APPENDIX A
EVALUATION DESIGN

SOUTH CAROLINA
MEDICAID FAMILY PLANNING WAIVER

South Carolina Department of Health and Human Services
Evaluation Design Report
9/19/2007

EVALUATION DESIGN REPORT FOR THE SOUTH CAROLINA FAMILY PLANNING WAIVER RENEWAL, 2008-2010

Information About the Demonstration

Project Dates

Initial Demonstration Waiver (coverage to post-partum women): Jan 1994 – Dec 1998 (services did not start until July 1994)
Amended Waiver (expanded to all women at or below 185% FPL): Jan 1997 – Dec 1998 (services did not start until July 1997)
First Waiver Renewal: Jan 1999 – Dec 2001
Second Waiver Renewal: Jan 2002 – Dec 2004
Third Waiver Renewal: Jan 2005 – Dec 2007
Pending Waiver Renewal: Jan 2008 – Dec 2010

Project Background

Through a special program authorized by SOBRA, optional coverage for women and infants (OCWI), South Carolina (SC) provides Medicaid coverage of health services for pregnant women with family incomes at or below 185% of the federal poverty level. Eligibility for OCWI Medicaid coverage ends two months after the birth of the child unless the women are able to meet the much more stringent income limits for the regular Medicaid program (roughly 50% of poverty). Given that, through OCWI, the Medicaid program was likely to be financially responsible for these women if they again became pregnant, in June 1993, the SC Department of Health & Human Services (SCDHHS) asked permission to extend Medicaid coverage of post-partum family planning services to the women for an additional 22 months in an effort to avert or delay subsequent pregnancies. The request was submitted to the Centers for Medicare & Medicaid Services (CMS, formerly known as the Health Care Financing Administration or HCFA, the agency within the US Department of Health & Human Services responsible for the Medicaid program). It was approved as a five year research and demonstration waiver in December 1993. The SC Medicaid program implemented the new waiver program effective with SFY 1994-95. The end date for the waiver was December 31, 1998.

In May 1996, SCDHHS contracted with the Center for Health Services & Policy Research, at the University of South Carolina to:

- design and deliver an evaluation of the original waiver to extend eligibility for family planning services to post-partum women with family incomes at or below 185% of the federal poverty level; and
- assist in developing an amendment to the original waiver to expand services to all women at or below 185% of poverty.

The planned expansion was based on the fact that through OCWI the Medicaid program would be financially responsible for any women with family income at or below 185% of poverty who became pregnant. So the state sought permission to amend the waiver to extend Medicaid coverage of family planning services to all women, regardless of prior pregnancy history, with family income at or below 185% of poverty. This request was submitted to CMS in April 1996,

and was approved as an amendment to the original waiver in January 1997. In addition to expanding eligibility, the approved amendment introduced budget neutrality requirements and expanded evaluation activities. The SC Medicaid program implemented the expanded coverage allowed by the amended waiver effective with state SFY 1998. The end date for the waiver was not changed from December 31, 1998.

The SC Medicaid program implemented the expanded coverage allowed by the waiver amendment within six months of receiving approval. However, the December 31, 1998, end date allowed only 18 months of such coverage before the waiver ended. Concerned that a longer time period was needed for a reliable evaluation of the expanded coverage, SCDHHS asked CMS to extend the time period for the demonstration for an additional three years, through December 31, 2001. CMS authorized a six month extension until June 30, 1999, while it considered the request.

Prior to a decision on the three year extension of the amended waiver, CMS required an interim evaluation report that included an assessment to date of budget neutrality, up to date discussion of evaluation plans, and a preliminary process and outcome evaluation. The original project evaluator from the Center for Health Services & Policy Research was replaced in the spring of 1999 and the interim evaluation report was delivered in June 1999. CMS subsequently approved the three year extension of the amended waiver. Based on feedback from SCDHHS and CMS staff, and more comprehensive statistical analyses of the data, the final evaluation report for SFYs 1995-1997 was completed in early 2000. Under a new contract, evaluation staff agreed to design and deliver an interim evaluation report on waiver participants through SFY 2001. Some revisions were needed to reflect the expanded coverage allowed by the waiver amendment during SFY 1998 – SFY 2001.

During SFY 2002, the waiver was renewed for three years and further amended to add a new objective -- to promote the increased utilization of primary care services by waiver participants. SCDHHS collaborated with community health centers (e.g., Federally Qualified Health Centers (FQHCs), and Rural Health Centers (RHCs)) to promote primary medical care homes for waiver participants.

Evaluation results to date demonstrate the many forces that impact the Medicaid family planning waiver and highlight the limitations of an intervention solely focused on increasing access. While a number of process indicators, including the number of clients seen, the number of providers seeing clients, and continuity of care have improved over time, it has become increasingly difficult to attribute these changes solely to the waiver. Other important indicators (most notably repeat conceptions) have not showed an effect of the waiver or showed a strong initial effect of the waiver, but those gains have been almost all lost. One major disappointment has been the dramatic decline in Title X patients seen by the health department, from over 113,000 in SFY 1992 to just over 42,000 in SFY 2005. This has offset much of the gains one would expect from the dramatic increase in Medicaid family planning clients. Another disappointment has been the lack of any effect on pregnancy intention, at least as measured through the PRAMS data.

Using the terms and conditions specified for the 2005-2007 time period (though noting that SFY contains data from 2004 and 2005), SFY 2005 is budget neutral. While federal costs total $16,922,921, federal savings equal $25,244,596. Additionally, the costs per participant for calendar year 2006 are also down, and indicate the implementation of cost control measures implemented in 2005 are reducing per participant costs.

Project Population

The waiver extends Medicaid coverage for all Medicaid family planning services to women (typically women between the age of 10 – 55) who have family income at or below 185% of the federal poverty level and who are capable of bearing a child (i.e., excluding women who have had a hysterectomy, sterilization, etc.).

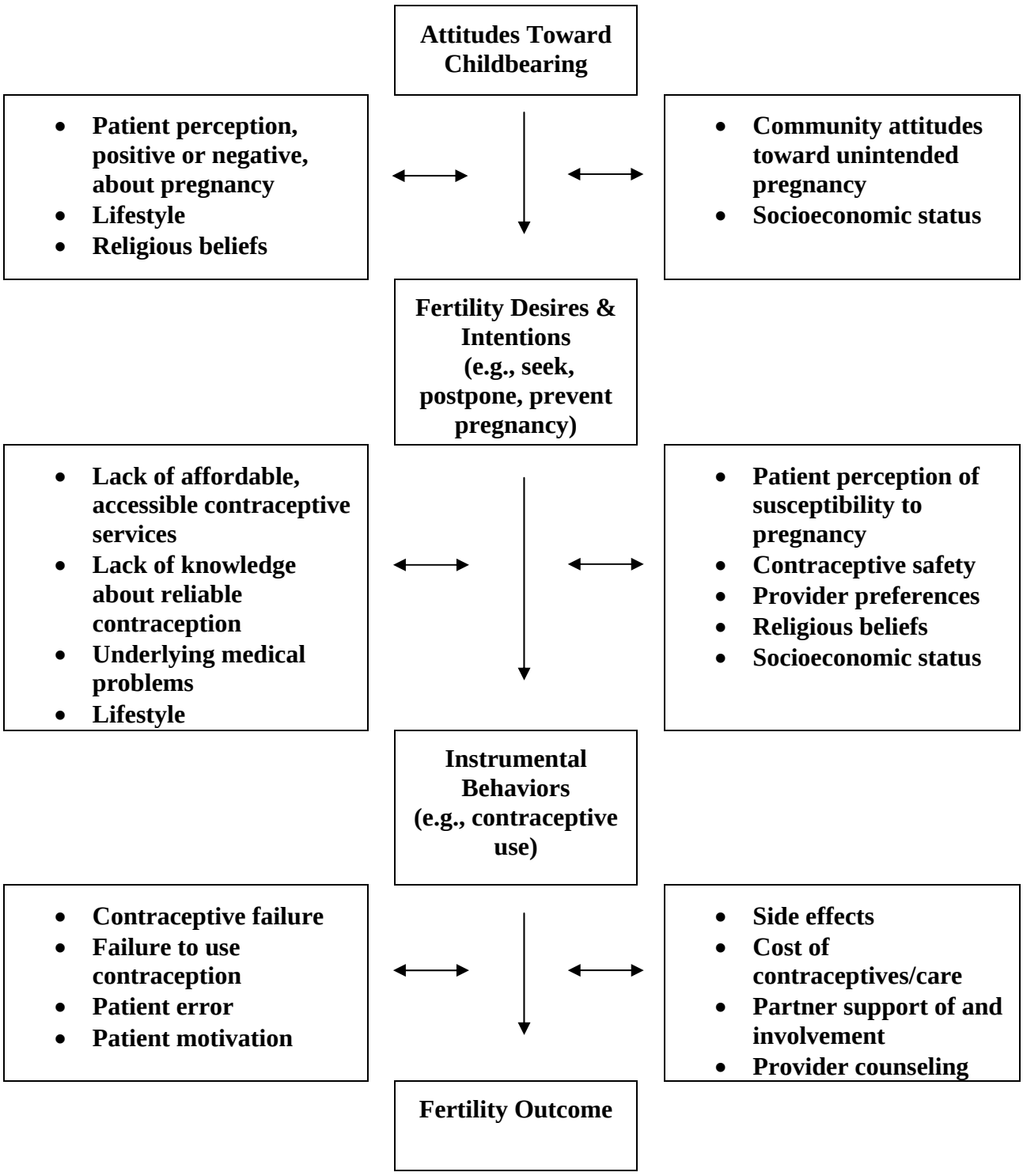
Evaluation Requirements

The special terms and conditions for 2005-2007 outline evaluation requirements for the demonstration. These include requirements of the evaluation plan and the reporting of evaluation results. They also require states to evaluate primary care referral, costs, and budget neutrality.

Conceptual Model for Family Planning Services

The conceptual model on the following page shows the major factors which affect fertility outcomes. The model is complex and shows the many forces at play – and highlights the limitations of an intervention solely focused on increasing access. Despite these limitations, virtually all of the process indicators and some outcome measures important to the waiver have significantly improved since the initial demonstration.

CONCEPTUAL MODEL FOR FAMILY PLANNING SERVICES



Project Objectives

1) To increase the number of reproductive age women (typically women between the ages of 10 - 55) at or below 185% of poverty receiving Title XIX funded family planning services.

2) To allow affected women the opportunity to choose if and when to have children.

3) Reduce the number of inadequately spaced (less than 18 months) pregnancies among mothers eligible for maternity services under the expanded eligibility provisions of Medicaid.

4) Reduce the number of unintended and unwanted pregnancies among women eligible for Medicaid.

5) To estimate the overall savings in Medicaid spending attributable to providing family planning services to women who would otherwise qualify for Medicaid coverage if they were pregnant.

6) To promote primary medical care homes for waiver participants through collaboration with community health centers and other primary care providers.

Project Implementation Activities

There are several key components of the project needed to accomplish the objectives:

A) Inform eligible women of the availability of Medicaid coverage for family planning services:

   1) SCDHHS caseworkers to inform these women of the available family planning services and provide a full description of them before or after delivery;

   2) Information about the project to be mailed by SCDHHS to all enrolled Family Planning Waiver (FPW) [Project No. 11- W –00057/4] recipients annually;

   3) SC Department of Health & Environmental Control (DHEC) to use family planning outreach to encourage participation and coordinate where necessary.

B) Enroll eligible women in the waiver

C) Inform family planning providers of the FPW by:

   1) Providers informed of the availability of these services through a Medicaid bulletin explaining the services available and population eligible.

   2) Providers furnished with brochures explaining the benefits of the FPW.

D) Ensure continuing and comprehensive reproductive health care through increased choice of providers, especially private physicians.

1) Provide a medical home, leading to better coordination of services; and

2) Increase continuity of family planning care.

E) Encourage waiver participants to access comprehensive primary care services.

1) Current waiver enrollees are notified by mail of the locations and how to access the primary medical care services.

2) Outreach workers are given a list of community health centers and instructed to incorporate referrals for primary medical care into outreach activities. The outreach workers are signing waiver applications after discussing the promotion of primary care with the potential waiver clients.

3) SCDHHS prepares a Medicaid Bulletin to all Medicaid providers regarding notification of waiver renewals.

Covered Services

Women enrolled in the waiver are eligible for all family planning services covered by the SC Medicaid program. These services include: all medical and counseling services related to alternatives for birth control and pregnancy prevention services prescribed and rendered by physicians, hospitals, clinics, pharmacies, and other Medicaid providers. For the renewal period beginning January 2008 this also includes approved treatments for sexually transmitted infections found during initial/annual visits and follow-up visits under certain circumstances. Medicaid pays for all methods of contraception, both prescription and nonprescription.

Evaluation Design

Management of the Evaluation

The evaluation of the South Carolina Medicaid family planning waiver will be coordinated and carried out by the University of South Carolina Center for Health Services and Policy Research (CHSPR). CHSPR exists to coordinate and conduct research designed to improve the accessibility of health care services and to inform public policy in a manner that has a positive impact on the health-related quality of life of South Carolinians. Staff working on this evaluation include Kim Nichols Dauner, PhD, MPH, the Principal Investigator and Dave Murday, PhD, the Center Director and previous Principal Investigator for this project. Both researchers worked on the development of this evaluation plan. Dr. Dauner will be responsible for implementing this evaluation plan, developing data collection instruments, collecting and analyzing qualitative and quantitative data, providing on-going quality improvement feedback to SCDHHS, attend project-related meetings and conference calls, and preparing formal oral and written presentation and reports of evaluation results. Dr. Murday will provide consultation to Dr. Dauner and participate in national-level meetings and conference calls as needed. Timelines for the implementation of this evaluation and the reporting of deliverables will be developed by CHSPR in conjunction with SCDHHS and will abide by those timelines specified in the special terms and conditions.

Definitions

To avoid confusion, the following terms are used to reference different subsets of women for whom the waiver is intended:

Women eligible for the waiver refers to all women who meet the income and fertility eligibility criteria for waiver services, regardless of whether they are enrolled in the program.

Women enrolled in the waiver refers to the subset of women eligible for the waiver who have applied and been approved for Medicaid coverage of family planning services.

Women receiving services under the waiver, or "participants," refers to the subset of women enrolled in the waiver who actually received Medicaid reimbursed family planning services. Not all women who are eligible for the waiver actually apply for coverage, and not all women who are approved for coverage actually receive Medicaid reimbursed family planning services.

Data Sources

Evaluation data will be drawn from three sets of state specific data:

1) *Vital records* of births, deaths, and abortions, maintained by DHEC. A key limitation of this database is the length of time which passes before this data is available for analysis.

2) *Medicaid Management Information System* data, including eligibility files and claims for reimbursement of services delivered, maintained by SCDHHS. The claims files are shared with the Office of Research & Statistics (ORS) of the SC Budget & Control Board. These data allow for comparison of data trends for the three state fiscal years prior to implementation of the waiver to the data trends after implementation of the waiver.

3) *UB-92 inpatient hospital claims* data base, maintained by the Office of Research & Statistics of the SC Budget & Control Board. By state law, all general nonfederal hospitals in the state are required to submit to the Office copies of each inpatient bill for each person discharged from that hospital. Data are expected to meet strict completeness (99%) and accuracy (99.5%) requirements, and the Office has a very detailed editing and "unduplication" process to prepare the data files for analysis. At the close of each calendar quarter, these billing data are merged with medical record abstract data for each patient.

Telephone Survey(s). To obtain information about the Medicaid Family Planning Waiver not otherwise available through existing evaluation databases, a telephone survey will be conducted in early 2008 with three groups of women: eligible but not enrolled, enrolled but not participating, and waiver participants. Of specific interest in conducting this telephone survey are assessing primary care referrals during family planning waiver visits, outreach to targeted populations, and waiver awareness. Additional surveys may also be implemented to evaluate the proposed hypotheses further.

Performance Measures, Rationale, Hypotheses, and Analyses

To maintain continuity with the previous evaluations of the waiver, this evaluation is based on the original waiver objectives and hypotheses, with revisions as appropriate. Over ten years of

waiver-related evaluation data have allowed us to set benchmark performance objectives. More recently, evaluation data have indicated that FPW performance has declined from early results. These benchmarks have become the basis for the performance targets for the renewal period beginning January 2008.

Process Indicators

Hypothesis #1: The number of women obtaining Medicaid family planning services, including postpartum women, will increase after implementation of the waiver until unmet demand for services is satisfied. Those women who do not obtain family planning services may be facing one or more barriers to obtaining services. These barriers will be examined. Outreach efforts by state agencies to reduce barriers, and recruit and retain women in waiver services will encourage eligible women to enroll in and seek waiver services.

Specific Data Elements:

- assessing the number of eligible women who are enrolled in the waiver;
- assessing the number of enrolled women who participate in the waiver;
- assessing the number of eligible women who are enrolled in the waiver as a percentage of all eligible women;
- assessing the number of enrolled women who participate in the waiver as a percentage of those potentially needing services;
- assessing the percent of OCWI women who participate in the waiver;
- assessing the number of eligible postpartum women who enroll and participate in the waiver;
- qualitatively assessing the outreach efforts of agencies involved in waiver outreach;
- qualitatively identifying barriers to enrollment and participation; and
- monitoring the effect of the waiver on the Title X program.

Qualitative Assessment:
Assessing the outreach efforts of agencies involved in waiver outreach will initially focus on process evaluation indicators. These indicators will include documenting the types of outreach and identifying where outreach is being conducted. Methods to conduct this process evaluation will include interviewing staff engaged in outreach activities. After assessing the scope of outreach activities in early 2008, a more comprehensive evaluation plan will be developed.

Measure #1.1: At least 50% of eligible women will enroll in the family planning waiver.

Measure #1.2: At least 50% of enrolled women will participate in a family planning waiver service.

Rationale: The FPW must both enroll eligible women into the waiver program and then also encourage those women to take part in services. As a result both enrollment and participation as a percent of those eligible to be enrolled or participate must be monitored.

Measure # 1.3: Increase annual Medicaid FPW clients by 5% over SFY 2005 (the most recent year for which data is available) levels.

Rationale: The average number of monthly Medicaid FP clients has continued to increase over time and will continue to increase until demand for services is satisfied. Recent evaluation data have indicated some leveling off in the average number of monthly clients but the general trend is still increasing.

Measure #1.4: Over 90% of eligible postpartum women will enroll and participate in the waiver.

Rationale: In SFY 2004 only 90% of eligible postpartum women (including OCWI) subsequently participated in waiver services. This was an all time low since the beginning of waiver implementation. Prior evaluation data demonstrates that having at least 90% of eligible postpartum women subsequently participate in waiver services is achievable.

Hypothesis #2: Continuous Medicaid coverage for family planning services will lead to improved continuity rates among family planning clients in the regular Medicaid and Medicaid waiver population.

Specific Data Elements:

- assessing continuity rates for women receiving an index family planning service
- assessing continuity rates for FPW women having a birth;[1]

Measure #2.1: Over 50% of women who receive a family planning service or have a birth will receive a subsequent family planning service within 9-15 months.

Rationale: The waiver has increased continuity of care to over 50% for both women receiving an index family planning service or having a birth. These levels have, for the most part been maintained over the course of the waiver demonstration and renewals.

Hypotheses #3: The proportion of services provided by private providers as a percent of all family planning services will continue to increase until demand in the private sector is met. Similarly, as the patients of private providers become more aware of the waiver, more regular Medicaid and Medicaid waiver family planning clients will seek services from private providers, and more private providers will provide such services. These hypotheses build on results of prior years' evaluations showing that family planning services are increasing in the private sector.

Specific Data Elements:

- assessing the number of private providers involved in family planning waiver services;

1 Prior evaluations have indicated that there are no interruptions in continuity related to Medicaid sponsored births.

- assessing the proportion of services provided by private providers as a percent of all family planning services;
- assessing the number of clients receiving privately provided family planning services;
- qualitatively assessing how outreach efforts have penetrated to private providers.
- identifying provider characteristics associated with privately rendered services; and
- identifying barriers affecting clients or providers which limit the amount of privately provided family planning services.

Qualitative Analyses: Telephone surveys will be used to assess how outreach efforts have penetrated to private providers, identify provider characteristics associated with privately rendered services, and identify what affects the provision of private FP services to clients.

Measure #3.1: The annual number of private FPW providers providing family planning services will continue to increase.

Measure #3.2: The annual number of private provider FPW clients will continue to increase.

Measure #3.3: The proportion of FPW services provided by private providers as a percent of all FPW services will increase.

Rationale: The number of private providers participating in the FPW program, the proportion of services occurring in the private sector, and the number of FP clients going to the private sector have been increasing in recent years. There is little evidence of an appropriate benchmark here and as a result qualitative data will also be used to assess why and how private sector participation is increasing (see section on qualitative analyses).

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Hypothesis #4: Waiver performance will not vary by county.

Specific Data Elements:
- GIS mapping of each major outcome by county.

Measure #4.1: Family planning waiver services will be rendered and utilized consistently in all 46 South Carolina counties.

Rationale: Services are intended to be rendered and utilized consistently across all 46 counties. Measuring each process and outcomes indicator by county will help to identify services gaps and barriers.

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Hypothesis #5: As the waiver covers STI detection and treatment for syphilis, chlamydia, gonorrhea, herpes, candidiasis, and/or trichomoniasis when identified in conjunction with a

family planning initial evaluation/management visit or an annual family planning visit, the number of waiver participants being screened and treated for these STIs will increase. Women who are able to receive STI treatment will have reduced barriers to receiving FP services.

Specific Data Elements:

- assessing the number of women who receive STI screening and treatment during the initial/annual exam

Measure #5.1: The number of waiver participants being screened and treated for STIs will increase.

Rationale: STI infection can be a contraindication for certain types of family planning. Likewise, STI infection can result in less efficacious contraception. Therefore, the coverage of STI early detection and basic treatment removes one barrier to family planning service delivery.

Evaluation of STI detection and treatment covered under the waiver will initially look at process indicators as described above. In 2008, measures will be developed to assess the impact of STI detection and treatment on birth outcomes and STI infection rates in subsequent years. Possible outcomes include comparing birth outcomes in participating women to eligible women and evaluating STI rates among waiver women over time. Methods involving the linkage of claims data to vital records (for birth outcomes data) and to laboratory data (STI rates) will be explored.

Outcome Indicators

The primary activity of the waiver is to increase access to publicly funded family planning services. To make significant changes in fertility intentions and outcomes will require a more comprehensive approach than just increasing access to services (see conceptual model).

Hypothesis #6: The mother's age at first birth among women eligible for services under the waiver will increase following implementation of the waiver.

Specific Data Elements:

- assessing changes in the age at first birth among women eligible for the waiver;
- assessing changes in the age at first birth among women participating in the waiver; and
- examining the impact of secular trends in age at first birth as it applies to women participating in the waiver.

Measure #6.1: Maintain prior increases in the mother's age at first birth among women eligible for services under the waiver, and continue to increase age at first birth as it parallels secular trends.

Rationale: Over the course of the waiver implementation age of first birth has increased from 20.5 years in 1996 to 22.2 years in 2005, while over the same time period, the age at first birth

for regular Medicaid has slightly decreased. Also during the same time frame, the secular trend in age of first birth has increased. Given historical trends and the five-year gap between age at first birth for waiver women and women in the general population, it is unrealistic to expect this ground to be made up in the near future.

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Hypothesis #7: The rate of inadequate inter-pregnancy intervals among women eligible for services under the waiver will decline following implementation of the waiver.

Specific Data Elements:

- assessing changes in the birth to conception interval among women eligible for the waiver, by assessing the percent of repeat births conceived within 6, 12, and 18 months;
- assessing changes in the birth to conception interval among women participating in the waiver, by assessing the percent of repeat births conceived within 6, 12, and 18 months;

Measure #7.1: The rate of repeat conception within 18 months will decrease to less than 12% by the end of the renewal period.

Measure #7.2: The rate of repeat conception within 6, 12, and 18 months among women participating in the waiver will remain substantially lower will remain substantially lower than the rate of repeat conception within 6, 12, and 18 months of women eligible for the waiver.

Rationale: Historical data indicate that the FP waiver in SC can achieve a rate of less than 12% for repeat conception within 18 months. This gain has been lost in recent years, but provides a benchmark to return to in future years. In the past, rate of repeat conception within 6 and 12 months has not been measured, but other analyses indicate that women participating in more waiver services have significantly longer birth-to-conception intervals compared to women eligible (but not participating in services).

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Hypothesis #8: Women receiving family planning services will be referred to primary care services. As a result of this referral, the number of waiver participants who receive family planning services through Federally Qualified Health Centers (FQHCs) (a medical home) will increase following implementation activities.

Specific Data Elements:

- assessing primary care referrals and the outcomes of those referrals during family planning waiver visits via a telephone survey of a sample of waiver participants;
- assessing the number of waiver participants who receive family planning services through Federally Qualified Health Centers (FQHCs);
- assessing the percentage of women who are eligible for the waiver who use FQHCs for primary care;

Telephone Survey: To obtain information about the Medicaid Family Planning Waiver not otherwise available through existing evaluation databases, a telephone survey will be conducted in early 2008 with three groups of women: eligible but not enrolled, enrolled but not participating, and waiver participants. Of specific interest in conducting this telephone survey are assessing primary care referrals during family planning waiver visits and the outcomes associated with such referrals. To develop questions to get at this process, input from waiver participants and providers will be sought.

Measure #8.1: Continue increases in the number of waiver participants who receive family planning services through Federally Qualified Health Centers (FQHCs).

Rationale: Given the income eligibility of the target population, they are likely to use FQHCs for primary care in addition to FP care. In other words, the FQHC provides a medical home. Over time, there has been an increase in the number of women receiving care through the FQHC and this increase has been attributed to the waiver.

Hypothesis #9: Family planning services delivered to women who qualify for Medicaid under the waiver will produce net Medicaid program savings, with the costs of family planning service delivery outweighed by the savings associated with averting births (where the costs of prenatal, delivery and postpartum care are considered).

Specific Data Elements:

- analyses for this hypothesis are based on the revised methodology contained in the terms and conditions for the 2005-2007 waiver (Project No. 11- W – 00057/4) renewal period.
- analyses will include looking at the per capita expenditures for waiver participants over time as compared to the Medical Consumer Price Index (MCPI).
- assessing annual budget limits.

Measure #9.1: The waiver will continue to maintain births averted and remain budget neutral for the renewal period.

Rationale: The waiver has been budget neutral since its inception.

Statistical Analyses

Due to the lack of adequate control or comparison groups within the state, or in other states, evaluation staff prefer time series analyses to simpler statistical designs which might compare a single value on a pre-intervention measure to a post-intervention value on the measure. To gain statistical power, monthly data will be used to allow better tracking of trends instead of just a single data point for each of the pre and post intervention years.

Statistical methods generally used for the analysis of time series data include autoregressive integrated moving average (ARIMA) modeling. This is due to the problem that data collected over time often do not satisfy key assumptions for regular regression analysis, specifically the independence of observations. ARIMA models estimate and control for autocorrelation among observations in time series regressions. ARIMA models are based only on the mathematical properties of the series, the nature of the observed event is irrelevant.

In this study, data for each hypothesis will be graphed over time to observe any trends, and the autocorrelation structure of the time series will be analyzed to see if sufficient autocorrelation exists to require ARIMA modeling instead of regular regression analysis. If ARIMA modeling is required, the data will be transformed if necessary to ensure the time series was stationary with respect to mean and variance.

A regular ARIMA model can include two sets of terms: Aautoregressive@ (AR) terms related to the significant partial autocorrelations in the series, and Amoving average@ (MA) terms related to the significant autocorrelations in the series. For this evaluation, a special kind of ARIMA model (an intervention model) which includes the values of another variable (called an input series) will be used. In an intervention model, the input series is an indicator variable containing discrete values that flag the occurrence of an event affecting the original series. Intervention models are used to analyze the impact of the intervention. In the case of continuing interventions, the input variable identifies periods before and after the intervention. If the effect of the intervention is thought to be immediate, the input variable would be zero before the intervention and one after the intervention. If, as in the case of the present study, the effect of the intervention is assumed to be gradual, the input variable is zero before the intervention and then gradually increases to one over the time it takes for the intervention to reach full effect. Since past expansions of Medicaid eligibility have taken about 18 months to fully mature, the input variable for the original waiver increased gradually from zero before the intervention to one over the course of 18 months. The input variable for the later amendment gradually increased from zero to one over the course of six months.

For each hypothesis, different ARIMA models will be tested to estimate the parameters of the AR terms, the MA terms, and the intervention. The residuals for each model will be checked to see if they uncorrelated, or if they contained additional information that could be accounted for using a more complex model. Once the best model is identified, t-tests will be used to determine the significance of parameter estimates, including the intervention input series.

General Notation for ARIMA Models. The order of an ARIMA model is usually denoted by the notation ARIMA (p, d, q) where:

p is the order of the autoregressive part

d is the order of the differencing (if needed to make the series stationary)
q is the order of the moving average process

Regression and ARIMA models, and how well those models fit the data for each hypothesis will be presented graphically in the evaluation report.

Time Period for Data Analyses. In general, Medicaid claims data from the state fiscal year prior to the fiscal year just completed will be used. The reason for this delay is that many analyses require tracking clients for a subsequent period of months after the fiscal year being evaluated. In these cases, the time period for data presented is shortened accordingly. Also, data from vital records and PRAMS are reported (and therefore presented) on a calendar year basis.

Exclusion of Data on Some Participants. In some of the analyses, as appropriate, data on certain participants will be excluded. These include participants who only had pharmacy claims, or participants who only received limited specialized services (such as counseling or education) from a state agency, such as the Department of Social Services or the Department of Disabilities and Special Needs.

Limitations, Challenges, and Successes

Many forces impact fertility and thus highlight the limitations of an intervention solely focused on increasing access to services. To the extent possible, how these forces influence and impact waiver service delivery will be accounted for as part of the statistical analyses. Another challenge for South Carolina has been to evaluate outreach and tie what outreach is being done to the quantitative evaluation data. Beginning in 2008 it is proposed that the evaluation take a closer qualitative look at what FPW outreach is being conducted and how it can be improved to maximize the number of women eligible who are enrolled and enrolled who participate in waiver services. Many of the gains that have been observed over the course of the waiver have since declined and it is time to not only get back to those benchmarks, but to discover what implementation efforts were most relevant in getting there. The ultimate goal of this effort will be to inform national practice on waiver outreach.

Some successes in the state have included the increases in waiver participants and the increased involvement of private providers. Telephone surveys conducted in 2006 have told us that among all three categories of women (see definitions section for a description of the participation categories) most went to a private provider for their family planning services and the most important reason participating women saw a private doctor instead of a public medical provider was due to their good relationship with the doctor. A complementary survey of providers conducted in 2006 found that private providers had a general awareness of the waiver and what it covered (though lacked to ability to help women enroll). Also, of note is the fact that the participating women were satisfied with their current method of birth control and reported satisfaction with their current provider of primary health care services.

Interpretations, Recommendations, and Conclusions from Prior Evaluations

While a number of process indicators, including the number of clients seen, the number of providers seeing clients, and continuity of care have improved over time, it has become increasingly difficult to attribute these changes solely to the waiver. Other important indicators

(most notably repeat conceptions) have not showed an effect of the waiver or showed a strong initial effect of the waiver, but those gains have been almost all lost. For those reasons, South Carolina has emphasized in this evaluation plan a return to the outcomes previously seen and an increased emphasis on the contextual factors in which waiver implementation occurs (for example, studying outreach). One major disappointment has been the lack of any effect on pregnancy intention, at least as measured through the PRAMS data. For that reason, we are not proposing to measure pregnancy intention going forward.

Evaluation Reports

Reporting Plan

CHSPR will provide an annual report to SCDHHS at the end of each calendar year and a final report at the conclusion of the renewal period. Annual and final report(s) will incorporate the results of all the performance measures outlined above, any telephone surveys that have been conducted, and any additional data analyses requested by the state. This report will encompass all years of the waiver so that new data can be interpreted in the historical context of the waiver. Reports will also interpret findings in the context of waiver implementation. Reporting will follow timelines as specified in the special terms and conditions.

This evaluation design report is submitted by the State of South Carolina for the Renewal of the Family Planning Waiver Demonstration beginning January 2008. It presents the conceptual model, project objectives and activities, services, project hypotheses, data sources, sampling methodology for assessing these outcomes, and how the referral process for primary care will be evaluated.