

Promoting Change to Improve Birth Outcomes

Kansas Mini-Collaborative Project Handbook

Maternal and Child Health Target Area

About This Handbook

The purpose of this handbook is to provide background and reference information on the Mini-Collaborative on Maternal and Child Health (MCH) and to help the teams involved in the Mini-Collaborative prepare for a successful start to this quality improvement initiative.

Getting Started contains an overview of the Mini-Collaborative, a schedule of major events and periods, and a checklist of pre-work activities—tasks your team should accomplish before the first learning session on February 12, 2009.

The section on **Completing Pre-work** will walk teams step-by-step through preparing for the first learning session.

The **Mini-Collaborative Charter** contains the mission and rationale for this Mini-Collaborative along with a description of the methods that will be used and the Mini-Collaborative expectations—what teams can expect from the project and what the project expects from each team.

The **Change Package** contains a variety of strategies for addressing the MCH outcomes targeted by this project.

The **Measurement Strategy** section provides data definitions for the required and optional measures and describes the data that teams will collect to monitor their progress during the Mini-Collaborative.

In addition, please find included with this handbook a detailed **Calendar of Activities and Events**.

Getting Started

This section provides an overview of the Mini-Collaborative, a schedule of activities, and a list of pre-work activities—tasks to be accomplished before the first learning session.

Overview

A Breakthrough Series (BTS) Mini-Collaborative is a systematic approach to quality improvement in which teams test and measure practice innovations, then share their experiences in an effort to accelerate learning and widespread implementation of best practices.

In 1995, the Institute for Healthcare Improvement held the first BTS Collaborative, and since then, more than 700 teams from over 465 U.S. and Canadian healthcare organizations have participated in BTS Collaboratives. In 2008, the Robert Wood Johnson Foundation identified the BTS Collaborative strategy as an essential element for a multi-year project on quality improvement for public health systems. The project, being implemented in 16 states, is called Multistate-Learning Collaborative # 3 (MLC-3). In Kansas, the MLC-3 project is managed jointly by the Kansas Association of Local Health Departments (KALHD), the Kansas Department of Health and Environment (KDHE) and the Kansas Health Institute (KHI). The Mini-Collaborative project described in this document is part of the Kansas MLC-3 initiative.

This Mini-Collaborative

The *Promoting change to improve birth outcomes* Mini-Collaborative will involve teams from three public health regions in Kansas and from KDHE working together for about 9 months to individually test system changes aimed at increasing the number of pregnant women who receive prenatal care in the first trimester and to collectively share learning experiences.

Mini-Collaborative Events and Working Times

The four components of the Mini-Collaborative are:

1. Pre-work activities
2. Learning sessions
3. Action periods
4. Outcomes learning congress

Pre-work is the period between the beginning of the project (January 2, 2009) and Learning Session 1, scheduled for February 12-February 13, 2009. During this time, each participating team has several important tasks to accomplish. These tasks are listed later in this section and described in detail in the following section.

Learning sessions are the major interactive events of the Mini-Collaborative. The learning sessions for this Mini-Collaborative will be coordinated by the University of Kansas' Area Health Education Centers (AHEC). Continuing Education (CE) credits will be provided for individuals participating in the learning sessions. Through plenary sessions, small-group discussions, and team meetings, attendees have the opportunity to

- learn from faculty and colleagues;
- receive individual coaching;

- gather knowledge on the subject matter and on process improvement;
- share experiences and collaborate on improvement plans; and,
- solve problems and barriers to improving care.

Action periods are the time between learning sessions. During action periods, your team will work within your organizations and in your regions to test and implement changes aimed at improving early prenatal care. Early prenatal care in this project is defined as the initiation of prenatal care by a physician or nurse midwife during the first trimester of pregnancy. Teams will share the results of their improvement through an electronic mailing list (e-mail list), monthly conference calls, and a Web site. Participation in action periods is not limited to those who attend learning sessions; we encourage and expect the participation of other team members and supporters in the region.

An **outcomes learning congress** where teams will publicly share (through storyboards and other means) their findings and celebrate their achievements will take place on November 13, 2009.

Schedule

The sequence of events for the Mini-Collaborative is as follows:¹

Mini-Collaborative project begins - January 2, 2009
Pre-session work: January 2, 2009 – February 12, 2009
Learning Session 1 – February 12 to February 13, Topeka
Action Period 1 - February 13 to May 22
Learning Session 2 - May 22, TBA
Action Period 2 - May 23 to August 21
Learning Session 3 – August 21, TBA
Action Period 3 – August 24 to November 12
Outcomes Congress – November 13, TBA
Mini-Collaborative project ends – December 31, 2009

Please also see the attached **Calendar of Activities and Events**. It provides a more detailed schedule which includes conference calls, due dates for senior leader reports, and major Mini-Collaborative events.

Each team is expected to participate in monthly conference calls with the Mini-Collaborative leadership. The first conference call is scheduled for January 22, 2009, before the first learning session. The Calendar of Activities and Events provides the dates of all the conference calls for the duration of the Mini-Collaborative. All calls will occur at 1:00 pm central time.

¹ Dates and places subject to change.

Checklist of Pre-Session Activities

To prepare for Learning Session 1, each participating team involved in the Mini-Collaborative needs to complete the following pre-session activities:

1. Read and review the Request for Proposals.
2. Read and review the Mini-Collaborative Handbook (this document).
3. Form a team.
4. Participate in a pre-work call with the project management team at a designated time .
Contact: Tatiana Lin, KHI, (785)-233-5443.
5. Obtain Internet access (if needed) for accessing the Mini-Collaborative e-mail list.
6. Register and arrange for travel to the learning sessions.

Mini-Collaborative Handbook and Charter

Please read this handbook and pay particular attention to the Mini-Collaborative charter, which is the next section of this handbook. The charter defines the Mini-Collaborative mission, summarizes the evidence that will direct your work, outlines methods that your team will use to achieve the mission, and lists what teams can expect from the Mini-Collaborative leadership as well as what the leadership expects of teams.

Forming a Team

Having an appropriate and effective team is a key component of successful improvement efforts. Choose your team members based on their knowledge of, involvement with, and enthusiasm for the systems and processes that you will work to improve. Team members also should be willing to dedicate the amount of time (sometime substantial) necessary for the success of this project. The following instructions should be used as a general guidance to assemble your team, but the final composition will depend on the specific characteristics of your project.

Each participating public health region and KDHE need to form a team to test and implement system changes related to the improvement of pregnancy outcomes and reduction of infant mortality rates. Five to ten members is a typical size for the team. However, not all team members will need to travel to the learning sessions and a learning congress. You will need to select between 3 and 5 people who will attend the Mini-Collaborative learning sessions and a learning congress. The remaining team members will participate in the work that is done between learning sessions. Teams should include people from departments and work areas that will be affected by the changes, to ensure that the team understands the system it is trying to redesign and to promote buy-in for the changes.

Characteristics of Effective Team

You need to define your initial project team at the start of the project, before the first learning session. This initial team should then relatively quickly identify additional team members, as necessary, during and soon after the first learning session. It is helpful to maintain continuity in the project leader and key team members, but team members may be added during the life of the project, if needed. The key is to recognize and make use of existing skills and experience to ensure that the project moves forward with the best available knowledge. For the regional teams, it may be advisable to include at least one representative from each of the counties that are part of the region.

Working as a team is not always easy. Portion of the first learning session will be devoted to discuss how team can be successful. For a team to function in the most efficient manner, team members have to be focused on the objectives, share leadership roles, and be accountable for their actions. Below are some of the defining features of a successful team:

1. Each member of a team should be clear about the goals and objectives of the project.
2. Clear leadership roles should be defined for different team activities.
3. All members of the team should have a sense of belonging and a strong desire to meet the defined goals and objectives.
4. The specific responsibilities for each team member should be mutually agreed upon by all team members.
5. The team must be built on the premise that viewpoints and contributions of all members are of equal value.

The team should meet (in person or by conference call) as often as the project requires. In general, it is recommended that meetings take place at least twice a month.

Team composition

The regional teams ideally should include at least one representative from each agency that is a member of the region. Teams may include the following professionals, as appropriate for the specific goals of each project:

- Regional coordinator;
- Director of the health department;
- Health officer/medical consultant;
- WIC Coordinator;
- Family planning coordinator;
- Director of Nurses;
- Director of outreach programs;
- Director of MCH program;
- Disease Control Program Coordinator;
- Immunization program coordinator;
- Administration support;

- Prenatal care providers; and,
- Other community partners.

Although leadership responsibilities are often shared between team members, normally one individual is appointed as the overall project leader.

Once you have identified some of key people involved in the project, draw up rough “terms of reference” for each person that spells out what they are expected to contribute to the team.

Regional and State (KDHE) Teams

Regional teams and the KDHE team will work closely together to assure the overall success of the mini-collaborative. Like it happens in real public health practice, the results of local and regional activities may depend heavily on the resources and activities performed at the state level, and vice versa. Within the scope of the mini-collaborative, each team will set up its own goals and decide its own activities, but teams will check their goals against those of other teams and of the KDHE team. The KDHE team will develop and implement a rapid cycle improvement project using the same methods and QI tools as the regional teams. In addition, the KDHE team will support the regional teams with activities that are necessary for the regional projects and fall within KDHE’s roles. Examples of issues likely to be important for the KDHE team to support the regional teams include direct access to data, timeliness of data, data visualization and report, linkage to national resources and standards, and technical assistance.

Activities to complete during or soon after the first Learning Session

Selection of Focus Area for Each Team

The selection of the specific quality improvement goals and activities for your project is one of the most critical decisions that needs to take place at the beginning of each project. The use of logic models can assist in this task.

Review the logic models in Figure 1 and Figure 2 at the end of this document. The overall target that was decided by the MLC-3 national office for this project (and for all the team activities) is how to increase the proportion of pregnant women who receive early prenatal care. Please note that the emphasis is on timeliness, not quality of prenatal care. Within this general target, each team will decide during the first learning session or soon after what specific activities to focus on. Based on your knowledge of the specific issues, strengths and weaknesses in your region, you will discuss with your team which box or boxes of the logic model you could address with your project - what box could be changed within the timeframe and resources of this Mini-Collaborative in a way that would have the largest impact on the overall issue of assuring early prenatal care?

Because of the relative short duration of this mini-collaborative project, it is highly recommended that the focus area for the project and the measurement strategies (see “Change package” section) be selected from the outputs and the short- and medium-term outcomes boxes of the logic models.

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After you select the focus area for your interventions, you may want to sketch another logic model, specific to your project, with more details on the goals and activities. You can start drafting your own logic model for review and discussion at the learning session, if you want, and refine it later with input from the rest of the team. Like all logic models, this should be a living document that can help you and your team stay focus, select priorities, and measure progress.

Tips for selecting and running a regional project*

- 1) Choose a topic for which you can find a gap between “evidence” (i.e., science and best practices) and current practices.
- 2) Focus on areas for which examples of better performance exist (e.g., in another county, region or state).
- 3) Choose something that “matters”. You will spend a lot of time on this project; be ready to explain why.
- 4) Start small and aim for realistic improvement.
- 5) Avoid making your QI effort a large scale project that you always wanted to tackle, but were not quite sure how to proceed.
- 6) Choose a QI effort related to a familiar process, program or area.
- 7) Be patient; change takes time.
- 8) Keep in mind that unanticipated results are not failures.
- 9) Most QI projects fail on their first attempt. If the results are not what was expected, you have a learning opportunity, not a failure.

Knowing what does not work is sometime as important as knowing what works.

Developing an Aim Statement

An aim statement is a concise written statement describing what the team expects to accomplish in the Mini-Collaborative; it provides guidance for the team’s specific improvement efforts. The aim statement ensures that team activities align with the strategic goals of the team’s organization. Involving senior leadership in developing an aim statement can help teams ensure support for their work.

The aim statement answers the question” What are we trying to accomplish?”. It should be detailed, but not too long (one or two paragraphs). The aim should be stated clearly, and the statement should contain numerical goals that can be measured during and at the end of the project.

Aim statements are operational statements that specify what activities a team is going to implement during the project. One common mistake that should be avoided is for a team to jump straight to the development of an aim statement without adequate preparation and discussion regarding the nature of the problem that the team wants to address. The insert in this page describes the correct process to develop an aim statement.

The development of the aim statement can take place only after the topic for the team project has been fully identified. A first draft of the aim statement should be prepared as a part of the pre-session activities, and will be refined and revised during and after the first learning session. You should use the time before the first learning session to work on identifying and obtaining the data that you need to describe your current status and decide what you want to change. Data collection and preliminary analysis represent very important pre-session activities. (If you do not know where you are, you cannot decide where you want to go and how to get there.)

Specific activities for each project should be decided at or soon after the first learning session. While the regional projects should have a regional scope (by including members from the entire region and addressing issues relevant to the region) individual activities need not to be deployed in the entire region. It is a key concept of a Mini-Collaborative to select one change and test it on a small scale first. Several tests usually take place during a single Mini-Collaborative through subsequent cycles. While it is desirable to involve multiple areas in the region in at least one cycle, there is no requirement for each change to be tested and implemented throughout the entire region.

Storyboards

At the beginning of the first learning session, each team will receive an access to a storyboard template that will be available on the KALHD MLC-3 website. The template is being built so that teams making use of it will be able to update their storyboards as often as they need. The storyboard will visualize the project progress on paper and will give the opportunity to see the visual images that tell the story.

At each learning session, the designated member of the project management team will print the teams' storyboards and display them on the foam-core boards (approximately 30" x 40"), in order to present what the teams have accomplished and learned so far.

Storyboards help create an environment conducive to sharing and learning from the experiences of others. At the first learning session in February, a team's storyboard will be a way to introduce the team to the other Collaborative participants. The storyboard is an opportunity to have some fun and show the unique character of each project and team. The storyboard should be clear and concise. The audience for storyboards consists of other teams, the Mini-Collaborative leadership, observers, and faculty. Your audience may not be familiar with your region, your agency, your aim, and your work.

At the end of the Mini-Collaborative, the project leadership team will develop a storyboard to summarize the results of the entire project (including all the teams involved in the project).

Further details and templates on how to prepare a storyboard will be provided at a later date.

Mini-Collaborative Charter

The Mini-Collaborative charter includes the mission and goals for the Mini-Collaborative; a problem statement that describes opportunities to improve early prenatal care; a methods section that describes how the Mini-Collaborative works and what models will be used; a section on expectations; and references and recommended readings. The charter, measurement strategy, and change package (described in following sections) were partly developed using material published by the Institute for Healthcare Improvement (IHI) and Qualis Health and OMPRO.

Charter

The purpose of the Mini-Collaborative is to improve pregnancy outcomes and reduce infant mortality rate in a cost-effective manner through system and process redesign using proven, evidence-based practices or innovative interventions accompanied by rigorous evaluation. The goal is an improvement in each participating region in the proportion of pregnant women who receive prenatal care in the first trimester of their pregnancy, described below.

Mission

The mission of this Mini-Collaborative is to achieve, in 9 months, a breakthrough improvement in the provision of early prenatal care. The primary emphasis of this Mini-Collaborative is on promoting public health systems that can improve the timeliness of prenatal care. The mission encourages participating teams to a collaborative approach with other partners in their region, such as local health departments, hospitals, private providers and safety net clinics.

The Mini-Collaborative faculty will help each team achieve this mission and their specific aim. The faculty will support the teams in meeting the Mini-Collaborative goals by sharing the best available scientific knowledge on supporting collaborative public health systems and by teaching and applying methods for organizational change.

Goals

The goal of the Mini-Collaborative is an improvement in each participating region of 10% percent over baseline in the proportion of pregnant women who receive prenatal care in the first trimester of their pregnancy.

Problem Statement

Since 1993, decreased Congressional appropriations for the Maternal and Child Health Services Block Grant have resulted in decreased funding for Local Health Departments (LHDs). At the same time, the number of pregnant women with risk factors for negative pregnancy outcomes has remained stable or has increased. As a result of this environment of increasing demands and decreasing resources, public health and health care providers are struggling to assure that pregnant women receive adequate prenatal care.

Of the 39,701 Kansas live births in 2005, only 76% received first trimester prenatal care, down from 87% in 2004 and substantially less than the Healthy People 2010 goal of 90%. During that same timeframe, both the Low Birth Weight (LBW) and Infant Mortality (IMR) Rates increased. Babies who are born LBW (<2,500 grams or 5.5 lbs.) are more likely to die before their first birthday and African American babies are more likely than any other race to die from LBW complications. This data confirms that, as a state, Kansas has moved farther away from MCH and HP 2010 goals rather than closing the gap.

In Kansas disparities in the percentage of pregnant women receiving early prenatal care exist. Hispanics, African Americans and teens have disproportionately lower rates. Geographically, early prenatal care rates are lowest in Southwest Kansas.

Reducing risks for high-risk pregnancies benefits not only the physical and emotional health of the woman, but also the health of the community. It also makes good fiscal sense. Improving birth outcomes by changing the behaviors of the mother and reducing the effect of risk factors during pregnancy can result in substantial cost savings, making MCH a program that pays for itself.

According to a 2007 report from Harvard University, *A Science-Based Framework for Early Childhood Policy*, “Cost-benefit studies over the past four decades show that programs—some as early as prenatal and some beginning as late as age 4—return \$3 to \$17 back for every dollar invested.” Among the program and policy recommendations of this report are the following:

- Access to basic medical care for pregnant women and children is critical to healthy development.
- Early and intensive support by skilled home visitors can significantly benefit parents and children.

A mother’s medical problems and lifestyle choices prior to and during pregnancy influence the weight of her baby. Not only are the costs of health care alone for a significantly premature and LBW infant excessive, but those infants experience substantially greater life-long health problems as well as cognitive problems that can have a profound impact on school performance.

According to the March of Dimes, almost 70% of LBW babies are premature (born prior to 37 weeks gestation), compounding complications already associated with the infant’s LBW. In 2005, Prematurity costs in the U.S. were at least \$26.2 billion. Of that total, 65% was for medical

care, 22% for lost household and labor market productivity, 7% for maternal delivery, 4% for special education services and 2% for early intervention services.

Between 1994 and 2004, the rate of premature births in Kansas increased by more than 20% and the LBW rate increased more than 12%. The average first-year medical costs, including both inpatient and outpatient care, were almost 15 times greater for preterm/LBW infants (\$41,610) than for term infants (\$2,830).

Initiation of prenatal care during the first trimester is universally considered an important aspect of the overall strategy to decrease negative pregnancy outcomes. While early start of prenatal care is important, it should be considered as one component of a comprehensive, multi-disciplinary strategy to promote healthy mothers and healthy babies. The content of the prenatal care that a pregnant woman received is at least as important as how many times she visits a health care provider. For the purpose of this project, only the time of beginning of prenatal care will be considered. In addition, for the purpose of this project a prenatal care visit occurs when a pregnant woman receives a clinical assessment from a physician or nurse midwife.

Methods

To apply changes in their local settings, participants in the Mini-Collaborative will adopt an approach for organizing and carrying out their improvement work, modified from a Model for Improvement developed in 1996. This model identifies four key elements of successful process improvement: specific and measurable aims, measures of improvement that are tracked over time, key changes that will result in the desired improvement, and a series of testing “cycles” during which teams learn how to apply key change ideas to their own organizations.

The Model for Improvement requires teams to ask three questions:

1. What are we trying to accomplish? (Aim) Here, participants determine which specific outcomes they are trying to change through their work.
2. How will we know that a change is an improvement? (Measures) Here, team members identify appropriate measures to track their success.
3. What changes can we make that will result in improvement? (Changes) Here, teams identify key changes that they will actually test.

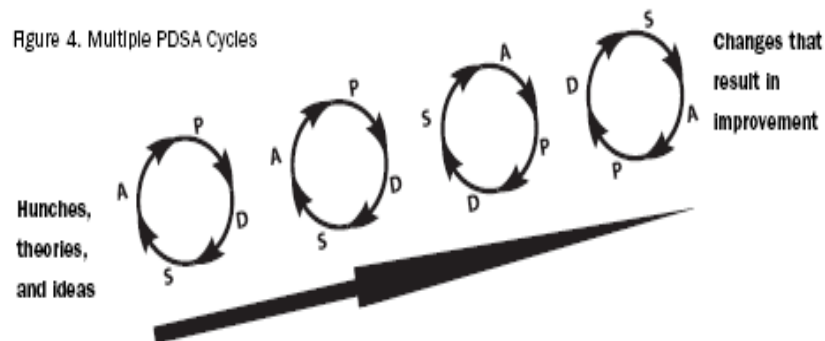
Key changes are then implemented in a cyclical fashion: teams thoroughly plan to test the change, usually starting on a small scale, taking into account cultural and organizational characteristics; they do the work to make the change, tracking their progress using quantitative measures; they closely study the results of their work for insight on how to do better; and they act to apply the successful changes on a large scale and make them permanent or to adjust the changes that need more work. This process continues serially over time and refinement is added with each cycle, which is known as the “Plan-Do-Check-Act” (PDCA)² cycle of learning.

² The Plan-Do-Check-Act cycle is often referred to also as the Plan-Do-Study-Act. The two terms are equivalent.

Each team is expected to develop an aim statement (a statement on what the team expects to accomplish during the Mini-Collaborative) that includes specific goals relating to improving early prenatal care. Teams are encouraged to begin by working initially within a specific population (pilot population) or with one or two providers. The ultimate goal is to spread the improvements to other populations and throughout the entire system. To facilitate learning during the Mini-Collaborative, teams should try to identify a pilot population that is expected to include an adequate number of pregnant women and to be relatively accessible to the team for interventions.

Both process and outcome measurement strategies will be used to assess organizational progress toward achieving the Mini-Collaborative goals. Teams will practice an improvement strategy that includes breakthrough goals and a method to develop, test, and implement changes in their systems. Teams will be expected to collect well-defined data that relate to their aim at least monthly and to plot these data over time for the duration of the Mini-Collaborative.

Figure 1 shows the high-level logic model for this project (developed by the MLC-3 national program office). Figure 3 illustrates the multiple cycles of a typical rapid improvement project.³



Expectations

The Mini-Collaborative project staff and faculty will:

- provide information on subject matter, application of that subject matter, and methods for process improvement, both during and between learning sessions;
- offer coaching to teams;
- perform a site visit to each project site during the course of the project;

³ From: Institute of Health Care Improvement. The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvements. Cambridge, MA, 2003.

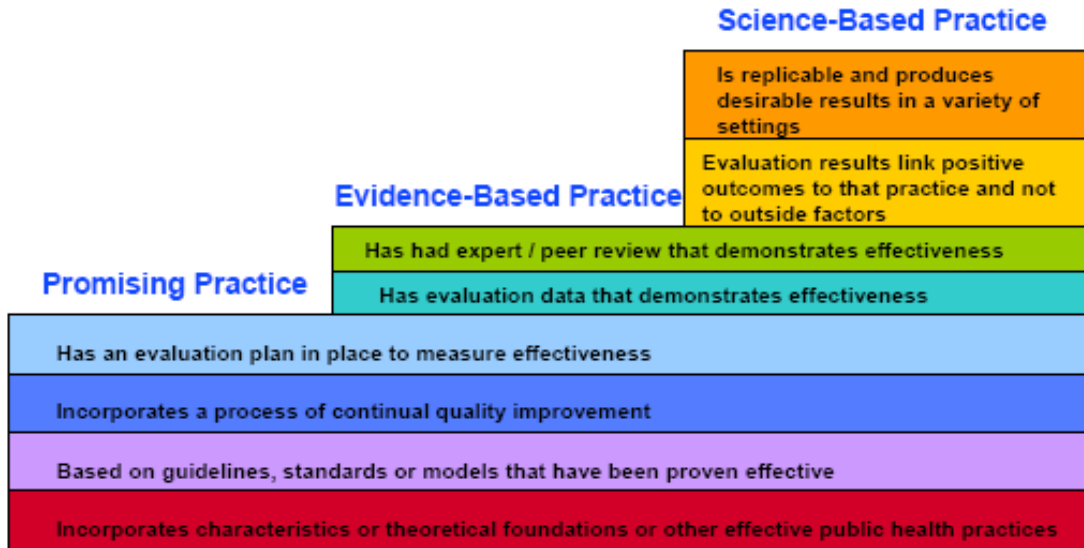
- provide an electronic mailing list (e-mail list) and other communication venues for shared learning;
- assess team progress and provide feedback to teams monthly;
- plan and implement face-to-face meetings (three learning sessions and an outcomes learning congress);
- create a summary storyboard to summarize the results of the Mini-Collaborative project;and,
- provide Continuing Education (CE) units for the face-to-face meetings.

Teams are expected to:

- perform pre-work activities as outlined in section II of this handbook;
- connect the goals of the Mini-Collaborative work to a strategic initiative in their jurisdiction;
- provide a senior leader to act as a point of contact for the Mini-Collaborative and actively support the team;
- provide the resources to support the team, including resources necessary for learning sessions and staff time to devote to this effort;
- participate in each face-to-face session;
- identify the performance measures that the team is going to target;
- plan, design and implement plan-do-check-act cycles of learning (improvement cycles) to meet the targeted performance measures;
- submit two reports during the course of the project: a brief intermediate report (6 months from the beginning of the mini-collaborative and a brief final report at the end of the mini-collaborative);
- create brief storyboards for presentation at each learning session; and,
- share information with the Mini-Collaborative, including details of changes made and data to support these changes, both during and between learning sessions.

Change package

This section contains a collection of ideas for changing processes and activities that affect the delivery of early prenatal care. Ideally, quality improvement projects will be based on a select number of *best practices*. Best practices are represented by a continuum of practices, programs and policies ranging from promising to evidence-based to science-based. This is illustrated in the following diagram:



While there are science-based practices known to improve the overall *quality* of prenatal care, little is known about the effectiveness of practices aimed at improving the *timeliness* of prenatal care (which is the goal for this mini-collaborative). There is good information on what factors may affect how early a woman receives her first prenatal care assessment, and this information is summarized in this section. However, less knowledge is available on what activities are effective in removing the barriers.

In general, the following groups of women are considered at increased risk of receiving late or no prenatal care:

1. Non-white women;
2. Women who are poor;
3. Women who are poorly educated;
4. Teenage women;
5. Women over age 45;
6. Women with three or more previous pregnancies; and,
7. Unmarried women.

The Institute of Medicine in 1985 identified six major barriers to timely prenatal care:

1. Financial constraints;
2. Limited availability of maternity care providers;
3. Insufficient prenatal services, especially for high risk women;
4. Experiences, attitudes and beliefs that discourage women from seeking prenatal care;
5. Inadequate transportation and child care services for pregnant women; and,
6. Inadequate recruitment of pregnant women in hard-to-reach, high risk populations.

In 1988 the Institute of Medicine also identified (in addition to the factors already listed above) lack of health insurance and residence in inner cities and isolated rural areas as key determinants of late prenatal care.

The Government Accounting Office (GAO) reported in 1987 that among multiple barriers to early initiation of prenatal care identified, three were found predominant in most communities:

- 1) Lack of money to pay for care;
- 2) Lack of transportation to get to the provider of care; and,
- 3) Lack of awareness of the pregnancy.

The GAO also reported that 63% of women who receive Medicaid encounter problems establishing eligibility during their pregnancies, and concluded that an important barrier to early prenatal care could be removed if women could receive services while waiting for Medicaid to establish their eligibility (presumptive eligibility).

Financial barriers are certainly important, but they are often difficult to remove for public health practitioners. In a review published in 1992, Klerman listed a series of nonfinancial barriers to the receipt of medical care for women and children. While not exclusive to prenatal care, many of the barriers identified in that report may be applicable to pregnant women as well. Some of the barriers listed are:

1. Legal restrictions, such as laws that require substance-abusing pregnant women to be reported to child protective agencies, fear of deportation for undocumented aliens, or regulations requiring frequent re-certification for programs such as Medicaid or WIC.
2. Geographic problems and residential situations, such as shortage of providers, large distances between providers and patients in rural areas, homelessness, and runaway children.
3. Institutional barriers, such as policies that limit referrals for specialized care, practices that make it difficult for pregnant women to make an appointment for their prenatal care visit, long delays between making an appointment and being seen, and lack of support services in clinical settings (e.g., bilingual staff, on-site child care, assistance with transportation).

4. Providers attitudes, such as negative attitudes towards individual patients or groups, cultural insensitivity (e.g., calling patients by their first name without asking if that is their preference), or leaving inadequate time to answer patients' questions.
5. Personal barriers, such as age-related factors (particularly important for adolescents), being in foster care, being in juvenile custody or jail, racial and ethnic barriers, lack of sufficient and appropriate information, inability to speak and read English, psychological problems, drug addition, depression or other mental health issues, or competition with other activities that appear more important.

Measurement Strategy

Before the activities for the Mini-Collaborative begin, a list of key measures that will be used to track improvement must be developed. Data availability often represents a major barrier in tracking measures of progress during a rapid cycle improvement project. In many cases, information is either not available or it is not timely enough to support a fast-moving project. Teams should examine the issue of how they are going to monitor their progress, and where they will obtain the necessary data. *The importance of measuring progress and outcomes cannot be over-emphasized.* Without measures you would not be able to learn if your changes have produced a difference, which would undermine the very purpose of the Mini-Collaborative.

The long-term outcome measure for this Mini-Collaborative is the proportion of pregnant women who start prenatal care in the first trimester. Given the time lag between the project activities and the availability of information on that long-term outcome, teams will have to select additional measures for their projects. Specific measures based on short- and intermediate outcomes should be established by each team and will depend upon the specific aims and activities of each project. In particular, measures will vary depending on what

Make Providers more user-friendly

A systematic review of policies and procedures is often helpful to identify and remove barriers at the provider's level. Interviews with patients or the use of anonymous questionnaires can supply additional information. Accompanying a patient, particularly a first-time patient, through a visit also may yield fresh insights. With such information available, staff meetings become a vehicle for devising new policies and procedures, and for organizing in-service training programs. Strong resistance to change is often present in these situations.

Some providers of prenatal care have gone through this process. In the early 1970s, a maternity and infant care project required all personnel on their first day of employment to register as new obstetric patients and "to go through the clinic." The clinic directors believed that this experience increased staff awareness of "what a patient's average day involves and underlines the importance of treating patients with respect and courtesy."

Adapted from : Klerman, L.V. *Nonfinancial barriers to the receipt of medical care.* U.S. Health Care for Children, Vol. 2, N.2, 1992.

boxes in the logic model (Figures 1 and 2) the team decides to address. Examples of possible measures could be:

- Development of new strategies to identify pregnant women in priority populations (who they are, where they live, how large is the group).
- Development of new strategies to reach out to pregnant women in priority populations.
- Change in knowledge among the target population about the importance of early start of prenatal care and where to obtain care.
- Change in the number of health care providers willing to begin prenatal care for a pregnant woman on Medicaid or who is waiting for determination of eligibility.
- Development of new policies to address specific non-financial barriers that discourage pregnant women from starting prenatal care in the first trimester.
- Number of bilingual brochures distributed by local venues (e.g., drugstores, grocery stores) describing how and where a pregnant woman can receive prenatal care early during pregnancy.

Once again, these are only examples – the appropriate measures for each project will depend on the project’s goals, activities and characteristics. Teams are encouraged to select multiple measures for their projects. Teams should make provisions to perform some limited original data collection and analysis, if necessary, to monitor their measures and support their projects. A mix of outcome measures (are we achieving our aim?) and progress measures (how is the system working?) should be used.

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Figure 1 – Multi-state Learning Collaborative Project Logic Model – Reducing Infant Mortality Rate

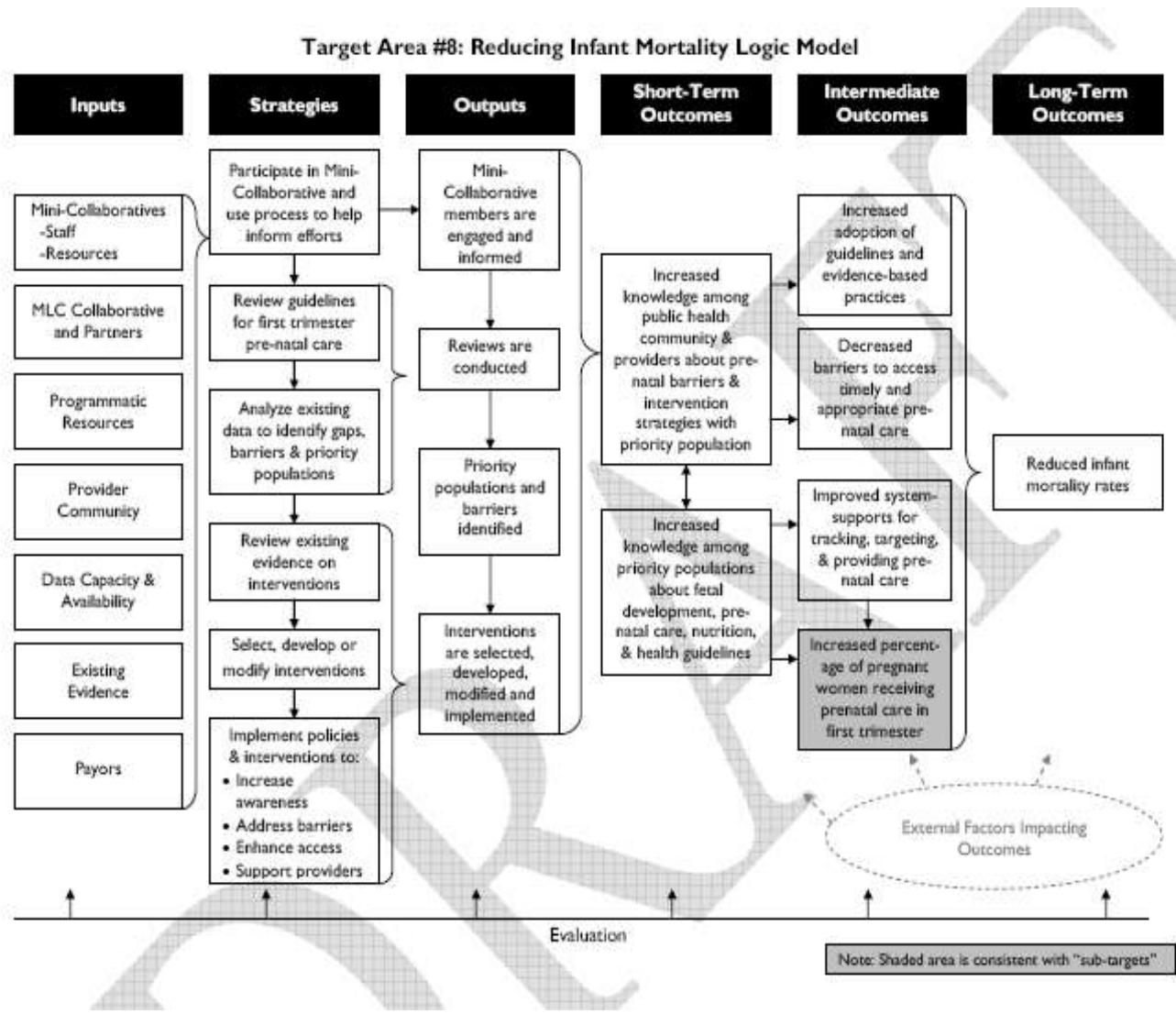
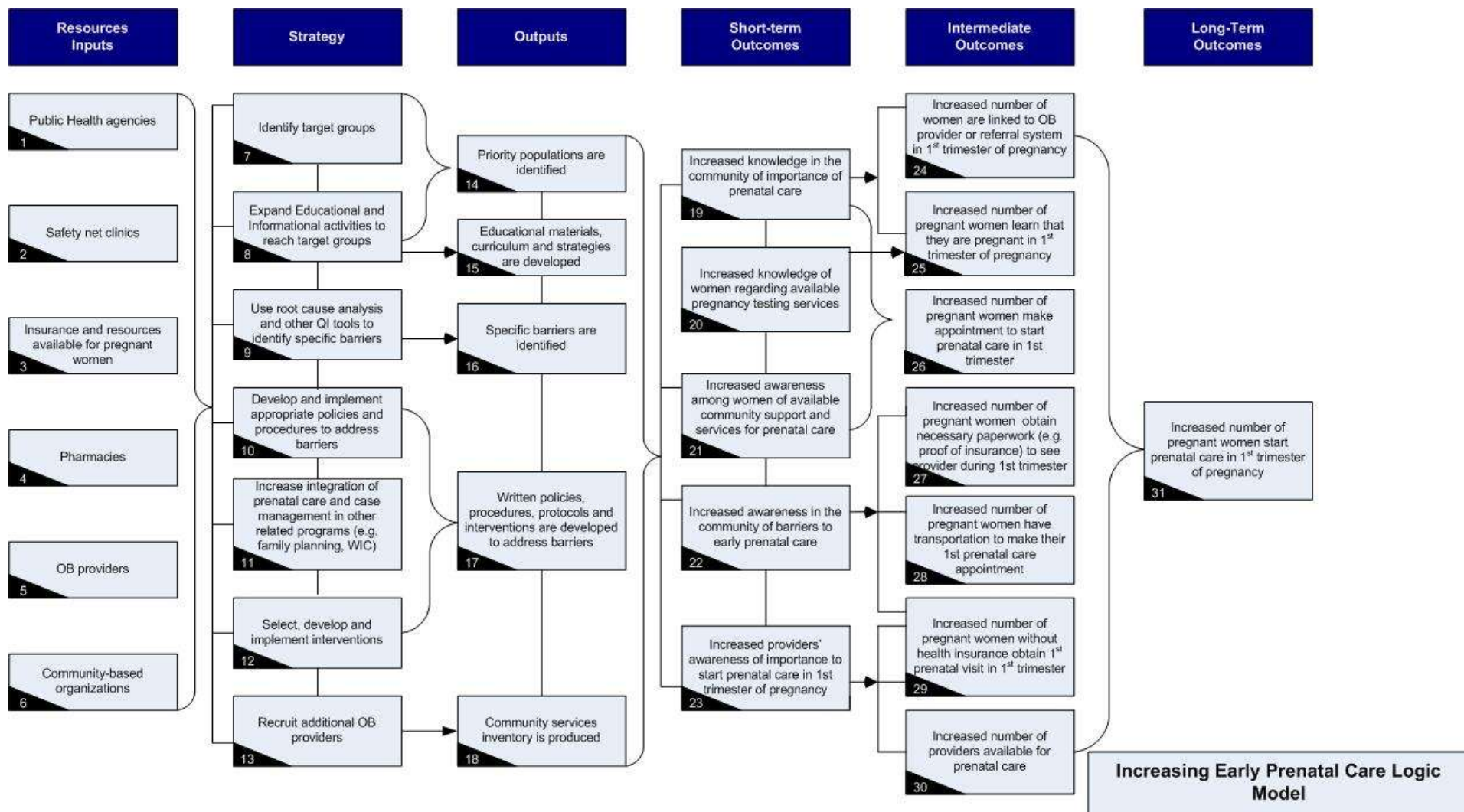


Figure 2 – Kansas Mini-Collaborative Logic Model – Increasing Early Prenatal Care



Calendar of Activities and Events

Activity/Event	Start Date	End Date	Place	Time
Mini-Collaborative project	January 2, 2009	December 31, 2009	n/a	n/a
Conference Call #1	January 22 nd		n/a	1:00 pm (CST)
Learning Session 1	February 12 th – February 13 th		Topeka	TBA
Conference Call #2	February 26 th		n/a	1:00 pm (CST)
Action Period 1	February 12 th , 2009	May 22 nd , 2009	n/a	n/a
Conference Call #3	March 27 th		n/a	1:00 pm (CST)
Conference Call #4	April 24 th		n/a	1:00 pm (CST)
Conference Call #5	May 18 th		n/a	1:00 pm (CST)
Learning Session 2	May 22 nd		TBA	TBA
Action Period 2	May 23 rd , 2009	August 21 st , 2009	n/a	n/a
Conference Call #6	June 26 th		n/a	1:00 pm (CST)
Conference Call #7	July 24 th		n/a	1:00 pm (CST)
Conference Call #8	August 17 th		n/a	1:00 pm (CST)
Intermediate Senior leader report due	August 19th		n/a	by 5:00 pm
Learning Session 3	August 21 st		TBA	TBA
Action Period 3	August 24 th , 2009	November 12 th , 2009	n/a	n/a
Conference Call #9	September 18 th		n/a	1:00 pm (CST)
Conference Call #10	October 16 th		n/a	1:00 pm (CST)
Conference Call #11	November 9 th		n/a	1:00 pm (CST)
Outcomes Congress	November 13 th		TBA	TBA
Conference Call #12	December 18 th		n/a	1:00 pm (CST)
Mini-Collaborative project ends	December 31 st		n/a	n/a
Conference Call #13	January 22 rd , 2010		n/a	1:00 pm (CST)
Final Senior leader report due	January 29th, 2010		n/a	by 5:00 pm

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