methods were women who received a pregnancy test using?
- Did providers document clinical indications for pregnancy testing? To what extent were the pregnancy testing services over- or under-utilized?
- What proportion of visits with positive and negative pregnancy tests had documentation of appropriate follow-up?
- To what extent did providers use visits with a negative pregnancy test as an opportunity to encourage women to use more effective contraceptive methods?

This chapter is based on the analysis of records on the 2,290 women included in the Female General Sample for whom at least one visit was abstracted. Women with demographic information but no abstracted visits were excluded from the analysis.

Findings

Pregnancy Tests

Among the 2,290 women in the Female General Sample, 1,002 (44%) received a pregnancy test in at least one abstracted visit. This is a smaller proportion than in the 2002 MRR (58%) as that study over-sampled by an additional 12% clients who had pregnancy test only (PTO) services. Eleven percent (11%) of clients in the 2007 MRR Female General Sample received two or more pregnancy tests during the year. Thirty-two percent (32%) of the total visits abstracted (1,408 of 4,365) included a pregnancy test. Pregnancy tests were performed at an average of 1.4 tests per client tested. See Table 8.1.1. This is slightly less than the 1.5 tests per client in the 2002 MRR.

Table 8.1.1. Pregnancy Testing by Provider Sector and Specialty

	Visits with Pregnancy Test		All Visits	Women with Pregnancy Test		All Women	Number of Pregnancy Tests per Woman Tested
	No.	%	No.	No.	%	No.	
Provider Sector							
Private	965	34%	2,841	651	45%	1,437	1.5
Public	443	29%	1,524	351	41%	853	1.3
Provider Specialty							
Family Planning/Women's Health	410	27%	1,524	293	36%	825	1.4
Primary Care/Multi-Specialty	997	35%	2,841	709	48%	1,465	1.4
Total	1,408	32%	4,365	1,002	44%	2,290	1.4

Source: 2007 Family PACT Medical Record Review, Female General Sample

Clients were somewhat more likely to receive a pregnancy test at a visit with a private sector provider (34%) than with a public sector provider (29%) and the overall proportion of clients seen who were tested for pregnancy was slightly higher in the private sector than the public sector (45% vs. 41%). Compared to the 2002 MRR, the difference between provider sectors in the proportion of clients tested is less pronounced (58% private vs. 32% public).

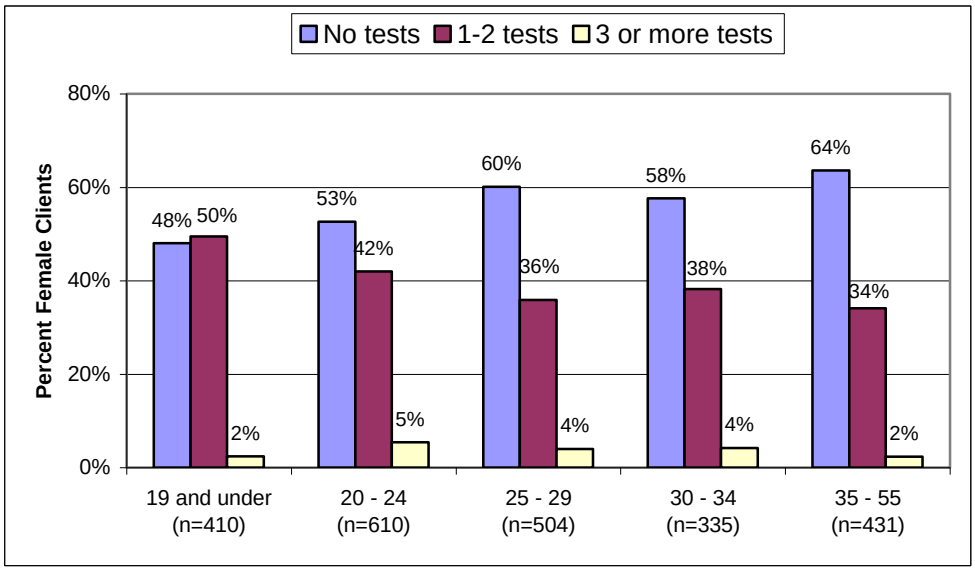
Private sector providers were slightly more likely to perform multiple tests, averaging 1.5 tests per client tested compared to 1.3 for public sector providers. This variation among provider sectors is comparable to the 2002 MRR (1.6 private vs. 1.4 public). See Table 8.1.1.

When analyzed by provider specialty, visits to a Primary Care/Multi-Specialty provider (35%) were more likely than visits to a Family Planning/Women's Health provider (27%) to include a pregnancy test. The overall proportion of women tested for pregnancy was also substantially higher among Primary Care/Multi-Specialty providers (48%) than among Family Planning/Women's Health providers (36%). The overall rate of pregnancy tests per woman tested was similar for these two specialty groupings at 1.4 tests. See Table 8.1.1.

Of women who received a pregnancy test, the vast majority received just one or two pregnancy tests (92% Family Planning/Women's Health specialist, 91% Primary care/Multi-Specialty providers); less than 10% received more than three tests.

Although women in all age groups had a similar number of abstracted visits, women 35 years and over were less likely (36%) to receive a pregnancy test than women under 35 (45%). Women ages 20-34 were twice as likely to receive more than three pregnancy tests during the year than women ages 19 and younger. See Figure 8.1.1

Figure 8.1.1. Number of Pregnancy Tests per Client, by Age (n=2,290)



Source: 2007 Family PACT Medical Record Review, Female General Sample

Pregnancy Test Results

Among the 1,408 pregnancy tests abstracted in the 2007 MRR, 1,390 (99%) had documented results. The proportion of documented results is consistent with the 2002 MRR. Public and private providers recorded pregnancy test results at similar rates. Of the 1,390 pregnancy tests with documented results from the 2007 MRR Female General Sample, there were 1,243 negative and 147 positive results, equating to a positivity rate of 11%. This is reduced from 13% in the 2002 MRR, but the difference in the proportions is not statistically significant. See Table 8.1.2. As the 2002 MRR oversampled women with pregnancy testing only visits, there may have been a disproportionate number of women with positive results.

Table 8.1.2. Pregnancy Test Results, 2002 MRR vs. 2007 MRR

	2002 MRR (n=3,042)[a]		2007 MRR (n=1,390)[b]	
Test Results	No.	%	No.	%
Negative	2,654	87%	1,243	89%
Positive	388	13%	147	11%

[a] Excludes 42 pregnancy tests with no documented results.

[b] Excludes 17 pregnancy tests with no documented results and 1 test for which the result was not abstracted.

Source: 2002 and 2007 Family PACT Medical Record Reviews, Female General Samples

Women ages 19 and under were the most likely (13%), and those between the ages of 35-55 the least likely (8%), to test positive for pregnancy. See Table 8.1.3.

Table 8.1.3. Positive Pregnancy Tests, by Client Age (n=1,390)[a]

	Positive Tests		Total Tests
Age	No.	%	No.
19 and under	36	13%	272
20-24	39	9%	425
25-34	55	11%	481
35 - 55	17	8%	212
Total	147	11%	1,390

[a] Excludes 17 tests without documented results and 1 test for which the result was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female General Sample

The proportion of positive pregnancy test results found by public providers was nearly twice that of positive tests found by private providers (16% vs. 8%, $p<0.01$), which is comparable to the 2002 MRR (17% vs. 9%, respectively). When analyzed by specialty, the proportion of positive pregnancy test results found by Family Planning/Women's Health providers was significantly higher than that of Primary Care/Multi-Specialty providers (15% vs. 9%, $p<0.01$). See Table 8.1.4.

Table 8.1.4. Pregnancy Test Results, by Provider Sector and Specialty (n=1,390)[a]

	Positive Tests		Total Tests
	No.	%	No.
Provider Sector			
Public	69	16%	438
Private	78	8%	952
Provider Specialty			
Family Planning/ Women's Health	59	15%	405
Primary Care/ Multi-Specialty	88	9%	985
Total	147	11%	1,390

[a] Excludes 17 tests without documented results and 1 test for which the result was not abstracted.

Source: 2007 Family PACT Medical Records Review, Female General Sample

Pregnancy Testing Results by Method of Contraception

Eighty-three percent (83%) of visits with a pregnancy test result contained information on the method of contraception used by the client prior to testing. Eighty-five percent (85%) of positive and 80% of negative pregnancy test visits included documentation of the contraceptive method at the beginning of the visit. This represents a marked improvement over the 2002 MRR in which only 66% of visits with a pregnancy test result contained information on the method of contraception used by the client prior to testing.

Women seeking pregnancy were the most likely to receive a pregnancy test at the visit (64%), followed by women who reported using no birth control method (49%). Women using one of the low-efficacy methods of contraception in Tier 3 received pregnancy tests

at 36% of visits, followed by women using combined hormonal methods, including oral contraceptives, patch, and ring (26%) in Tier 2. See Table 8.1.5.

Table 8.1.5. Pregnancy Testing, by Primary Contraceptive Method at Beginning of Visit

Primary Method[b]	Total Visits[a]	Visits with Pregnancy Test		Positive Results	
	No.	No.	%	No.	%
Tier 1: Sterilization, IUC, Implant, Injection	719	210	29%	6	3%
Tier 2: OC, Patch, Ring	1,310	338	26%	14	4%
Tier 3: Barriers and Low-Efficacy Methods	866	308	36%	22	7%
No Method	569	280	49%	59	21%
Pregnant/Seeking Pregnancy	59	38	64%	24	63%
Total	3,523	1,174	33%	125	11%

[a] Excludes 842 visits in which method at the beginning of the visit was not recorded in chart.

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Records Review, Female General Sample

Pregnancy tests were performed at 29% of visits among women using the most effective methods of contraception in Tier 1 (IUC, sterilization, implant and injectables). Further analysis revealed that 80% of pregnancy tests among women utilizing a Tier 1 method were for users of injectable contraceptives. Pregnancy testing prior to contraceptive implant initiation and at the time of a delayed injection ,as well as with a delayed interval of injection, is clinically indicated to rule out pregnancy.

Of the 169 pregnancy tests performed on clients using injectable contraception, three were reported positive. Further investigation of the MRR and claims data showed that one client was actually using oral contraceptives rather than contraceptive injection and had been late in refilling her prescription which is probably when the pregnancy occurred. The second client had been enrolled in Family PACT in 2004 but had seven months lapse in coverage and reenrolled for the purpose of a pregnancy test. The third client was dispensed an injectable by a pharmacy in the appropriate time frame but did not have an office visit for the injection. A pregnancy test performed 14 weeks later at an office visit with injection was negative, however she may have had an early pregnancy at that time. By the next visit 13 weeks later, the pregnancy test was positive.

Of the 172 visits by women with an IUC in place at the beginning of the visit, 39 (23%) included a pregnancy test. Of these tests, three were reported positive. Further analysis revealed that two of the three clients tested had their IUCs inserted through the Family PACT Program in 2003 and 2004. They were counseled on pregnancy options or given follow-up referrals and their IUCs were removed. The third positive pregnancy test among IUC clients appears to be a data entry error. Her record does not include documentation of counseling on pregnancy options and her method of contraception at the end of the visit continued to be IUC and condoms. Her IUC was removed 11 weeks after the visit that included the pregnancy test.

Hormonal methods that require the client's daily, weekly or monthly participation (Tier 2 methods) had a higher pregnancy test positivity rate (4%) when compared to long-acting and permanent methods of contraception (3%, Tier 1). Clients who did not use a method of contraception and those seeking pregnancy were the most likely to have a positive pregnancy test result (21% and 63%, respectively).

Clinical Indication for Pregnancy Tests

Testing for pregnancy should occur only when clinically indicated because of a suspicion of pregnancy or as part of the protocol for initiation or continuation of a contraceptive method. The timing of the last menstrual period (LMP) and specific timing factors related to the method of contraception used prior to the visit are the core criteria for clinical indication of the test. Pregnancy testing may be indicated if at least 28 days have passed since the LMP, but is not necessary if the woman had a normal menses less than 28 days before the visit.

Of the 1,408 pregnancy tests found in the Female General Sample, 201 (14%) had no documented LMP. Based on documented LMPs in visits where a pregnancy test may have not been clinically indicated, the test was nonetheless provided 28% of the time (631 out of 2,228 visits), suggesting overutilization of this service. See Table 8.1.6. Indicators for pregnancy testing other than a delayed menses and timing factors related to the use of contraceptive method, such as pregnancy symptoms, history of irregular menses or initiation of a contraceptive method were not abstracted in the MRR but may have been a clinical indication for some tests. Seven of the tests performed prior to a missed menses were positive.

At the same time, only 60% of visits (409 out of 686) in which a pregnancy test may have been clinically indicated had documentation that the test was provided, which, in turn, suggests that this service may be underutilized in this subgroup. See Table 8.1.6. The extent to which these clients have adopted extended cycle oral contraceptives is unknown. These methods would reduce the number of pregnancy tests expected from those shown here.

Table 8.1.6. Clinical Indication for Pregnancy Tests

Test Clinically Indicated?		Visits with Pregnancy Test No.	%	Total Visits[a] No.
Yes	≥28 days since LMP, and Not using a long-acting method[b] which may delay menses, and Method before visit is recorded	409	60%	686
No	<28 days since LMP regardless of the method before visit	631	28%	2,228
Unknown	LMP not recorded, or ≥28 days since LMP and using a long-acting method[b] which may delay menses, or ≥28 days since LMP and method before visit is not recorded	368	28%	1,294

[a] Excludes 157 visits in which it is unknown whether a pregnancy test was done.

[b] Includes sterilization, IUC and injection.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Documentation of Test Result Follow-Up

Program standards require that pregnancy test counseling include information about all options appropriate to the test result. The 2007 MRR recorded information on any counseling and referrals documented in the chart in response to a pregnancy test result. Among the 1,408 visits in which a pregnancy test was performed, 99% also contained documentation of follow-up services that included referral and/or counseling.

Documentation of Follow-Up to Positive Pregnancy Tests

Family PACT Standards state that positive pregnancy test results should be followed by options counseling that includes information about prenatal care, adoption, and pregnancy termination services. Of the 147 visits with a positive pregnancy test, there was documentation of options counseling or referrals for 132 (90%). Less than half of these visits (46%) contained specific chart notation that *comprehensive* pregnancy options counseling, as defined by the program standards, was provided. However, in total, 107 (72%) visits with positive pregnancy tests documented the provision of one or more referrals for follow-up care.

Of the 147 women who tested positive for pregnancy, 87 (59%) were referred for or scheduled for prenatal care; 68 (46%) received options counseling; 19 (13%) were referred or scheduled for an elective abortion; nine women (6%) were referred for additional counseling; three (2%) were referred for adoption services; one (1%) was referred for ultrasound; and seven (5%) received unspecified pregnancy referrals. See Table 8.1.7.

Table 8.1.7. Documented Follow-up Provided to Clients for a Positive Pregnancy Test, by Provider Sector and Specialty

	Sector				Specialty					
	Private (n=78)		Public (n=69)		Family Planning/ Women's Health (n=59)		Primary Care/ Multi-Specialty (n=88)		Total (n=147)	
Type of Follow-up Documented[a]	No.	%	No.	%	No.	%	No.	%	No.	%
Referred for Prenatal Care	48	62%	39	57%	30	51%	57	65%	87	59%
Options Counseling	24	31%	44	64%	32	54%	36	41%	68	46%
Referred for Abortion	6	8%	13	19%	7	12%	12	14%	19	13%
Referred for Additional Counseling	2	3%	7	10%	2	3%	7	8%	9	6%
Referred for Adoption	0	0%	3	4%	2	3%	1	1%	3	2%
Referred for Ultrasound	1	1%	0	0%	1	2%	0	0%	1	1%
Unspecified Pregnancy Referral	5	6%	2	3%	2	3%	5	6%	7	5%
No Documented Follow-Up	12	15%	3	4%	7	12%	8	9%	15	10%

[a] Clients may have received more than one type of follow-up service.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Clients may have received more than one type of referral. There was documentation of multiple referrals in nine client records. Six women received referrals for both prenatal care and additional counseling; two women received referrals for pregnancy termination and prenatal care; and one record showed documentation of referrals for abortion, prenatal care, and adoption.

Of those with a positive test result, 50-60% of women in all age groups were referred for prenatal care. Clients 19 years of age and under and those 35-55 were the least likely to receive referrals for abortion, whereas women in the 20-24 age group had the highest proportion of referrals for pregnancy termination.

Public sector providers were more likely than private sector providers to document delivery of comprehensive options counseling (64% vs. 31%) and referrals for abortion (19% vs. 8%) and less likely to document referrals for prenatal care (57% vs. 62%). Public sector providers were also more likely to have documentation in the medical record of at least one follow-up service or referral provided to clients with a positive pregnancy test. See Table 8.1.7.

Family Planning/Women's Health providers were more likely to document options counseling (54%) than were Primary Care/Multi-Specialty providers (41%). Primary Care/Multi-Specialty providers were more likely than Family Planning/Women's Health providers to document referrals for specific services such as prenatal care (65% vs. 51%) and abortion (14% vs. 12%). Perhaps this is an indication that obstetric and/or abortion services are offered on-site by family planning providers and do not require a referral.

Documentation of Follow-Up to Negative Pregnancy Tests

Family PACT Standards indicate that a client with a negative pregnancy test "shall be given information and referral resources about family planning services". With a negative pregnancy test result, information and referral resources should be given for family planning services, preconception care, and infertility services, as appropriate.

Table 8.1.8. Follow-up and Counseling to Clients with a Negative Pregnancy Test

	No.	%
Type of Follow-up Documented (n=1,230)[a]		
Client has or left with method	1,027	83%
Client attempting pregnancy	45	4%
Methods discussed; client declined or left without method	45	4%
Methods not discussed; client declined or left without method	42	3%
Unable to tell from chart if client has method or attempting pregnancy	71	6%
Counseling Documented[b] (n=1,243)		
Method Use/Options	822	66%
Infertility	46	4%

[a] Excludes 13 records that had no documentation of follow-up; counts of clients with each type of follow-up are distinct.

[b] Counts of clients who received counseling are not distinct; 29 clients received both types of counseling.

Source: 2007 Family PACT Medical Records Review, Female General Sample

Ninety-nine percent (99%) of visits with a negative test result contained documentation of follow-up. Of clients with documented negative test follow-up, 83% left the visit with a method of contraception, 4% were attempting pregnancy, and 4% refused or left without contraception. In addition, 66% of visits with a negative pregnancy test had documentation of counseling about method use/options and 4% had documentation of counseling on infertility. See Table 8.1.8. There were no notable differences in follow-up after a negative pregnancy test by provider sector or specialty.

Method Switching at Visits with a Negative Pregnancy Test

A negative pregnancy test result given to a woman who has had a "pregnancy scare," a method failure (e.g. condom break or missed OC pills), or who is just beginning to explore family planning options may serve as an opportunity for the provider to encourage a shift to a more effective contraceptive method. To assess the extent to which this shift occurs, we looked at 1,001 visits with a pregnancy test in which the method before and after the visit was documented.

Over two-thirds (70%) of the women who were not using any method before the pregnancy test visit adopted a contraceptive method at the end of the visit; 38% adopted a high-efficacy method from Tiers 1 and 2 and 33% adopted lower-efficacy methods from Tier 3. See Table 8.1.9. Out of women who used low-efficacy methods from Tier 3 at the beginning of the pregnancy test visit, 32% adopted a more effective method from Tiers 1 and 2 at the end of the visit. The majority of women who used highly effective methods prior to the pregnancy test visit remained in their respective tiers at the end of the visit.

Table 8.1.9. Primary Contraceptive Method at Beginning and End of Visit among Women with a Negative Pregnancy Test (n=1,001)[a]

Method at the End of Visit[b]	Method at the Beginning of Visit[b]				
	Tier 1: Sterilization, IUC, Implant, Injection (n=198)	Tier 2: OC, Patch, Ring (n=319)	Tier 3: Barriers and Low-Efficacy Methods (n=272)	No Method (n=200)	Seeking Pregnancy (n=12)
Tier 1: Sterilization, IUC, Implant, Injection	82%	3%	7%	8%	0%
Tier 2: OC, Patch, Ring	12%	93%	25%	30%	0%
Tier 3: Barriers and Low-Efficacy Methods	7%	4%	68%	33%	8%
No Method	0%	1%	0%	27%	8%
Seeking Pregnancy	0%	0%	0%	3%	83%

[a] Excludes 242 negative pregnancy test visits that lacked documentation of method at the beginning or end of the visit.

[b] The classification of methods by tiers is adapted from Nelson A, et al. (2006). Intrauterine Copper Contraceptive: Update and Opportunities. Supplement to The Journal of Family Practice, October 2006, pp. S1-S8.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Discussion

Findings from the 2007 MRR differ little for pregnancy test utilization and positivity rate when compared to the 2002 MRR. In the 2007 MRR, 44% of women received a pregnancy test at least once in CY 2005, down from 58% in the 2002 MRR. However, as noted above, the 2002 MRR included an over-sampling of pregnancy test only visits. Pregnancy tests were performed at an average rate of 1.4 per woman tested which is consistent with the earlier study.

Clients ages 35 years and over were markedly less likely to receive pregnancy testing when compared with women under age 35. Women ages 20-34 were twice as likely to receive three or more pregnancy tests during the year as women ages 19 and younger.

When analyzed by provider type, visits with private sector providers were somewhat more likely to include a pregnancy test than with public sector providers, although the difference between provider sectors has narrowed since the 2002 MRR. For every four pregnancy tests performed by Primary Care/Multi-Specialty providers, only three were performed by Family Planning/Women's Health providers. Despite performing fewer tests, Family Planning/Women's Health specialists were twice as likely to find positive results. This may indicate over-testing by Primary Care/Multi-Specialty providers.

Women seeking pregnancy and those not using a method were the most likely to receive a pregnancy test and to have a positive result. Pregnancy tests were performed at nearly one-third of visits among women using the most effective methods of contraception (IUC, sterilization, implant and injectables), many of which may have been unnecessary given the low likelihood of pregnancy in women who used their method correctly and consistently. However, the majority of those tests were to contraceptive injection users where pregnancy testing is more frequently indicated by the clinical protocol for off-cycle method continuation or a delayed injection.

Of concern are the 233 tests performed without documentation of the method of contraception at the beginning of the visit, 201 tests performed without a documented LMP and 17 records that did not include documentation of the result of the pregnancy test. OFP should consider interventions to improve medical record documentation around pregnancy testing, including notations of last menstrual period, the method before the pregnancy test and, if negative, the method of contraception with which the client left.

The vast majority of visits that included a pregnancy test contained documentation of follow-up services. Four-fifths of those with a positive result received referrals for follow-up care. Public providers were more likely than private providers to document follow-up referrals. By specialty, Primary Care/Multi-Specialty providers were more likely to document individual referrals than Family Planning/Women's Health providers. Conclusions on this are guarded however, as this may be an indication that obstetrical services were offered on-site and did not require a referral. Gauging compliance to the standard that explicitly requires pregnancy options counseling is difficult because less than half of providers specifically noted in the chart that pregnancy options were discussed, but it is clear that counseling and referrals are being provided.

Among women with negative pregnancy tests who used low-efficacy or no method, a large proportion adopted more effective contraceptive protection. This demonstrates that providers are using the negative test as an opportunity to encourage the use of more effective methods. OFP should continue to encourage providers to use a pregnancy test visit as a "teachable moment" to educate clients about consistent use of condoms, more effective methods of contraception, and preconception care.

Analysis of clinical indication for the tests based on LMP and contraceptive methods suggests that there is both over-utilization and under-utilization of this service. Clients received pregnancy tests in 28% of visits in which the test may have not been indicated. At the same time, only 60% of visits in which the test may have been indicated had documentation that this service was provided.

Several interventions addressing the issue of over-utilization of pregnancy testing were developed based on the findings of the 2002 MRR. The "Clinical Practice Alert: Urine Pregnancy Testing in the Office" was released in December 2005 with a key point that routine pregnancy testing is discouraged. The Provider Profiles project, first released in the fall of 2005, includes an indicator of pregnancy tests per 100 encounters in comparison to peers (private providers vs. public providers). While both of these interventions are expected to improve appropriate use of pregnancy testing in the future, neither was implemented early enough in 2005 to influence the clinical visits abstracted for this MRR. Future MRRs should evaluate how those interventions change provider behavior over time.

One intervention, which may have been reflected in this MRR, was the Laboratory Service Reservation System (LSRS) implemented by the Medi-Cal Program in January 2004. The LSRS limits the frequency with which any provider can claim reimbursement for the same test for the same patient in the same month. Once implemented, LSRS immediately began denying subsequent claims for the same lab service without a

reservation. While it is unlikely that providers would drastically alter their pregnancy testing practices because of this policy change, it is possible that frequent denials for pregnancy tests may have discouraged over-utilization.

8.2. Chlamydia Screening and Treatment

Introduction

The Family PACT Program Standards state that the diagnostic and treatment services for sexually transmitted infections (STIs) shall be consistent with recognized medical practice standards.[9] Results from the 2002 MRR were used to design several program quality improvements addressing key aspects of *Chlamydia trachomatis* (CT) care, including dissemination of a Clinical Practice Alert on CT and gonorrhea screening, CT screening data feedback with targeted messages to providers related to screening performance, and statewide audio conferences given jointly by the Sexually Transmitted Disease (STD) Control Branch and Family PACT to review updates in STI practice guidelines. In light of these interventions, the primary evaluation questions to be addressed with the 2007 MRR are as follows:

- What is the level of sexual risk assessment among Family PACT clients? Are there differences by age, race/ethnicity, provider sector and specialty?
- What proportion of female Family PACT clients are being screened for CT? What proportion of CT testing among women age 26 and older is supported by documented sexual risk assessments and clinical data in the chart?
- What is the prevalence of CT among Family PACT clients? Does it differ by age or symptomatic status? Are these estimates similar to those based on testing data from Quest Diagnostics/Unilab?
- Are clients with a positive CT test appropriately followed up with treatment, partner management, and retesting to prevent ongoing transmission?
- What proportion of clients with STI-related reasons for visit have documented STI/HIV counseling?
- What proportion of CT cases are reported to the local health department?

The analyses in this chapter are based on visits abstracted from 2,656 medical charts from the Female and Male General Samples, and 342 charts from the Female and Male Chlamydia Positive Samples. Only records with at least one abstracted visit were retained in the analysis. Clients with demographic information but no abstracted visits were excluded.

In addition, MRR chart records were matched to Family PACT administrative claims data and to CT positivity data provided by Quest Diagnostics/Unilab. It is important to note that while the 2007 MRR General Samples were representative of the overall Family PACT client population, the CT positive sample from Quest Diagnostics/Unilab was disproportionately drawn from Southern California clients, as we were only able to include Northern California clients tested through Quest Diagnostics facilities in West

[9] These practice guidelines include those disseminated by the California State Sexually Transmitted Disease (STD) Control Branch, Centers for Disease Control and Prevention (CDC), National Preventive Services Task Force, and medical specialty organizations.

Hills, Sacramento, and San Jose. Therefore, while the prevalence estimates from the Quest Diagnostic/Unilab sample provides a point of reference, this sample is not representative of the overall Family PACT population. Further, a smaller proportion of the CT cases identified through the Quest data were from private sector providers, precluding direct comparisons by provider sector between MRR and Quest Diagnostics/Unilab prevalence estimates.

Findings

Sexual Risk Assessment

Risk assessment is a key aspect of providing quality STI services to ascertain which clients are at higher risk of an STI and therefore who would benefit from screening and risk-reduction counseling. According to the Family PACT Standards, risk assessment should be conducted at least once every two years as part of a comprehensive health history. The presence of a client risk assessment was abstracted from the medical record. If a provider assessed whether the client had a history of any STI within the past 12 months or since the last visit, OR whether s/he had a new sexual partner and/or more than one sexual partner within the last 12 months or since the last visit, a risk assessment was considered as documented.

Overall, a risk assessment was documented among 57% of all female and 71% of all male clients. See Table 8.2.1. This overall level of risk assessment is consistent with estimates found in numerous population-based surveys as well as provider surveys.[1,2] Risk assessment was more prevalent among clients of both genders seen by public sector providers ($p<.001$ for females, $p=0.05$ for males), possibly because public providers are more likely to have a standardized documentation tool in which a risk assessment would be recorded.

Current Center for Disease Control and Prevention (CDC) guidelines recommend screening all sexually active women under age 26 for CT infection, but restricting screening among women age 26 and older to those who are at increased risk as determined by risk assessment and/or presenting symptoms and clinical findings.[3] We found that risk assessments were more frequent among females under age 26 than in the older group ($p=0.05$), which was consistent with the high levels of CT testing observed among younger females. Older women were also found to have high levels of CT testing in the past year, thus the lower levels of risk assessment in this group may be of concern since there is very low CT positivity among older women without behavioral or clinical risk factors.

Table 8.2.1. Documentation of Risk Assessment, by Client Age and Provider Sector (n=2,656)

	Female Clients		Male Clients	
	% with Risk Assessment	Total No.	% with Risk Assessment	Total No.
Age				
Under 26	60%	1,082	72%	187
26 and Over	55%	1,208	71%	179
Provider Sector				
Private	52%	1,437	67%	193
Public	66%	853	76%	173
Total	57%	2,290	71%	366

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Risk assessment occurred slightly more frequently among white women (62%) than among African-American (59%) or Hispanic (57%) women (p=0.08). Among males, risk assessment occurred more frequently among African-Americans (82%) than among white (73%) or Hispanic (71%) clients (p=0.03). Frequency of risk assessment did not vary significantly by provider specialty among clients of either gender.

The 2007 MRR abstracted two specific risk factors in the risk assessment that are strongly associated with higher risk of STI—new and/or multiple partners in the past 12 months and history of an STI in the past 12 months. Of clients who had a documented risk assessment, 13% of females and 32% of males reported new and/or multiple partners or history of an STI within the past 12 months. The percentage of clients reporting these risk factors was higher among female clients seen by public sector providers compared to private sector providers (16% vs. 11%, p=0.005), among females under age 26 compared to those 26 and older (16% vs. 11%, p=0.02), and among black females (31%) compared to Asian/Pacific Islander (17%), White (16%), or Hispanic (10%) females (p<.0001).

Chlamydia Screening

The proportion of females screened for CT was evaluated in the General Sample to assess adherence to the CDC recommendation for annual screening of females under age 26. A CT screening was considered to have been performed if abstractors found a CT test in the medical record for 2005, or a chart note documenting that the last CT test date was in 2004 or 2005. Overall, 62% of the clients from the Female General Sample were tested for CT in the past year. There was no significant difference in testing between females under age 26 (61%) and females age 26 and older (62%) in the 2007 MRR. See Table 8.2.2.

Slight increases in public sector screening compared to 2002 MRR data seem to be driven by increases in screening among women age 26 and older. See Table 8.2.2. In the private sector, screening rate increases for younger females were offset by decreases in screening for women age 26 and older. Overall, public sector providers were more likely to screen clients for CT than private sector providers (64% vs. 60%, p=0.05).

We also compared estimates of CT screening from the 2007 MRR to the entire Family PACT client population using administrative claims data for 2005. See Table 8.2.2. Claims-based estimates were higher than those found in the MRR, especially for private sector providers. This may reflect differences between the private sector providers selected for the MRR and all private sector program providers, or it may be due to poor documentation of CT screening in the medical record among private sector providers.

Table 8.2.2. Female Clients Tested for Chlamydia, 2002 MRR vs. 2007 MRR vs. 2005 Claims Data, by Provider Specialty and Client Age

	2002 MRR		2007 MRR		2005 Claims Data	
Provider Sector	% Tested	Total No. of Clients	% Tested	Total No. of Clients	% Tested	Total No. of Clients
Private	60%	1,454	60%	1,437	73%	462,049
Under 26	55%	612	60%	639	74%	196,350
26 and Over	64%	842	60%	798	72%	265,699
Public	62%	1,619	64%	853	65%	847,484
Under 26	64%	881	63%	443	67%	490,808
26 and Over	61%	467	66%	410	63%	356,676
Total	61%	3,073	62%	2,290	68%	1,258,662

Source: 2002 and 2007 Family PACT Medical Record Reviews, Female General Samples, and administrative claims data.

Seventy percent (70%) of male clients had CT tests documented in the medical record. This is similar to the 2002 MRR findings and consistent with the estimates based on administrative claims data.[4,5]

Of clients who reported new and/or multiple partners or history of an STI in the past 12 months (N=174 females and N=84 males), 80% of females and 82% of males had a CT test documented in the medical record. Estimates of CT testing were similar across age groups, race/ethnicity, provider sector, and practice specialty.

Screening of females under age 26 has been shown to be effective for identifying asymptomatic infections; nearly two-thirds of all CT infections are diagnosed in this age group.[6] However, regardless of age, diagnostic testing is indicated when clients seek care for lower genital tract symptoms or contact with an infected partner; appropriate treatment can then be determined based on these test results. To identify whether CT testing was associated with symptoms, we identified specific female symptoms and complaints, including contact with an infected partner, in the medical record. See Table 8.2.3. Among visits where female clients were tested for CT, 31% had documentation of symptoms or STI contact in the same visit. This indicates that the majority of testing for CT among females is screening of asymptomatic clients. The proportion of symptomatic females tested at each visit did not vary significantly by age.

Of visits where males were tested for CT, almost half (47%) of medical records had documented symptoms or STI contact in the same visit, a significant increase over the 34% of male CT tests associated with symptoms or STI contact noted in the 2002 MRR. See Table 8.2.3. This increase may reflect more effective partner management for female cases since the proportion of male tests associated with an STI contact increased from 10% of tests in 2002 to 23% of tests in 2007.

Table 8.2.3. Symptoms and STI Contact Documented in Visits with Chlamydia Test (n=1,401)

	Visits with CT Test							
	Females				Males			
	Under 26 (n=548)		26 and Over (n=575)		Under 26 (n=153)		26 and Over (n=125)	
Symptom[a]	No.	%	No.	%	No.	%	No.	%
STI Contact	10	2%	3	1%	43	28%	22	18%
Genital Sores	14	3%	6	1%	17	11%	11	9%
Genital Itching	36	7%	39	7%	4	3%	8	6%
Pain on Urination	22	4%	27	5%	23	15%	15	12%
Pelvic Pain	24	4%	41	7%	-	-	-	-
Pain with Sex	13	2%	10	2%	-	-	-	-
Cervicitis	5	1%	11	2%	-	-	-	-
Vaginitis	13	2%	25	4%	-	-	-	-
Abnormal Bleeding	30	5%	30	5%	-	-	-	-
Discharge/Odor	93	17%	90	16%	-	-	-	-
Urethral Discharge	-	-	-	-	12	8%	13	10%
Balanitis	-	-	-	-	9	6%	12	10%
NGU	-	-	-	-	4	3%	3	2%
Any Symptom or Contact	173	32%	175	30%	75	49%	55	44%

[a] Symptoms are not mutually exclusive.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

Chlamydia Positivity

CT prevalence monitoring in family planning clinics has enabled programs to follow trends in CT morbidity and to evaluate the efficiency of screening.[7] Specifically, CT prevalence of at least 3% has been shown to be the cost-effective cut-off for universal screening; this prevalence level has been consistently observed among adolescent and young adult females.[8] Females age 26 and older tend to have lower prevalence rates than younger women. This results in lower cost-effectiveness for programs which routinely screen asymptomatic older women and the potential for lower test positive predictive value.

CT positivity rates were calculated for females and males in the General Sample as an estimate of prevalence and compared with estimates based on the subset of clients tested by Quest/Unilab Data. The CT positivity rate was 3% overall among females in the 2007 MRR General Sample and 4% overall in the Quest Diagnostics/Unilab data. See Table 8.2.4. Among females under age 26, the 2007 MRR found a positivity rate of 4% compared with 2% among females age 26 and older. These positivity rates are similar to those found in the Quest Diagnostics/Unilab data.

The overall positivity rate for males in the 2007 MRR was 9% compared with 10% from the Quest Diagnostics/Unilab data. See Table 8.2.4. CT positivity rates seen among males in both the 2007 MRR and Quest Diagnostics/Unilab data were higher than the rates in females and likely reflect the higher proportion of males who seek care due to an STI contact or symptom.

Table 8.2.4. Chlamydia Positivity, 2002 MRR vs. 2007 MRR vs. 2005 Quest/Unilab Data, by Client Age and Gender

	2002 MRR		2007 MRR		2005 Quest/Unilab Data	
	% Positive	Total No. of Tests	% Positive	Total No. of Tests	% Positive	Total No. of Tests
Females	4%	1,921	3%	1,123	4%	212,052
Under 26	6%	948	4%	548	5%	111,271
26 and Over	2%	973	2%	575	2%	100,781
Males	-	-	9%	278	10%	25,995
Under 26	-	-	12%	153	12%	14,728
26 and Over	-	-	6%	125	8%	11,267

Source: 2002 and 2007 Family PACT Medical Record Reviews, Female and Male General Samples, and 2005 Quest/Untilab Data

Overall, CT positivity was higher among clients with symptoms and/or an STI contact. See Table 8.2.5. The difference in positivity between female clients tested with symptoms (5%) and those tested without symptoms (2%) approached statistical significance (p=0.06). Overall positivity for symptomatic male clients was 14%, significantly higher than 5% for asymptomatic males regardless of age and race/ethnicity (p=0.02). Higher positivity was not significantly associated with age for either symptomatic or asymptomatic females, although ability to detect statistical differences may have been limited due to the small sample size.

Table 8.2.5. Chlamydia Positivity among Symptomatic and Asymptomatic Clients, by Client Gender and Age (n=1,401)

	Tests Performed on			
	Asymptomatic Clients		Symptomatic Clients	
	% Positive	No. of Tests	% Positive	No. of Tests
Females	2%	775	5%	348
Under 26	3%	375	6%	173
26 and Over	2%	400	3%	175
Males	5%	148	14%	130
Under 26	6%	78	17%	75
26 and Over	4%	70	9%	55

[a] Symptomatic clients included those with STI symptoms and/or STI contact.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Treatment and Time to Treatment for Chlamydia Cases

Timely treatment of CT cases is critical in reducing the potential for upper genital tract complications, such as pelvic inflammatory disease in women, and for interrupting transmission to partners. The CDC has defined two performance measures for timely CT treatment: (1) the proportion of female CT cases that are treated within 14 days of

specimen collection, and (2) the proportion of female CT cases that are treated within 30 days of the specimen collection date.[9] The goal is to increase the proportion of cases who receive timely treatment, preferably within 14 days.

Treatment data were abstracted from the medical records from the CT Positive Sample and from the subset of CT cases identified from the General Sample. Time to treatment was defined as the number of days from CT test date to documented CT treatment date. Of the 397 total CT cases, 332 clients (84%) had both a test date and treatment date documented in the chart, allowing for calculation of time to treatment.

Table 8.2.6 shows time from test date to treatment in the 2007 MRR. Sixty six percent (66%) of female and 96% of male cases were treated within 14 days of the CT test date. The higher proportion of male cases being treated within 14 days ($p<.0001$) than female cases is largely driven by the higher proportion of male cases being presumptively treated. The proportions of females treated within 14 days has decreased from 77% in the 2002 MRR, particularly in the private sector, where the percentage of female cases treated within 14 days declined from 85% in the 2002 MRR to 55% in the 2007 MRR (note that these estimates are based on a small sample size). Ninety percent (90%) of female cases and 97% of male cases were treated within 30 days of testing.

Twelve percent (12%) of female cases and 58% of male cases were treated presumptively on the day of the CT test. See Table 8.2.6. The proportion of male cases treated presumptively was significantly higher than that of females ($p<.0001$) which is consistent with males being likely to seek care in Family PACT because of an STI concern, contact or symptom. Of presumptively treated cases, only 32% of female and 8% of male cases did not report having an STI-infected partner or STI-related symptoms.

Cases seen by public sector providers were more likely to be presumptively treated compared with cases seen by private sector providers ($p=0.01$). Of total CT cases, 58% of those seen by public sector providers presented with an STI contact or symptom compared to 39% of cases seen by private sector providers ($p=0.002$), consistent with higher rates of presumptive treatment seen for clients in the public sector.

Table 8.2.6. Time from Chlamydia Test Date to Treatment, by Client Gender and Provider Specialty (n=332)[a]

	Chalmydia Cases with Documented Treatment					
	Private Sector		Public Sector		Total	
	No.	%	No.	%	No.	%
Females	49	100%	182	100%	231	100%
Same day as test (Presumptive)	3	6%	25	14%	28	12%
1-7 days	9	18%	50	27%	59	26%
8-14 days	15	31%	51	28%	66	29%
15-30 days	14	29%	41	23%	55	24%
31-90 days	8	16%	13	7%	21	9%
>90 days	0	0%	2	1%	2	1%
Males	20	100%	81	100%	101	100%
Same day as test (Presumptive)	7	35%	52	64%	59	58%
1-7 days	4	20%	13	16%	17	17%
8-14 days	7	35%	14	17%	21	21%
15-30 days	0	0%	1	1%	1	1%
31-90 days	1	5%	1	1%	2	2%
>90 days	1	5%	0	0%	1	1%

[a] Excludes 50 female CT cases and 15 male CT cases where treatment was not recorded or missing, treatment date was missing, or test date was missing.

Source: 2007 Family PACT Medical Record Review, Female and Male General and Chlamydia Positive Samples

Table 8.2.7 shows the frequency of medications recommended by the CDC STD Treatment Guidelines[10] that were used to treat CT and documented in the medical record. Single dose therapy with azithromycin is the first-line recommendation because of high effectiveness and patient compliance; doxycycline is also recommended for its effectiveness but requires a seven-day course and thus has potentially lower patient compliance. Most cases in the 2007 MRR (79%) were treated with one gram of azithromycin; 11% of cases were treated with doxycycline. The percentage of clients treated with one gram of azithromycin has increased since the 2002 MRR, when only 54% of female cases and 35% of male cases received this regimen. This increase may reflect greater availability at the provider sites than in previous years.

Table 8.2.7. Type of Treatment for Chlamydia Cases

	Cases by Documented Treatment			
	Female (n=244)		Male (n=109)	
	No.	%	No.	%
Treatment				
Azithromycin 1g	193	79%	85	78%
Azithromycin 2g	2	1%	1	1%
Doxycycline	27	11%	12	11%
Erythromycin	1	<1%	1	1%
More than One Treatment	12	5%	8	7%
Other	5	2%	1	1%
No treatment documented[a]	4	2%	1	1%

[a] Treatment date was documented in the chart but no treatment recorded.

Source: 2007 Family PACT Medical Record Review, Female and Male General and Chlamydia Positive Samples

Partner Management

Partner management is the process by which partners of CT-positive or suspected CT-positive cases are identified for follow-up including examination, testing, treatment, and risk-reduction counseling. The most common method for partner management in the family planning setting has been patient self-referral because it requires little in the way of clinic resources; yet this approach results in low rates of partner treatment (between 40-60%, depending on the study).[11] The 2007 MRR monitored documentation and type of partner management in the CT Positive Sample and for CT cases from the General Sample to allow comparison with the 2002 MRR. Partner management was defined as any one of the following occurrences noted in the medical record: client was instructed to tell the partner to get treated or to bring the partner in when s/he comes in for treatment (patient self-referral); clinic staff contacted partner directly; client was referred to the local health department for help with partner notification; client was given patient-delivered partner therapy (PDPT) to administer to the partner; partner came into the clinic with the client for testing, exam, and/or treatment; or the client came in to the clinic as a contact to a diagnosed case.

Overall, 69% of female cases (a substantial decrease from 90% for females in the 2002 MRR) and 72% of males had documented partner management (no male case comparison was available for 2002 MRR). For female cases, public sector providers were more likely to document partner management than private sector providers (74% vs. 52%; p=0.001). See Table 8.2.8. However, if the 6% of female and male cases with unsuccessful clinician attempts to contact the partner are included in the estimates of cases with documented partner management, then the overall proportion of partner management increases to 74% and 76% of female and male CT cases, respectively.

Reasons for the decrease in this proportion with documented partner management since the 2002 MRR over time are unclear. A potential factor might be less outreach or treatment occurring for partners who may not be eligible for services in Family PACT, consistent with guidance from a Clinical Practice Alert disseminated during this period. Additionally, there may have been changes in forms of documentation such that partner management was not adequately captured in the medical record for more recent cases.

Table 8.2.8. Chlamydia Cases with Documented Partner Management, by Client Age and Provider Sector (n=397)

	Female		Male	
	% with Partner Management	Total No. of Cases	% with Partner Management	Total No. of Cases
Age				
Under 26	69%	192	74%	77
26 and Over	69%	89	67%	39
Provider Sector				
Private	52%	62	77%	22
Public	74%	219	70%	94
Total	69%	281	72%	116

Source: 2007 Family PACT Medical Record Review, Female and Male General and Chlamydia Positive Samples

Expedited partner therapy includes a variety of opportunities to increase levels of partner treatment other than through patient self-referral or provider contact.[12] Legislation to enable PDPT was passed by the California State Legislature (SB 648) in 2001; PDPT is the most common form of expedited partner therapy in which a patient diagnosed with an STI is given medication to deliver to his or her sex partners when the partner is unlikely or unable to seek care.

Overall, 20% of female cases and 10% of male cases received PDPT as documented in either written notes or standardized forms in the medical record. Public sector providers appeared more likely (although not significantly) to dispense PDPT than private sector providers. Male cases served by Family Planning/Women's Health Specialty Providers were significantly more likely than those served by Primary Care/Other Specialty Providers (19% vs. 4%, respectively, p=0.01) to be dispensed PDPT. See Table 8.2.9

Table 8.2.9. Chlamydia Cases with Documented Patient-Delivered Partner Therapy (PDPT), by Provider Sector and Specialty (n=397)

	Female		Male	
	% with PDPT	Total No. of Cases	% with PDPT	Total No. of Cases
Provider Sector				
Private	13%	62	5%	22
Public	21%	219	12%	94
Specialty				
Family Planning/Women's Health	17%	134	19%	48
Primary Care/Multi-Specialty	22%	147	4%	68
Total	20%	281	10%	116

Source: 2007 Family PACT Medical Record Review, Female and Male General and Chlamydia Positive Samples

An additional 11% of female cases (N=31) and 21% of male cases (N=24) did not have PDPT documented in the medical record, but received medication regimens suggestive of potential PDPT. These regimens included: 2 grams of azithromycin, multiple medications dispensed or prescribed in the same visit, or medication both dispensed directly by the provider and given as a prescription. Cases served by public sector providers were more

likely than cases served by private sector providers to be given these regimens as well (16% versus 6%, respectively; p=0.02).

Family PACT policy limits services to enrolled clients. The extent to which providers limit PDPT to cases with enrolled partners is unknown. PDPT may be reimbursed through another payer source for non-enrolled partners. Payer source for services to partners cannot be determined in the MRR. The MRR may underestimate the true extent of PDPT for Family PACT cases.

Re-testing and Re-infection

There are numerous observational follow-up studies of female CT cases in which the repeat infection rate within the first year ranged from 10-30%.[13,14] To reduce the risk associated with undetected asymptomatic repeat CT infections, the 2002 CDC STD Treatment Guidelines recommended that CT cases be re-tested within three to four months after the initial infection regardless of symptom status.[10]

Information from cases from the Female Chlamydia Positive Sample was used to evaluate re-testing of CT clients and re-infection among those re-tested. Re-testing was defined as the proportion of female clients with a documented positive CT test that were re-tested for CT after one month (excludes test of cure) but within six months of the initial positive test. Repeat infection rate was defined as the proportion of clients re-tested that had a positive result.

The 2007 MRR assessed whether providers informed female clients that a re-test should be performed within three months of their initial diagnosis. Thirty-six percent (36%) of female cases had a record of a clinician recommendation for re-test within three months. See Table 8.2.10. Differences in re-testing recommendations varied by provider sector, with 23% of private sector providers and 39% of public sector providers recommending re-testing (p=0.02).

The re-testing rate for cases was 32% – slightly lower than the estimate of re-testing found in the 2002 MRR (38%) but higher than the Quest/Unilab sample of clients in 2003-2004 (26%)[13]. The proportion re-tested was higher among older female clients, clients served by public sector and Family Planning/Women's Health providers. The proportion of female clients who were re-tested and re-infected was 11%, consistent with previously reported levels among Family PACT clients served by Quest laboratories, with higher repeat infection rates among clients served by public sector and Family Planning/Women's Health providers.

Table 8.2.10. Female Chlamydia-Positive Clients Counseled for Retesting, Retested and Reinfected, by Client Age and Provider Sector and Specialty (n=280)

	% Clinician Recommended Retest in 3 mo.		% Retested 1-6 mo.[a]		% Reinfected 1-6 mo.[a]		Total No. of Clients
	No.	%	No.	%	No.	%	
Age							
Under 26	69	36%	57	30%	6	11%	191
26 and Over	33	37%	33	37%	4	12%	89
Provider Sector							
Private	15	24%	11	18%	0	0%	62
Public	87	40%	79	36%	10	13%	218
Specialty							
Family Planning/Women's Health	42	31%	56	42%	8	14%	134
Primary Care/Multi-Specialty	60	41%	34	23%	2	6%	146
Total	102	36%	90	32%	10	11%	280

[a] Includes positive clients retested greater than one month but within six months of initial infection identified in the Quest data

Source: 2007 Family PACT Medical Record Review, Female Chlamydia Positive Sample and Quest Diagnostic laboratory claims.

STI/HIV Counseling

CDC STD Treatment Guidelines recommend risk reduction counseling for all CT cases to reduce transmission and acquisition of repeat infection.[10] Sixty-one percent (61%) of female CT cases had documented STI/HIV counseling, with female cases under age 26 more likely to be counseled (67%) than older females (48%, p=0.003). Public sector providers appeared more likely than private sector providers to document counseling for females (64% and 52%, respectively), although this difference was not statistically significant. There were no statistically significant differences in STI/HIV counseling for males across any of the demographic or provider characteristics.

Reporting of Chlamydia Cases

Public health surveillance of the incidence of STIs is based on mandated reporting of cases from clinician providers and laboratories to the local health jurisdiction.[15] To assess the overall level of documentation and potential differences in reporting by provider characteristics, the proportion of positive CT tests with documented reporting was assessed. Documented reporting was defined as the presence of a confidential morbidity report and/or documentation of reporting in the medical record. Overall, 70% of female CT cases and 73% of male cases had reporting to the local health jurisdiction documented. See Table 8.2.11. This represents an increase in reporting from the 2002 MRR, when only 66% of female and 53% of male cases were reported. Female cases served by public sector providers were significantly more likely to have documented reporting than female cases served by private sector providers (74% versus 58%, respectively; p=0.02). Male cases served by private sector providers were more likely to have documented reporting (82%) than the male cases served by public sector providers (71%); this difference was not statistically significant. Documented reporting did not vary significantly by practice specialty for either female or male CT cases.

Table 8.2.11. Reporting of Chlamydia Cases to Local Health Jurisdiction, by Provider Sector (n=397)

	Female		Male		Total	
	% Reported	Total No. of Cases	% Reported	Total No. of Cases	% Reported	Total No. of Cases
Provider Sector						
Private	58%	62	82%	22	64%	84
Public	74%	219	71%	94	73%	313
Total	70%	281	73%	116	71%	397

Source: 2007 Family PACT Medical Record Review, Female and Male General and Chlamydia Positive Samples

Discussion

Since the 2002 MRR, there have been significant program efforts to improve the frequency and scope of risk assessments, adherence to guidelines on annual CT screening of adolescent and young adult females, and management of partners of CT cases. These interventions were in the form of technical assistance to providers via Clinical Practice Alerts, development of standardized risk assessment forms, regular mailings of Provider Profiles with trend data on CT screening by age, and regional/statewide provider forums. The 2007 MRR provides some preliminary data to evaluate the impact of some of these interventions that were implemented by 2005, and will provide a baseline for others.

Although there were increases in the level of annual risk assessment since the last MRR, these levels should continue to increase. The low prevalence of risk assessment occurring among women age 26 and older, and low percentage of women in this age group reporting new and/or multiple partners on those risk assessments documented, suggests that there may be over-screening of older females for reasons not justified by either symptoms, contact with an infected partner, or sexual risk behaviors.

Consistent with trends seen in claims analyses demonstrating ongoing increases in the level of CT screening among female clients under age 26 in Family PACT, the MRR also continued to show high levels of CT screening in this group. Health Employer Data Information Set (HEDIS) quality measures have found lower screening rates for this group among managed care providers than those in Family PACT during the same time period.[16] The higher level of CT screening coverage seen across providers delivering Family PACT services illustrates the expanded access to STI prevention and care as a benefit of STI and family planning service integration. Additionally, high positivity rates among both female and male symptomatic clients indicate that CT is commonly found among those presenting with lower genital tract symptoms and supports the need to conduct diagnostic CT testing with these clients for appropriate treatment and management. It should be noted that the lack of differences in screening levels by age and the relatively low prevalence among females age 26 and older reinforces the need to examine potential over-testing of this age group in the program.

Management of CT cases continues to be an important area for quality improvement. Although the majority of CT cases are treated in a timely fashion, other components of follow-up care merit attention. The MRR indicates that adherence to re-testing of cases

still falls short of CDC guidelines to re-test at three months even when the follow-up period was extended to 6 months post-diagnosis. Lower levels of documented partner management noted in the 2007 MRR compared with the 2002 MRR may be due to changes in documentation formats and/or concerns about documenting management of partners that are unenrolled in Family PACT. Efforts to improve documentation are warranted since there are no other administrative data sources that capture the degree to which partner management is conducted by providers. These data are important for further targeted interventions to decrease client risk of repeat CT infection through more effective partner management.

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8.3. Cervical Cancer Screening and Follow-Up of Positive Results

Introduction

As part of the goal to maintain and protect optimal reproductive health, Family PACT services include diagnosis and treatment of cervical abnormalities and pre-invasive cervical lesions for women. The program standards require that screening for cervical cancer by Pap smear be provided on-site. Evaluation of cervical abnormalities found by Pap smear or physical exam and treatment of pre-invasive cervical lesions may be provided either on-site or by referral to a Family PACT or Medi-Cal provider. The program standards specify that cervical cancer screening and the diagnosis and treatment of abnormal cervical conditions covered by the program be provided in accordance with recognized medical practice standards.

While information about the provision of screening tests and treatments reimbursed through Family PACT is available from claims data, information on test results, referrals made on the basis of a particular result and the follow-up on referrals, is not. Medical records present a unique opportunity to evaluate the incidence of abnormal Pap results and to assess whether the follow-up is conducted appropriately.

In this section we focus on the following questions:

- What was the cervical cancer screening rate among female clients?
- What was the incidence of abnormal cervical cytology?
- Were abnormal Pap results followed up appropriately?

Analyses presented in this chapter are based on data collected for the Female General Sample, supplemented with administrative paid claims data.

Findings

Cervical Cancer Screening

Between 2002 and 2004 the American Cancer Society, the U.S. Preventive Services Task Force and the American College of Obstetricians and Gynecologists issued revised guidelines for the frequency of cervical cancer screening (Pap smears). In August 2005, Family PACT issued a Clinical Practice Alert announcing the adoption of these revised cervical cancer screening guidelines, which lengthened the screening interval for the majority of women to three years depending on age, history and the screening test utilized.[1] The impact of this change may not yet be reflected in the 2005 visit data collected in the 2007 MRR.

A total of 1,182 Pap smear tests were performed on women in the Female General Sample, with 1,128 women receiving one test and 52 women receiving two or more tests.

The resulting annual screening rate found in medical charts was 49%, a lower rate compared to the 57% reported in the 2002 MRR.

The purpose of a Pap test is to identify women who either have cervical cancer or who have a pre-invasive cervical lesion that could progress to cancer. Abnormal Pap smear results include a range of categories with varying degrees of severity. Atypical Squamous Cells of Undetermined Significance (ASC-US) is a Pap result that has a low risk of cervical cancer but indicates a need for further evaluation by either colposcopy, HPV testing or a repeat Pap test. Atypical Squamous Cells Suggestive of HSIL (ASC-H), Low Grade Squamous Intraepithelial Lesion (LSIL), Atypical Glandular Cells of Undetermined Significance (AGUS), and High Grade Squamous Intraepithelial Lesion (HSIL) are Pap results that have a higher likelihood of either indicating or progressing to cervical cancer ; these Pap results generally require follow-up by colposcopy. See Write et al. (2007) for more information on guidelines for the management of women with abnormal Pap results.[2]

Of the 1,182 Pap smear tests found in medical records for the Female General Sample, 39 did not have results recorded in the chart, and for six tests, the results were unclear. Of the 1,143 Pap tests with recorded results, 91% were within normal limits (WNL). The remaining 9% of results were considered abnormal, including 59 ASC-US, 11 ASC-H, 29 LSIL, and three HSIL results. There were no tests with a diagnosis of AGUS/AGC, squamous cell carcinoma or adenocarcinoma. See Table 8.3.1. The proportion of abnormal Pap results is consistent with that found in the 2002 MRR.

Table 8.3.1. Cervical Cytology Results, by Test (n=1,182)

Pap Smear Result	No.	%
Within Normal Limits (including squamous metaplasia and atrophy) (WNL)	932	82%
Within Normal Limits plus benign cellular changes (WNL PLUS)	103	9%
Atypical Squamous Cells of Unknown Significance (ASC-US)	59	5%
Atypical Squamous Cells of Unknown Significance: suggestive of HSIL (ASC-H)	11	1%
Low Grade Squamous Intraepithelial Lesion (LSIL)	29	3%
Atypical Glandular Cells of Unknown Significance (AGUS)/Atypical Glandular Cells (AGC)	0	0%
High Grade Squamous Intraepithelial Lesion (HSIL)	3	0%
Squamous Cell Carcinoma, Adenocarcinoma	0	0%
Unsatisfactory/Unclear[a]	6	1%
Missing/Not Recorded	39	

[a] Includes one result recorded as "other - hyperplasia."

Source: 2007 Family PACT Medical Record Review, Female General Sample

HPV Testing

Testing for human papillomavirus (HPV) when an ASC-US Pap result is obtained can identify women at higher risk of having a pre-invasive cancer and the result can be used to inform follow-up care. According to the standards in place in 2005, follow-up by an HPV test was considered one of the three clinically appropriate approaches for women with an ASC-US Pap result. Alternative follow-up steps for an ASC-US Pap result included repeat Pap smear tests at six and twelve months or colposcopy. For all other categories of Pap results, follow-up by an HPV test was not considered appropriate.[10] Note that Family PACT does not reimburse HPV testing outside the context of an abnormal Pap result.

A clinician may order a reflex HPV-DNA test when collecting a Pap smear specimen in advance of knowing the results of the Pap, in which case the test is performed on the same specimen as the Pap after a finding of abnormality. Alternatively, an HPV test may be ordered in lieu of a Pap smear when following women who were previously treated with cryotherapy or Loop Electrosurgical Excision Procedure (LEEP).

As seen in Table 8.3.2, an HPV test was recorded for 3% of all visits with a Pap test included in the Female General Sample. All documented HPV tests had an associated Pap test. About one-half (51%) of ASC-US Pap results were followed by an HPV test. These tests accounted for 30 out of 39 (77%) of all documented HPV tests. The remaining nine HPV tests (23%) were clinically inappropriate, including one test to a woman with a normal Pap result, one test to a woman with an ASC-H result, six tests to women with an LSIL result, and one test to a woman with an HSIL result. We found paid claims for two of the nine HPV tests performed inappropriately.

Table 8.3.2. HPV Tests,[a] by Pap Smear Result (n=1,182)

Pap Smear Result	HPV Test Recorded No.	HPV Test Recorded %	Total Tests
Within Normal Limits (including squamous metaplasia and atrophy) (WNL)	1	<1%	932
Atypical Squamous Cells of Unknown Significance (ASC-US)	30	51%	59
Atypical Squamous Cells of Unknown Significance: suggestive of HSIL (ASC-H)	1	9%	11
Low Grade Squamous Intraepithelial Lesion (LSIL)	6	21%	29
High Grade Squamous Intraepithelial Lesion (HSIL)	1	33%	3
All Other Results or Missing/Not Recorded	0	0%	148
Total	39	3%	1,182

[a]Includes reflex HPV tests and tests done on a separate specimen on the same date of service as the Pap test.

Source: 2007 Family PACT Medical Record Review, Female General Sample

[10] In October 2005, Medi-Cal published a change to the practice standards that restricted the use of HPV tests to women with an ASC-US Pap smear result.

Abnormal Pap Follow-Up

Medical charts contained follow-up information on 88 out of 102 (86%) abnormal Pap smear test results. In 34 cases, women were advised to repeat the Pap smear test; in 21 cases, the chart only recorded that the woman was notified of results; in 15 cases, women were referred to another provider for follow-up; in another 15 cases, women were referred for colposcopy; in two cases, women were referred for cryotherapy; and in one case, the woman was referred for LEEP. However, the information on follow-up available from the MRR was limited because the data abstraction tool allowed for entering only one type of follow-up, and it is unclear how multiple follow-up steps recorded in the chart were coded during abstraction. In addition, the abstraction period did not allow for following all women with abnormal Pap results for equal periods of time.

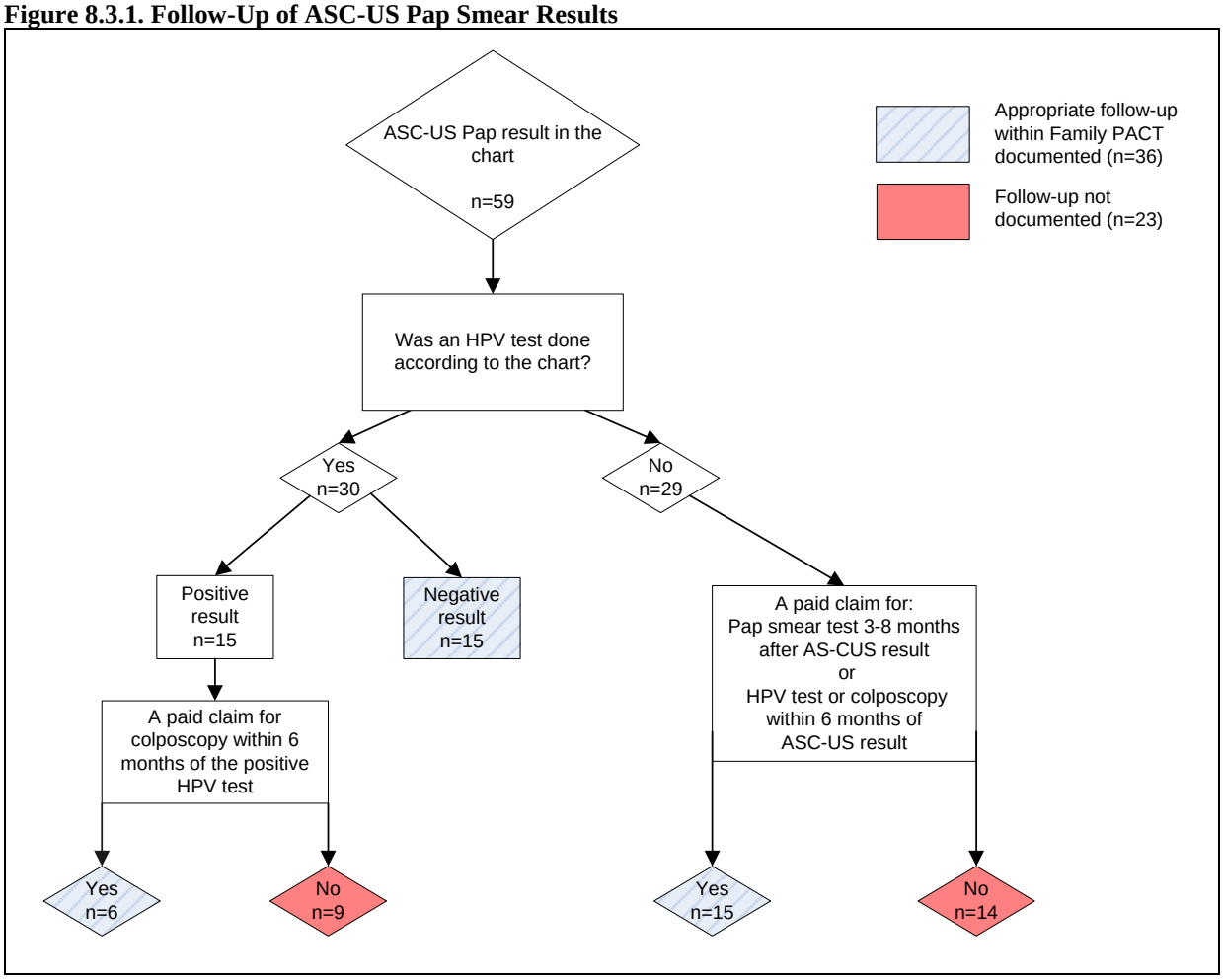
To address the limitations of the MRR data and to evaluate the effectiveness of follow-up of abnormal Pap smear results, we searched paid Family PACT claims data for women with an ASC-US Pap smear result. We focused on this group because it was the most frequent abnormal result. There were a total of 59 Pap tests with an ASC-US result, representing 56 unique women, with three women receiving an ASC-US result at two visits. In this analysis, we considered each ASC-US Pap test as a separate event and followed it in claims and the MRR data as such.

Our logic for deciding whether the follow-up of an ASC-US result was appropriate, and the associated cell sizes for each group, is presented in Figure 8.3.1. We considered the follow-up to be appropriately documented within Family PACT when: (1) the chart contained documentation of a negative HPV test associated with the abnormal Pap result,[11] (2) the chart had documentation of a positive HPV test and there was a paid claim for colposcopy within six months of the abnormal Pap, or (3) there was no documentation of an HPV test in the chart but there was a paid claim for an HPV test or colposcopy within six months of the abnormal Pap test, or a repeat Pap smear test between three and eight months of the original Pap test.

Follow-up was considered not documented when: (1) a positive HPV test was not followed within six months by a claim for colposcopy, or (2) there was no chart documentation of an HPV test, no claims for an HPV test or colposcopy within six months of the abnormal Pap result, and no claims for a repeat Pap test between three and eight months of the original Pap test.

[11] In this event clinicians are advised to resume regular screening with Pap smear at 12 months after the test.

Figure 8.3.1. Follow-Up of ASC-US Pap Smear Results



The resulting proportion of appropriately documented follow-up for ASC-US results was 36 out of 59, or 61%. It is not possible to ascertain from claims to what extent the lack of evidence for follow-up in the remaining 39% was due to clients' failures to keep appointments, the ineffectiveness of providers in tracking or scheduling follow-up with clients, or follow-up care managed and paid for outside of Family PACT. We expect that some women with abnormal results were able to obtain follow-up care through other publicly funded programs, such as the Breast and Cervical Cancer Treatment Program (BCCTP). Also note that due to a small sample size these results should be treated with caution.

Discussion

The 2007 MRR abstraction period coincided with substantial changes in clinical guidelines for cervical cancer screening. The lower screening rate found in 2007 MRR compared to the 2002 MRR (49% vs. 57%) suggests that providers began incorporating the new screening guidelines into their clinical practice.

Utilization of HPV tests in the context of abnormal Pap follow-up was not assessed in prior MRRs. The 51% utilization rate for HPV tests associated with an ASC-US Pap

result will serve as a baseline for future MRRs. Our results also suggest that overutilization of HPV tests by providers was low during the 2007 MRR abstraction period.

The low rate of documented follow-up on abnormal Pap smear results (61%) points to an area for future improvement. However, our analysis is limited by the small sample size and a lack of knowledge about the proportion of abnormal Pap tests managed outside of Family PACT. Future studies should evaluate to what extent women with abnormal Pap results receive care through other payer sources, and whether provider training is necessary to facilitate access to these services.

Reference List

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2. Wright, T. C., Jr.; Massad, L. S.; Dunton, C. J.; Spitzer, M.; Wilkinson, E. J.; Solomon, D. 2006 consensus guidelines for the management of women with abnormal cervical cancer screening tests. *Am. J. Obstet. Gynecol.* **2007,** *197* (4), 346-355.

Chapter 9. Program-Wide Quality Issues/Indicators

9.1. Education and Counseling Services

Introduction

Family PACT Program Standards stipulate that education and counseling services be provided to clients in order to promote optimal reproductive health, clarify personal family planning goals, and assist them in choosing and using contraception correctly and consistently. The standards require that education and counseling services be client-centered, include an assessment of the client's specific education and counseling needs, and be supported by written materials as needed.

Providers may elect to code a claim for a visit that included education and counseling services using, either Evaluation and Management (E/M) or Education and Counseling (E&C) codes, the latter of which are unique to the Family PACT Program. E&C codes allow providers to receive reimbursement for the additional time required to provide in-depth counseling to clients. They are also used for visits where education and counseling is provided by non-clinician counselors. If providers elect to bill using E&C codes, the standards mandate that the counseling service be sufficiently documented in the chart to support the claim. This chapter focuses on all counseling and education provided, regardless of how these services were billed. [12]

Administrative claims data do not provide details on the topic of education and counseling services provided or whether the client received counseling relevant to the reported purpose of the visit. Thus, medical records are critical for evaluation of this program standard.

The 2002 MRR documented a decrease in the provision of education and counseling services compared to the 1999 MRR, particularly for counseling on method use and STI/HIV prevention. This chapter updates and expands on the analyses conducted in the 2002 MRR and focuses on the following evaluation questions:

- What proportion of clients received education and counseling services and how did the provision of these services vary by client and provider characteristics?
- What education and counseling topics were discussed and how did provision change compared to the 2002 MRR?

[12] The Office of Family Planning also administers the TeenSmart Program. Family PACT providers that are designated as TeenSmart providers can perform in-depth counseling and education to adolescent clients and receive enhanced reimbursement for these services. TeenSmart counseling is not identified separately here.

- How did the provision of education and counseling on contraceptive method use and STI/HIV prevention vary by client age? Were they provided to specific client populations in which these topics were expected to be discussed?
- To what extent did medical records document preconception care counseling to female clients?
- To what extent were education and counseling services supplemented by health education materials?
- To what extent did medical record documentation support billing for education and counseling services?

In addition to the results presented in this chapter, education and counseling services are also discussed in Chapters 4.1, 8.1 and 9.3 when pertinent to specific evaluation questions addressed in those chapters.

This chapter is based on records for 2,656 clients in the Female and Male General Samples. Only clients with at least one abstracted visit were retained in the analysis. Clients with demographic information but no abstracted visits were excluded. The MRR data were also supplemented with paid claims data for analyses on provider billing patterns.

Findings

Education and Counseling by Client and Provider Characteristics

Among clients in the Female and Male General Samples, 76% had at least one visit with documentation of an education and counseling service, an increase over the 66% reported in the 2002 MRR. There was no significant difference by gender. See Table 9.1.1.

About equal proportions of clients seen by private and public sector providers had at least one visit with education and counseling documented in the chart (76% and 77%). Private sector providers were more likely to document the delivery of education and counseling services to males than to females (81% vs. 75%, $p<0.1$), while there was no significant difference between males and females served by public sector providers. Family Planning/Women's Health providers were also more likely to document education and counseling services to males than females (82% vs. 77%), though this difference did not reach the level of statistical significance. Overall, clients were equally likely to receive education and counseling regardless of their gender or provider. See Table 9.1.1.

Table 9.1.1. Provision of Education and Counseling Services[a], by Provider Sector and Specialty (n=2,565)

	Education and Counseling Received					
	Females (n=2,290)		Males (n=366)		All Clients (2,656)	
	No.	%	No.	%	No.	%
Provider Sector						
Private	1,081	75%	156	81%	1,237	76%
Public	661	77%	130	75%	791	77%
Provider Specialty						
Family Planning/Women's Health	636	77%	72	82%	708	78%
Primary Care/Multi-Specialty	1,106	75%	214	77%	1,320	76%
Total	1,742	76%	286	78%	2,028	76%

[a] Education and counseling provided to clients in at least one abstracted visit.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Education and Counseling by Topic

In the 2002 MRR, the provision of education and counseling was recorded for six defined categories (contraceptive options/method use, breast self-exam, STI/HIV prevention, infertility, psychosocial issues, and tobacco prevention) and an additional open category for all "other" topics of counseling. To collect more detail about the provision of counseling services, in the 2007 MRR abstractors used an expanded list of topics which was updated to more closely reflect current charting terminology. Weight management, intimate partner violence/relationship counseling, and alcohol/ substance use, as well as preconception care and folic acid use for females, and testicular self-exam for males were added as separate categories for recording. In addition, general wellness, primary care concern, follow-up of covered services and pregnancy-related counseling were added as categories after the content of the free-text "other" field had been parsed out. The psychosocial issues category from the 2002 MRR was replaced with alcohol/substance use and intimate partner violence/relationship counseling categories in the 2007 MRR. All of the topics we present are appropriate in the context of a family planning visit.

Table 9.1.2. Education and Counseling Services Documented During Visits, by Gender, 2002 vs. 2007 Medical Record Review

	Visits with Females[a]				Visits with Males[a]			
	2002 MRR (n=6,929)		2007 MRR (n=4,365)		2002 MRR (n=683)		2007 MRR (n=574)	
Education and Counseling Topic	No.	%	No.	%	No.	%	No.	%
Topics Common to Females and Males								
Method Use/Options	3,331	48%	2,376	54%	328	48%	311	54%
STI/HIV Prevention	1,900	27%	1,490	34%	369	54%	331	58%
Tobacco Prevention/Smoking Cessation	160	2%	89	2%	28	4%	17	3%
Infertility	43	1%	92	2%	5	1%	23	4%
Weight Management	-		313	7%	-		36	6%
General Wellness[b]	-		260	6%	-		39	7%
Primary Care Concern[b]	-		129	3%	-		9	2%
Follow-Up for Covered Services[b]	-		120	3%	-		0	0%
Intimate Partner Violence/Relationship	-		109	2%	-		15	3%
Alcohol/ Substance Use	-		83	2%	-		20	3%
Psychosocial Issues	140	2%	-		13	2%	-	
Gender-Specific Topics								
Breast Self-Exam	1,129	16%	686	16%				
Pregnancy-Related[b]	-		41	1%				
Preconception Care	-		63	1%				
Folic Acid Use	-		92	2%				
Testicular Self-Exam					-		85	15%
Other[c]	707	10%	46	1%	81	12%	28	5%

[a] Percents do not sum to 100% as clients may have received education and counseling on multiple topics.

[b] The category was not on the original list of answer choices in 2007 MRR. It was created during coding of free-text responses in the "other" field.

[c] In the 2007 MRR, the responses that remain in the "other" category are predominantly counseling on laboratory test results, the purpose for which could not be determined.

Source: 2002 and 2007 Family PACT Medical Record Reviews, Female and Male General Samples

In visits with females, the three most frequently documented education and counseling topics were method use/options, HIV/STI prevention, and breast self-exam. For males, the most frequent topics were HIV/STI prevention, method use/options, and testicular self-exam. Compared to the 2002 MRR, there was an increase in the proportion of visits documenting counseling for the two most common counseling topics – method use/options and STI/HIV prevention – among both men and women. See Table 9.1.2.

Similar to the 2002 MRR, visits with male clients were more likely to include STI/HIV prevention counseling than visits with female clients. This is consistent with a substantially higher proportion of male than female clients who reported an STI-related reason for the visit (see Chapters 4.1 and 4.2).

Visits frequently included counseling on more than one topic. For females, 58% of visits with counseling had documentation that more than one topic was discussed. For males, 70% of visits with counseling documented that more than one topic was discussed.

Counseling on Method Use/Options and STI/HIV Prevention by Age and in Client Subgroups

Contraceptive methods and STI/HIV prevention comprise the core of education and counseling services offered to male and female clients in Family PACT. To better understand this service provision, we explored the provision of these services by age, in the overall sample and in two client subpopulations in which education and counseling were expected to be seen: clients who adopted any new contraceptive method at the visit and clients who presented with an STI concern.

Table 9.1.3. Provision of Counseling on Method Use/Options and STI/HIV Prevention by Age

Topic	Client Population	Visits with Documentation of Counseling on Listed Topic No.	%	Total Visits No.	Clients Who Received Counseling on Listed Topic in at Least One Visit No.	%	Total Clients No.
Method Use/Options Counseling	All Clients						
	Adolescent	602	64%	934	344	72%	480
	Adult	2,085	52%	4,005	1,340	62%	2,176
	Clients Adopting New Method[a] at Visit						
	Adolescent	287	80%	357	-	-	-
	Adult	720	71%	1,018	-	-	-
STI/HIV Prevention Counseling	All Clients						
	Adolescent	403	43%	934	259	54%	480
	Adult	1,418	35%	4,005	980	45%	2,176
	Clients with an STI Concern[b] at Visit						
	Adolescent	102	71%	144	-	-	-
	Adult	362	69%	521	-	-	-

[a] Switching to no method or leaving the visit pregnant/attempting pregnancy is not considered to be adoption of a new method. Methods not analyzed by Tiers.

[b] Includes visits with clients who reported STI check or contact/exposure as a reason for the visit.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Family PACT promotes the provision of comprehensive sexual and contraceptive counseling to adolescents. As seen from Table 9.1.3, visits with adolescent clients were more likely than visits with adult clients to have documentation of counseling about contraceptive methods or STI/HIV prevention (64% vs. 52%, $p<0.001$, for method use, and 43% vs. 35%, $p<0.001$, for STI/HIV prevention counseling). When analyzed by client, the differences between adult and adolescent clients remain. A greater proportion of adolescent clients had at least one visit during the year that included counseling on methods (72% vs. 62%) or STI/HIV prevention (54% vs. 45%) than adults. See Table 9.1.3.

For clients adopting new contraceptive methods, contraceptive counseling was documented in about three-quarters of visits – 80% of visits with adolescent clients and 71% of visits with adult clients. For clients who reported an STI check or STI contact/exposure as a reason for the visit, STI/HIV prevention counseling was documented in 71% of visits for adolescents and 69% of visits for adults. See Table 9.1.3.

Preconception Care Counseling for Women

Family PACT promotes optimal reproductive health among women who are planning families, therefore preconception counseling can be part of the Family PACT visit, when appropriate. This topic is of particular interest to the Office of Family Planning and the Maternal and Adolescent Health Branch as they look at ways to address Healthy People 2010 goals related to healthy childbearing. Since prior MRRs did not look at preconception care counseling, we used this MRR to collect baseline information about current documentation practices. To explore how often preconception counseling was provided, we looked for documentation suggestive of preconception care, such as folic acid use, or a general note that preconception counseling was provided. A total of 108 women (5%) had documentation of counseling on either preconception care, folic acid use, or both. Folic acid use counseling was documented in 1%-3% of visits and preconception care was documented in 1%-2% of visits across age groups. See Table 9.1.4.

Table 9.1.4. Preconception Counseling Topics[a] Documented in Visits, by Age (n=4,365)

	Folic Acid Use		Preconception Care		Total Visits
Client Age	No.	%	No.	%	No.
19 and Under	17	2%	11	1%	820
20-24	28	2%	22	2%	1,206
25-29	18	2%	12	1%	943
30-34	19	3%	10	2%	630
35 and Over	10	1%	8	1%	766
Total	92	2%	63	1%	4,365

[a] Women could have received counseling on both of these topics during the visit.

Source: 2007 Family PACT Medical Record Review, Female General Sample

Of visits with education and counseling on folic acid use and/or preconception care, 70% included documentation that the client received health education materials, (not shown), which is a much larger proportion of counseling visits supplemented with health education materials than in the overall sample (see Table 9.1.5).

Preconception care includes a variety of additional general health subjects which may be addressed in the context of planning a pregnancy, such as STI/HIV counseling, psychosocial issues, weight management, tobacco cessation, and diabetes control.[1] Nearly half (49%) of women in the Female General Sample had documentation of education and counseling on one of these topics. Hence, to the extent that counseling on these topics were provided in the context of planning a pregnancy and was not specifically documented as preconception care, our results likely underestimate the actual provision of preconception care.

Provision of Health Education Materials

The Program Standards include an expectation that education and counseling sessions be supplemented with written materials, as needed. Educational materials on a wide variety of topics designated for Family PACT clients are offered to providers at no cost.

Of 3,384 visits in the Female and Male General Samples where counseling was noted, 1,276 (38%) had documentation that written health education materials were also provided. See Table 9.1.5. An additional 2% of all visits (99 out of 4,939) showed provision of health education materials without documentation of any other counseling services (not shown in Table 9.1.5). Since there is no requirement that provision of health education materials be documented in the chart and since these materials may be made freely available to clients in waiting and exam rooms, it is likely that our results underestimate the actual provision of written health education materials.

Table 9.1.5. Provision of Health Education Materials in Visits with Education and Counseling, by Client and Provider Characteristics (n=3,384)

	Health Education Materials Provided		Total Visits with Counseling
	No.	%	No.
Client Gender and Age			
Female			
Adolescent	271	45%	604
Adult	849	36%	2,347
Male			
Adolescent	31	35%	88
Adult	125	36%	345
Provider Category			
Sector			
Private	619	29%	2,148
Public	657	53%	1,236
Specialty			
Family Planning/Women's Health	568	50%	1,145
Primary Care/Multi-Specialty	708	32%	2,239
Total	1,276	38%	3,384

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

There were considerable differences in documented provision of health education materials by client age, gender, and provider sector and specialty. Forty-five percent (45%) of counseling visits with adolescent females documented the receipt of health education materials, compared to 36% of adult female and males visits, and 35% of adolescent male visits. Public sector and Family Planning/Women's Health providers were more likely to document having distributed educational materials during counseling visits than were private sector and Primary Care/Multi-Specialty providers (53% and 50% versus 29% and 32%). See Table 9.1.5.

Documentation to Support Billing for Education and Counseling Services

The standards mandate that counseling services be documented in the medical record to justify reimbursement for claims billed with an E&C code. To explore whether providers

included appropriate chart documentation when they billed using the E&C codes, we identified 988 visits in the Female and Male General Samples that had a paid E&C-coded claim.[13] All of these claims should have been supported by a note in the medical record which documented the content of the education and counseling services provided to the client.

Of the 988 visits matched to an E&C-coded claim, 72% contained chart documentation of education and counseling services. The remaining 28% of visits billed with an E&C-coded claim appear not to have had supporting documentation in the chart. See Table 9.1.6.

Male clients' charts and those maintained by private sector and Primary Care/Multi-Specialty providers were more likely to show supporting documentation for E&C-coded claims than those of female clients and those maintained by public sector and Family Planning/Women's Health providers. The differences are statistically significant at $p<0.01$ by gender, $p<0.05$ by provider sector and $p<0.1$ by provider specialty.

Table 9.1.6. Chart Documentation of Education and Counseling Services to Support Billing (n=1,742)[a]

	Education and Counseling Documented in Chart		Total Visits with E&C Claim
	No.	%	No.
Client Gender			
Females	629	71%	887
Males	87	86%	101
Provider Sector			
Private	527	74%	709
Public	189	68%	279
Provider Specialty			
Family Planning/Women's Health	207	69%	302
Primary Care/Multi-Specialty	509	74%	686
Total	716	72%	988

[a] Includes visits with a matching claim for education and counseling services, procedure codes Z9752, Z9753, and Z9754. Visits were matched on client ID, date of service and provider ID.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples and Family PACT Paid Claims Data

[13] The orientation codes Z9750 and Z9751 were excluded because they were not expected to be supported by a note in the chart.

Discussion

In the 2007 MRR, more than three-quarters of clients had documentation of receiving education and counseling services at some time in 2005. This is an increase compared to the 2002 MRR, in which 66% of clients had documentation of these services. The most common topics for both males and females continued to be method use/contraceptive options and STI/HIV prevention.

Since the Family PACT Program Standards require client-centered counseling appropriate to the needs of the client, not all clients are expected to receive education and counseling services in a given year.

For clients adopting new methods at the visit or presenting with an STI concern, the level of documented counseling points to an area for future improvement. As all clients in these two categories are expected to receive counseling on pertinent topics, it is unclear whether the one-quarter of clients adopting new methods and the one-third of clients presenting with an STI concern actually did not receive counseling or whether the counseling was not documented in the chart. Further evaluation should also examine whether the difference in documentation of counseling provided to adolescent and adult clients presents a gap in services, reflects client needs or is a result of disparate charting practices.

The topic of preconception care in primary care and family planning settings has gained increased visibility over the past years. The 2007 MRR presents one of the first attempts to gauge the extent to which preconception care is provided to female clients in Family PACT. More detailed provider charting about preconception care would increase accuracy of future assessments of preconception counseling.

The proportion of counseling visits supplemented by health education materials showed substantial differences between provider sectors and specialties. Since free client education materials are available to all providers, further research should assess whether private sector and Primary Care/Multi-Specialty providers use health education materials less frequently or whether the differences reflect disparate charting practices. Provider awareness of the available health education materials could be improved through an audio-conference or forum presenting an overview of education and counseling written materials available through Family PACT.

The high proportion of E&C-coded claims not supported by a sufficient amount of chart documentation warrants a provider-focused intervention, particularly among Family Planning/Women's Health and public sector providers. Quality of education and counseling chart documentation could be improved by offering providers an optional form for use during education and counseling visits that list expected topics and associated key details in accordance with Family PACT standards for education and counseling services. In addition, OFP should consider the development of an educational program for providers, such as a webinar or provider forum, including education and counseling techniques, appropriate documentation of the education and counseling visit,

and the use of written client education materials that are appropriate to individual clients' primary language and reading ability.

As discussed in Chapter 1, counseling services are particularly difficult to assess through medical record reviews because documentation may not fully reflect the services provided. Chart reviews are not well suited to the evaluation of the completeness and accuracy of counseling or of client comprehension and retention of the information. Data obtained through other evaluation methods such as client exit interviews and direct observation allows for a more comprehensive evaluation of provider adherence to this program standard.

Reference List

1. Preconception Health and Care, 2006. *March of Dimes* **2008**.

9.2. Primary Care Provision and Referral

Introduction

Family PACT Program Standards state that "referrals to local resources shall be made available to clients when needed medical and psychosocial services are beyond the scope of the provider organization including, but not limited to, domestic violence and substance abuse related services." Additionally, the Centers for Medicare and Medicaid Services (CMS) has expressed special interest that 1115 Medicaid family planning demonstration programs assess access to primary care services for its clients. In its May 2004 waiver renewal application, California included as one of the goals that Family PACT providers "ensure Family PACT clients are referred from Family PACT providers to primary care providers for follow-up of needed primary care services" and "establish and increase partnerships with Federally Qualified Health Care Centers (FQHCs) and primary care clinics to facilitate primary care follow-up referrals when needed."

Family PACT clinicians come from a variety of disciplines and include obstetrician-gynecologists, internists, family physicians, and pediatricians. In addition, Family PACT providers include nurse practitioners and physician assistants trained in women's health, adult health care, family medicine, and pediatrics. Many of these clinicians are able to provide primary care services to their clients in addition to reproductive health services. According to California law, obstetricians and gynecologists can "provide care for the majority of health care problems, including, but not limited to preventive services, acute and chronic conditions, and psychosocial issues" as well as initiate referrals for specialty care.[1] In addition, the Family PACT provider network includes FQHCs, Rural Health Clinics (RHCs), Indian Health Clinics and other clinics that are required by law to provide primary care services to indigent clients. Many other clinics or medical practices have been designed to provide clients with multi-specialty services and Family PACT is only one aspect of their work. Thus, certain Family PACT providers can serve as their clients' primary care providers, eliminating the need to refer clients with primary care needs to other providers. In the 2005 Family PACT Provider Referral Study, up to 88% of providers indicated that they can provide one or more primary care services on-site and 75% said that they screen for Medi-Cal and other insurance eligibility. In this chart review, we assess to what extent usual source of care and primary care referrals are documented. We also assess to what extent Family PACT clients are rescheduled within the same provider site.

Identification of clients in need of primary care services is a challenge. The waiver renewal application did not define the term "clients in need of primary care," and the best definition may not be limited to clients presenting with acute primary care needs. The most inclusive definition would consider all clients without a usual source of care to be in need of referral to a primary care provider, also referred to as a "medical home." "Usual source of care" is generally considered to be the place or person where the client goes when he or she is sick or needs health advice.[2,3] Having a usual source of care is associated with a higher likelihood of receiving preventive care,[4] timely receipt of medical care when needed,[5] and lower health care costs.[6]

Considering the limited scope of services covered by Family PACT, an important program integrity concern is whether the Family PACT Program is used to pay for non-reproductive health care services. In certain cases, primary care services, such as pain or weight management, may be associated with counseling about contraceptive methods or preconception care. It is also reasonable to expect that a small number of clients will need counseling and management of chronic medical conditions in addition to their reproductive health needs to optimize safe and effective use of contraception. However, a high proportion of visits focused on non-reproductive health issues or repeated client visits that address the same non-reproductive health problem may indicate a misuse of Family PACT resources.

To describe the patterns of primary care provision and referrals in Family PACT, we address the following evaluation questions:

- What proportion of Family PACT providers offered primary care services on-site?
- To what extent did Family PACT providers assess their clients' usual source of care and to what extent do Family PACT providers serve as this source of care?
- To what extent did providers refer or reschedule clients for primary care services?
- To what extent were primary care services provided during Family PACT visits?
- What was the proportion of clients who were referred or rescheduled for specialized medical or psychosocial services not covered by Family PACT?

This section is based on data from records for 2,290 clients in the Female General and 366 clients in the Male General Samples. Only clients with at least one abstracted visit were retained in the analysis. Clients with demographic information but no abstracted visits were excluded.

Findings

On-Site Primary Care Services and Determination of Client's Usual Source of Care

Nearly all (98%) Primary Care/Multi-Specialty providers included in the 2007 MRR sample indicated that they offered primary care on-site, while only a third (34%) of the Family Planning/Women's Health providers stated that they did. Overall, three quarters (76%) of clients in the Female General Sample were seen by providers who offer some level of primary care services on-site. This proportion is even higher for clients in the Male General Sample, where 86% were seen by providers who offer primary care services on-site.

To identify clients with a usual source of care, abstractors recorded the presence of specific chart notations on usual source of care and checked charts for non-reproductive health visits which would suggest that the provider was the usual source of care.[14] In nearly half of all records (49%), it was either directly or indirectly indicated that the

[14] Primary care visits would not be billed to Family PACT and hence not be abstracted as part of this review, but the visits would be recorded in the chart.

Family PACT provider was the usual source of care. Only 2% of the charts documented that the usual source of care was an entity other than the current provider. Another 11% of the charts included a notation that the clients did not have a usual source of care. In 38% of charts, the information on usual source of care was not noted and no non-reproductive health visits were found in the chart. See Table 9.2.1. We could not ascertain in these cases whether providers failed to ask for the client's usual source of care or simply did not document this information in the chart.

Information on usual source of care varied by client gender and provider specialty and office type. Women were more likely than men to lack information on usual source of care in their charts (39% vs. 33%) and less likely to have the current provider as their usual source of care (47% vs. 56%). See Table 9.2.1.

Table 9.2.1. Client's Usual Source of Care, by Gender

	Females (n=2,234)[a]		Males (n=355)[a]		Total (n=2,589)	
Usual Source of Care	No.	%	No.	%	No.	%
This Provider	1,061	47%	200	56%	1,261	49%
Other Source	54	2%	6	2%	60	2%
No Usual Source of Care	256	11%	32	9%	288	11%
Not Documented in Chart	863	39%	117	33%	980	38%

[a] 56 records from the Female General Sample and 11 records from the Male General Sample were excluded because the usual source of care field was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Overall, clients seen by Family Planning/Women's Health providers appeared less likely to have a usual source of care for their non-reproductive health needs. A higher proportion of charts from Family Planning/Women's Health providers (48%) than those from Primary Care/Multi-Specialty providers (32%) showed no documentation or evidence of the usual source of care at all. Charts from Family Planning/Women's Health providers were less likely to state or show evidence that the provider was the client's usual source of care (21% vs. 63%) and more likely than charts from primary care providers to specifically document that the client did not have a usual source of care (28% vs. 3%)

A higher proportion of men (28%) than women (21%) who were seen at Family Planning/Women's Health clinics had these providers serve as their usual source of care and information on usual source of care was less likely to be missing for men (41%) than women (49%) at these clinics. See Table 9.2.2.

Table 9.2.2. Documentation of Client's Usual Source of Care, by Gender and Provider Specialty

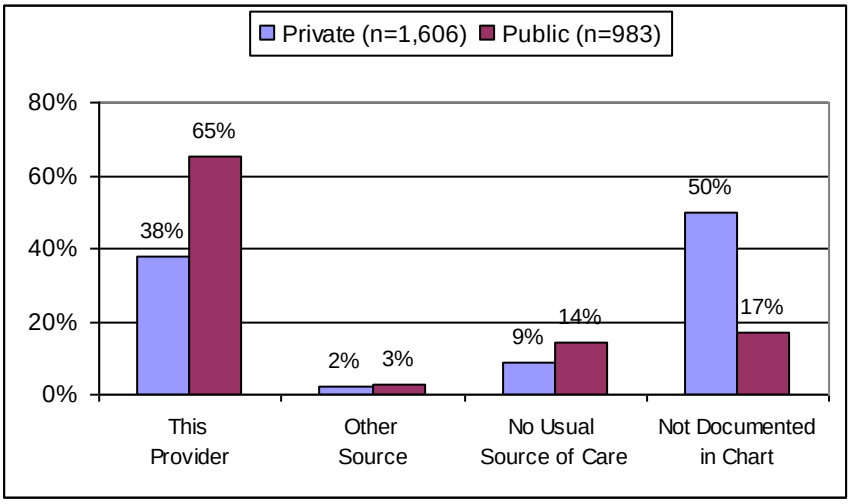
	Family Planning/ Women's Health			Primary Care/ Multi-Specialty				
Usual Source of Care	Females (n=803)	Males (n=82)	Total (n=885)	Females (n=1,431)	Males (n=273)	Total (n=1,704)	Total (n=2,589)	
This Provider	21%	28%	21%	63%	65%	63%	1,261	49%
Other Source	3%	0%	3%	2%	2%	2%	60	2%
No Usual Source of Care	27%	30%	28%	3%	3%	3%	288	11%
Not Documented in Chart	49%	41%	48%	33%	30%	32%	980	38%

*56 records from the Female General Sample and 11 records from the Male General Sample were excluded because the usual source of care field was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Information on usual source of care varied widely by provider sector. Charts of clients served by private sector providers (50%) were more likely than charts of clients served by public sector providers (17%) to lack information on whether the client had a usual source of care and less likely to indicate that the provider was the usual source of care (38% vs. 65%, respectively). See Figure 9.2.1.

Figure 9.2.1. Client's Usual Source of Care, by Provider Sector (n=2,589)[a]



[a] 56 records from the Female General Sample and 11 records from the Male General Sample were excluded because the usual source of care field was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

There were, however, noteworthy differences among providers from different office types. Among the private sector providers, lack of documentation and evidence on usual source of care was more frequently found in group medical practices (58%) than solo medical practices (48%). Planned Parenthood clinics and hospital-based clinics also had a large proportion of charts where clients' usual source of care could not be identified; 42% charts at Planned Parenthood clinics and 32% at hospital-based outpatient clinics specifically noted that clients did not have a usual source of care. In contrast, half of school-based clinic charts (48%) had a note indicating that the client had another usual source of care, which is not surprising given the limited scope of school health clinics. The Family PACT provider site was the usual source of care for clients going to college-based student health centers (100%), and for most clients attending FQHC, RHC and

Indian Health Centers (87%), and other community clinics/neighborhood clinics (74%). This is not surprising as FQHCs, RHCs and Indian Health Centers are required by law and licensure to have a full range of primary care services available on-site. See Table 9.2.3.

Table 9.2.3. Client's Source of Usual Care, by Practice Type (n=2,589)[a]

	Source of Usual Care								
	This Provider		Other Source		No Usual Source of Care		Not Documented in Chart		Total
Practice Type	No.	%	No.	%	No.	%	No.	%	No.
Group Medical Practice	208	34%	8	1%	44	7%	354	58%	614
Solo Medical Practice	316	39%	20	2%	86	11%	393	48%	815
FQHC/RHC/Indian Health Center	112	87%	1	1%	7	5%	9	7%	129
Other Community Clinic/Neighborhood Health Center/Free Clinic	496	74%	12	2%	39	6%	123	18%	670
Planned Parenthood	31	20%	0	0%	64	42%	59	38%	154
Hospital-Based Outpatient Clinic	43	36%	4	3%	38	32%	34	29%	119
County or City Health Department Clinic	0	0%	1	9%	2	18%	8	73%	11
High School-Based Student Health Center	7	24%	14	48%	8	28%	0	0%	29
College-Based Student Health Center	48	100%	0	0%	0	0%	0	0%	48

[a] 56 records from the Female General Sample and 11 records from the Male General Sample were excluded because the usual source of care field was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Referrals for Primary Care Services

Only a few clients (3%) were referred to another provider for primary care services. The proportions were equally low for male and female clients. At sites that do not offer primary care on-site, only 2% of charts recorded a referral to another provider for primary care. Providers who offer primary care services on-site do not necessarily have to refer a client for primary care services to another location, so the proportion of rescheduled visits should be higher than the proportion of external referrals. However, providers with on-site primary care referred a larger proportion of clients to other sites (3%) than within the same site (1%). It may be that in some cases a referral to another clinician or a different department at the same provider site was abstracted as an external referral rather than a rescheduled appointment, depending upon the content of the note in the chart. This lack of distinction in the abstraction does not impact the overall number of reschedules and external referrals. Alternatively, it is possible that sites with primary care available screen and identify more primary care issues of a severity that warrant external referral. See Table 9.2.4.

Table 9.2.4. Clients Who Received Referrals and Rescheduled Appointments for Primary Care, by Availability of Primary Care On-Site (n=2,656)

	Primary Care Available On-Site			
	Yes		No	
	No.	%	No.	%
Referred to Another Provider	58	3%	10	2%
Rescheduled with Same Provider	24	1%	2	0%
No Referral or Rescheduled Visit Documented	1,972	96%	590	98%
Total	2,054	100%	602	100%

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Similarly, documentation in the chart noting lack of usual source of care did not seem to prompt an internal or external referral to a primary care provider. Only 10 of the 288 clients (3%) with a written chart note stating the client lacked a usual source of primary care had a documented referral for primary care services and another two were rescheduled with the same provider. See Table 9.2.5.

Table 9.2.5. Clients Who Received Referrals and Rescheduled Appointments for Primary Care, by Client's Usual Source of Care (n=2,589)[a]

	Usual Source of Care							
	This Provider		Other Source		No Usual Source of Care		Not Documented in Chart	
	No.	%	No.	%	No.	%	No.	%
Referred to Another Provider	35	3%	3	5%	10	3%	15	2%
Rescheduled with Same Provider	18	1%	2	3%	2	1%	1	0%
No Referral or Rescheduled Visit Documented	1,208	96%	55	92%	276	96%	964	98%
Total	1,261	100%	60	100%	288	100%	980	100%

[a] 56 records from the Female General Sample and 11 records from the Male General Sample were excluded because the usual source of care field was not abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Provision of Primary Care Services as Part of the Family PACT Visit

To evaluate how often primary care is provided during Family PACT visits, abstractors recorded whether the chart documented provision of any services during a Family PACT visit from a pre-defined list of primary care issues. In certain circumstances, chronic disease management or screening may be a clinically indicated complement to the use of contraception and to STD prevention and treatment. The duration and content of non-reproductive health care services may not be reliably documented in the chart and was not assessed in this MRR.

In total, 8% of visits (371 out of 4,939) abstracted for clients in the Female and Male General Samples had documentation of the provision of general primary care services. Twelve percent of clients (309 out of 2,656) in the Female and Male General Samples received primary care services in at least one visit. A small number of clients received the same primary care service during more than one abstracted visit. The primary care services received by the largest number of clients pertained to common illness (3.1%) and weight management (1.4%). See Table 9.2.6.

The small proportion of clients receiving any primary care services during a Family PACT visit and the very small number of clients who received the same primary care service over several visits do not suggest any inappropriate use of Family PACT resources for provision of primary care services.

Table 9.2.6. Primary Care Provision to Clients (n=2,656)

Primary Care Service	Clients Who Received Service in at Least One Visit No.	%	Clients Who Received Service at More than One Visit No.
Common Illness	83	3.1%	4
Weight Management	37	1.4%	5
Non-Contraceptive Drug Dispensing	29	1.1%	4
Diabetes Monitoring	27	1.0%	3
Pain Management	20	0.8%	2
Depression Treatment	19	0.7%	4
Hypertension Management	16	0.6%	2
Minor Injuries	14	0.5%	1
Asthma Management	11	0.4%	0
Smoking Cessation	11	0.4%	2
Immunization	5	0.2%	1
Substance Abuse	5	0.2%	2
Other Acute Condition	44	1.7%	2
Other Chronic Condition	75	2.8%	5
Any Primary Care Service	309	11.6%	

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Referrals for Other Medical and Psychosocial Services

We were also interested in the proportion of clients who received referrals or were rescheduled with the same provider for specialized services beyond regular primary care. These include services for substance abuse, domestic violence, other psychosocial conditions, anonymous HIV testing, and other reproductive health services not covered by Family PACT.

In general, few clients received referrals or were rescheduled for specialized services. The largest proportion of such referrals was recorded for pregnancy-related services after a positive pregnancy test. Providers were equally likely to refer or reschedule their patients for alcohol or substance abuse counseling, smoking cessation, domestic violence and other psychosocial conditions. They were more likely to reschedule clients for anonymous HIV testing than to refer them to another provider. The trends were similar for men and women. See Table 9.2.7.

Of particular interest were referrals for domestic violence services. In the 2002 MRR, only three of the 3,087 women included in the Female General Sample had a referral for domestic violence services documented in the chart. Considering a conservative prevalence estimate of intimate partner violence of 6%,[7] the 2002 MRR should have located approximately 185 charts that documented relationship issues and potential referrals. During 2002-2005, OFP implemented a number of interventions to increase

screening and referrals for domestic violence such as provider training and development and dissemination of domestic violence screening tools. However, the 2007 MRR showed no increase in domestic violence referrals.

Table 9.2.7. Clients Who Received Referrals and Rescheduled Appointments for Medical and Psychosocial Services, by Gender

	Females (n=2,290)				Males (n=366)			
	Referred		Rescheduled		Referred		Rescheduled	
Referral Type	No.	%	No.	%	No.	%	No.	%
Alcohol Counseling	1	0.0%	2	0.1%	0	0.0%	1	0.3%
Smoking Cessation	2	0.1%	1	0.0%	0	0.0%	1	0.3%
Other Psychosocial Condition	6	0.3%	5	0.2%	1	0.3%	1	0.3%
Domestic Violence	2	0.1%	2	0.1%	0	0.0%	0	0.0%
Anonymous HIV Testing	5	0.2%	9	0.4%	4	1.1%	7	1.9%
Other	4	0.2%	1	0.0%	2	0.5%	0	0.0%
Pregnancy Related/Infertility	15	0.7%	8	0.3%				

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Discussion

The Family PACT client population is generally young and healthy and most clients are not in need of medical care for chronic conditions. This would explain the low rate of provision of primary care services within the reproductive health visit and the small number of referrals to primary care services for non-reproductive medical needs. However, there is likely a higher proportion of clients who were in need of referrals for preventive care or for acute or chronic health conditions than we see in the 2007 MRR. In the 2005 Client Exit Interview (CEI) study, 28% of clients interviewed reported having a health concern in the twelve months prior to the interview that was unrelated to family planning but only 3% of all clients reported receiving a referral.[8] Nearly a third of Family PACT providers who participated in the provider referral study estimated that over half of their client population were in need of primary care services.[9]

Furthermore, the assessment and documentation of usual source of care is important to ensure that clients have access to and receive referrals for health promotion and disease prevention for non-reproductive health needs, independent of acute medical needs. In the 2005 CEI, 29% of interviewees report having nowhere to go for general health services. In the 2007 MRR, the proportion of clients whose chart documented the lack of a usual source of care is considerably lower (11%); however, there was a high proportion of charts missing any documentation related to usual source of care. These data suggest that while a large proportion of Family PACT providers offer primary care on-site, they do not seem to have a systematic way of identifying clients in need of a usual source of care. Assessment and documentation of client's usual source of care should be improved across all provider specialties and sectors. However, interventions have to take into account that procedures and challenges for a referral system are different for providers who refer to another medical office or clinic than for those that can provide appointments to a primary care clinician at the same location.

Many Family PACT providers have the potential to be the medical home for their Family PACT clients. Such providers need to ensure a good in-house referral system to primary care services that screens and refers all Family PACT clients in need of such services while ensuring that Family PACT claims are limited to covered family planning services. In January 2008, with input from several medical professional organizations,[15] the National Committee on Quality Assurance (NCQA) released a web-based tool to assist medical providers in assessing their progress towards becoming certified as a Patient Centered Medical Home.[10] One of the mandatory elements of the nine quality standards of a medical home is the existence of appropriate referral mechanisms.[11] These standards could be used to guide the training of Family PACT providers in quality referral and primary care services. In addition, when recruiting new Medi-Cal providers for Family PACT, the Office of Family Planning may specifically reach out to sites that not only offer primary care but also meet the quality criteria of patient-centered primary care according to the NCQA standards.

Upon enrollment, providers should be asked whether they can provide affordable non-reproductive health services. Information about ability to offer affordable health services will help in estimating provider capacity to meet primary health care needs. The 2009 Provider Referral Survey will assess in more detail how providers screen for usual source of care and whether providers are able to provide primary care services to their uninsured clients paid for on a sliding fee scale or through charity care. In the 2005 CEI, 60% of clients who said that they had a place to go for general healthcare indicated that they paid for these services out of pocket. Lack of health insurance might deter clients from seeking preventive care or ensuring ongoing care of chronic conditions, even if they know where to go and had a referral. The complementary data gathered in the additional UCSF evaluation studies will help to determine how the reproductive health visit can best serve as a pathway to access more comprehensive primary care services.

As non-reproductive health services are not reimbursed by Family PACT, we cannot use this medical record review and Family PACT claims data to monitor whether referrals for mental health and counseling services were actually provided to the client. The continuing low number (n=4) of women who had documentation of a referral for domestic violence services among the 2,290 female charts was disappointing considering OFP's efforts to increase intimate partner violence screening and documentation among Family PACT providers. We cannot assess in this chart review whether providers did not screen for intimate partner violence or whether they did not document women who experienced intimate partner violence. Since 2006, OFP has tracked providers' participation in Family PACT-sponsored provider training. This will inform future medical chart reviews as to the extent a provider was exposed to Family PACT's quality improvement (QI) activities and provide a more accurate picture of the impact of these QI interventions.

[15] These included the American College of Physicians, American Academy of Family Physicians, American Academy of Pediatrics and American Osteopathic Association.

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9.3. Quality of Services to Clients with Limited English Proficiency

Introduction

The Family PACT Program Standards stipulate that "all services shall be provided in a culturally sensitive manner and communicated in a language understood by the client." Studies on quality of care to clients with Limited English Proficiency (LEP) have shown vast gaps in quality of care. Monolingual providers seeing LEP clients during language-discordant visits tended to take a less comprehensive medical history and were more likely to order unnecessary medical tests than bilingual providers during language-concordant visits.[1] LEP clients were more likely after language discordant visits than after language concordant visits to report having outstanding questions about their medical care.[2]

Medical charts provide some insights regarding the cultural and linguistic appropriateness of services by documenting whether interpretation services are needed and if so, how these services were provided – by a third person acting as interpreter or by a bilingual provider. Although charts lack sufficient detail to allow for evaluation of the quality of language services, client's use of an interpreter as opposed to speaking to a bilingual provider may have implication for the quality of services received by clients with LEP. This chapter is therefore limited to a discussion of the impact of the use of an interpreter or bilingual provider on selected quality indicators.

In this chapter we address the following evaluation questions:

- In visits where the services were delivered in a language other than English, how was interpretation done?
- How did the method of interpretation differ by provider sector and specialty?
- How was the method of interpretation related to selected quality indicators?

This chapter is based on 1,641 visits with 871 clients from the Female and Male General samples whose primary language was not English, in which the chart indicated that services were provided in a language other than English and the type of interpretation was documented. Visits with clients whose primary language was missing from the chart were excluded from the analysis. Of clients included in the analysis, 831 (96%) spoke Spanish as their primary language and the remaining 4% spoke other languages.

Findings

Language Discordant and Language Concordant Visits

Since many non-English native speakers are fluent in English, having a primary language other than English does not imply the need for interpretation services. Therefore, this analysis is limited to visits which had documentation that the services were provided in a language other than English and which indicated the type of interpretation used. Visits in which the services were provided by a bilingual provider are considered language-concordant (LC) and visits in which a bilingual staff member, designated interpreter or the client's friend provided interpretation are considered language-discordant with interpreter (LDI). LDI visits in this analysis are distinguished by the use of a third person to translate between English and the client's language during the clinical encounter. The analyses below do not include language-discordant visits with monolingual providers where no interpreter was present.

In 1,105 (37%) of visits with clients whose primary language was not English, the information on whether an interpreter or bilingual provider was used was missing or inconclusive ("unable to tell from chart"). Of the remaining visits with non-English speaking clients, 51% (832) were language-concordant and 49% (809) were language-discordant. The distribution of languages spoken by clients was nearly identical in LC and LDI visits; 94% of LC and 97% of LDI visits involved clients with Spanish as a primary language. Almost all language-discordant visits used a bilingual staff member as the interpreter, whereas the use of designated interpreters or telephone language line was only occasionally documented. See Table 9.3.1. A total of 431 clients had only LC visits, 405 had only LDI visits, and 35 had both LC and LDI visits.

Table 9.3.1. Visit Type and Method of Interpretation in Visits with Interpretation (n=1,641)[a]

Visit Type	Method of Interpretation	No.	%
Language-Concordant	Bilingual Clinician	832	51%
Language-Discordant with Interpreter	Bilingual Staff	803	49%
	Designated Interpreter/ Language Line	5	<1%
	Friend	1	<1%

[a] Excludes 1,105 visits in which interpreter use or the type of interpreter was not recorded.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Of visits with interpretation, visits with private sector providers were more likely to be LC than LDI (55% vs. 45%), while visits with public sector providers were more likely to be LDI than LC (59% vs. 41%). Family Planning/Women's Health providers had a higher proportion of LC than LDI visits (58% vs. 42%), but the trend is reversed for Primary Care/Multi-Specialty providers. See Table 9.3.2.

Table 9.3.2. Visit Type in Visits with Interpretation, by Provider Sector and Specialty (n=1,641)[a]

	Provider Sector				Provider Specialty					
	Private (n=1,154)		Public (n=487)		Family Planning/ Women's Health (n=434)		Primary Care/ Multi-Specialty (n=1,207)		Total (n=1,641)	
Visit Type	No.	%	No.	%	No.	%	No.	%	No.	%
Language-Concordant	631	55%	201	41%	253	58%	579	48%	832	51%
Language-Discordant with Interpreter	523	45%	286	59%	181	42%	628	52%	809	49%

[a] Excludes 1,105 visits in which interpreter use or the type of interpreter was not recorded.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Quality of Care at Language Discordant Visits

To explore the differences in quality of care between LDI and LC visits, we selected indicators to measure the following aspects of medical history taking, clinical testing, and counseling and education:

- Yield and appropriateness of pregnancy tests
- Follow-up of positive pregnancy test results through counseling or referral
- Completeness of STI risk assessment (females only)[16]
- Chlamydia testing rate among females
- Frequency of provision of education and counseling services

Yield and Appropriateness of Pregnancy Tests

Contrary to prior research findings that language-discordant encounters may create the potential for over-testing[1], women in the LDI group were significantly less likely to have a pregnancy test done than women in the LC group (31% vs. 36%, $p<0.0001$). LDI and LC visits were equally likely to include pregnancy testing among visits in which a pregnancy test was not clinically indicated (27% vs. 28%, $p=0.75$).[17] However, the yield of positive pregnancy tests was significantly lower for LDI visits than for LC visits (8% vs.12%, $p<0.05$).

Follow-up after a Positive Pregnancy Test

Three of the 16 LDI visits with a positive pregnancy test result had no documentation of any follow-up, such as options counseling or referral to prenatal or abortion services. All of the 31 LC visits with a positive pregnancy test result received some type of follow-up.

[16] This comparison is limited to female clients because the STI risk assessment questions were not abstracted for each visit for clients in the Male General Sample.

[17] See Chapter 8.1 for the methodology of determining clinical appropriateness of a pregnancy test.

This difference is statistically significant ($p<0.05$) but the finding has to be taken with caution due to the small cell size.[18]

Completeness of STI Risk Assessment among Females

Among women, LDI visits were significantly less likely than LC visits to have documentation of STI risk assessment, defined as documented assessment of recent STI history or of new or multiple sexual partners (57% vs. 65%, $p<0.01$).

Chlamydia Testing

Female clients in LDI and LC visits were about equally likely to be tested for chlamydia (24% vs. 25%, $p=0.57$). Among women ages 26 and older, LDI and LC visits were also about equally likely to document a test for chlamydia (22% vs. 26%, $p=0.21$). While over-testing for chlamydia in the older age group is a program-wide problem (see Chapter 8.2), it does not seem to be exacerbated by a LDI visit.

Education and Counseling

Among male and female clients, LDI visits were significantly less likely than LC visits to contain documentation that at least one education and counseling topic was discussed (63% vs. 87%, $p<0.0001$). This difference in the frequency of service provision is observed among all major categories of counseling services, including method use/ options, STI/ HIV prevention, and other reproductive and non-reproductive health counseling. See Table 9.3.3.

Table 9.3.3. Provision of Counseling in Visits with Interpretation, by Visit Type (n=1,641)[a]

	Counseling Topic										
	Method Use/ Options		STI/ HIV Prevention		Other Repro. Health		Other Non-Repro. Health		Any Counseling		Total Visits with Interpretation
Visit Type	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Language-Concordant	581	70%	443	53%	230	28%	184	22%	726	87%	832
Language-Discordant with Interpreter	446	55%	273	34%	171	21%	115	14%	509	63%	809

[a] Excludes 1,105 visits in which interpreter use or the type of interpreter was not recorded.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples

Discussion

The MRR provides important insights about linguistic access and its impact on health care quality in Family PACT that could not be gained from administrative data or provider surveys.

Overall, medical charts do not consistently document the client's language needs. The Family PACT Client Eligibility Certification form provides proxies that interpretation might be needed such as clients' primary language and country of birth but does not

[18] Due to small cell sizes we used Fisher's exact test of significance instead of a Chi-Square test.

assess English proficiency directly. Providers often do not document this information. In over one-third of the visits with clients whose primary language was not English, the information on whether an interpreter or bilingual provider was used was missing or inconclusive. OFP should evaluate in more detail how providers document limited English proficiency and encourage the use of mechanisms that prompt clinicians and staff to document information on interpreter needs in the chart, such as items on standardized intake forms or flagging charts of LEP clients.

Where documented, interpretation needs in Family PACT seem to be addressed mainly by bilingual providers and bilingual staff who serve as interpreters. This high proportion of documented visits utilizing bilingual clinicians or staff is remarkable and is yet further evidence of a diverse provider network within Family PACT. However, the low documentation of use of language lines suggests a potential gap, particularly when providing services to non-Spanish speaking LEP clients.

Rates of STI testing do not seem to be influenced by the use of interpreters in the medical encounter. However, STI history is completed less frequently when the visit is mediated by a non-clinician interpreter. Pregnancy testing showed mixed results: although the likelihood of a test without clinical indication was the same for LDI and LC visits, women seen at LDI visits were more likely to have a negative pregnancy test result, a potential indicator of over-testing. At some of the LDI visits with a positive pregnancy test where an interpreter was used, there was no documentation of the required pregnancy counseling and referral services, whereas this standard was met at all LC visits with bilingual providers.

A model feature of the Family PACT Program is the provision of comprehensive counseling on reproductive health issues. Less frequent documentation of counseling on contraceptive methods, STI prevention and other reproductive and non-reproductive health issues to clients using an interpreter (LDI visits) compared to that for clients seen by a bilingual provider (LC visits) indicates a potential gap in services. It is possible that the actual gap is even greater because this analysis did not include non-English speaking clients who saw a monolingual provider and did not have interpretation provided at the visit.

The chart review suggests that many providers are complying with program standards for communicating in a language the client understands. However, it does not show whether providers and staff have been evaluated for their language proficiency and their ability to provide accurate and unbiased interpretation. In light of the high number of visits where interpreters were used in LDI visits, OFP should consider offering training to Family PACT providers on working with interpreters, including rapport building and avoidance of common pitfalls when communicating through a third person. This provider training is particularly important if providers have to rely on untrained interpreters. An example of such a provider training is the half-day module developed by the New York Task Force on Immigrant Health.[3]

Several studies suggest that language-discordant patient-provider interactions may negatively impact other components of patient care that cannot be assessed with a

medical record review, such as the increased likelihood of medical errors,[4-6] client comprehension,[7] lower participation in preventive care[8,9] and lower adherence to follow-up appointments.[10] OFP may want to request special evaluation studies that assess the impact of language discordance and the use of interpreters on clients' understanding of reproductive health issues and contraceptive use.

Access to bilingual providers and interpreter services is only one component of providing linguistically and culturally appropriate clinical services. Other evaluation methodologies such as client exit interviews matched with provider recall of what occurred during the encounter and observation of the clinical encounter will provide additional information on the quality of medical care and future provider training needs.

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9.4 Completeness and Quality of Documentation

Introduction

Sufficiently detailed medical records are required by law, regulation, and good medical practice to support claims for reimbursements and to document the quality of care provided at each encounter. Accurate, complete client eligibility documentation is critical for program integrity. Requirements regarding medical record documentation are outlined in Family PACT Program Standards, while the client eligibility documentation requirements are specified in the Policies, Procedures and Billing Instructions (PPBI) Manual.

The 2002 MRR described the quality of documentation in terms of clinicians' charting style, the ease of abstraction and legibility of records. Client Eligibility Certification (CEC) forms were examined for completeness and the proportion of invasive procedures supported by informed consent was determined. Documentation of client medical history and the use of preprinted forms for medical history were also assessed.

This analysis repeats and builds on the analysis conducted in the 2002 MRR by focusing on the following evaluation questions:

- What proportion of charts contained a CEC form and how did the proportion vary by client gender, provider sector and specialty?
- To what extent were the CEC forms found in charts complete?
- How often were Social Security numbers (SSNs) documented on the chart and to what extent did the SSNs found in medical records match those on file in the administrative client enrollment data[19]?
- What proportion of invasive procedures performed at the visit were supported by complete informed consents?
- What proportion of charts met program standards for comprehensive reproductive and contraceptive assessment for female clients?
- To what extent were the records legible and understandable?
- To what extent did providers use electronic medical records for Family PACT clients?

This chapter is based on records from the Female and Male General Samples. For the analysis of client eligibility, SSN collection, and medical history documentation, we analyzed the records of 2,329 female and 371 male clients for whom a chart was located, including 44 records for which no visits were abstracted. For the analysis of informed consent and comprehensive reproductive and contraceptive assessment for females, we used 2,290 female records with at least one abstracted visit. We also looked at 366 male

[19] Administrative client enrollment data originate from the HAP Client Eligibility System.

records with at least one abstracted visit to assess informed consents for vasectomy. To assess chart legibility, ease of abstraction and the frequency of use of electronic records, we used all records from the Female and Male General, IUC Insertion and Removal, and Chlamydia Positive Samples (n=3,540). The analysis of SSN reporting was supplemented by administrative client enrollment data.

Findings

Client Eligibility Documentation

Family PACT uses the CEC form for eligibility screening at the place of service delivery. The PPBI requires all fields on the CEC to be completed, with the exception of the number of live births, which applies to female clients only. Fields may be completed by either the client or provider. The form must be retained onsite for a period of three years.

Of the Female and Male General Sample charts abstracted, CEC forms were present for 88% of clients' charts, down from 94% reported in the 2002 MRR. Eighty-seven percent (87%) of female clients' charts contained a CEC, compared to 94% for males, a statistically significant difference ($p<0.01$). Charts maintained by Family Planning/Women's Health providers were significantly less likely than those maintained by Primary Care/Multi-Specialty providers to contain a CEC form (82% vs. 91%, $p<0.01$), but there was no difference by provider sector. See Table 9.4.1.

Table 9.4.1. Client Eligibility Certification Form Found in the Chart (n=2,700)[a]

	Charts with CEC		Total Charts
	No.	%	No.
Client Gender			
Female	2,026	87%	2,329
Male	347	94%	371
Provider Sector			
Private	1,442	88%	1,644
Public	931	88%	1,056
Provider Specialty			
Family Planning/Women's Health	762	82%	933
Primary Care/Multi-Specialty	1611	91%	1,767
Total	2,373	88%	2,700

[a] Includes 44 records for which the chart was located but no visits were abstracted.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

To replicate the analysis conducted in the 2002 MRR, we scored the CEC completeness based on whether the eight required fields necessary to perform an eligibility screening were filled out or left blank on the form. The scored fields included: other health insurance, request for confidentiality, county of residence, family size, family income, client signature, provider certification and staff signature.

Table 9.4.2 shows completeness of the CEC forms, by element and overall. Only 28% of the forms abstracted had all eight scored elements completed, a substantial decrease from 51% reported in the 2002 MRR. Seven out of eight elements showed a decrease in completion rates compared to the 2002 MRR, with the largest decreases observed for the

provider certification of eligibility, which decreased from 69% to 55%, staff signature (76% to 63%), and other health insurance (93% to 83%). The elements most likely to be missing in both the 2002 and 2007 MRR were provider certification and staff signature.

Table 9.4.2. Completeness of Client Eligibility Certification Form, by Element[a] (n=2,373)

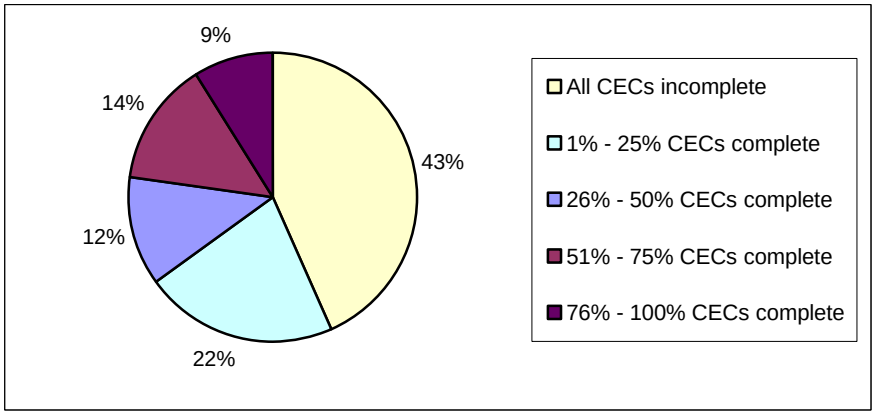
CEC Element	Completed in CEC	
	No.	%
Family Size	2,235	94%
Client Signature	2,227	94%
Income	2,191	92%
Confidentiality Request	2,090	88%
Other Health Insurance	1,963	83%
County of Residence	1,916	81%
Staff Signature	1,500	63%
Provider Certification	1,294	55%
All 8 Elements	660	28%

[a] Excludes 327 charts in which the CEC was not found.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

There was substantial variation between individual providers in the proportion of CEC forms that were complete. For 43% of providers, all abstracted CECs were incomplete, while for 22% of providers, at least 50% of the abstracted CECs had all eight elements completed. See Figure 9.4.1.

Figure 9.4.1. Providers by the Proportion of Completed CEC Forms[a] (n=194)[b]



[a] A CEC form is complete if all of the 8 required elements are completed.
[b] Excludes 6 providers which had no Female or Male General Sample records with a CEC in chart.
Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

Recording of Social Security Numbers

Recording of SSNs has been encouraged throughout the life of the program but services are not withheld from clients who do not report one. In the 2002 MRR, 44% of the reviewed CEC forms contained an SSN. CEC forms in charts maintained by private sector providers were substantially less likely to record an SSN than charts maintained by

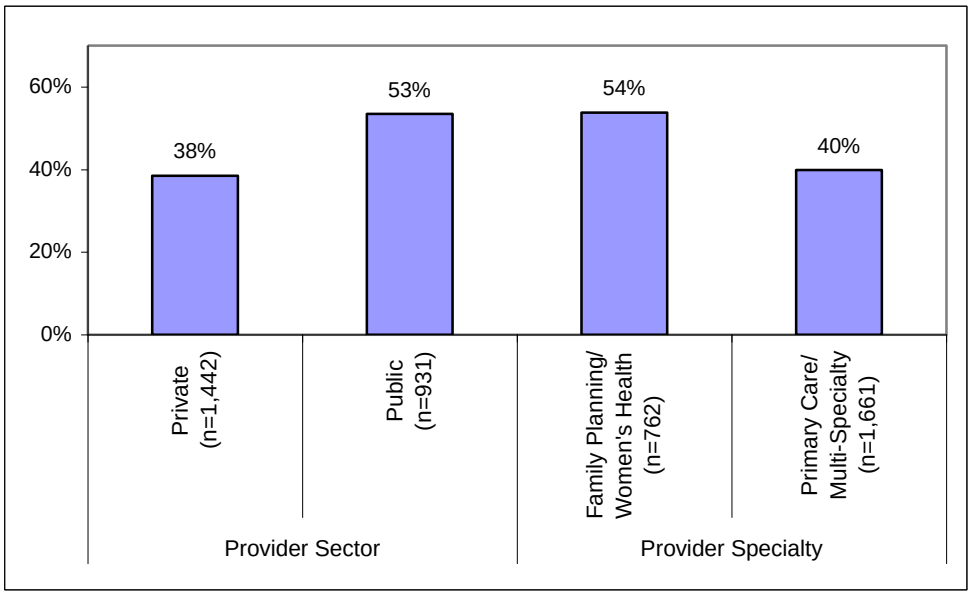
public sector providers (31% vs. 58%). Comparisons with administrative client enrollment data presented in a separate report[1] showed that at least 9% of charts abstracted in the 2002 MRR had an SSN recorded in the CEC but not in the administrative client enrollment record. For at least another 5% of charts, the SSN was recorded in the administrative client file but not in the chart. Matching of the SSN values recorded in the chart and administrative data was not performed because in the 2002 MRR the exact values were not abstracted.

In the 2007 MRR, CEC forms found in the charts were abstracted and additional data about values in certain fields, including the SSN, were collected. The proportion of CEC forms that had an SSN remained at 44%, as was found in the 2002 MRR. Although the gap between private and public providers has narrowed, private providers continued to report a significantly lower proportion of SSNs compared to public providers (38% vs. 53%, $p<0.01$). Primary Care/Multi-Specialty providers also reported a significantly lower proportion of SSNs compared to Family Planning/Women's Health Providers (54% vs. 40%, $p<0.01$). See Figure 9.4.2.

To assess the accuracy of SSN reporting and to evaluate the potential for increasing the usability of the SSN reported in administrative data, the exact values of the SSN recorded on the CEC were analyzed. If the SSN was missing from the CEC, abstractors were instructed to examine the entire chart and record the SSNs found outside of the CEC in a separate field. The SSN values found in charts that included a CEC were then compared to those recorded in the administrative client enrollment file that covered the abstraction period. [20]

[20] Enrollment file data current as of January 7, 2006.

Figure 9.4.2. Proportion of CEC Forms with Social Security Number, by Provider Sector and Specialty (n=2,373)[a]



[a] Excludes 327 charts in which the CEC form was not found.
Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

Comparison of data from charts in which a CEC form was found to the administrative client enrollment file showed that 35% of the records had matching SSNs recorded in both the chart and the client file; 3% had an SSN found in both data sources but the values did not match; 10% had an SSN found in the chart only, including 8% with an SSN recorded on the CEC and 2% with an SSN located elsewhere in the chart; and 4% had an SSN recorded in the administrative client file only. For 48% of the records, an SSN was not recorded in either of the data sources. See Table 9.4.3.

Table 9.4.3. Reporting of the Social Security Number in Medical Record Compared to Administrative Client Enrollment File (n=2,373)[a]

SSN Reporting	No.	%
SSN found in:		
Chart and Client File, Data Match	833	35%
Chart and Client File, No Match	75	3%
Chart Only - CEC Form	183	8%
Chart Only - Elsewhere in the Chart	45	2%
Client File Only	88	4%
Not Found Anywhere	1,149	48%

[a] Excludes 327 charts in which the Client Eligibility Certification form was not found.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples, and administrative client enrollment data.

Of the non-matching values found in the chart and the administrative client enrollment file, the vast majority differed by no more than one or two digits. Of charts that did not have a CEC, 32% (105 out of 327) had an SSN located elsewhere in the chart; these SSNs were not matched to the administrative client file.

Informed Consents for Invasive Procedures

Program standards require that informed consent, verbal or written, be provided in a language understood by the client and a signed consent shall be obtained for all invasive procedures. In the 2002 MRR, charts were examined for the presence of informed consents obtained prior to the performance of covered invasive procedures. Consents found in the chart were not examined for completeness. In the 2007 MRR, abstractors were instructed to record whether the consent was found and if so, whether it was complete. There were a total of 66 covered invasive procedures performed in the abstracted visits that required an informed consent. Of those, high completion rates were found for IUC insertion, cryotherapy and LEEP (84%, 80% and 100%, respectively). See Table 9.4.4.

Table 9.4.4. Informed Consent for Invasive Procedures Performed at the Visit (n=66)

	Complete Consent in Chart		Consent Incomplete or Not in Chart		Total Procedures
Procedure Performed[a]	No.	%	No.	%	No.
IUC Insertion/Reinsertion	16	84%	3	16%	19
IUC Removal	7	30%	16	70%	23
Cryotherapy	16	80%	4	20%	20
LEEP	3	100%	0	0%	3
Implant Removal	0	0%	1	100%	1

[a] A single consent may have included two procedures.

Source: 2007 Family PACT Medical Record Review, Female General Sample.

The low proportion of complete consent forms for IUC removals (30%) may be due to providers who consider verbal-only consent for this procedure sufficient in some clinical situations or that consent for a removal is already included in the provider's general consent for treatment.

In addition to procedures shown in Table 9.4.4, the charts contained 23 consents[21] for tubal ligation and 9 consents for vasectomy. Since both procedures are frequently referred out by providers, completeness of these consents was evaluated based on the pre-operative portion of each, regardless of whether the procedure had actually been performed. A complete[22] and accurate pre-operative portion of the PM 284 consent form for sterilization is critical for referral providers to obtain reimbursement. Of consents for tubal ligation, 20 were complete and three were incomplete. Of consents for vasectomy, eight were complete and one was incomplete.

Medical History Form

In the 2007 MRR, medical history checklists were found in 76% of female charts (1,777 out of 2,329) and 70% of male charts (260 out of 371). Nearly all checklists found included personal medical history (95% for females and 97% for males). The majority of

[21] These procedures require consent form PM 284 in the female or male version.

[22] Abstractors evaluated consents for completeness by using a cardboard sheet which when placed on top of the consent form, made each of the required fields appear in a window cut in the sheet. If any of the windows were empty, the consent was considered incomplete.

checklists also included family medical history (88% for females and 85% for males), while contraceptive and sexual history was included less frequently (77% for females and 70% for males). See Table 9.4.5.

Table 9.4.5. Elements Included in Medical History Form (n=2,037)[a]

	Females (n=1,777)		Males (n=260)	
Element Included	No.	%	No.	%
Personal Medical History	1,686	95%	252	97%
Family Medical History	1,567	88%	221	85%
Contraceptive and Sexual History	1,377	77%	183	70%

[a] Excludes 552 female and 111 male clients' records that did not have a history checklist in chart.

Source: 2007 Family PACT Medical Record Review, Female and Male General Samples.

Reproductive and Contraceptive Assessment for Females

Elements essential to the assessment of a female client seeking family planning services include menstrual and pregnancy history and information about current contraceptive method. While an established client may not need such information to be recorded at every visit, clients new to the provider should be queried in these areas and the program standards require that an assessment be documented. The analysis of provider adherence to the minimum standards for reproductive and contraceptive assessment is therefore limited to 917 female clients who were new to the provider at the first abstracted visit. Provider adherence was scored based on recording of the three essential elements: gravidity, date of last menstrual period, and client's contraceptive method. Providers were considered to have met the standard if all three elements were documented at least once within either the first or second visit.

Overall, providers who served new clients met the minimum documentation standard for 78% of client charts. Table 9.4.6 shows the proportion of charts for which the minimum standard for reproductive and contraceptive assessment was met, by age, provider sector and specialty. There was no significant difference between adherence to the standards for adolescents (76%) and adults (78%). However, among clients served by public sector providers, adolescent clients' charts were significantly less likely to meet the minimum standard than adult clients' charts (70% vs. 82%, $p<0.05$).

Table 9.4.6. Documentation of Reproductive and Contraceptive Assessment for Female Clients New to the Provider, by Age, Provider Sector and Specialty (n=917)

	Age 19 and under			Ages 20-55		
	Minimum Standard Met[a]		Total Clients	Minimum Standard Met[a]		Total Clients
	No.	%	No.	No.	%	No.
Provider Sector						
Private	88	81%	109	404	77%	527
Public	64	70%	91	156	82%	190
Provider Specialty						
Family Planning/Women's Health	55	79%	70	167	77%	216
Primary Care/Multi-Specialty	97	75%	130	393	78%	501
Total	152	76%	200	560	78%	717

[a] Minimum standard is met when gravidity, last menstrual period, and method of contraception before or after the visit are documented within the first two visits with the new client.

Source: 2007 Family PACT Medical Record Review, Female General Sample.

Chart Legibility and Ease of Abstraction

Medical records must be legible, organized, and complete to support claims for reimbursement for the services provided to Family PACT clients. Legibility and ease of abstraction were assessed by abstractors using a scale of 1 to 5, where "1" indicates great difficulty and "5" great ease. Ninety percent (90%) of the medical records reviewed in the 2007 MRR were scored by abstractors as not difficult to read or to abstract.

Use of Electronic Medical Records

Due to a considerable interest in electronic medical records that followed the implementation of federal and state privacy protection rules in 2003,[23] the 2007 MRR was used to assess the extent to which providers rely on electronic records. Abstractors were instructed to consider the record electronic if all or a portion of the clinical record is accessed electronically by the provider during a patient encounter, even if a paper record is later printed out. Among the 201 provider sites that were visited by the abstraction team, at only 13 sites (6%) were one-fifth or more of the abstracted records electronic.

Discussion

Compared to the 2002 MRR, both retention of the CEC forms in the chart and completeness of CEC forms have substantially decreased. Field observations during data collection and anecdotal reports from the audit by the Centers for Medicaid and Medicare Services (CMS) conducted in 2005 suggested that instead of using the CEC as required by the program, some providers relied on alternative documents, such as general financial questionnaires and public assistance applications, or electronic records for the information required to complete an administrative transaction for each client. Since the

[23] The Health Insurance Portability and Accountability Act, enacted by Congress in 1996, required implementation of the Privacy Rule protecting personal health information (PHI) on April 14, 2003. This was followed by implementation of the Transactions and Code Sets Rule governing electronic transfer of PHI on October 16, 2003. California's Confidentiality of Medical Information Act can be found at Part 2.6 of Division 1 of the California Civil Code.

PPBI mandates that a complete CEC is retained in the chart for each client, renewed efforts are warranted to increase provider awareness and compliance with documentation requirements for client eligibility screening. Electronic versions of the CEC form with an electronic signature option should be considered to support efforts to convert to electronic records, assure inclusion of the CEC form in client records within such systems and to better capture information about each eligibility screening performed.

Since the 2002 MRR, there have been several provider-focused interventions to increase SSN reporting. A November 2002 Provider Letter directed providers to ask every client for their SSN and to either record it on the CEC or document the reason the client could not provide one on the CEC. In anticipation of the CMS 1115 Medicaid waiver renewal in October 2004, the accurate completion of all elements of the CEC was identified as a program priority in presentations to stakeholders. In the spring of 2005, providers received an alert that CMS would conduct a series of on-site audits in the summer of 2005 to ascertain if providers were correctly collecting information for the CEC and screening for eligibility accurately, with an emphasis on the recording of the SSN. Yet, compared to the 2002 MRR, the SSN reporting in the CEC has remained low. However, the analysis that matched SSNs found in the chart with those on file in the administrative client enrollment records suggests that reporting of SSNs to the program could be increased by up to ten percentage points. Therefore, additional efforts to increase SSN reporting are needed. The mismatch between SSNs in the medical charts/CEC forms and client eligibility files may be explained by data entry errors, as most of the differences occurred in one or two numbers. However, this finding reinforces the need to design interventions that not only stress the completeness of SSNs but also accuracy of SSN reporting.

Retention of complete informed consents for invasive procedures remained high in the 2007 MRR. Future MRRs should continue to monitor this quality indicator.

In 2007, following a recommendation from the 2002 MRR, OFP disseminated checklist-style medical and sexual history and physical examination forms. The information on the use of checklists for medical history collected in the 2007 MRR will thus serve as a baseline for future assessments of the quality of documentation.

Reproductive and contraceptive assessment for new female clients, even when a relatively relaxed definition is used, was not documented for nearly a quarter of new clients. Providers should be reminded of the importance of comprehensive assessments, and this quality indicator should continue to be monitored in future MRRs.

As of 2005, only a small proportion of providers used electronic medical records. As more providers convert to electronic record systems, the impact on future MRRs should be considered and the study design adjusted as appropriate.

The following specific steps to improve the quality of documentation should also be considered:

- Include a reminder at the end of each POS and internet HAP card activation of re-certification transaction for the staff member to sign the CEC form and assure that it is completely filled out.
- Consider adding fields/steps to the internet certification transaction to capture the name and title of the staff person completing the transaction. This could be done as an electronic signature that is maintained in the eligibility file for audit purposes.
- Distribute the current training module on CEC completion to enrolled providers on CD or DVD to eliminate barriers to participation in internet trainings.
- Consider adding a requirement to the enrollment transactions that a reason be reported when SSN is skipped (left blank) on the Eligibility File.
- Continue to promote availability of the history and physical forms developed by OFP and available on the website.
- Consider revisions to the CEC form to facilitate accurate completion of fields required for screening of client eligibility.

Reference List

1. Bradsberry, M.; Hulett, D. *Comparison of Medical Records Review (MRR) Data to Family PACT Enrollment and Claims Data: General Female Cohort & General Male Cohort*; 05.

Chapter 10. Discussion and Conclusions

The goal of the 2007 MRR was to assess the quality of services delivered through Family PACT and to answer the following program evaluation questions:

- Were family planning and reproductive health care services provided under Family PACT consistent with the program standards?
- Has the quality of services delivered under the program changed over time?
- Did the quality of delivered services differ by provider or client characteristics?

The 2007 MRR assessed six of the seven program standards: Access to Care, Availability of Covered Services, Clinical and Preventive Services, Education and Counseling, Linguistic and Cultural Competence, and Informed Consent. The Confidentiality standard could not be assessed with the MRR. Each standard is not mutually exclusive. For example, provision of referrals pertains to Access to Care, Availability of Covered Services, Clinical and Preventive Services, and Education and Counseling. Provision of contraceptives is addressed in Access to Care, Availability of Covered Services and Clinical and Preventive Services. For this reason, many of our analyses evaluated adherence to more than one standard.

The standards also stipulate that documentation shall support services claimed for reimbursement. We evaluated chart documentation for the clinical rationale for providing program services, including, but not limited to, client assessment, diagnosis, treatment and follow-up, to assess the extent to which medical records support claims and to detect potential overutilization. We also reviewed other quality indicators for documentation including presence of consent forms for surgical sterilization, evidence of mandated reporting of STI cases to local health jurisdictions, and completeness of Client Eligibility Certification (CEC) forms. Finally, as in past MRRs, we evaluated trends in client retention and method continuation as additional program quality indicators.

Access to Care

The Family PACT Program plays an important role in meeting the need for family planning reproductive health services in California. Compliance with Family PACT's Access to Care standard assures readily accessible visits, contraceptive methods and supplies, and referrals to local resources for services beyond the scope of the program. The MRR is one component of a multi-faceted analysis of access to care within the Family PACT Program that also includes Client Exit Interviews and Telephone Access Surveys.

The large and diverse statewide provider network and on-site eligibility determination and enrollment have made an impact on reducing barriers to accessing services. The program is providing services to more clients earlier in their reproductive lives with the services necessary to prevent unintended pregnancies and to meet their reproductive

goals. According to the 2007 MRR, an increasing number of female clients served by the program had never been pregnant.

Family PACT provides access to all FDA-approved contraceptives. The standards stipulate that while most contraceptive methods must be offered by every Family PACT provider, provision of more complex methods such as sterilization, intrauterine contraceptives (IUC) and implant insertion may be by referral to another provider who has appropriate training and experience. The need to schedule a visit with another provider may be a barrier to access and deter clients from adopting these high-efficacy contraceptives. This subject is discussed in more detail in the Availability of Covered Services section.

The standards stipulate that referrals to local resources shall be made available to clients when needed medical and psychosocial services are beyond the scope of the provider's organization and beyond the scope of services reimbursable by the program. Overall, very few referrals were documented in the charts. Documented referrals for primary care services were likely to be an underestimation of clients in need of medical care. Providers, particularly those who deliver primary care on-site, should be encouraged to systematically identify clients in need of a usual source of care, and refer clients for primary care services, as appropriate.

Availability of Covered Services

This standard identifies contraceptive methods and services (including emergency contraception), education and counseling, referral mechanisms, STI screening and treatment, and cervical cancer screening that must be provided on-site or by referral. Details on STI testing and treatment follow below under the Clinical and Preventive Services standard.

Provision of Methods with High Contraceptive Efficacy

Overall, Family PACT providers offer access to a full array of contraceptive methods. However, the use of specific methods varied by subgroups. Differences in provision of methods with high contraceptive efficacy to members of certain racial/ethnic groups may be due to a combination of provider behavior and client preferences. Non-White women were less likely to exit the Family PACT visit with highly effective methods (sterilization, implant, injectable contraceptives) than White women. On the other hand, women who had IUC insertions and removals were almost exclusively Latinas.

One barrier to the adoption of IUC as a method may have been the narrow definition of appropriate candidates. Analysis of the IUC Insertion Sample suggested that providers applied conservative criteria when selecting candidates for IUC, which reduced the pool of eligible women. Once the IUC was inserted, providers appeared to manage the use of IUCs and potential side effects appropriately. We found little evidence of premature removals due to side effects. Hence, it is reasonable to assume that IUC use in Family PACT can be increased by promoting wider use of this method. After 2005, OFP issued a Clinical Practice Alert containing clinical practice guidelines for the use of IUCs and conducted IUC insertion trainings across California. In the future, we hope to show

successful implementation of broader eligibility criteria for IUC insertions and an increase in IUC use, particularly among higher proportions of nulliparous, adolescent clients, and non-Latina clients.

In July 2008, OFP added another highly effective, long-term contraceptive as a Family PACT benefit, the contraceptive implant Implanon™. As with the evaluation of IUC services, OFP may want to monitor similar criteria regarding the management of Implanon™ insertions in future MRRs.

Providers should be encouraged to discuss and document plans for contraceptive use or plans for pregnancy among women who leave without an effective contraceptive method, e.g., after IUC removal, so that appropriate follow up can take place in future visits. Further analysis should explore whether women who continue to rely on or switch to low-efficacy methods, or who receive no method after several Family PACT encounters, need special intervention.

The quality of sterilization counseling and referrals could not be assessed with the chart review methodology. It was not possible to select a representative cohort of candidates for sterilization based on claims data because women may use a reversible contraceptive method while they discuss surgical sterilization with their provider and could not be identified as candidates for sterilization. We recommend assessing barriers to obtaining sterilization services with other complementary evaluation methodology such as client and provider surveys.

Provision of Services On-site or by Referral

The 2007 MRR found that specialized Family PACT services were more likely to be rescheduled on-site with the same provider than referred to other providers, with the exception of mammography and complication management services. Rescheduling may be arranged because the particular procedure needs more time and resources or because the client has to be seen by a different clinician. In either case, rescheduling has the advantage that clients do not have to go to another provider's office.

Availability of covered services by referral may impact IUC utilization in the Family PACT Program. In the IUC Insertion and Removal Samples, we found that IUC removals were performed by providers representing both sectors and specialty groupings. However, IUC insertions tended to mainly be performed by public sector providers and Family Planning/Women's Health specialists, suggesting that availability of this method is lower at private sector and Primary Care/Multi-Specialty sites. Private sector and primary care providers who perform IUC removals but no insertions may particularly benefit from attending an IUC training program, as they already serve the population that is familiar with this method.

Follow-through of both referrals and rescheduled visits was found to be low, in particular for rescheduled or referred sterilization, IUC, or mammography services. Further exploration about the particular reasons for insufficient follow-through and strategies to improve receipt of these Family PACT services is warranted.

Emergency Contraception and Use of High-efficacy Methods

Women who are seen for emergency contraception (EC) after unprotected sex are a group that should be targeted to adopt high-efficacy methods. Overall, providers tended to use the EC visit as an opportunity to counsel clients about methods of contraception; nearly two-thirds of those receiving EC adopted more effective methods of contraception at the end of the EC visit. Provision of EC should be improved among all providers and particularly among private sector and primary care-focused providers. In the past few years, OFP conducted several interventions to increase EC utilization. A Clinical Practice Alert on the subject of EC was released in December 2005, which highlighted advance provision of emergency contraception. This immediately followed a policy change that increased the dispensing quantity of Plan B from one pack to two per visit. Client education materials regarding EC were updated. The information on EC trends presented in this report will provide a baseline for evaluating these and other interventions in future MRRs.

Clinical and Preventive Services

This standard outlines the scope, type and quality of family planning and reproductive health services that the program expects providers to deliver. These include contraceptive services and clinically indicated laboratory testing; health history and physical exams; pregnancy testing and the associated education and counseling; screening, testing and treating STIs; cervical cancer screening and treatment of pre-invasive lesions; and follow-up care for complications of a contraceptive method or of the treatment of an STI.

Laboratory Testing as Clinically Indicated

The standards address laboratory testing for purposes of screening for cervical pre-cancers and cancers, STIs, and testing performed as clinically indicated. We found that providers tended to test appropriately for cervical cancer, as well as for chlamydia among women under 26 years of age and males. However, there was over-utilization of chlamydia testing among women age 26 and older, as well as pregnancy testing and HPV testing in general.

The 2007 MRR abstraction period coincided with substantial changes in national clinical guidelines for cervical cancer screening. The lower screening rate found in the 2007 MRR compared to the 2002 MRR suggests that providers have begun incorporating the new screening guidelines into their clinical practice.

The standards require follow-up of abnormal cervical cancer screening results either on-site or by referral. The rate of appropriately documented follow-up in response to abnormal Pap smear results should be improved, however the data do not capture abnormal Pap tests managed outside of Family PACT and may thus underestimate the proportion of abnormal Pap smears that are being followed up. Future studies should evaluate to what extent women with abnormal Pap results receive care through other sources, and whether provider training is necessary to facilitate and document successful referrals.

Utilization of HPV tests in the context of abnormal Pap test results was not assessed in prior MRRs. About half of HPV tests performed were associated with an ASC-US Pap result and will serve as a baseline for future MRRs. Our results suggest that some inappropriate HPV testing with LSIL was occurring at the time that the MRR was conducted.

The single nationally recognized standard applicable to Family PACT for STI testing is annual chlamydia screening of women under age 26, and screening when clinically indicated by risk factors for women aged 26 and older. Approximately two-thirds of women under age 26 years had a chlamydia test during the year. The MRR showed, however, that there was no significant difference in testing rates among women under age 26 as compared to women age 26 and over. The program promotes a goal of 95% annual screening rate for younger women. Chlamydia screening information was broadly disseminated to providers in a variety of formats including a 2003 Clinical Practice Alert, targeted provider letters in 2003, periodic audio-conferences, online training modules, and the semi-annual Provider Profiles that were initiated in fall 2005. OFP should continue to reinforce these important public health testing guidelines and should develop targeted technical assistance and training to providers who screen inappropriately. There are no national or program chlamydia screening guidelines for asymptomatic men against which to evaluate the appropriateness of the screening of men in Family PACT.

OFP should continue to monitor chlamydia positivity at the level of individual providers for clients tested by Quest Diagnostics/Unilab and other commercial laboratories serving significant numbers of Family PACT clients. A strategy could be developed to offer provider-specific reports showing levels of testing by age groupings for female clients and corresponding positivity rates, with special note of rates that are below the cost-effective threshold, especially among women age 26 and older.

Analysis of clinical indication for pregnancy tests based on last menstrual period (LMP) and contraceptive methods suggests over-utilization of pregnancy tests. A Clinical Practice Alert was released in December 2005 with a key point that routine pregnancy testing, i.e. without clinical indication, is discouraged. OFP should continue quality improvement interventions, such as the Provider Profiles first issued in Fall 2005, on the subject of pregnancy testing and monitor whether these efforts are resulting in improved practice utilization patterns.

Sexually Transmitted Infections Risk Assessment, Testing and Treatment

Documentation of annual STI risk assessment, though low overall, is consistent with findings from numerous population-based and provider surveys. The 2002 MRR recommended the development of a risk assessment tool. In response, OFP developed both reproductive history and physical exam forms in 2007. The impact of this form on documentation cannot be observed in the 2007 MRR which uses 2005 data. Future MRRs should assess whether risk assessment improves with the use of standardized documentation tools.

We found that 2/3 of female chlamydia cases and almost all male chlamydia cases were treated within 14 days. However, we noted some clients lost to follow-up due to failure

to return and insufficient contact information among those who needed to wait for test results before treatment. OFP should continue efforts to increase timely treatment for asymptomatic screened females found to be CT-positive after their visit.

To reduce the risk of re-infection it is important to treat all partners of patients with chlamydia. Partner management was documented for just over two thirds of chlamydia cases, a substantial decrease from the 2002 MRR. One-fifth of female cases and one-tenth of male cases had documentation of patient delivered partner therapy (PDPT). PDPT should increase the levels of partner treatment, and to improve its use, OFP should consider alternative methods of notification and treatment as recommended in the CDC guidelines[1] for Expedited Partner Therapy.

CDC and California State guidelines recommend retesting of positive cases after three months to reduce the risk of undetected asymptomatic re-infection. The rates of retesting should be further improved; the re-testing rate was similar at 32% in the 2007 MRR compared with the 38% rate reported in the 2002 MRR . OFP should consider promoting interventions that improve the likelihood of return by using alternative methods of reminder systems (such as text messaging alerts) and facilitating either express visits for chlamydia retests with drop-off of self-obtained vaginal swabs or urine specimens. Technical assistance should address documentation issues that may have contributed to under-reporting of retesting in the medical record. Technical assistance strategies could include webinars, an updated Clinical Practice Alert, and provider newsletters. OFP should consider monitoring provider-specific claims data.

Education and Counseling

A limitation of the MRR is that the quality of counseling cannot be abstracted from clinical records alone and needs to be complemented by other evaluation methods such as client exit interviews or direct observation to allow for a more comprehensive evaluation of provider adherence to this program standard. However, the MRR can offer insight into the breadth of topics covered, what clinical situations prompted it, and whether documentation supported billing for E&C Codes.

Client-Centered Education and Counseling

The Family PACT Program Standards require client-centered education and counseling in family planning, in promoting optimal reproductive health, and in clarifying personal family planning goals. The findings of this report suggest high adherence to this program standard. More than three-quarters of clients had documentation of receiving education and counseling services at some time in 2005, a notable increase compared to the 2002 MRR. The most common topics for both males and females continued to be method use/contraceptive options and STI/HIV prevention. Adolescents were more likely to receive counseling services than adults on a per-visit and per-client basis, consistent with OFP's emphasis on sexual health education to teens. Improvement can be made for specific client subgroups where counseling can make an important impact on outcomes. For example, one-quarter of clients adopting new methods and one-third of clients presenting with an STI concern did not have counseling documented in the chart.

The program standard requires that education and counseling services are appropriately documented in the medical record to support claims for reimbursement. The finding that more than a quarter of visits coded as E&C on claims were not supported by chart documentation warrants a provider-focused intervention, particularly among Family Planning/Women's Health and public sector providers.

The proportion of counseling visits supplemented by health education materials showed substantial differences between provider sectors and specialties. It is not clear whether private sector and Primary Care/Multi-Specialty providers use printed materials less frequently or whether the differences reflect disparate charting practices. The standard requires that education and counseling be supplemented with written materials, as needed, but does not require chart documentation of their distribution. OFP may want to consider documentation on provision of written materials as a future measure of quality of care.

Pregnancy Testing Counseling

Family PACT standards require that education and counseling services be provided in conjunction with pregnancy testing. The majority of the visits that included a pregnancy test had documented counseling and/or referral(s). Documentation of a discussion of all options (prenatal care, adoption and pregnancy termination services) as defined in the standards was present in 90% of positive pregnancy tests. The proportion lacking documented counseling after a positive test was higher in the group of Limited English Proficient (LEP) women who needed an interpreter to bridge the language gap. Family Planning/Women's Health providers were more likely to document delivery of comprehensive options counseling than were Primary Care/Multi-Specialty providers. Four in five women had documented referrals after a positive pregnancy test. This is remarkable considering the scarce documentation of referrals for other primary care and psychosocial concerns. OFP will be dedicating professional education efforts to support pregnancy options counseling through Provider Forums scheduled to begin in late 2008. Additional efforts to target Primary Care/Multi-Specialty providers and providers who need interpreters to communicate with their LEP clients may be warranted.

In general, a visit with a negative pregnancy test result improved the provision of higher-efficacy contraceptives at the end of the visit. Over two-thirds (70%) of clients who came in with no method left the visit with contraception. Nearly 40% who were contracepting switched to a method in a higher efficacy tier. This indicates adherence to the standard to counsel about contraceptive options at the time of a negative pregnancy test.

A small number of women with a pregnancy test were attempting pregnancy or declined a method, however not all providers assessed women's fertility intentions and documented counseling on preconception care in these cases. A corresponding Clinical Practice Alert on preconception care is scheduled to be issued to providers in 2008. This Alert will stress the opportunity to encourage the use of effective contraception to women with negative pregnancy tests who are not attempting pregnancy. Another group that should receive preconception care on a routine basis is women who have IUC removal as many who have a removal do so because they intend to become pregnant.

Linguistic and Cultural Competency

This standard requires that Family PACT services are provided in a culturally sensitive manner and in a language understood by the client. Medical records do not allow for a comprehensive assessment of linguistic and cultural appropriateness of service delivery. However, the analysis of selected quality of care indicators in encounters with clients with Limited English Proficiency (LEP), where interpretation services were provided, showed that clients who were assisted by an interpreter other than a bilingual provider were significantly less likely to have documentation of STI risk assessment, counseling or referrals after a positive pregnancy test or education and counseling services on reproductive health and other topics. OFP should offer Family PACT providers training on working with interpreters so that they can ensure quality communication with their clients. This training is particularly crucial in encounters where providers may have to rely on untrained interpreters to bridge the language gap. Additional analysis should be performed to validate the high number of education and counseling services delivered by bilingual providers by comparing them to English monolingual providers who use ancillary interpreters.

Further studies should assess the quality of services to LEP clients who were seen without an interpreter by a monolingual provider. Evaluation strategies should also be developed to assess the impact of quality of interpretation on clients' understanding of reproductive health issues and contraceptive use.

Informed Consent

The standard for Informed Consent stipulates that clients are educated about their role in eligibility determination and on-site enrollment in the program. Accurate, legible completion of the Client Eligibility Certification (CEC) form is important to program integrity as it is a legal document that clients sign under penalty of perjury.

The 2007 MRR found a high proportion of incomplete or missing CEC forms. Consistent with 2002 MRR findings, the most likely elements to be complete included family size, income, and client signature. The elements most likely to be missing were the staff certification and staff signature. Given the large number of incomplete CECs, OFP may want to distribute a CD or DVD training module on CEC completion to enrolled providers to eliminate barriers to participation in internet trainings.

In the 2007 MRR, informed consent was reviewed for covered invasive procedures as a component of contraceptive management, including sterilization, IUC insertion, as well as LEEP and cryotherapy. For most procedures, the majority of records contained complete consent forms. The small number of invasive procedures in this sample did not allow us to evaluate whether certain provider groups might be in need of special attention to improve their documentation.

Client Retention and Contraceptive Continuation

As a program quality of care indicator, the Longitudinal Sample assessed program and contraceptive continuation over a period of four years. Three-fourths of the sample had more than one visit. On average, women had 4.1 visits across the four years, spanning an average of 16 months. Latina and White women were more likely to return after the first abstracted visit and had a higher number of visits spanning longer time periods than women of other race/ethnicities. Women ages 20-29 were more likely to return than were adolescents or those aged 30 and over. There was considerable variation in continuation between different methods of contraception, suggesting the need to strengthen method continuation particularly among user-dependent methods such as pill, patch, ring, and condoms. Complementary analysis of administrative data should assess the association of these racial/ethnic and age group differences with contraceptive choices, contraceptive continuation and, ultimately, unintended pregnancies.

Assessing Documentation

Medical records were assessed for documentation as an indicator of quality of care delivered. Several areas were identified in need of more complete documentation. Most of these areas can be addressed through provider education and training and posting of tools on the website.

Medical and Sexual History, including STI Risk Assessment

We found gaps in documentation in several areas that serve as clinical background information in medical decision making, including medical and sexual history and STI risk assessment. In 2006, OFP developed and disseminated, via a Provider Letter, model reproductive history and exam forms for males and females to improve chart documentation. The forms are downloadable from the Family PACT website and may be adapted and personalized by providers. It is anticipated that the adoption of these standardized forms will facilitate more complete documentation of reproductive health history including contraceptive use among male clients, assessment of usual source of care, and STI risk assessment. These should be supplemented with provider training that addresses age and racial/ethnic differences in risk assessment documentation.

Sexually Transmitted Infection Diagnosis, Treatment and Follow-up

Nearly 90% of diagnosed cases of chlamydia infection had documented treatment information in the medical record. OFP should continue to encourage providers to improve treatment documentation for better monitoring of this quality indicator.

Documentation of partner management decreased significantly from 2002 MRR. This is of concern as it was anticipated that the codified patient delivered-partner therapy option for providers would result in a considerable improvement in getting partners treated. This finding may represent insufficient documentation to identify clients who present because they are an exposed partner. However, OFP should investigate whether the decrease is due to a change in service delivery so that appropriate quality improvement interventions can be developed.

Mandated Reporting of Sexually Transmitted Infections

Nearly three-quarters of chlamydia cases had documented reporting to the local health jurisdiction. This is a significant improvement from the 2002 MRR, especially for males. However, provider training is needed to achieve the goal of the mandated 100% reporting.

Pregnancy Test Results and Options Counseling

Although the vast majority of pregnancy tests had results and follow-up documented, the method of contraception at the beginning of the visit and the last menstrual period (LMP) frequently were not documented at the time of a pregnancy test. This indicates a lack of documented medical indication for performing the test, as defined in the program standards. As a quality of care issue, providers should be encouraged to document medical indication for testing.

Documentation of Preconception Care

We found few medical records that documented preconception care counseling. Preconception care is a relatively new term and providers might benefit from tools that guide them on how to document counseling on this topic. If clinicians use the reproductive history tool or an equivalent form that contains all those elements, they will have assessed all topics that are relevant for preconception care counseling.

Documentation of IUC Types and Follow-up after Removal

Nearly a third of IUC insertion visits did not contain information on the type of IUC and/or the lot number as required by regulation. Notations of a pre-insertion pelvic exam also were inconsistent. Improved record keeping during IUC insertion will facilitate appropriate follow-up counseling and management of side effects.

Similar to IUC insertions, IUC removal visits often did not contain information that would prove to be useful to continuity of care. Documentation of the type of IUC that was removed, length and experience with IUC use, and reasons for removal including pregnancy intention and plans for contraception facilitate a more accurate assessment of client preferences and better contraceptive counseling in future visits. Provider training on chart documentation should include pertinent details on the client's plans subsequent to IUC removal.

Documentation of Linguistic Appropriateness

The standards do not require documentation of interpretation needs or of the strategies used to address them. Nevertheless, the abstractors were able to identify in a number of visits that either a staff interpreter was present at the visit or that the provider was bilingual. The use of interpreters other than staff was rarely documented. We found several quality indicators to be compromised when interpreters were used in interactions with Limited English Proficient clients compared to interactions in which providers spoke the clients' language. In order to measure this component of care in future MRRs, providers should be encouraged to document how they addressed the language interpretation needs of their clients.

Differences over Time

Several topics explored in the 2007 MRR were measured in more detail than in the 2002 MRR or for the first time. While these indicators cannot be compared to previous chart reviews, this information will provide useful baseline data for ongoing monitoring and the next medical record review. Key indicators of each chapter are summarized in Table 10.1

Compared to the 2002 MRR, we found that Family PACT maintained high quality of care on key indicators. As can be seen in Table 10.1, the number of women who used high-efficacy (Tier 1 and 2) methods at the end of their first Family PACT visit increased from 28% in the 2002 MRR to 50% in the 2007 MRR. This is similar to the findings noted in the 2002 MRR of the impact of the first Family PACT encounter. The impact of one visit was demonstrated by the finding that 54% of the female clients left using a high-efficacy method compared to 34% at the beginning of their first visit. The proportion of visits with documentation of education and counseling services increased by 10 percentage points compared to the 2002 MRR, indicating that providers continue to provide this crucial service to Family PACT clients. The number of pregnancy tests per female client and the proportion of clients with positive pregnancy tests who received a referral stayed level in the 2007 MRR.

A decline was observed for some quality indicators for the management of STIs. The proportion of women with timely treatment for chlamydia (within 14 days of diagnosis) decreased by 20 percentage points from 2002 to 2007. In contrast, a higher proportion of men seen by public sector providers received timely STI treatment in 2007 than in 2002. This can be explained by the fact that male cases are more likely to present with an STI concern or STI symptoms and are therefore more likely to be presumptively treated, while female cases tend to be asymptomatic and are more likely to be treated after a positive test result. In addition, the rates of retesting three to four months after a chlamydia diagnosis decreased slightly, by three percentage points between the 2002 MRR and the 2007 MRR. Efforts to improve re-testing of CT cases should remain a high priority in order to identify potential repeat infection and ongoing transmission.

Table 10.1. Selected Family PACT Performance Objectives

Performance Objectives	2002	2007
Contraception		
Increase the proportion of women using Tier 1 and 2 methods at the end of the first visit, new clients		
Beginning of Visit	34%	28%
End of Visit	54%	50%
Difference beginning to end of visit	20%	22%
Increase the proportion of counseling to women who start or switch methods		
Adults	N/A	71%
Teens	N/A	80%
Increase the proportion of visits with male clients documenting contraceptive method at end of the visit	N/A	72%
Pregnancy Testing		
Maintain or decrease the average number of pregnancy tests per client per year	1.5	1.4
Increase the proportion of positive pregnancy tests with documented follow-up among clients served by private providers to the level of public providers		
Private	66%	85%
Public	88%	96%
Increase the proportion of visits with documentation of a method of contraception at the beginning and end of a pregnancy test visit	N/A	71%
Increase the proportion of visits with documentation of the date of last menstrual period (LMP)	N/A	86%
Cervical Cancer Screening Guidelines		
Decrease the proportion of women who receive a Pap test annually	57%	49%
Increase the proportion of HPV tests that are clinically appropriate	N/A	77%
Education and Counseling		
Maintain or increase the proportion of visits that document education and counseling services	66%	76%
Maintain or increase the proportion of visits that include documented education and counseling for clients adopting new contraceptive methods		
Adults	N/A	80%
Teens	N/A	71%
Maintain or increase the proportion visits that include documented education and counseling to clients who present with STI concerns		
Adults	N/A	69%
Teens	N/A	71%
Increase the proportion of claims billed with E&C codes that are supported by documentation of counseling services	N/A	72%
Intrauterine Contraception (IUC)		
Maintain or increase the proportion of women who continue to use their IUCs 18 months after insertion	N/A	69%
Increase the proportion of records with documentation of details on IUCs removed		
Where inserted	N/A	74%
Type inserted	N/A	59%
Duration of use	N/A	37%
Reason for removal	N/A	91%

Performance Objectives	2002	2007
Sexually Transmitted Infections (STIs)		
Increase the proportion of records with documented STI risk assessment among clients served by private providers to the level of public providers		
Females	N/A	57%
Males	N/A	71%
Increase the proportion of clients who receive timely treatment (within 14 days of specimen collection) for diagnosed chlamydia		
Females		
Private	85%	55%
Public	77%	69%
Males		
Private	93%	90%
Public	83%	97%
Increase the proportion of female chlamydia cases with partner management documented by private providers to the level of public providers		
Private	81%	52%
Public	91%	74%
Increase the proportion of female chlamydia cases with documentation of retesting within 3-6 months (based on MRR + Quest claims data)	38%	32%
Linguistic Appropriateness		
Increase the proportion of visits in which interpretation services were used that include documentation of the type of interpreter	N/A	82%
Increase the proportion of visits with female clients in which interpretation was provided that include documentation that an STI risk assessment was performed		
Language Concordant (Bilingual Provider)	N/A	65%
Language Discordant with Interpreter	N/A	57%
Increase the proportion of language-discordant visits that include documentation of follow-up after a positive pregnancy test to the level of language-concordant visits		
Language Concordant (Bilingual Provider)	N/A	100%
Language Discordant with Interpreter	N/A	81%
Increase the proportion of language-discordant visits that include documentation of education and counseling to the level of language-concordant visits		
Language Concordant (Bilingual Provider)	N/A	87%
Language Discordant with Interpreter	N/A	63%
Primary Care		
Increase the proportion of charts that include documentation of the client's usual source of care	N/A	62%
Increase the proportion of clients with no usual source care who receive referrals or rescheduled appointments for primary care	N/A	4%
Maintain the low proportion of Family PACT visits that include provision of primary care services	N/A	8%

Provider Differences

With the implementation of the Family PACT Program in 1997, OFP changed its family planning program from one based on year-to-year contracts with public and private nonprofit family planning agencies throughout the state to one that utilized fee-for-service agreements. Agreements were signed with qualified Medi-Cal providers who chose to enroll with Family PACT and agreed to comply with the Family PACT Program Standards. This expansion of the provider network and revised reimbursement structure allowed the integration of private solo and group medical practices and General and Family Medicine specialists, thus offering more access points to the program. The broader diversity of provider disciplines and greater variety of business models in which services were delivered posed a challenge to ensure consistency in the implementation of reproductive health quality standards.

Overall, many of the quality indicators reported in the preceding chapters did not vary by provider sector (public vs. private) or the percentage differences were not statistically significant. However, public sector providers were more likely to do targeted testing measured by a better yield of positive pregnancy test results, and to document the dispensing of emergency contraception and of referrals after a positive pregnancy test. They consistently showed a higher adherence to clinical standards for STI assessment, testing, treatment and follow-up than private sector providers. At the same time, private sector providers were significantly more likely to have education and counseling documented in the chart to support claims billed with dedicated E&C codes.

We also explored whether quality indicators differed by provider specialty. Family Planning/Women's Health providers were significantly more likely to have a better yield of positive pregnancy test results, more emergency contraception dispensing, and better documentation of the usual source of care, type of IUC inserted and documentation of pre-IUC insertion pelvic exam. In contrast, Primary Care/Multi-Specialty providers were more likely to document referrals for clients requiring STI treatment and PDPT as well as for women with positive pregnancy tests. They were also more likely to have the content of education and counseling services documented in the charts.

Many of the differences among providers can be addressed through the dissemination of pre-printed forms and checklists that prompt the delivery of key program services and support the documentation of essential record keeping components. Organizing web-based provider trainings and posting the training and resource materials on the Internet will reach providers with busy office schedules or located in remote areas.

Conclusion

This MRR provides critical information required to assess the fertility impact of the program, the quality of service delivery and Program progress in meeting the goals and objectives of the CMS 1115 Waiver. Overall, Family PACT providers are delivering services consistent with the program standards with some differences noted by provider sector and specialty. Most, but not all, quality indicators improved over time. However, the 2007 MRR identified gaps and areas of improvement such as improving the quality of medical record documentation, facilitating the provision of high efficacy contraception, and better follow-through on referrals to other Family PACT providers. The 2007 MRR is based on visits occurring in 2005 and therefore also provides a baseline data for quality improvement interventions that have been implemented since January 2006. New areas, such as assessment of usual source of care and quality of care to clients with Limited English Proficiency (LEP), will warrant further attention and monitoring in future medical record reviews.

Reference List

1. Centers for Disease Control and Prevention *Expedited Partner Therapy in the Management of Sexually Transmitted Diseases*; US Department of Health and Human Services: Atlanta, GA, 06.