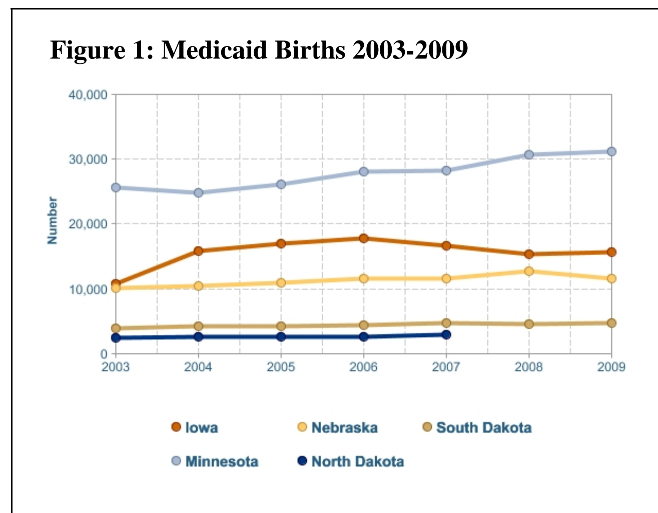
SECTION 1: PROJECT DESIGN

1.1 Background. Sanford Health is the largest rural, not-for-profit integrated healthcare system in the nation. Its expansive geographical reach includes a presence in 112 communities in eight states. Three of these communities – Bemidji, Minn.; Fargo, N.D.; and Sioux Falls, S.D. – are home to major obstetrics hubs. Through these and other system facilities, Sanford provides prenatal, obstetric and postpartum care to more than 7,500 women annually, with greater than 2,000 holding Medicaid coverage. Sanford educates providers and patients, with established protocols to reduce the overall rate of preterm births and the number of early elective deliveries.

Despite these efforts, risk factors for preterm births remain high within the Medicaid beneficiaries targeted by this proposal. This is of particular concern due to the sheer volume of Medicaid births at Sanford Health obstetrics hubs. In 2011, Medicaid funded 66% of all births at Sanford Bemidji Medical Center – far greater than the national average of 40%. Medicaid birth rates are lower in Fargo and Sioux Falls, though they still account for an average of nearly one-third of total births at those sites. These figures are representative of the high Medicaid birth rate in the states each hub serves, as well as in Sanford Health's primary coverage area (Figure 1).[1]

Figure 1: Medicaid Births 2003-2009



<u>Goals of Program:</u> **Sanford One Strong Beginning** proposes to serve 4,055 or more women over the three-year patient **services phase of the Strong Start for Mothers and Newborns Initiative. One Strong Beginning intends to build a comprehensive supportive system for high-risk pregnant Medicaid beneficiaries.** It outlines a course of action to

supplement existing obstetric care with nonmedical services during these critical periods for fetal development, infant growth and maternal health. The overarching goal across the project timeline is to **reduce the number of preterm (<37 weeks) births and low birthweight (<2,500 grams) infants born to women enrolled in Medicaid, and to improve the overall health outcomes of these high-risk pregnant women and newborns.** Additionally, Sanford Health seeks to contribute to the body of knowledge on interventions that suggest the potential to decrease system-wide costs for neonatal intensive care services and lifelong specialty services. Several key aims guide this project:

1. Offer two models of enhanced prenatal care to expectant mothers, enrolling women in Maternity Care Home programs in Bemidji and Fargo, and in the CenteringPregnancy program in Sioux Falls and several other communities within the Sanford Health Sioux Falls Region. The Sioux Falls Region includes clinics and hospitals in Eastern South Dakota, Southwest Minnesota and Northwest Iowa. (See Appendix: Page 2.) Each of the 41 proposed performance locations will offer only one type of approach. Over the three-year service-delivery phase, **Sanford Health expects this proposal to serve 3,125 women through the Maternity Care Home model and 930 or more non-South Dakota Medicaid beneficiaries through the CenteringPregnancy group model.** Furthermore, Sanford Health anticipates being the provider of choice for an additional 2,220 or more South Dakota Medicaid patients whose CenteringPregnancy care will be reimbursed as part of a separate partnership application from the State of South Dakota.

2. Capitalize on all points of access and marketing materials to **increase the number of Medicaid beneficiaries who seek and receive prenatal care during the first trimester.** Sanford will reach out to Medicaid enrollees and those who may be Medicaid-eligible through a

network of government agencies, social services, charitable nonprofits and faith-based organizations. Information will stress the importance of early prenatal care, positioning Sanford Health as the provider of choice for enhanced services and a true partner in obstetric, prenatal, postpartum and infant care for women and their families.

3. **Integrate culturally appropriate communication channels and materials with patients and to collaborate with tribal health agencies** that provide primary health and prenatal care to a large proportion of Medicaid enrollees, particularly in the Sanford Bemidji service area.

4. **Integrate a smoking cessation program to reduce cigarette use** and educate women on the devastating effects of alcohol abuse and drug use – especially methamphetamines.

5. **Integrate access to behavioral health resources** during pregnancy as well as the postpartum period, implementing screenings to determine risk for maternal depression at all stages and to refer individuals to licensed mental health professionals when appropriate.

6. **Integrate breastfeeding education and follow-up support for new mothers** in an effort to give newborns the highest level of early nutrition, and to foster attachment relationships.

7. **Monitor and report results with unified electronic medical record software** that captures vital patient information and allows seamless data-sharing and analysis of high-risk factors and outcomes, regardless of patient or provider location. One Strong Beginning implements transparent metrics that drive improvements to operational model design and service enhancements for patients. The project's base metrics will be standardized across all sites and will be consistent with those identified by the State of South Dakota in its partner application.

The electronic medical record system, known as Sanford One Chart, enables the project to **track gestational age, birthweight and other data throughout the intervention period, both for intervention infants and for a comparison population.** This integration also makes it

possible to **access gestational age and birthweight on births from a historical baseline period that spans more than two years prior to the start of One Strong Beginning.**

Geographic Area Classification: Sanford Health's footprint in the Northern Plains includes 62 counties and can be categorized as primarily rural. Only 11% of these counties are classified as Metropolitan Statistical Areas (population greater than 50,000). The remaining 89% meet the Office of Rural Health Policy's geographic eligibility as "rural" because they are not designated as parts of MSAs. Furthermore, 19% of rural counties in this service area also are considered as "frontier" due to a geographic distribution of less than seven people per square mile. Much of the service area is adjacent to Indian reservations. (See Appendix: Pages 3-4.)

Need and Risk Factors: Medicaid beneficiaries report a preterm birth rate significantly higher than that for all other women (11.9% vs. 8.7%).[2] Maternal race, age, cigarette use and/or alcohol and illicit drug abuse, education level, income, marital status and weight all are linked to preterm deliveries.[3] Compared to women with private insurance, pregnant Medicaid patients are more likely to exhibit high-risk factors.[4,5] Specifically, the Medicaid group is younger, with a high prevalence of smoking and illicit drug use – compounded by a late enrollment into prenatal care.[6]

Sanford One Strong Beginning funds enhanced care for an estimated 4,055 Medicaid beneficiaries enrolled in Minnesota, North Dakota and Iowa plans. Sanford Health also provides prenatal services for an annual average of 750 South Dakota Medicaid enrollees whose enhanced options under the Strong Start for Mothers and Newborns Initiative will be funded under a partner application from the State of South Dakota. A letter of support from the State is attached. (See Appendix: Page 5.) Altogether, the states served by Sanford's three main obstetrics hubs average an annual Medicaid birth rate of 41.55%, ranging from 39.06% in South Dakota to

44.18% in Minnesota.[7,8]

Sanford Bemidji Medical Center: Sanford Bemidji – in North Central Minnesota's Beltrami County – is well-positioned to serve Medicaid patients with increased incidence of high-risk pregnancies. Nearly 20% of Beltrami County residents report incomes below the poverty line, as do 13% of residents in adjacent Cass County, Minn. One of five Beltrami County residents is Native American, as Bemidji is the services center for Native peoples living on three reservations: Leech Lake Indian Reservation (Leech Lake Band of Ojibwe), Red Lake Indian Reservation (Red Lake Band of Chippewa) and White Earth Indian Reservation (White Earth Band of Chippewa). In all, 66% of the 1,000 or more women delivering babies each year at Sanford Bemidji rely upon Medicaid for health coverage. This far exceeds not only the national average, but also the state rate of 44.18% for Minnesota's more than 70,500 annual births.[9,10]

High rates for smoking, diabetes and other obesity-related diseases add to poverty's detrimental effects on prenatal care in the Sanford Bemidji area. Mental health issues and chemical dependency are other serious factors. In 2011, a full one-quarter of expectant mothers met criteria for drug testing. January through March 2012, that figure increased to 29%. Even more troubling, more than one-third (38%) of 2011 newborns tested positive for drugs, requiring additional resources to enforce 72-hour observational holds and administer any medical interventions. Sanford Bemidji houses a Level II nursery but lacks a neonatal intensive care unit, requiring transfers to facilities such as Sanford Fargo Medical Center.

Many Medicaid patients who deliver at Sanford Bemidji travel substantial geographical distances to reach the point of care. Tribal members who seek prenatal services typically do so at the appropriate, independent tribal health service agencies – which do not include birthing centers – or at one of three Indian Health Service facilities operated by the U.S. Department of

Health and Human Services. Therefore, Sanford Bemidji handles a significant percentage of births by mothers who are either unknown to the Sanford Network throughout their pregnancy and/or who received little to no prenatal care at any facility. In fact, these cases accounted for 9% of all births at Sanford Bemidji in 2011. Direct-service providers at Sanford Bemidji report that Medicaid patients who are 20 weeks or less into their pregnancies almost always access care via the emergency room. These patients might make several ER trips for acute complaints, and they typically consider those visits as prenatal care because they've seen a healthcare provider.

Sanford Fargo Medical Center: The Sanford Fargo obstetrics hub is based in a tertiary care center for high-risk pregnancies, with an on-site Level II neonatal intensive care unit (NICU). It is 90 miles from any other hospital providing maternity care. Annually, 27% of the 2,300 or more women who deliver at Sanford Fargo are covered by Medicaid. Prevalent risk factors among these women include cigarette smoking (13%) and alcohol use (6%). Gestational diabetes, mental health issues, lack of nutritional education and delayed enrollment in prenatal care also are contributors. In 2011, just less than 10% of all Sanford Fargo infants were preterm births (9.39%) or exhibited low birth weight (9.43%). More than 16% of infants each year are admitted to the Level II NICU, which also receives transfers from Sanford Bemidji and other facilities. The average length of NICU stay for all infants at Sanford Fargo is just less than 20 days – with infants born to Medicaid beneficiaries requiring an average stay of nearly three days longer. Native Americans make up a notable minority, as do Hispanics, Bosnians and Somalis.

Nearly one in six North Dakotans lives in Fargo – the state's largest city.[11] But Sanford Fargo delivers one-quarter to one-third of the state's births in any year,[12] owing both to the obstetrics hub's specialty services and North Dakota's sparsely distributed population.

Sanford Sioux Falls: The Sanford Sioux Falls obstetrics hub sees an annual average of more than

3,000 births at its main site, Sanford USD Medical Center. This facility draws obstetric patients from surrounding communities in South Dakota as well as from Southwest Minnesota and Northwest Iowa. Sanford Sioux Falls reports an average gestational age of 35.64 weeks for all births at this facility, which offers the only Level III care in the region for the more than 700 infants born each year with life-threatening conditions. The Medicaid birth rate is around 30%.

The Sanford Health Sioux Falls Region includes clinics and hospitals in other communities, both within and without South Dakota. These sites are part of the overall Sanford Network. Taken alone, these non-Sioux Falls locations add another 820 total births per year, on average, to the volume from the main Sioux Falls hub. The Region's immediate service area includes several counties in which mothers experience late onset of prenatal care. Only 68% of mothers in the Sioux Falls hub's primary county (Minnehaha) accessed care in their first trimester, well below the national average of 71%.[13] Smoking during pregnancy also is over-represented in Sanford Sioux Falls' population. Expectant mothers in Minnehaha County are nearly twice as likely to smoke, with a rate of 17% compared to 9.7% nationwide.[14] Minnesota and Iowa counties within the Sioux Falls hub's coverage area show similar pregnancy smoking rates, with four Minnesota counties reporting a rate of more than 15%.[15] Nobles County, Minn., claims three preterm birth risk factors: Unmarried mothers account for 47.5% of births, 41.5% of mothers are minorities (primarily of Hispanic origin) and the teen pregnancy rate for 18- to 19-year-olds is 127%.[16]

Existing Efforts: Few agencies and independent nonprofit organizations in One Strong Beginning's high-risk target areas offer comprehensive, nonmedical prenatal care of the type outlined in this proposal. Some of the most complete services are found within the separate tribal health divisions that exist on the three Indian reservations nearby the Sanford Bemidji hub. For example, members of the Leech Lake Band of Ojibwe can access Wadiswan ("The Nest") in the

reservation town of Cass Lake, Minn. Wadiswan provides childbirth classes, breastfeeding support, prenatal and postpartum education, car-seat clinics and home visits.

In Fargo, Family HealthCare Center offers limited nonmedical prenatal care options for underinsured and noninsured pregnant women from Cass County, N.D., and Clay County, Minn. The facility operates on a sliding fee scale to provide counseling on family planning and nutritional topics, as well as referrals to social services in the community. Annually, more than 175 of this clinic's patients deliver at Sanford Fargo. In addition, low-income women in Cass County, N.D., can receive counseling and management of menstruation and preconception at Fargo Cass Public Health – the City of Fargo's program. Once pregnant, these patients are eligible for home visits through the Cass County Maternal Child Health Program.

Patients served by Sanford Health would benefit from enhanced prenatal options as well as this project's infant care and safety education in the postnatal period. According to a recent report from the Centers for Disease Control and Prevention, South Dakota and North Dakota are in the upper quartile for infant (age <1 year) deaths as a result of unintentional injuries. Most of these tragedies are tied to an increase in accidental suffocations. South Dakota ranks second in the nation, at more than twice the U.S. rate (23.6 deaths per 100,000 vs. 11.0 deaths per 100,000), and North Dakota ranks 12th (17.3 deaths per 100,000).[17]

State Plan/Waiver Program Coverage: Through One Strong Beginning, Sanford Health funds enhanced prenatal care for Medicaid patients enrolled in Minnesota, North Dakota and Iowa plans. Funding for pregnant South Dakota Medicaid beneficiaries is part of a partner application from the State of South Dakota. All four states administer the federal Special Supplemental Nutrition Program for Women, Infants & Children (WIC) and provide traditional medical care for pregnant women – including prenatal visits and vitamins, ultrasound and amniocentesis

screenings, childbirth by vaginal or caesarean delivery, 60 days of postpartum care and clinical interventions in family planning. In addition to this obstetric care, states have expanded selected enhancements to further support “high-risk” pregnant women on Medicaid.

Each state plan’s risk definitions vary, and must be documented through an assessment tool accepted by the relevant State. Furthermore, each state sets forth its own specific education and experience requirements for providers who wish to offer the services and bill for reimbursement. In some states (and particularly in small, rural communities), a care-team requirement for enhanced services might make otherwise approved services non-reimbursable. This precludes providers and patients from participating in the full range of services for plan enrollees.

Minnesota offers general prenatal education, nutrition assessment, referral to community resources and follow-up on those referrals to qualifying women. A woman’s primary care provider has overall authority to determine which health services beyond routine prenatal care would benefit the patient, once her at-risk status is documented.

North Dakota offers Targeted Case Management for high-risk pregnant women who meet certain criteria. This includes a once-per-pregnancy assessment of patient needs and medical history, referral to professional services and follow-up activities to determine whether an individual has met key conditions of her care plan. North Dakota also intends to add smoking cessation counseling for pregnant women in the future, but the State had not received final approval from CMS as of this proposal’s submission date.

Iowa Medicaid identifies Maternal Health Centers that offer services such as general prenatal risk assessment, basic health education on pregnancy-related or chronic medical conditions and an overall psychosocial needs assessment to refer women for counseling. Iowa does not offer smoking cessation counseling for pregnant women, instead directing them to the

toll-free Quitline available to all State residents. See **BUDGET NARRARATIVE,** ***State Plan Coverage*** for details on State plan reimbursement rates and methodologies.

1.2 Identify the Proposed Options. To fit the needs of populations in three, distinct service areas, Sanford Health will implement the Maternity Care Home model in both Bemidji and Fargo, and the CenteringPregnancy model throughout its Sioux Falls Region. Program design and modifications address rural and cultural implementation barriers specific to each area. Sanford Health collects data on all pregnant patients, regardless of their Medicaid status or choice of prenatal care – thus allowing comparison of outcomes and delineation of best practices.

Maternity Care Home Approach: Sanford One Strong Beginning features accessible and approachable care providers, seamless communication and care navigation throughout the pregnancy in a team-based structure that is patient/family-centered and assessment-driven. These nonmedical interventions develop healthy, strong women who are confident in their abilities and support systems. Sanford Health's Maternity Care Home approach gives attention to the region's rural culture as well as each patient's behavioral health and self-management skills, all delivered in a supportive, proactive setting. This model will become the new standard of prenatal care for all women at Sanford Bemidji and Sanford Fargo, regardless of Medicaid status or risk category.

At the heart of the Maternity Care Home are RN Health Coaches – board-certified registered nurses trained to coordinate patient care, conduct motivational interviews, establish patient-centered goals for behavioral and/or lifestyle changes, manage quality-improvement activities, refer patients for specialized professional services and record data. Deployment of RN Health Coaches initiates integrated care for better health, better care and cost efficiencies. RN Health Coaches assist in identifying risk factors and work with patients to develop an individual care plan based upon the woman's willingness to learn and her capability for independent action.

Another critical element of the system design is the integration of Behavioral Health Specialists, who partner with RN Health Coaches within each obstetric services hub. This role is filled by psychologists who provide diagnostic screenings and assessments, according to each patient's level of clinical acuity and medical and psychosocial complexity. Specialists may refer patients to clinical psychologists and psychiatrists within the Sanford Health system or to external community resources. They provide on-site crisis intervention, brief counseling and education for patients and health care teams.

The Maternity Care Home approach in Sanford One Strong Beginning is informed and guided by the success of the Medical Home already at work in Sanford Fargo's primary-care system. One Strong Beginning adapts components of this model to serve the unique needs of pregnant Medicaid clients at risk for preterm deliveries. Through Sanford One Strong Beginning, those with the highest risk of preterm births – minority and rural, low-income populations among them – gain coordinated entry to an expanded slate of Sanford Health and external professionals. RN Health Coaches connect patients to social workers, smoking cessation counselors, lactation consultants, financial counselors, nutritionists, childbirth educators and genetic counselors. Through these relationships and educational experiences, expectant mothers gain important information to guide their decision-making processes.

Maternity Care Home Design Basis and Care Enhancements: The Maternity Care Home Model is a personalized leap forward in managing patient care. RN Health Coaches and Behavioral Health Specialists provide an immediate and intimate link between patients and a health care system that at times might seem intimidating and confusing. Integrating these professionals into various sites in the greater Bemidji and Fargo areas greatly eases the travel burden for patients.

One Strong Beginning builds on the established relationships between Sanford Bemidji and

tribal health agencies on the Red Lake Indian Reservation and Leech Lake Indian Reservation. The Bemidji hub's project director and another obstetrician/gynecologist currently hold monthly, on-site clinics in the reservation towns of Red Lake and Cass Lake. This project enables physicians to do even more to serve Native peoples where they live, upgrading to weekly clinics that also bring an RN Health Coach and Behavioral Health Specialist to both reservations.

One Strong Beginning incorporates behavioral health firmly into the prenatal care continuum. At present, mental health professionals are engaged only on a postpartum basis for Medicaid patients at Sanford Bemidji and Sanford Fargo. The American College of Obstetricians and Gynecologists recently recommended that depression screenings be "strongly considered" for all pregnant women. Women with low socioeconomic status have nearly twice the rate of postpartum depression as their middle-class counterparts, and women who suffer from Maternal Depression are 3.4 times more likely to deliver preterm and 4 times as likely to deliver low birthweight infants.[18] Other risk factors for maternal depression also overlap prevalent characteristics of Medicaid patients: history of substance abuse, poor marital or partner relationship, adolescent motherhood, financial stress, lack of a community network and unplanned or unwanted pregnancy.[19] Still, most providers screen for depression in pregnant women only 23%-45% of the time, due to time constraints and lack of reimbursement.[20]

CenteringPregnancy Approach: Group pregnancy care is an innovative alternative to traditional prenatal care checkups. It promotes patient and baby safety, efficiency, effectiveness and timeliness. Sanford Health piloted the CenteringPregnancy program in 2008 at Sanford USD Medical Center and has since added a second site in Sioux Falls.

CenteringPregnancy integrates group (public) education and support along with on-site (private) health assessments/medical exams. Eight to 12 women with similar gestational ages

meet together with an obstetric practitioner during a series of 10 sessions. Sessions begin in week 10-12 of a woman's pregnancy and continue through early postpartum. CenteringPregnancy helps women maintain accountability for their health because it enhances the ability to measure, address and impact factors that may increase preterm birth or negatively affect pregnancy outcomes. Adolescent mothers and those without nearby family support networks find CenteringPregnancy especially educational and empowering. Being around women who are going through similar physical and emotional changes gives patients the chance to learn about others' experiences. Frank discussion and a positive environment may lead women to choose behaviors that result in better infant outcomes. Group sessions prove particularly informational for patients who might not have the self-confidence to speak up in a one-on-one appointment.

Because Sanford Sioux Falls will expand an ongoing program with One Strong Beginning, Medicaid patients will become part of groups that include non-Medicaid patients. All participants will receive the same level of care, with no Medicaid-only groups.

CenteringPregnancy Design Basis and Care Enhancements: CenteringPregnancy offers numerous benefits to traditional prenatal care, many of which have not been accessible to Medicaid patients and other low-income women in the past. The program's two-hour sessions provide far more contact time with providers than patients would receive in typical clinic visits. This lends greater opportunities to identify and explore topics such as breastfeeding and infant care – as well as domestic violence, depression and other subjects that currently are addressed only after a Medicaid patient is formally identified as at-risk. The group dynamic allows women to share in education from multiple sources with different perspectives. While Sanford Sioux Falls is moving toward Centering as the preferred standard of prenatal care, Medicaid patients in the Sioux Falls Region may choose to "opt-out" and meet individually with practitioners.

CenteringPregnancy sessions are pre-planned months in advance, so it's easier for women to make childcare and work arrangements without worrying about wait times. Sessions occur in late afternoons, early mornings or Saturdays. **One Strong Beginning offers pregnant Medicaid beneficiaries in the greater Sioux Falls Region a chance to be among the first patients to enroll in perpetual groups.** This model overcomes one of the biggest obstacles to group prenatal care in rural areas, where it's often unfeasible to assemble cohorts of women with similar gestational ages. Instead, women may enroll at any point during their pregnancies. Session themes may fall in a different order for individuals, but each still explores all of Centering's topics and experiences its full benefits throughout her pregnancy. One Strong Beginning identifies Sanford Worthington, located in Nobles County, Minn., as one of the first sites to pilot the perpetual group model. Group care mimics the extended-family support system that's part of the Hispanic culture of many Nobles County residents. Perpetual Centering also is planned for other, more rural communities within this proposal.

Most significant, CenteringPregnancy positively affects health outcomes. A Yale University study showed that preterm infants of group prenatal care patients were significantly larger than those in individual care, and that group patients maintained their preterm pregnancies two weeks longer than individual care patients (34.8 weeks vs. 32.6 weeks).[21] According to a separate research project, group patients were 33% less likely to deliver preterm, and more likely to breastfeed.[22]

Figure 2: Sioux Falls Centering vs. Non-Centering*

	Centering	***Non-Centering***
Gestational Age	39.25 weeks	35.46 weeks
Birthweight	3,396.84 grams	3,284.01 grams
C-section Rate	20.4%	28.86%
NICU Rate	18.92%	18.68%
NICU LOS	6.68 days	19.85 days

*Average for all births, 12-month period ended 4/30/2012

Sanford Sioux Falls' program validates national trends (Figure 2). Sanford Centering patients carry their pregnancies 10.6% longer than non-Centering patients, and the average

length of stay for newborns needing NICU services is shorter by more than 60%. The Centering model applies a time-and-outcomes-tested program that increases the odds of consistent and sustainable success.

Primary Challenges. One Strong Beginning demands a high level of competency, coordination and communication at all levels to ensure quality implementation across multiple obstetrical hubs and at the various hospital and clinic sites that operate within them. Specific challenges and potential resolutions are displayed in the table below.

Sanford One Strong Beginning: Potential Challenges and Resolutions	
Potential Challenges	**Resolutions/Strategic Interventions**
New-from-the-ground up Maternity Care Home model in two Sanford Health obstetrics hubs	Pattern core structure after Sanford Fargo Medical Home model, with advisory support from One Strong Beginning Steering Committee members who run that program
RN availability for Heath Coach	Several new positions created through proposal funding, with some lateral movement of OB/GYN clinic RNs expected to fill these roles
Multiple providers of prenatal/birth care for Native American women living on Indian reservations	RN Health Coaches work individually with patients to collect medical information and coordinate care; Indian Health Advocate (existing) provides advisory support; Increase on-site clinics at reservations to weekly with obstetrician/gynecologist, RN Health Coach and Behavioral Health Specialist
Multi-ethnic patient base with differing cultural norms in pregnancy, childbirth and family planning (especially spacing of births >1 year apart)	Purchase and integrate culturally appropriate resources, such as "The Coming of the Blessing" and multilingual brochures; Use existing bilingual obstetrics staff members as community touchpoints
Time	Work Plan and Timeline created by group of stakeholders representing different points of view to assure that goals and target service numbers of patients are feasible
Resistance to group care based on lack of understanding, inaccessibility, unfamiliar providers	Uplift benefits of and address FAQs about group care in recruitment materials and marketing; Add group sites and additional times/days of week; Introduce perpetual model that allows women to join their own providers' groups

1.3 Education and Outreach. Sanford One Strong Beginning makes a concerted effort to reach pregnant Medicaid women who live within each major obstetrics hub's primary service area and introduces nonmedical prenatal care options to new publics in communities where those enhancements have never before been offered. Because Women's Services is designated as a major Center of Excellence within Sanford Health, One Strong Beginning becomes part of a

comprehensive marketing and public relations plan to uplift care options. Project-wide, One Strong Beginning builds a network of contacts and an inter-organizational referral system. Sites will collaborate with agencies and nonprofit organizations that provide public assistance and private charitable dollars to families who qualify for Medicaid coverage. Local WIC offices, public health clinics and other social services partners will play a role. Project sites adopting the Maternity Care Home model connect these points through the work of RN Health Coaches.

Sanford Bemidji's education and outreach will benefit from an Indian Health Advocate/Patient Rations representative who already is on staff and will advise direction when appropriate. This employee possesses a deep knowledge of Native American belief systems and cultural norms. One Strong Beginning respectfully encourages Native women to apply traditional value systems to their use of modern medicine.

Sanford Fargo currently claims a 64% market share in obstetric and gynecological services in its primary market areas of Cass County, N.D., and Clay County, Minn. Pregnant Medicaid patients are referred to prenatal services through family practice physicians within and without Sanford Health, social service agencies and faith-based organizations. Sanford Fargo also sees a notable number of transient Medicaid patients who live in the area short-term, typically during summer. In addition to Native Americans, Sanford Fargo serves Hispanic, Bosnian and Somali communities. Sanford One Beginning reaffirms the relationship with Family HealthCare Center, which provides translation services. Multi-lingual informational materials in these languages help convey important concepts, as does Sanford Fargo's Spanish-speaking obstetrician.

Practitioners at Sanford Sioux Falls obstetric clinics and at Sanford Health Maternal-Fetal Medicine offer CenteringPregnancy to all newly pregnant mothers. One Strong Beginning provides additional incentives for these women through a partnership with the Teddy Bear Den.

The independent, nonprofit organization gives Centering patients double points in its education program – points that women can use to "buy" essentials such as layettes, car seats and diapers. In addition, engaging Women's and Children's Community Services to help develop materials assures consistency and quality of message from prenatal education through postnatal period.

1.4 Enrollment. Obstetric care hubs will capitalize on all points of access to raise awareness of services and recruit women for programs. Sanford Health's internal financial counselors, patient financial assistance representatives and other business-office personnel will refer patients already receiving medical assistance as well as help identify self-pay patients who might be eligible. Other sources of internal referrals to Sanford One Strong Beginning include providers in Emergency Room services and primary care offices.

Additionally, Sanford Bemidji will work with Indian Health Services and individual tribal health systems to identify additional Medicaid enrollees and those who might be Medicaid-eligible. These patients will be directed first to the weekly obstetrics clinic that One Strong Beginning brings to two reservation towns in Minnesota. The care team's presence on Indian reservations and added availability at sites in Bemidji helps ensure that patients will have consistent access to their primary obstetric care practitioner. Sanford Fargo will follow a similar process, with appointments and program enrollment taking place at one of four service sites. In Sioux Falls and throughout the Sanford Sioux Falls Region, women will be identified as Medicaid beneficiaries or Medicaid-eligible when they present to the obstetric clinic for services or register in CenteringPregnancy. Enrollment in One Strong Beginning will occur at registration time. Patients at existing Centering sites in Sioux Falls are likely to be able to follow their practitioners of choice through the program. Those in communities with perpetual Centering groups are virtually guaranteed they'll remain with their preferred health care providers.

Once enrolled in Sanford One Strong Beginning, patients will have uninterrupted care, regardless of changes in Medicaid status or gaps in coverage. RN Health Coaches, social workers and financial counselors will work with women to address the reason for each patient's break in Medicaid eligibility. Project Co-Directors and Decision Support personnel will develop a mechanism for identifying this subset in the system-wide electronic medical record. In addition, Sanford Health will collaborate with CMS to outline standards for reporting these women's data, either as part of Medicaid statistics for the project or as part of the comparison group.

1.5 Stakeholder Involvement. One Strong Beginning is designed to be philosophically, organizationally and fiscally an integral part of the way Sanford Health delivers prenatal care. The project also is linked to strategic plan priorities, as its aims directly relate to two of Sanford Health's stated Core Values and three of Sanford Health's stated Guiding Principles (Figure 3).

Figure 3: Alignment with Sanford Health Concepts

Core Values	Guiding Principles
Resolve: Adherence to systems that align actions to achieve excellence, efficiency and purpose	Care should be delivered as close to home as possible
Advancement: Pursuit of individual and organizational growth and development	Access to health care must be provided regionally
	Integrated care delivers the best quality and efficiency

Sanford Health will work in close connection with the State of South Dakota – a separate applicant for the Strong Start initiative – and its Department of Social Services. Sanford Health and the State of South Dakota collaborated to develop consistent metrics and benchmarks. This improves patient care and inter-organizational coordination for the significant number of South Dakota Medicaid enrollees who receive services at Sanford Health facilities. Other key partners include sites within the Sanford Health Network of clinics and hospitals throughout the four states. One Strong Beginning will be part of community-level partnerships already established between Sanford Primary Care Clinics and health agencies, tribal government health systems, Indian Health Services and community

groups. Internal stakeholders are just as crucial. Numerous Sanford Health providers and administrators at corporate, regional and local levels were involved in the development of this proposal, which is supported by executive leadership.

SECTION 2: IMPLEMENTATION AND OPERATIONS

2.1 Relevant Experience. Reaching back to 2005, Sanford Health sites have successfully implemented the Medical Home model in primary-care clinics for people living with chronic illnesses, special health needs, patients with multiple medications and unstable or newly diagnosed illnesses. Sanford Fargo (then MeritCare) began its Medical Home as a pilot partnership with Blue Cross Blue Shield of North Dakota and has resulted in improved outcomes for patients with diabetes, hypertension and coronary disease. Payer savings also emerged as a notable factor. During the pilot timeline (2003-2005), patients demonstrated a 6% decrease in hospital admissions and a 24% reduction in emergency room visits.

Sanford Fargo has reduced elective inductions prior to 39 weeks to 0.1% of all births. In addition, a scheduling process at one clinic creates access to obstetric care during the first six to nine weeks of pregnancy. Leadership plans to expand early visits to two other clinic locations.

About the same time that Sanford Fargo was field-testing its medical home, physician leadership and clinic administrators in the Sanford Sioux Falls Region identified the Patient Centered Medical Home as a model for chronic disease management and quality improvement. Sanford Health in 2009 was awarded a grant from the Small Health Care Provider Quality Improvement Grant Program to implement a rural medical home project. This two-year project integrated the Chronic Care Model and Patient Centered Medical Home with health information technology to form a partnership between medical providers and rural communities.

Sanford Sioux Falls' CenteringPregnancy program was the first in South Dakota and

remains the state's only group-based prenatal care program approved by the Centering Healthcare Institute. Since 2008, six physicians and four certified nurse midwives have guided more than 300 women through the program. Roughly 10% of obstetric patients at this hub choose the group model. Patient satisfaction with CenteringPregnancy is high: More than 90% of women who participate in Centering choose the group model for their next pregnancy.

Summary of Plans: As stated previously, the goal of Sanford One Strong Beginning is to reduce the number of preterm and low birthweight infants born to women enrolled in Medicaid, simultaneously improving infant and maternal outcomes. Sanford Health will attain this goal through specific actions taken to achieve project aims. A Work Plan and Timeline outlining these processes follows, on pages 29-30 of this Project Narrative.

Organizational Structure: The organizational structures for Sanford Health Executive Leadership and for this project are attached – as is a list of One Strong Beginning Steering Committee Members. (See Appendix: Pages 6-10.) A dedicated team of nurses, physician specialists and health service administrators come together in Sanford One Strong Beginning. Each has in-depth knowledge of the communities s/he serves and a commitment to provide the highest level of care to all patients – regardless of race, ethnicity, religion or ability to pay for services. Project Directors' qualifications and experience are described more fully in ***Section 3.2 Proposed Staffing*** of this Project Narrative. Biographical sketches for Project Directors and other key personnel are attached. (See Appendix: Pages 11-19.)

Current and Project Capacity. In the most recent year, Sanford Health's three major birth centers delivered more than 2,100 newborns to Medicaid patients – including greater than 900 enrolled in South Dakota Medicaid. After making allowances for South Dakota Medicaid clients whose care will be reimbursed through the State of South Dakota's partner application, Sanford One

Strong Beginning anticipates funding care for 4,055 or more women across the three-year direct-care phase. Of these, Sanford Health expects to serve 3,125 women through the Maternity Care Home model (1,850 in the Bemidji area and 1,275 in the Fargo area) and 930 or more women through the CenteringPregnancy model within the Sioux Falls Region. This proposal's Centering participants are non-South Dakota Medicaid patients who receive prenatal care and deliver at Sanford Health sites in eastern South Dakota, southwest Minnesota and northwest Iowa.

One Strong Beginning builds the Maternity Care Home model from the ground up at Sanford Bemidji, which will take the longest of the three sites to fill positions and train employees. Enrollment of patients will not begin until approximately 45 days after filling these positions. This is due in part to the need for the Behavioral Health Specialist to develop a Bemidji-specific mental health curriculum and screening protocols, and then cross-train RN Health Coaches. Sanford Fargo's Maternity Care Home anticipates enrollment of expect mothers to begin within 30 days of filling RN Health Coach positions at each location. Fargo jumpstarts its implementation of One Strong Beginning by drawing on experiences and lessons learned from the Medical Home model in its primary-care system. Enrollment will occur most rapidly at Sanford Sioux Falls, where CenteringPregnancy already operates at two sites, and Medicaid patients may join a prenatal care group as soon as they reach 10-12 weeks gestational age. Expansion to other sites in the Sioux Falls Region requires education of existing providers and training them in Centering practices. Sanford Health intends to develop the perpetual group model in late fall 2012 and begin enrolling women at new locations by early 2013.

Regardless of model or site, Sanford Health intends to begin offering enhanced care to Medicaid patients no later than the end of the third month following receipt of initial/first-year funding. Sanford One Strong Beginning project designers anticipate that it will take 2½ to 3

years of services to reach full capacity, though the project easily will reach the first-year minimum of 250 participants and the service-delivery minimum of 1,500 women across three years. The actual timeframe and final patient capacity ultimately is likely to depend on the number of Medicaid patients in the Sioux Falls Region who receive services in communities where CenteringPregnancy has never before been offered.

2.2 Monitoring and Continuous Quality Improvement. System-wide, Sanford Health has dedicated itself to improving the human condition through both evidence-based practices and qualitative feedback from practitioners and patients. An integrated organizational structure allows clinical care providers to report concerns up through the model to project directors, ensuring that issues are quickly brought to a beneficial resolution. While these structures are specific to each obstetric services hub, all personnel within the framework are expected to provide patient advocacy, planning, problem-solving and direction for model improvements. For example, all Sanford Health obstetric care providers educate patients on the benefits of full gestational age for their infants, encouraging them to “go the distance.” Formal protocols require that elective delivery prior to 39 weeks occurs only with a medical indication. Births that do not follow protocol trigger an automatic case review and practitioner consultation. Some obstetrics clinics link deficient metrics to compensation categories for health care providers.

Strong, supportive relationships foster a solid understanding of key concepts and assure ongoing, two-way communication between direct-care staff and project leadership. As front-line caregivers, RN Health Coaches in the Maternity Care Home model at Sanford Bemidji and Sanford Fargo will have firsthand knowledge of operational and patient-centered issues that need immediate attention. While obstetric service providers move into this model of team care, clinical staff at each hub will meet regularly to discuss topics that require model adaptations,

exchange ideas on best practices and review data reports generated as part of the project. Specifically, the CenteringPregnancy model mandates that enrollment and patient satisfaction be evaluated at least monthly; and outcome metrics, not less than quarterly. Through this combination of qualitative and objective measures, Sanford Health assures that performance concerns are brought to light rapidly and approached from an integrated perspective.

Person-level records in Sanford One Chart allow Decision Support staff members to identify patients not only by Medicaid vs. non-Medicaid coverage, but to further categorize that coverage by state and then by specific plan type. This level of detail assures that reimbursement requests for Sanford One Strong Beginning will be made only for costs tied to appropriate Medicaid patients served by Minnesota, North Dakota and Iowa plans.

Sanford Health has a history of using internal monitoring to improve care and outcomes for obstetric patients. Early in 2009, Sanford Sioux Falls noticed that more than 80% of patients didn't access prenatal care until gestational weeks 12-14. While medically appropriate, the delay did not provide patients with the education and reassurance they needed or desired. Sanford Health quickly designed and implemented an Early OB Program that schedules a short visit with a certified nurse midwife or physician as soon as patients inform clinics of pregnancy. More than 75% of patients at Sanford Sioux Falls' clinics now take part, starting prenatal care by week 10.

More recently, physician leaders at Sanford Maternal-Fetal Medicine initiated a cervical-length screening program as part of the 20-week ultrasound. Their protocols follow evidence-based research studies that show screening and appropriate progesterone treatments for women with a shortened cervix can reduce risk of preterm birth by as much as 45%.[23,24]

2.3 Data Collection and Reporting. Sanford Health's unified electronic medical record allows for identification of data on mothers and infants at the person-level, including gestational age and

birth weight. All individual clinics and hospitals within the project will complete their transition to a single software suite by November 2012. Branded as Sanford One Chart, the Epic Systems Corporation program enables authorized care staff to enter, view and share patient information. This powerful tool allows Information Technology and Decision Support users to isolate high-risk factors, examine relevant outcomes, analyze outcomes and identify trends.

Sanford One Strong Beginning project designers worked in concert with officials from the State of South Dakota to develop consistent metrics for use in this proposal and in that agency's partner application. Sanford obstetrics hubs will use One Chart to track a set of agreed-upon metrics for all maternity patients, regardless of the enhanced prenatal care model or patient's Medicaid status. Through the electronic record, **Sanford Health commits to collect individual-level gestational age and birthweight data for the system's own Medicaid population for a baseline period that spans more than two years prior to the start of the intervention.** Sanford Health further commits to **accurately represent gestational age, birthweight and other data for One Strong Beginning participants as well as for a comparison population during the intervention period**. This project proposes a number of well-defined metrics and stratified

Figure 4: One Strong Beginning Metrics and Comparison Populations

Metrics consistent across projects from Sanford Health and State of South Dakota		*Proposed stratifications for Sanford comparison groups*
Metric	**Patient**	**Apply to all metrics at left***
Gestational age at birth	Mother	All births
Birthweight	Infant	Medicaid births
Onset of prenatal care	Mother	Medicaid patients invited to take part in project
Elective delivery (<39 weeks)	Mother	Medicaid patients ultimately participating in project
Cigarette smoking	Mother	All births by care model (Maternity Care Home, Centering Pregnancy)
Alcohol use	Mother	Medicaid births by care model
Illicit drug use	Mother	All births by OB hub (Bemidji, Fargo, Sioux Falls)
Delivery (vaginal, C-section)	Mother	Medicaid births by OB hub
NICU Admission	Infant	
NICU Length of Stay	Infant	
Breastfeeding (3 months)	Mother	
Breastfeeding (6 months)	Mother	**Further breakdowns by State*
Interval between births	Mother	*plan coverage: MN, ND, IA, SD*

comparison populations (Figure 4). Chief among these is a closer look at Medicaid patients throughout Sanford Health's OB hubs who participate in the enhanced interventions vs. those who "opt-out" of the Centering model in favor of traditional physician visits.

In addition to the metrics described above, project designers for Sanford One Strong Beginning have identified measures specific to each hub that will help gauge success in various other areas of prenatal care. These include frequency of prenatal visits, participation in educational opportunities, referrals for nutritional/healthy eating consultations and delivery of breast milk (breastfeeding exclusively vs. giving pumped breastmilk, fed from a bottle).

2.4 Cooperation with Evaluation. Leadership for One Strong Beginning will work closely with CMS and its contractors to assist in data collection for overall program analysis. Sanford Decision Support personnel will compile and submit quarterly reports, with semi-annual and summative reports forwarded per CMS requirements. Sanford Health practitioners, clinic directors, hospital managers and chief executives enthusiastically support One Strong Beginning for its potential to improve patient health and decrease costs. A Letter of Commitment signed by key personnel from Sanford Health is attached. (See Appendix: Pages 20-23.)

SECTION 3: APPLICANT ORGANIZATION

3.1 Organization Experience and Capacity. Today's Sanford Health was built from the November 2009 merger of two longstanding and trusted healthcare organizations: Sanford Health (formerly Sioux Valley Hospital and Health System, based in Sioux Falls, S.D.) and MeritCare (based in Fargo, N.D.). The system grew again in March 2011, when Sanford Health merged with North Country Health Service of Bemidji, Minn. Sanford Health's footprint now includes 130,000 square miles of contiguous service area in five Northern Plains states and encompasses hospitals, clinics, physicians, elder care, a health plan, research and education.

Sanford Health is the largest employer in North and South Dakota, with nearly 21,000 workers.

Large-Scale Projects: Sanford Health continues to see dynamic growth through several initiatives, including global children's clinics in underserved communities in the United States. Additional clinics are under development in Ghana, Ireland, Mexico and Israel. Sanford Research presently coordinates the work of 200 scientists and support staff – an enterprise that will triple in the next five years to focus on cancer biology, cardiovascular health, children's health, women's health and health disparities. The determined effort to find a cure for Type 1 diabetes has become known simply as The Sanford Project. Meanwhile, Edith Sanford Breast Health and its patient registry help physician scientists decode the disease's person-level genetic code. Sanford Health is proud to be one of 30 Community Cancer Care Centers designated by the National Cancer Institute to help lead the rapid delivery of evidence-based care and research.

Financial Strength: Sanford Health evaluates strategic opportunities with a measured approach to risk, balancing potential benefits with the need to provide sustainable, quality services to communities. Sanford Health's leadership seeks out and cultivates prospective partnerships with organizations and individuals who share a passion for our mission. Sanford's evolution was accelerated by the generosity of Denny Sanford, the entrepreneur and philanthropist whose $400 million gift in 2007 created the Sanford Initiatives. Mr. Sanford's total contributions represent nearly $600 in total philanthropic support for the health system.

For the fiscal year ended June 30, 2011, Sanford Health reported operating revenues of more than $2.3 billion and posted a $265 million increase in net assets over the previous fiscal year. Sanford Health holds bond ratings of A1 from Moody's Investor Services and AA- from Standard and Poors. Sanford Health achieves these outcomes by functioning as a highly efficient system, with salaries and benefits accounting for only 56% of every dollar collected.

3.2 Proposed Staffing. Leadership and staffing for Sanford One Strong Beginning are as follows, with specific details and cost justifications included in the Budget Narrative:

Project Director (0.05 FTE): Sharon Hunt, Vice President of Women's, Cancer and Imaging for Sanford Clinic Sioux Falls Region, will serve as overall Project Director to provide expertise and guidance on the aims, objectives and activities embedded in this project – including administrative responsibility for overseeing project reports and delivery to CMS. Hunt also will direct the project implementation for the entire Sioux Falls Region. During her time with Sanford Health, Hunt has led operations at a multifaceted Women's service line, including obstetrics/gynecology, reproductive endocrinology, gynecologic oncology, maternal-fetal medicine, urogynecology and breast health. Hunt is a former director of clinic services at Sanford USD Medical Center and has guided medical clinics as they develop and implement electronic software capabilities to manage patient data. Prior to joining Sanford Health, Hunt guided Obstetrics and Gynecology, Ltd as the practice formed the Sioux Valley Health Alliance, a clinic-without-walls group of six primary-care clinics. Her educational and work background also includes data analytics, market research and process monitoring.

Project Co-Directors (0.05 FTE Bemidji, 0.05 FTE Fargo): Jane Killgore, MD, OB/Gynecological Physician at Sanford Bedmidji Medical Center; and Cynthia Skorick, Vice President of Internal Medicine, OB/GYN, Reproductive Medicine , Gastroenterology and Eating Disorders and Weight Management Center for Sanford Clinic Fargo, will coordinate project implementation, assessment and evaluation activities for their respective obstetrics hubs. They will provide administrative and operational oversight of clinical services and required reporting mechanisms and schedules. Each will be the administrative point of contact for all project personnel at her respective obstetrics hub. Killgore has been in her current position as an

OB/Gynecological specialist since 1980. As senior member of the four-physician obstetrics and gynecology department, she also is a member of the medical center's OB/Pediatrics Clinical Quality Improvement Committee. Skorick is a longtime behavioral health professional with a background in counseling and assessment. Prior to joining Sanford Fargo (then known as MeritCare), Skorick oversaw $27 million annual budget and 5,500 employees as CEO of a state-operated regional treatment center for the Minnesota Department of Human Services.

RN Health Coach (2.0 FTE Bemidji, 2.4 FTE Fargo): The RN Health Coach is a board-certified registered nurse who is trained to coordinate patient care, conduct motivational interviews, establish patient-centered goals for behavioral and lifestyle changes, manage quality-improvement activities, refer patients for specialized professional services and report data. (See Appendix: Pages 24-25.) Sanford Bemidji intends to increase to 3.0 FTE for Year 2 and Year 3.

Behavioral Health Specialist (0.50 FTE Bemidji, 0.20 FTE Fargo, 0.028 FTE Sioux Falls): The Behavioral Health Specialist is a psychologist who provides integrated, early-intervention diagnostic screenings and assessments according to each patient's level of clinical acuity and psychosocial complexity. (See Appendix: Pages 26-27.) Sanford Bemidji and Sanford Fargo both intend to decrease this position to 0.10 FTE for Year 2 and Year 3, after the Specialist has completed work on curriculum, materials, protocols and training for RN Health Coaches.

Data Support Team (0.15 FTE Bemidji, 0.15 FTE Fargo, 0.093 FTE Sioux Falls): Data support team members will record, abstract and analyze data through the Sanford One Chart electronic medical record. Sanford Bemidji intends to increase to 0.40 FTE in Year 4 and Sanford Fargo intends to increase to 0.25 FTE in Year 4. Both use Decision Support Analysts in this role. Sanford Sioux Falls assigns an RN Data Analyst to track outcomes in the group model.

Smoking Cessation Counselor (0.10 FTE Bemidji, 0.15 FTE Fargo): Counselors are

respiratory therapists who integrate in prenatal care the education and motivational tools from existing formal smoking cessation programs in Bemidji and Fargo. In the Sioux Falls Region, smoking cessation is a focus of group sessions, and Centering Instructors absorb this role.

Lactation Consultant (0.10 FTE Bemidji, 0.028 FTE Sioux Falls): Consultants offer expertise on infant nutrition and breastfeeding techniques. Sanford Fargo absorbs this function with existing RN staff members who visit new mothers during their hospital stays. Sioux Falls' portion is a specialty topic during a CenteringPregnancy session.

CenteringPregnancy Instructors (0.374 FTE): An RN Co-Facilitator (0.281 FTE) and an RN Centering Coordinator (0.093 FTE) are designated to serve Medicaid patients as part of Sanford One Strong Beginning in the Sioux Falls Region.

Supportive Services Team (0.484 FTE): Various specialists assist in additional screening, education and referral services as part of One Strong Beginning. Each brings vital knowledge of their respective disciplines. Their roles include Dietician (0.15 FTE Fargo, 0.028 FTE Sioux Falls), Financial Consultant (0.028 FTE Sioux Falls), Infant/Child Specialist (0.028 FTE Sioux Falls), Certified Childbirth Educator (0.10 FTE Bemidji) and Social Worker (0.15 FTE Fargo).

WORK PLAN AND TIMELINE

The work plan for Sanford One Strong Beginning a detailed operationalization of project aims. It identifies reasonable milestones with associated timeframes and holds accountable the individuals responsible for accomplishing project goals. (See separate file, as part of "Other Attachment Form, per CMS guidance issued via e-mail on August 3, 2012.)