Systematic Screening and Assessment of Workforce Innovations in the Provision of Preventive Oral Health Services

Evaluability Assessment Site Visit Summary Report
Sarrell Dental Program
Anniston, Alabama

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Innovative Preventive Practices in Traditional Dental Settings

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I. BACKGROUND AND PURPOSE OF EVALUABILITY ASSESSMENTS

Lack of access to oral health care for all ages remains a public health challenge. Currently, potentially promising workforce innovations are being used to improve access to preventive oral health care. Examples include improving the diversity of the workforce, enhancing the education of health care professionals, encouraging the participation of non-dental health care professionals, expanding the roles of existing dental professionals, and developing new types of dental professionals. In most cases, these innovations do not have robust outcome data demonstrating their impact on access to care or oral health status.

This project, the *Systematic Screening and Assessment of Workforce Innovations in the Provision of Preventive Oral Health Services,* seeks to identify promising workforce innovations that increase access to and availability of preventive oral health services. This is a collaborative effort led by a team from the Robert Wood Johnson Foundation (RWJF) and ICF International. ICF International serves as the project contractor.

For this project, we are interested in identifying **promising innovations that increase the workforce and capacity of dental and non-dental professionals in the provision of preventive oral health services**, in both typical and atypical settings. We will focus on the following four types of workforce interventions, programs, policies, and models that strive to increase Americans' access to oral health care, as well as prevent the onset of real diseases (e.g., tooth decay, gum disease, cavities):

> Throughout this protocol, the following terms are used interchangeably:
>
> - Innovations
> - Interventions
> - Programs
> - Policies
> - Models

1. **Dental providers in non-dental settings.** Dental providers may expand the public's access to oral health services through a variety of programs and settings such as WIC, Head Start, classrooms, congregate meal sites, public health and social services centers. Dentists, dental hygienists, and other dental providers may provide oral health education, fluoride, sealants, and other services in these diverse settings. For example, a dental hygienist may work with schools to deliver fluoride treatments and sealants to school children.

2. **Non-dental providers in non-dental settings.** Non-dental providers may include physicians, nurse practitioners, physician assistants, nurses, nutritionists, childcare and outreach workers, and others. With the appropriate education and training, these professionals can educate patients, perform dental screenings, and make referrals for dental treatment. A specific example is caregivers of seniors and adults with disabilities, who are trained to prompt, assist or perform oral health prevention services with their clients.

3. **New types of dental professionals trained to provide preventive services.** New dental professionals, who focus on preventive services may be added to the dental team, function independently in a collaborative program with a dentist, or program under general supervision of a dentist. Examples of these new types of dental professionals may include dental health aides, dental health coordinators, oral preventive assistants, advanced dental hygiene practitioners, and expanded function dental auxiliaries.

4. **Innovative preventive practices in traditional dental settings.** Dentistry and dental education are increasingly moving toward a medical model of dental disease that prioritizes prevention, risk assessment, and disease management. This approach is likely to change how dentistry is practiced and delivered in offices and clinics. Examples might include dental practices or clinics that have changed the way they deliver anticipatory guidance, risk assessment, and prevention services (e.g., via group dental wellness visits and similar innovations).

We use the Systematic Screening and Assessment (SSA) Method to identify and screen real-world interventions and select those that are both ready for evaluation and highly promising in terms of their plausible effectiveness, reach to the target population, feasibility, and generalizability (Leviton, Kettel Khan & Dawkins, 2010). The SSA Method integrates expert review with evaluability assessment (EA) as a means to identify promising practice-based strategies worthy of more rigorous evaluation studies (Leviton & Gutman, 2010). It includes the following steps: (1) requesting nominations of programs and innovations; (2) engaging a panel of experts with knowledge in oral health, health workforce, health education and promotion, and evaluation to conduct an initial review of the initiatives and identify those that merit further study; (3) conducting EAs of the selected programs; (4) facilitating a second review by the expert panel of the selected programs after considering the results of the EA, and having the expert panel rate their promise and readiness for evaluation; (5) using the results to position the most promising interventions for rigorous evaluation; (6) providing constructive feedback to the programs for further refinement; and (7) providing the list of most promising programs for further evaluation and program development. The funnel diagram in Figure 1 below depicts the overall process of this project.

Figure 1. Funnel Process of the Systematic Screening and Assessment of Workforce Innovations Designed to Promote Oral Health and Prevent Dental Disease
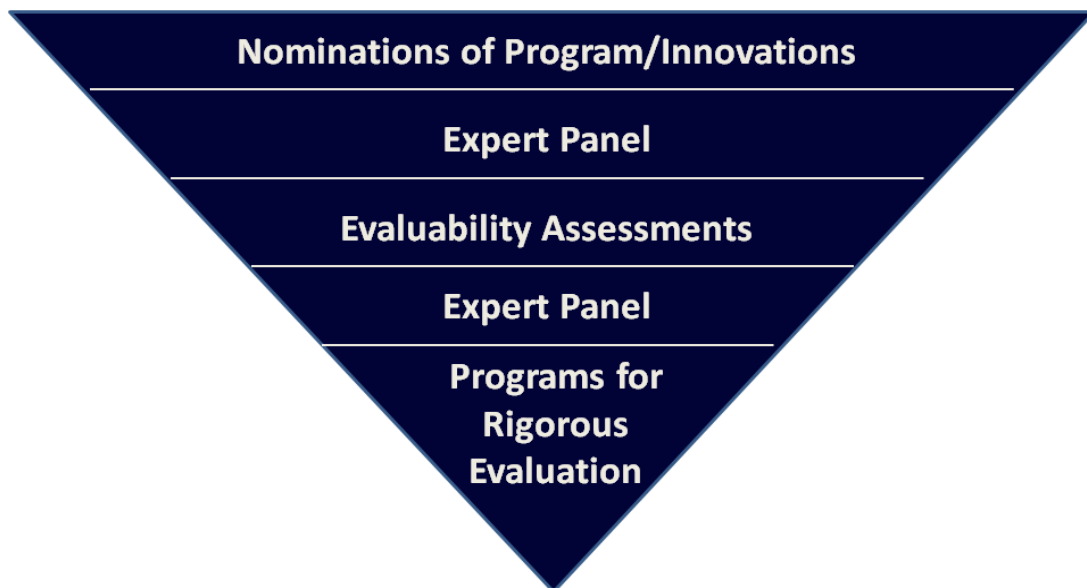
Project Purpose

The overall goal of this project is to identify promising innovations that increase the workforce and capacity of dental and non-dental professionals in the provision of preventive oral health services, in both typical (i.e., dental) and atypical (i.e., non-dental) settings. Based on findings from this SSA project, programs may be evaluated for effectiveness and/or for adaptation purposes. The SSA method will assess plausibility, implementation, data availability, design, and analytic issues among the programs.

The innovations selected for EA are the result of a systematic review by a panel of experts using the criteria described in Figure 2.

Figure 2. Criteria for Selecting Innovations for an Evaluability Assessment

Criterion	Description
Potential impact	The potential for the innovation to increase access to oral health care. Estimate of potential impact can be based on "face value," program documents, and/or expert input.
Reach to target population	The percentage of the target population "reached" or in some other way positively affected by the intervention.
Acceptability to stakeholders	The potential or actual evidence that the intervention is acceptable and even attractive to pertinent collaborators, gatekeepers, and other necessary groups, such as dental clinics, dentists, and patients. Conversely, the lack of likelihood that stakeholder opposition to the intervention might limit its effectiveness, sustainability or replication.
Feasibility of implementation	The likelihood that the intervention as designed can be or has been implemented fully, given the clarity of its goals, objectives, and strategies; complexity and leadership requirements; financial and other costs; and training and supervision requirements.
Feasibility of adoption	The potential for other sites or entities to adopt the intervention---particularly for multiple states or regions or racial/ethnic groups.
Transportability or generalizability	The degree to which the intervention demonstrates or has potential to be adapted for other settings that differ in size, resources, and demographics.
Intervention sustainability	The likelihood that the intervention can continue over time without special resources or extraordinary leadership.
Staff and organizational capacity	Sponsoring organization and staff have the capacity to participate fully in a brief assessment, learn from it, and further develop the program.
Sustainability of health effect	Will the intended health effect of the intervention endure over time?

Evaluability Assessment Questions

At the core of the SSA Method is the EA. Each EA will consist of reviews of documents followed by a 3-day site visit during which trained project staff members will assess implementation, data collection, and options for evaluation. The objectives of the EA are to examine the following:

1. The *plausibility* that the innovation will produce the desired outcomes
2. The *feasibility* of fully implementing the innovation
3. The options for *further evaluation*

As part of the site visit, a limited amount of onsite technical assistance (TA) will be provided to each site; this TA may focus on topics such as the program's logic model and evaluation. (Templates of logic models can be found in Appendix A.) On the basis of the findings of the EAs, the expert panel will identify a program that shows promise in increasing access to and availability of preventive oral health services and readiness for rigorous evaluation.

Questions guiding the EA are noted below. These questions form the basis of the guides for data collection, analysis, and reports.

1. Is it *plausible* that the program will produce the desired outcomes, leading to the provision and/or improved access to preventive oral health services?
    a. Is the program based on scientific theory or evidence?
    b. Is the logic or theory of change plausible?
        i. What are the components of the program?
        ii. What are the goals and expected outcomes of the program?
        iii. Are the links between program components and expected outcomes in the logic model appropriate and plausible based on logic, scientific theory, or evidence?
        iv. Is there agreement on the program logic model among key informants?
2. Is it *feasible* that the program will be fully implemented as intended?
    a. How far has implementation progressed?
    b. Have there been any barriers in implementing the program?
    c. How is the program funded?
    d. Who is the target audience? Is the program tailored to this audience?
3. What are options for *further evaluation*?
    a. What is the capacity of the parent organization and staff for evaluation and their receptivity to it?
    b. Is there an ongoing documentation or formal evaluation component?
    c. What are the available data sources? Are the available data sources appropriate indicators of achievement?
    d. Are there sufficient baseline data to use in further evaluation?
    e. How might the timeline of the program impact evaluation methods if selected for a more formal evaluation?
    f. Are there sufficient nonmonetary resources to conduct a more formal evaluation?

II.   METHODS

Document Review

As part of the background review on the program, the site visit team reviewed the following documents to gain a general understanding.

1. Sarrell Dental Program's Web site at http://www.sarrelldental.org/
2. A compilation of materials selected from grant applications and funding proposals that detailed the history and ongoing efforts of the program
3. The program's Fact Sheet listing 2012 business facts

Site Visit

The site visit to Anniston, Alabama took place November 7–9, 2012. The site visitors used semistructured interview guides to conduct a total of 11 interviews (See Appendix A for the interview guide topics.) Before the visit, ICF requested a list of suggested interviewees from the site. Once the list was received, ICF team members talked with the site visitors and the site contact to discuss the roles of those individuals suggested, consider any important persons who may have been missed, and confirm those who would be interviewed. The site visitors conducted 10 in-person interviews during the visit and 1 interview over the telephone. Respondents read an informed consent statement, which emphasized that the purpose of the visit was not to conduct an actual evaluation, but rather to learn about the program. The document also stressed that interviewees' responses would be confidential. Table 1 shows the number of interviews by interviewee type.

Table 1. Interviews Conducted

Lead Administrator/ Manager(s)	Other Staff	Partners	Other Stakeholders	Total
9	1	1	0	11

These interviews were conducted with the following people:

1. Jeff Parker, President and Chief Executive Officer
2. Stephen Wallace, DMD, Chief Dental Officer
3. Brandi Parris, Vice President of Marketing and Community Outreach
4. Chris Haugen, Vice President and General Counsel
5. Burt Arthur, Vice President of Finance
6. Frank Catalanotto, DMD, Sarrell Dental Program Board Member and University of Florida College of Dentistry Department Chair
7. Connie Thomas, Head Start Family Engagement Manager
8. Teresa Stacks, Director of Talladega Operations
9. Bobby Shoulders, Athens Community Director
10. Mike Woodall, Director of Boaz Operations
11. Summer Quinn, Attalla/Boaz Community Outreach Manager

III. IDENTIFIED ELEMENTS OF THE PROGRAM AS PLANNED AND IMPLEMENTED

The review of program documents and the site visit interviews helped the site visitors to identify various elements of the program as it was planned and as it is being implemented.

Program as Planned

Brief History of the Program

In 2000, the Community Foundation of Northeast Alabama funded a county-wide health assessment to examine issues of access to health care and the health status of the population. That assessment identified a significant lack of access to dental care for the county's low-income population, particularly for children. In 2004, the Foundation's Board of Trustees committed to funding a dental clinic and appointed Dr. Warren Sarrell (1924-2012), a trustee, to chair the Task Force on behalf of the Board. The Foundation provided a $300,000 start-up grant from the Stringfellow Health Fund, other corporate and not-for-profit organizations provided $50,000, and Northeast Alabama Regional Medical Center donated space for the facility in the Medical Arts Building. Originally named the Calhoun County Dental Center, it was later renamed the Sarrell Regional Dental Center for Public Health in honor of Dr. Sarrell.

In early 2005, Dr. Sarrell sought the advice of Jeffrey Parker, a retired businessman and former CEO of many multi-national companies. After Dr. Sarrell shared the struggles of the clinic and his vision for serving the children of Alabama, Mr. Parker agreed to join the organization and serve as CEO. Since then, Sarrell has grown to include 13 other offices located in: Alexander City, Athens, Attalla, Bessemer, Boaz, Clanton, Enterprise, Heflin, Leesburg, Pinson, Selma, Talladega, and Tuscaloosa. Sarrell also owns and operates a mobile dental bus that travels to schools, Head Start, and day care facilities throughout the State. Since 2006, Sarrell has provided optical services in five of its locations: Anniston, Bessemer, Boaz, Clanton, and Heflin.

Planned Components of Program

The Sarrell Dental Program uses a combination of an innovative business approach, marketing and community outreach and clinical service delivery to meet the oral health care needs of children ages 1–20, most of whom are Medicaid recipients. Sarrell Dental has willingly experienced a decline in its average reimbursement per patient from $328 in 2005 to $125 in 2012. For Sarrell, this decline in average reimbursement is evidence that it is possible to provide services to a Medicaid population in a cost-effective manner. Staff at Sarrell attributes the organization's ability to contain costs to its sustainable, self-sufficient business model. As aptly noted by Sarrell's CEO, the decreased reimbursement rates show "that you can run a sustainable business from Medicaid and CHIP (State Children's Health Insurance Program) revenues. Yet, at the same time, reduce the cost of care to the taxpayer and the government." Program leadership attributes this success to its well-honed, customer-centric business approach, extensive marketing and community outreach efforts in each of its locations and its clinical service delivery. A brief description of each of these components is provided below.

Business Approach

One of the more unique features of Sarrell Dental's business model is its use of dedicated call center staff. Sarrell employs mostly college students who work on a part-time basis to fill the equivalent of 19.5 full-time employee, call center staff positions. The part-time student employees' primary responsibility is to maximize the daily chair utilization rate in each office. Call center staff members use the existing patient database to make reminder telephone calls and reschedule missed appointments. Call center staff also follow up with parents whose children received free, basic dental screenings provided in schools, day care facilities and Head Start centers. Although each child is sent home with a letter notifying parents of exam results, call center staff follow up by phone to make sure the parent actually received the letter and to ensure any questions are answered. This phone call also gives call center staff an opportunity to begin building rapport with the parent and to offer Sarrell's services if the child does not have a dental provider. If the parent chooses to use Sarrell Dental services, call center staff will schedule an appointment at a time and location most convenient for the parent. Most of Sarrell's locations offer extended hours of operation, including evenings and Saturdays in an effort to better accommodate families' schedules.

Call center staff also play a critical role in maximizing the daily chair utilization rates. When scheduling appointments, call center staff is trained to take into consideration the average length of dental procedures as well as the typical no-show rates. This approach enables them to book the number of appointments they think will result in the targeted show rates, while minimizing the potential negative side effects of long patient wait times and overly high patient loads for clinical staff. Call center staff members track and monitor individual patient show rates on a daily, weekly, and monthly basis, and receive performance-based incentives for meeting agreed-upon goals. According to program leadership, the resulting high rate of chair utilization is critical to maintaining consistently high revenue, and, therefore, is worth the financial investment.

Another critical ingredient to Sarrell Dental's business approach is the scale at which it operates. Sarrell's size allows it to take advantage of economies of scale and increased purchasing power. For example, Sarrell is large enough to support a centralized billing department with approximately four to five full-time staff under the leadership of the insurance director. The billing department has extensive experience with Medicaid and CHIP. Claims are usually processed quickly and without error, resulting in a consistent weekly flow of revenue to support program operations and growth. Similarly, Sarrell is large enough to support employment of a full-time materials manager who is able to leverage Sarrell's purchasing power, in conjunction with his professional relationships, to command favorable prices on equipment and supplies.

Sarrell also invests heavily in cross training staff members so that they can perform multiple roles in each clinic. For instance, many call center staff members are also trained to be dental assistants and front desk staff. Similarly, Sarrell covers the tuition for any staff member who seeks additional training to become a dental hygienist or dentist. Similar benefits are available for those in nonclinical tracks who enter into advanced degree programs. Program leadership strongly believes that such investments result in a more highly qualified and committed staff that is willing to go the extra mile to meet a patient's needs.

Marketing and Community Outreach

Each clinic also has a full-time community outreach coordinator who works closely with county and local Head Start programs, day care facilities, schools, and other local organizations to organize free, basic dental screenings for children who provide signed parental consent forms. These dental screenings help Head Start programs comply with mandated screening requirements. Community outreach coordinators also offer oral health education to children and parents at health fairs, PTA, and mandatory Head Start parent meetings, and classroom visits. Sarrell sponsors and conducts other community outreach activities on a more limited basis. For example, this past Christmas, the program brought "Santa" in to take free pictures with the kids in several communities. In another activity, each year, one grade at a school is chosen to write and publish a book on oral health care, in partnership with the NFL Alumni Atlanta Area Chapter: "Caring for Kids" Program. Sarrell also provides free summer sports camps for kids in selected communities. Sarrell's community outreach efforts are valuable opportunities to increase the program's visibility, while also providing a variety of venues from which to recruit children who do not already have a dental provider.

Clinical Service Delivery

At Sarrell, a dentist works with either a dental hygienist or dental assistant to provide the following services: caries risk assessment, radiographs, cleanings, fluoride varnishes, fillings, extractions, sealants, orthodontic evaluations, oral surgery and endodontic. At the start of each appointment, a dental assistant records the child's height, weight, blood pressure, and temperature. A copy of this information is given to each parent. Program leadership decided to institute this data collection as standard practice because many of the children that Sarrell serves do not see a primary care provider on a regular basis. If a child is overweight or obese, the one-on-one oral health education provided to each child (and his or her parent) during the visit is tailored to provide information about the importance of healthy eating and physical activity. Children who present with a temperature or high blood pressure are referred to a primary care provider and the dental appointment with Sarrell is rescheduled. Parents (and other family members) are encouraged to be present in the room during the exam. The dental providers will take this time to explain the importance of good oral health habits as well as provide a detailed explanation of any dental problems the child may have. Treatment recommendations are thoroughly discussed with both parent and child.

Sarrell Dental has over 210 employees, including a clinical team that consists of 51 full-time and part-time dentists, 41 full-time dental hygienists, and 18 dental assistants. Dentists are not assigned to a clinic; instead, they work in different clinics on a daily basis. As a result, a dentist is not assigned to a specific group of patients. However, to ensure continuity of care, extensive notes are recorded in the EHR that each provider reviews before the patient's appointment. This method also allows many trained dentists to review recommended treatment plans and ensure optimized care is delivered to the patient. Sarrell's leadership points to the program's active cultivation of a "culture of caring" as a reason why its system of rotating providers works. According to program leadership, this "culture of caring" is operationalized in multiple ways, including: the clinic décor; expanded hours of operation; reminder phone calls; follow-up calls to inquire as to why an appointment has been missed; requesting that the parent to be present in the room while the child receives care; the one-on-one education for parent and child during the exam; and extensive community outreach efforts.

Sarrell's management purposefully seeks employees, both clinical and nonclinical, who are personable, friendly, educated, and have a strong belief in customer service and who are willing to take the time to provide extensive one-on-one education during the visit. This rapport subsequently becomes the basis for a trusting relationship between the patient and Sarrell and is reportedly another key factor in Sarrell's reportedly high compliance with recommended recall and follow-up visits.

Sarrell Dental is also in the process of developing an integrated virtual desktop infrastructure (VDI) that will allow its staff and providers to use a laptop-based interface to access a patient's records, regardless of which location the patient goes to for services. Sarrell leadership is hopeful that this system can be leveraged to incorporate telehealth technology in the future.

Planned Target Audience

The primary target audience for Sarrell Dental is underserved children in Alabama ages 1–20 that, despite having Medicaid or CHIP dental coverage, have difficulty finding a provider. Sarrell also provides services on a limited basis to indigent adults and pregnant women referred by local social service agencies. In addition, Sarrell has a contract with a local military base to provide dental care to military personnel who are about to be deployed and another relatively small contract to provide dental care to local prisoners.

Goals and Expected Outcomes

The program aims to reduce the incidence of untreated tooth decay; increase the number of participants receiving preventive oral health services; continue to contain Medicaid reimbursement rates; and increase compliance and treatment completion. Over the long term, the program seeks to counter cultural fears about dentistry and the belief that baby teeth do not need dental care; protect the future health of children as they age by treating existing issues; educate and encourage families to adopt better oral health practices, such as regular brushing and limiting consumption of sugar-sweetened beverages; and to normalize and facilitate the delivery of regular dental care and hygiene, including establishment of a dental home either at Sarrell Dental or a local dentist.

Program as Implemented

Progression of Implementation

Currently, the program components are fully implemented as previously described. The program has had over 415,000 patient visits to date, without a single patient complaint to the Alabama Board of Dental Examiners. Program leadership would like to continue expanding within Alabama, but has expressed some reservation due to uncertainty regarding how the State is planning to respond to the Affordable Care Act. In the past, when some states moved to a managed care Medicaid system, some providers were disqualified from participating in the various programs because of the large market share the providers commanded. It is unclear whether a similar decision will be made as the State moves forward with the establishment of health care exchanges.

Program leadership would also like to expand to neighboring states; however, respondents noted that the current state-level dental practice act laws present a barrier.

Program Funding

The program is a self-sustaining nonprofit, relying primarily on Medicaid and CHIP reimbursements and copays. The program also received some funding from private insurance reimbursements and a limited number of contracts as previously described. To date, the program has not relied on any grant funding; however, program leadership is open to the idea as a way to finance future expansion efforts.

Context of Program

Organizational Context

As a nonprofit, Sarrell Dental has a board of directors comprised of nationally focused leaders, including Roger Quillen, Chairman and Managing Partner of the Fisher & Phillips national law firm, Dr. Jack Dillenberg, Dean of the Arizona School of Dentistry & Oral Health, and Dr. Frank Catalanotto, Department Chairman of the University of Florida's School of Dentistry, all of whom are very supportive of both program operations and leadership. The Board meets regularly and provides general oversight and guidance, while decisions affecting the day-to-day operations are the responsibility of the program CEO and his leadership staff. As noted previously, Sarrell has over 210 employees, including a clinical team that consists of full-time and part-time dentists, 41 full-time dental hygienists, 18 dental assistants.

Community Context

Alabama is a largely rural State with a high rate of poverty among children and adults. In 2012, with 16.9% of its population living in households at or below the Federal poverty threshold, Alabama ranked 47th out of 50 states in poverty (http://en.wikipedia.org/wiki/List_of_U.S._states_ by_poverty_rate). In 2012, approximately 21.6% of Alabama children under age 18 lived in households at or below the poverty threshold (http://www.aap.org/en-us/advocacy-and-policy/federal-advocacy/access-to-care/Medicaid%20Fact%20Sheets/Alabama.pdf). A little over 1 million of Alabama's 4, 822, 023 residents were enrolled in the State's Medicaid program. Approximately 42.7% of the State's children are enrolled in the State Medicaid program (http://quickfacts.census.gov/qfd/states/01000.html). Virtually all Alabama counties qualify as a Health Provider Shortage Area. With 14 locations, and a mobile dental bus, Sarrell Dental selected the locations of its current facilities based on the need for services in areas in which there are few or no dental providers serving children enrolled in Medicaid and CHIP. In some parts of Alabama, Sarrell Dental is the only full-time Medicaid dental provider.

The program does appear to be acceptable to its local community partners as well as more national partners, such as the NFL Alumni Atlanta Chapter "Caring for Kids" to provide outreach to children. The program's extensive outreach activities are well-attended and well-received. Sarrell also has very strong relationships with its local partners. For example, the Alabama Association of Head Start awarded Sarrell the Corporation of the Year Award for 2010 and again for 2012.

Recently, Sarrell's CEO successfully resolved a high profile conflict with the Alabama State Dental Association (ALDA) which contended that only a dentist should manage a dental facility and that Sarrell Dental had an unfair advantage in the marketplace due to its nonprofit status. ALDA and Sarrell were able to mutually agree on State legislation designed to clarify and secure Sarrell's ability to provide clinical dental services as a nonprofit. Recently approved by the State legislature, the law

requires Sarrell to have a dental professional provide formal oversight for its clinical operations and allows non-dentists to operate dental facilities. ALDA's and Sarrell's ability to reach this compromise is an indication of the growing credibility of, and support for, the Sarrell model among Alabama's legislative and dental communities.

IV. HIGHLIGHTED FINDINGS

The site visit interviews and review of documents provided some suggestions about the program's plausibility for attaining the desired goals and the feasibility of its full implementation.

Plausibility

The logic underlying the program model is highly plausible. Sarrell's business approach enables it to maximize revenue by maintaining a high rate of chair utilization while containing costs associated with equipment and supplies. Similarly, the marketing and community outreach efforts not only raise the visibility of the program but also provide additional opportunities to recruit new patients into the program. Lastly, the one-on-one education and overall "culture of caring" the patient is exposed to during a clinic visit increases the likelihood that an individual will consider Sarrell a dental home and return accordingly at recommended intervals.

Feasibility

The program is fully implemented with capacity to expand. The program has the staff and financial resources required to support its current level of implementation. If it continues to expand to other areas of Alabama, program management has the capacity and experience to successfully secure staff, facilities, equipment, supplies and funding as needed. The program has engaged in similar efforts for the establishment of each of its 14 locations.

V. EVALUATION POTENTIAL

Evaluation Capacity Building

Sarrell leadership is very receptive to the idea of a rigorous evaluation and would like to work closely on the design and implementation of the evaluation to ensure that such an evaluation would be helpful in its future plans for expansion. To date, the program has been self-funding, and there has been little need to demonstrate effectiveness to funders or others. However, as the program's visibility grows and others become interested in replication, program leadership recognizes the value and credibility that an independent evaluation could bring.

The program leadership appears to have the capacity to participate in a rigorous evaluation, as evidenced by the recent collaboration of Sarrell staff with professors from Emory University and University of Florida to analyze the program's electronic health records (EHR) and billing data to assess the cost effectiveness of its current model to achieve high chair utilization rates. To support this effort, staff assisted with the articulation of research questions, created a data set, made it available to the researchers, and reviewed preliminary results as well as drafts of the manuscript. It has been submitted to a peer-reviewed journal for publication. Due to Sarrell's lack of funding designated specifically for evaluation, it will be important for future evaluations to be designed in a way that minimizes ongoing or regular participation from staff members who have other competing demands on their time.

Current Data Collection or Evaluation

Although there is currently no formal evaluation, future studies can utilize the data from EHR currently housed in separate databases for each clinic. The program has the ability to manually merge these databases into one large database and/or create smaller subsets of data, as needed. In addition to the close-ended data fields, these records also include detailed notes so that other providers can quickly get up to speed on the patient's need and histories. Call center and front desk staff also use this database to record all activity related to scheduling, following-up, and making reminder phone calls. The program also has a rich billing database that would be useful in exploring questions related to cost effectiveness.

Options for Further Evaluation

In addition to using the billing data to explore questions related to cost-effectiveness, the following idea for a rigorous evaluation was discussed during the site visit.

- **Identify the drivers of the decrease in the average Medicaid reimbursement.** The program has done a great job in identifying and highlighting this trend as a reflection of cost savings to the Federal Government. Program leadership asserts this trend data is proof that, with the right systems in place, Sarrell can effectively contain costs for Medicaid while meeting patients' needs and running a sustainable business. However, the program has not conducted research to identify the drivers of this trend. Anecdotally, staff attributes it to three factors: 1) the program's successful movement of children from the more costly treatment phase of oral health care to the less expensive provision of preventive services; 2) the increased provision of free dental screenings combined with the more widespread education emphasizing good oral health habits; and 3) the

program's high recall rate. Children who have participated in these activities are more likely to need either preventive or early intervention services, both of which are cheaper than treatment of more advanced dental disease. Although these explanations appear to be plausible, a careful and detailed longitudinal analysis is needed to truly assess their merit. Such an analysis may also allow researchers to identify and quantify what role, if any, the call center staff plays in containing these costs.

The program could also benefit from a thorough assessment of patient outcomes in general. With the exception of the reimbursement data, little is known about improvements in patient-level outcomes. Although these data are available in the EHR, at the time of the site visit, they had been not been extensively analyzed and/or presented to the general public.

VI. RECOMMENDATIONS

The site visitors noted many strengths of the Sarrell Dental Program, including its business approach, extensive community and marketing outreach efforts and service delivery. Below are some of the strengths reported by interviewees and observed by site visitors:

Strengths

- Dedicated, committed and motivated leadership and management staff who are willing to think outside of the box and continuously identify and pursue strategies designed to improve service delivery and increased the program's reach. The program's CEO is widely regarded as the model of this mindset and the driving force behind the program's growth and financial sustainability.

- Sarrell's commitment to creating and maintaining a "culture of caring" which encourages parents and children to initiate, and return as appropriate for, preventive care and treatment.

- Extensive use of marketing and community education and outreach services to increase the public's understanding of the importance of preventive oral health care, particularly for children. In addition, the free screenings that are usually a part of these activities also increase access to early preventive care and treatment. Lastly, the screenings are an effective vehicle for increasing the visibility of Sarrell and supporting the program's patient retention efforts.

- Strong partnerships with supportive local community-based agencies, many of which were previously in search of dental providers to meet the needs of their clients. Partners cited staff members' willingness to be flexible combined with their professionalism as key to partners' satisfaction and their desire to continue working with Sarrell.

- The deployment of well-trained and dedicated call center staff. In many respects, these individuals represent a new member of the dental team that holds great promise for reaching, recruiting and retaining populations that are often considered hard to reach and hard to keep in dental care.

- Dedicated billing staff that can efficiently and effectively process Medicaid and other claims in a timely manner. As a result, the program is able to maintain a steady stream of revenue to support its community outreach, marketing, service delivery, and program expansion efforts.

- Scale that enables favorable procurement arrangements. As a result, the program is able to minimize some of its significant costs, thus increasing the program's efficiency and cost-effectiveness.

- Proven procedures to support the physical expansion of the program in facilities designed to resonate with and meet the needs of the local populations it intends to serve.

- Easy adaptability for other populations in the State of Alabama. For example, the Boaz office serves a predominantly Hispanic/Latino population. As a result, most of the staff is bilingual and the office is decorated with bilingual posters and art. Similarly, the use of

individuals living in the respective communities as outreach coordinators and call center staff facilitates the implementation of the model with different populations.

Recommendations

Interviewees praised Sarrell Dental highly and offered no suggestions for improvement in program operations or management. Sarrell is currently implementing an initiative to migrate everyone to an integrated virtual desktop system that would allow all of the clinics' data to reside in one common database. One interviewee suggested providing more data on the clinical outcomes of the children served. Sarrell staff agreed that it would be important to identify the factors behind the decline in its average Medicaid reimbursement rate. This information would help others seeking to employ similar strategies in their healthcare settings.

VII. CONCLUSION

With health care reform, practitioners and academics are trying to identify cost-effective ways to deliver oral health care to the anticipated surge of children who will now be eligible for services through Medicaid or CHIP. Sarrell Dental holds great promise as a cost-effective model for meeting the needs of this very vulnerable population. This program demonstrates the success and utility of recruiting and utilizing local, culturally competent staff to work with the program. The familiarity with local conditions and sensitivity to local concerns, along with significant relationship-building and outreach, has allowed the program to achieve successful collaborations with the State university system, elementary schools, Head Starts, and families, as well as civic groups and elected officials.

Sarrell's apparently successful efforts in this arena have attracted attention from across the country. As a result, Sarrell regularly hosts site visits from private practitioners and academics who are interested in replicating Sarrell's approach to cost savings in their respective states. Program leadership has been asked to present numerous times on Sarrell's model across the country and is a strong advocate for the adoption of the model nationally. An evaluation will be useful in informing future discussions regarding potential adaptation and adoption.

REFERENCES

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APPENDIX A
INTERVIEW GUIDE TOPICS

APPENDIX A.   INTERVIEW GUIDE TOPICS

SYSTEMATIC SCREENING AND ASSESSMENT OF WORKFORCE INNOVATIONS IN THE PROVISION OF PREVENTIVE ORAL HEALTH SERVICES

INTERVIEW TOPICS

During the evaluability assessment site visits, we hope to learn more about your program. Some of the topics that we would like to discuss with the identified interviewees include the following:

Lead Administrators

- Background and history of the program, including political context
- Program's goals, expected outcomes, activities, and services
- Program components
- Role of the new provider associated with the program
- Staffing, training, roles and responsibilities
- Administrator's role and responsibilities
- Challenges and successes with implementation
- Community awareness and involvement
- Program's reach to target audience
- Current or potential partnerships
- Strengths and weaknesses of the program
- Success(es) of the program
- Key lessons learned with overall experience
- Data collection activities
- Financial resources and funding challenges
- Start-up costs, ratio of costs across program components, cost of administration

Managers

- Manager's role and responsibilities
- Program's goals, expected outcomes, activities, services
- Program components
- Key staff members and their roles
- Role of the new provider associated with the program
- Community awareness and involvement
- Program's reach to target audience

- Current or potential partnerships
- Strengths and weaknesses of the program
- Key lessons learned with overall experience
- Success(es) of the program
- Data collection activities
- Financial resources and funding challenges
- Start-up costs, ratio of costs across program components, cost of administration

Staff

- Staff member's role and responsibilities
- Program's goals, expected outcomes, activities, and services
- Community awareness and involvement
- Current or potential partnerships
- Strengths and weaknesses of the program
- Successes of the program
- Key lessons learned with overall experience
- Data collection activities
- Financial resources and funding challenges

Partners

- Partner's involvement, role, and responsibilities
- Program's goals, expected outcomes, activities, and services
- Community awareness, involvement, and reaction
- Benefits from partnership
- Other potential partners
- Strengths and weaknesses of the program
- Success(es) of the program
- Key lessons learned from experience with the program
- Funding sources and their effect on partnership

Evaluators

- Evaluator's role and responsibilities
- Program's goals, expected outcomes, activities, and services
- Program's reach to target audience
- Community awareness, involvement, and reaction

- Other potential partners
- Success(es) of the program
- Evaluation design
- Data collection methods
- Analysis of data and dissemination of results
- Key lessons learned from experience with the program and efforts with evaluation
- Financial resources and funding challenges

Other Stakeholders

- Background and history of the program
- Program's goals, activities, and services
- Stakeholder's role and involvement with the program
- Program's reach to target audience
- Audience's awareness and reaction
- General impression of the program
- Success(es) of the program
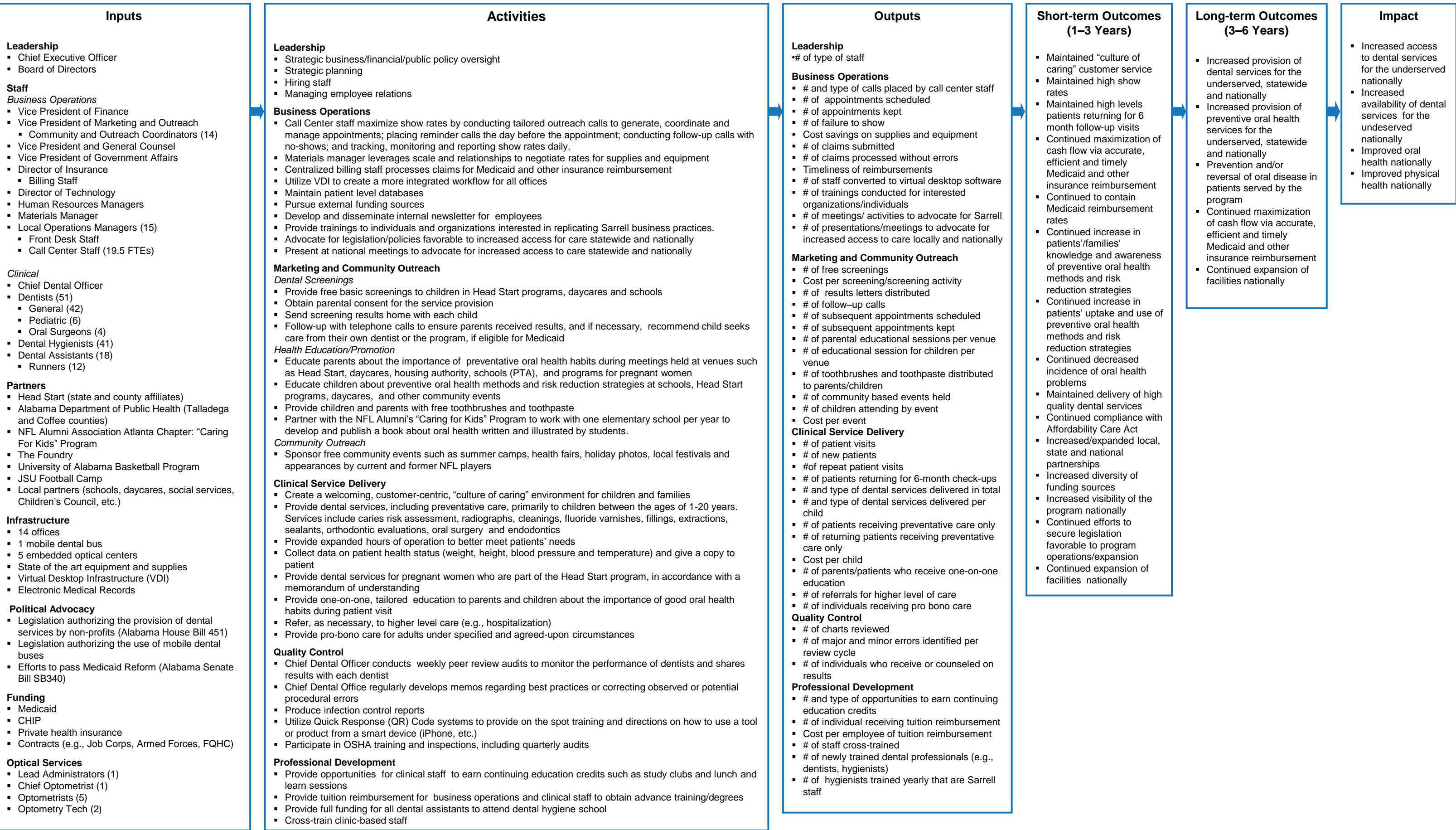- Key lessons learned from experience with the program

APPENDIX B
LOGIC MODEL

Sarrell Dental Centers for Public Health, Inc. Logic Model
Dental providers in non–dental settings and innovative preventive practices

Rationale: A new model within dentistry that prioritizes disease prevention by focusing on risk assessment and disease management changes how dentistry is practiced and delivered in offices and clinics for high-risk populations like children, pregnant women, senior adults, and Medicaid recipients.

Inputs

Leadership
- Chief Executive Officer
- Board of Directors

Staff

Business Operations
- Vice President of Finance
- Vice President of Marketing and Outreach
  - Community and Outreach Coordinators (14)
- Vice President and General Counsel
- Vice President of Government Affairs
- Director of Insurance
  - Billing Staff
- Director of Technology
- Human Resources Managers
- Materials Manager
- Local Operations Managers (15)
  - Front Desk Staff
  - Call Center Staff (19.5 FTEs)

Clinical
- Chief Dental Officer
- Dentists (51)
  - General (42)
  - Pediatric (6)
  - Oral Surgeons (4)
- Dental Hygienists (41)
- Dental Assistants (18)
  - Runners (12)

Partners
- Head Start (state and county affiliates)
- Alabama Department of Public Health (Talladega and Coffee counties)
- NFL Alumni Association Atlanta Chapter: "Caring For Kids" Program
- The Foundry
- University of Alabama Basketball Program
- JSU Football Camp
- Local partners (schools, daycares, social services, Children's Council, etc.)

Infrastructure
- 14 offices
- 1 mobile dental bus
- 5 embedded optical centers
- State of the art equipment and supplies
- Virtual Desktop Infrastructure (VDI)
- Electronic Medical Records

Political Advocacy
- Legislation authorizing the provision of dental services by non-profits (Alabama House Bill 451)
- Legislation authorizing the use of mobile dental buses
- Efforts to pass Medicaid Reform (Alabama Senate Bill SB340)

Funding
- Medicaid
- CHIP
- Private health insurance
- Contracts (e.g., Job Corps, Armed Forces, FQHC)

Optical Services
- Lead Administrators (1)
- Chief Optometrist (1)
- Optometrists (5)
- Optometry Tech (2)

Activities

Leadership
- Strategic business/financial/public policy oversight
- Strategic planning
- Hiring staff
- Managing employee relations

Business Operations
- Call Center staff maximize show rates by conducting tailored outreach calls to generate, coordinate and manage appointments; placing reminder calls the day before the appointment; conducting follow-up calls with no-shows; and tracking, monitoring and reporting show rates daily.
- Materials manager leverages scale and relationships to negotiate rates for supplies and equipment
- Centralized billing staff processes claims for Medicaid and other insurance reimbursement
- Utilize VDI to create a more integrated workflow for all offices
- Maintain patient level databases
- Pursue external funding sources
- Develop and disseminate internal newsletter for employees
- Provide trainings to individuals and organizations interested in replicating Sarrell business practices.
- Advocate for legislation/policies favorable to increased access for care statewide and nationally
- Present at national meetings to advocate for increased access to care statewide and nationally

Marketing and Community Outreach

Dental Screenings
- Provide free basic screenings to children in Head Start programs, daycares and schools
- Obtain parental consent for the service provision
- Send screening results home with each child
- Follow-up with telephone calls to ensure parents received results, and if necessary, recommend child seeks care from their own dentist or the program, if eligible for Medicaid

Health Education/Promotion
- Educate parents about the importance of preventative oral health habits during meetings held at venues such as Head Start, daycares, housing authority, schools (PTA), and programs for pregnant women
- Educate children about preventive oral health methods and risk reduction strategies at schools, Head Start programs, daycares, and other community events
- Provide children and parents with free toothbrushes and toothpaste
- Partner with the NFL Alumni's "Caring for Kids" Program to work with one elementary school per year to develop and publish a book about oral health written and illustrated by students.

Community Outreach
- Sponsor free community events such as summer camps, health fairs, holiday photos, local festivals and appearances by current and former NFL players

Clinical Service Delivery
- Create a welcoming, customer-centric, "culture of caring" environment for children and families
- Provide dental services, including preventative care, primarily to children between the ages of 1-20 years. Services include caries risk assessment, radiographs, cleanings, fluoride varnishes, fillings, extractions, sealants, orthodontic evaluations, oral surgery and endodontics
- Provide expanded hours of operation to better meet patients' needs
- Collect data on patient health status (weight, height, blood pressure and temperature) and give a copy to patient
- Provide dental services for pregnant women who are part of the Head Start program, in accordance with a memorandum of understanding
- Provide one-on-one, tailored education to parents and children about the importance of good oral health habits during patient visit
- Refer, as necessary, to higher level care (e.g., hospitalization)
- Provide pro-bono care for adults under specified and agreed-upon circumstances

Quality Control
- Chief Dental Officer conducts weekly peer review audits to monitor the performance of dentists and shares results with each dentist
- Chief Dental Office regularly develops memos regarding best practices or correcting observed or potential procedural errors
- Produce infection control reports
- Utilize Quick Response (QR) Code systems to provide on the spot training and directions on how to use a tool or product from a smart device (iPhone, etc.)
- Participate in OSHA training and inspections, including quarterly audits

Professional Development
- Provide opportunities for clinical staff to earn continuing education credits such as study clubs and lunch and learn sessions
- Provide tuition reimbursement for business operations and clinical staff to obtain advance training/degrees
- Provide full funding for all dental assistants to attend dental hygiene school
- Cross-train clinic-based staff

Outputs

Leadership
- # of type of staff

Business Operations
- # and type of calls placed by call center staff
- # of appointments scheduled
- # of appointments kept
- # of failure to show
- Cost savings on supplies and equipment
- # of claims submitted
- # of claims processed without errors
- Timeliness of reimbursements
- # of staff converted to virtual desktop software
- # of trainings conducted for interested organizations/individuals
- # of meetings/ activities to advocate for Sarrell
- # of presentations/meetings to advocate for increased access to care locally and nationally

Marketing and Community Outreach
- # of free screenings
- Cost per screening/screening activity
- # of results letters distributed
- # of follow-up calls
- # of subsequent appointments scheduled
- # of subsequent appointments kept
- # of parental educational sessions per venue
- # of educational session for children per venue
- # of toothbrushes and toothpaste distributed to parents/children
- # of community based events held
- # of children attending by event
- Cost per event

Clinical Service Delivery
- # of patient visits
- # of new patients
- # of repeat patient visits
- # of patients returning for 6-month check-ups
- # and type of dental services delivered in total
- # and type of dental services delivered per child
- # of patients receiving preventative care only
- # of returning patients receiving preventative care only
- Cost per child
- # of parents/patients who receive one-on-one education
- # of referrals for higher level of care
- # of individuals receiving pro bono care

Quality Control
- # of charts reviewed
- # of major and minor errors identified per review cycle
- # of individuals who receive or counseled on results

Professional Development
- # and type of opportunities to earn continuing education credits
- # of individual receiving tuition reimbursement
- Cost per employee of tuition reimbursement
- # of staff cross-trained
- # of newly trained dental professionals (e.g., dentists, hygienists)
- # of hygienists trained yearly that are Sarrell staff

Short-term Outcomes (1–3 Years)
- Maintained "culture of caring" customer service
- Maintained high show rates
- Maintained high levels patients returning for 6 month follow-up visits
- Continued maximization of cash flow via accurate, efficient and timely Medicaid and other insurance reimbursement
- Continued to contain Medicaid reimbursement rates
- Continued increase in patients'/families' knowledge and awareness of preventive oral health methods and risk reduction strategies
- Continued increase in patients' uptake and use of preventive oral health methods and risk reduction strategies
- Continued decreased incidence of oral health problems
- Maintained delivery of high quality dental services
- Continued compliance with Affordability Care Act
- Increased/expanded local, state and national partnerships
- Increased diversity of funding sources
- Increased visibility of the program nationally
- Continued efforts to secure legislation favorable to program operations/expansion
- Continued expansion of facilities nationally

Long-term Outcomes (3–6 Years)
- Increased provision of dental services for the underserved, statewide and nationally
- Increased provision of preventive oral health services for the underserved, statewide and nationally
- Prevention and/or reversal of oral disease in patients served by the program
- Continued maximization of cash flow via accurate, efficient and timely Medicaid and other insurance reimbursement
- Continued expansion of facilities nationally

Impact
- Increased access to dental services for the underserved nationally
- Increased availability of dental services for the undeserved nationally
- Improved oral health nationally
- Improved physical health nationally

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