Final Progress Report

State Oral Health Collaborative Systems Grant

Connecticut Community-Based Sealant Program (CCSP)

H47MC04113-01-00

Contact:
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Connecticut Department of Public Health
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Commissioner
A. PROBLEM:

In Connecticut (CT), disproportionately high levels of dental decay, low levels of preventive interventions such as sealants, and lack of access to oral health care are significant health problems for minority, poor and otherwise vulnerable children. Utilization of preventive dental services in 2006, including sealants, by children in the Connecticut Medicaid program was at the second lowest level in the past 9 years. Of the 2679 practicing dentists in Connecticut in 2006, only 15% were Medicaid providers. An oral health basic screening survey conducted during the 2006-2007 school year in Connecticut determined that only 36% of third grade students have received dental sealants, falling well short of the Healthy People 2010 objectives of 50% of 6-8 year olds having dental sealants. Additionally, the survey found that minority children and children from low-income households had a higher incidence of dental caries and untreated decay. This combination of high prevalence of dental decay, low prevalence of dental sealants and unavailability of dental providers lead to the conclusion that the oral health of Connecticut’s neediest children is in jeopardy. Prior to the Connecticut Community Sealant Program (CCSP), no standardized comprehensive community based sealants program existed in Connecticut.

The goal of the CCSP was to increase entry into long-term comprehensive dental services for Medicaid, SCHIP and other underserved children. During the first year of the CCSP, the primary focus was on the development of two pilot programs, to develop both strategic and implementation plans that may serve as a best practice model for effective, efficient and sustainable statewide sealant programs. The following years focused primarily on program implementation and efforts to attain sustainability.

B. EXPERIENCE TO DATE

Years 1-4
(Please note that some objectives under each goal were modified to better accommodate a successful completion of the CCSP programs)

Goal I: Plan development and implementation of two pilot demonstration programs to increase placement of dental sealants on third grade molars by at least 15 percent over baseline for underserved children and at least 50 percent over baseline for high-risk children (e.g., SCHIP, Head Start, children with special health care needs, minority children and their families) by the end of the third year of the project
Objectives 1.1

- **Year 1 - Objective 1.1:** Plan Development: The Department of Public Health (DPH) will issue a notification of availability of funding to public and private non-profit dental facilities in Connecticut, to submit their plans for possible approval of grants-in-aid as pilot projects in the CCSP. Two (2) sites, one urban and one rural, will be recommended by a DPH review committee for approval for funding by the DPH Commissioner.
- **Year 2 - Objective 1.1:** September 2006, identify two pilot sites and begin implementation of sealant programs.
- **Year 3 - Objective 1.1:** By August 2007, at least a 15% increase in sealants over the previous year will occur.

Objectives 1.2

- **Year 1 - Objective 1.2:** Pilot Plan Implementation: DPH will collaborate with two successful awardees to implement their respective proposed sealant program.
- **Year 2 - Objective 1.2:** By August 2006 increase by at least 15% dental sealant placement over baseline.
- **Year 3 - Objective 1.2:** By August 2007, 20% of children in need of dental homes will have secured dental homes.

ACCOMPLISHMENTS:

- The Connecticut Community Sealant Program (CCSP) did not begin as was initially planned in the original grant application. The Connecticut Department of Public Health (DPH), experienced unforeseen obstacles in staffing to initiate the implementation of the grant, principally, the terminal illness of the grant’s author, the only staff person in the Oral Health Unit and the delay in hiring a Dental Director for the state.
- DPH issued the notice of availability of federal funding in March 2005 to develop a strategic and implementation plan to increase dental sealants in third grade children that could serve as a best practice model for an effective, efficient and sustainable statewide sealant program.
- In May 2005, the Connecticut Department of Public Health (DPH) selected two grantees for the CCSP based on (1) access to the target population (third graders), (2) sites most likely to develop a “dental home” for children seen in the project and (3) sites responsible for multiple locations which required a coordination of services that would make them more apt to develop a “best practice” model for a statewide sealant delivery system. The two grantees were the Hartford School System and the City of Bridgeport. Even though the original notification of
federal funding indicated that one rural and one urban site would be chosen, there were no applications from programs that would be considered “rural”. Each site offered a range of oral health services from simple screening and referral to comprehensive oral health services. While most of the schools in the programs had access to preventive education, access to sealants was limited. This posed a great opportunity to expand the delivery of dental sealants to children in some of the neediest areas of the state. In 2005, among all cities nationally with populations of 100,000 or more, the city of Bridgeport ranked #2 and Hartford ranked #72 for infants and children living in poverty

- Dr. Ardell Wilson was named the dental director of the DPH Office of Oral Health in May 2005 and took on the role of Project Director and Principal Investigator of the CCSP at that point. A joint meeting was held on July 19, 2005, with each program’s leadership and the Project Director. At this meeting Dr. Wilson provided technical assistance and reviewed the: (1) overall expected outcomes of the project, (2) implementation steps to expand sealant use including identification of targeted schools, (3) plans for promotional materials and activities for the start of the school year, (4) baseline data needs for both sites, (5) membership for steering committees and (6) needs assessments as appropriate.

- The Bridgeport Dental Hygiene Division is part of the City of Bridgeport Department of Health and Social Services and has been in existence since 1913. Bridgeport actually is the birthplace of dental hygiene, where Dr. Alfred Fones trained women to go into the Bridgeport public schools and provide oral hygiene instruction. Prior to the CCSP, services consisted of dental screenings, prophylaxis, fluoride treatments, but not dental sealant placement, with 7 FTE dental hygienists. This program identified 7 schools to participate in the sealant project. 8 Laptop computers and associated software were purchased, as these were identified as the most important resource for their program to carryout program activities, such as collecting the necessary data required to report to the DPH. Baseline data were collected during each of the last 2 years of the project at each selected sites

- The Hartford Public Schools Dental Program is part of the Hartford Board of Education and has operated for over 90 years. Prior to the CCSP, the dental program offered preventive and comprehensive services at some schools, while other schools had only screening and referral systems in place with 11 FTE dental hygienists. The Hartford program identified 8 schools to participate in their demonstration project, 4 schools that had some level of existing dental services and 4 sites with no prior dental services other than screening/referral. They purchased portable dental equipment, as this was identified as the most important resource to carryout their program’s activities and expand sealant services into schools that did not already have fixed dental units in place. Baseline data was collected at 6 of the sites identified in year two of the project and all 8 during the last year.
Each site produced materials to announce their new sealant programs; Hartford named their program “KidSeal Spectacular”. (See Appendix 2,3,4) Each program contacted school administrators, personally meeting with principals and school nurses in each of the targeted schools to gain their approval of the new program. Reaching out and providing education and information at parent meetings, school open houses and during parent/teacher conferences also informed parents. Bridgeport set up “mini health fairs” at each school during report card conferences.

In December 2005, DPH hired Linda Ferraro, RDH as the new Health Program Associate for the Office of Oral Health and took over responsibility, along with Dr. Wilson, of oversight of the grant and providing technical assistance. Ms. Ferraro conducted at least two site visits per year with each program over the course of the project and provided technical assistance to the project coordinators as needed throughout the project.

Bridgeport experienced an enhanced working relationship between the Bridgeport Health Department and the School-Based Dental Services as a result of this program. The Bridgeport Health Department provided oral health screening, prophylies, fluoride treatments, and limited dental sealants to children in the Bridgeport school system and referred children needing more comprehensive services to the School Based Dental program, a separate entity within the schools. Prior to this program, their respective programs did not communicate regularly and are now meeting monthly to discuss how best to serve the children in the schools and have developed a written protocol on treating their mutual clients. (See Attachment 1)

The Hartford program had a target population of 823 third grade students in 2004. Baseline data was collected during the 2004-2005 school year on third graders; children were screened to determine if sealants were needed. In Hartford all elementary school children with dental programs on sites were screened as well. During the 2005-2006 data was again collected on third graders, as well as all elementary children where dental sites existed. In addition, baseline data was collected regarding the children’s need for a dental home and whether or not the children went to the referred practice.

The Bridgeport program had a target population 669 third graders at the seven schools selected for the CCSP. Baseline data was collected on the third graders in these schools during the 2004-2005 school year, as well as the 2005-2006 school year, to determine children’s eligibility for dental sealants. Baseline data was collected on the need for a dental home and whether the child actually went to that dental home.

There were the school based dental programs providing comprehensive services, associated with both the programs that served as the dental home for many children.
Year 2 Results

<table>
<thead>
<tr>
<th>Data</th>
<th>Total A+B</th>
<th>Bridgeport 3rd Grade (A)</th>
<th>Hartford 3rd Grade</th>
<th>Hartford All Grades * (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children Screened</td>
<td>4082</td>
<td>855</td>
<td>448</td>
<td>3,227</td>
</tr>
<tr>
<td>Needing Sealants</td>
<td>1871</td>
<td>572</td>
<td>229</td>
<td>1299</td>
</tr>
<tr>
<td>Received Sealants</td>
<td>535</td>
<td>107</td>
<td>72</td>
<td>428</td>
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<tr>
<td>Referred to Dental Home</td>
<td>1092</td>
<td>238</td>
<td>146</td>
<td>854</td>
</tr>
<tr>
<td>Visited Dental Home</td>
<td>159</td>
<td>96</td>
<td>6</td>
<td>63</td>
</tr>
</tbody>
</table>

* Includes 3rd grade totals

**IMPACT**

> 22% of Third Grade children identified as needing sealants received them (29% all grades)

> 27% of Third Grade children referred to a dental home reported a visit there (15% all grades)

Year 3 Results

<table>
<thead>
<tr>
<th>Data</th>
<th>Total A+B</th>
<th>Bridgeport 3rd Grade (A)</th>
<th>Hartford 3rd Grade</th>
<th>Hartford All Grades * (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children Screened</td>
<td>4346</td>
<td>853</td>
<td>705</td>
<td>3493</td>
</tr>
<tr>
<td>Needing Sealants</td>
<td>2290</td>
<td>488</td>
<td>204</td>
<td>1802</td>
</tr>
<tr>
<td>Received Sealants</td>
<td>429</td>
<td>105</td>
<td>69</td>
<td>324</td>
</tr>
<tr>
<td>Referred to Dental Home</td>
<td>2084</td>
<td>176</td>
<td>236</td>
<td>1908</td>
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<tr>
<td>Visited Dental Home</td>
<td>1632</td>
<td>40</td>
<td>219</td>
<td>1592</td>
</tr>
</tbody>
</table>

* Includes 3rd grade totals
IMPACT
- 25% of Third Grade children identified as needing sealants received them (19% all grades)
- 70% of Third Grade children referred to a dental home reported a visit there (78% all grades)

Strengths

- DPH had existing contracts with both sites, so amendments were made to expedite the contracting process and avoid delays in starting the projects. By July 2005, both contracts were executed.

- Each program identified project coordinators, Diane Dimmock (Hartford) and Helen O’Brien (Bridgeport), dental hygienists each with more than 20 years experience in a public health program. The project coordinators took leadership of the projects and were responsible for multiple-school based oral health programs in two of the largest cities in CT.

- Hartford and Bridgeport had existing oral health coalitions in their communities, which provided a wonderful source for members for the steering committees for their projects. During the course of the grant period, each program meet regularly with their steering committees and reported that their committees provided each with a wealth of information and guidance to make their programs as successful as they could be.

- Strong relationships between the schools and the communities, increased support from both school administrators and parents and increased awareness of the importance of oral health and preventive practices

- Hartford’s program protocols allowed placement of dental sealant after screening performed by the dental hygienists in the program, providing more efficient identification and access to dental sealant placement

- Bridgeport’s program experienced an increased value of dental services, 4 new schools in the city include dental rooms in the construction plans

- The Bridgeport program had 7 FTE dental hygienists on staff at the onset of the grant period

- The Hartford program had 11 FTE dental hygienists on staff at the onset of the grant period
Both programs had systems already in place for billing prior to the CCSP

As part of the Hartford Board of Education, the Hartford program staff had access to student records from the school’s databases and had an effective database dedicated to the dental program in place, which enabled them to accurately track students, especially when they moved from school to school within the district.

**Weaknesses**

- Unfortunately, the author of this grant and the Health Program Associate expected to contribute 25% of her time to assist the Project director with the day-to-day activities and oversight of the grant, unexpectedly passed away in June 2005
- Both programs added dental sealant services, but did not increase staffing
- Obtaining parental consent was an obstacle in both programs, due to many factors; one being the perceived perception of parents that school based dental services may not be of the same quality as a private dental practice.
- Both programs experienced unexpected delays and barriers the first program year
  - Bridgeport ordered and received their laptops in a timely fashion, but was delayed in utilizing them, due to a citywide computer virus, which prevented their being programmed, and efficiently collecting data.
  - Hartford had to be resourceful when their portable dental equipment was placed on back-order, which required them to incorporate the sealant program into their existing mobile dental van’s schedule, and provide the sealants while the van was stationed at the schools. They also had to delay establishing the program in two targeted schools due to over-runs on construction.
- Mandated state student testing hampered access to children during the beginning of the school year in both programs
- The Bridgeport program’s protocol required a dentist’s examination prior to sealant placement, which delayed sealant placement in some instances
- In the last year of the grant period, the Bridgeport program experienced staffing problems, 1 dental hygienist was lost due to budget cuts and the other was on an extended Family and Medical Leave Act (FMLA)
The Bridgeport program did not have the capacity to track the children if they moved from school to school.

Goal II: Broadly disseminate the design, reports and findings of the CCSP, statewide and nationally, as a replicable, innovative, community-based, integrated, and culturally appropriate model that builds on existing dental service systems and meets the Healthy People 2010 objectives for oral health. The specific objective is that 50 percent of third grade children have sealants on one or more permanent teeth.

Objectives 2.1

- **Objective 2.1**: By June 30, 2005, the Project Director will prepare an Annual Report based on reports of needs assessments and evaluations including analyses of surveys and recommendations for expansion or modification of the Program.

- **Objective 2.1**: By September 2006, develop a system to disseminate the design, findings and reports of the CCSP.

- **Objective 2.1**: By August 31, 2007, both project coordinators will develop draft guidance on their respective sealant models to include at least the following:
  - Overall description of the model including local community support requirements
  - Clinical Process and protocols including dental records management
  - Billing and data collection processes
  - Quality assurance and follow-up procedures
  - Challenges and lessons learned

- **Objective 2.2**: By June 30, 2005 and if funded, June 2006 and 2007, the Project Coordinators from each site will work together with technical assistance and guidance from the Project Director to conduct a statewide children’s oral health prevention/dental sealants conference for the state’s professional and non-professional populations to report the results of the pilot sites.

- **Objective 2.3**: By November 30, 2007, the Project Director will produce a final report of the CCSP for dissemination statewide and nationally.

ACCOMPLISHMENTS:
Each program has provided quarterly reports on the activities of their programs to the Department.

The Office of Oral Health has a designated site on the Department’s Website which contains updates on program activities.

The steering committees in both programs served as vehicles for communication regarding project activities on a community level. These committees provided the programs with recommendations and counsel throughout the projects and in Bridgeport, enabled the template for a citywide data collection tool that could be used by several agencies in that city providing dental services.

In June 2007 a statewide oral health conference was convened at which both programs presented on their pilot dental sealant projects. Each program described lessons learned for the development of a best practice model for school-based dental sealant programs for the state. 150 participants, consisting of dental and non-dental professionals and stakeholders, attended this conference.

**Strengths**

- The CT Office of Oral Health has a dedicated website for oral health information which consists of publications and reports, oral health links and “what’s new” in oral health in CT.

**Weaknesses**

- Due to the delay in the project’s implementation, it was determined that a statewide conference would not be held each year of the grant period, but rather one conference be held in the last year of the project.

Goal III: Ensure the sustainability and expansion of the CT Community Sealant Program

Objectives 3

- **Objective 3:** By January 2006, integrate the CCSP into the State Oral Health Planning process.

- **Objective 3:** By August 31, 2007, project coordinators will develop sustainability plans for the CCSP programs.
Accomplishments

- The Connecticut Coalition for an Oral Health Plan began discussion to develop a state oral health plan in 2005 and the CCSP and development of dental sealant programs based on best practices was a primary goal of the plan.

- In June 2007, the CT State Oral Health Plan was launched, which includes objectives and activities to increase the number of school based dental sealant programs and ensure their sustainability.

- Both project coordinators have developed sustainability criteria for their respective programs and have made recommendations for model school based dental sealant program for replication.

Strengths

- Because each of the programs each had long standing dental programs already in place, communication between parents, school administrations and school staff was greatly enhanced, which provided for increased “buy-in” for the projects.

- Good working relationships with school nurses helped immensely, especially when co-location with dental programs is necessary due to space limitations in the schools.

- Experience in years of running school based dental programs ensured the knowledge of the need for flexibility, i.e. be prepared to go to plan B, when plan A does not work.

- The Hartford program had the benefit of having access to student records as the dental program is part of the Hartford Board of Education.

- Both programs actively work with parents to enroll their children in the CT SCHIP program “Husky”. This ensures compensation for services provided, which is essential for sustainability.

Weaknesses

- Parental consent is often difficult to obtain, especially in schools with no prior dental programs and has to be repeated each year.

- Access to children is limited during summer months in a school based program.
Poor Medicaid reimbursement rates effect program sustainability and limited
dental providers as resources for a dental home outside of the school program

Portable equipment is cumbersome to move from site to site, need to engage
building maintenance or custodial staff to assist in relocating portable equipment

Requiring a dentist’s exam prior to sealant placement creates delays and hampers
maximizing RDH resources

Beginning a “prevention only” program does not have the same immediate
success of opening a “full service” dental program, less parent “buy-in”.

New programs take time to build parent “trust”

When an existing program accommodates all students in the school, it is difficult
to single out one grade for services such as third graders for sealants

Both programs are funded by city funds and are subject to municipal budget
considerations

Bridgeport’s billing is done by the dental hygienists

Recommendations for Model Dental Sealant Program

Extensive follow-up and care coordination is essential to ensure a dental home
outside of the school based program

Appropriate staffing levels need to be maintained

Productivity standards are essential for providers and effective billing systems are
vital in order to maintain program sustainability

“Buy-in” from parents, school administrators, school nurse, teachers for the dental
sealant program is crucial for the success of the program

Community commitment and support for the dental sealant program is imperative

PUBLICATIONS/PRODUCTS:

Attachment 1 “Bridgeport Scope of Practice Based Services Protocol”
Attachment 2 “KidSeal Spectacular” English
Attachment 3 “KidSeal Spectacular” Spanish
Attachment 4 “KidSeal Letter to Staff”
Bridgeport Scope of Practice Based Services Protocol

Dental Hygienists
  Screening/Referral
  Preventive services:
    Prophylaxis/Topical fluoride application/Sealants
  Education:
    Classroom - oral health/nutrition
    Chairside - Each child seen individually
  Parent/Teacher/Professional:
    Health Fairs; Parent Groups; Parent Conferences
  Referral for restorative work to school based clinic or dentist of record

Dentists
  Examinations:
    Initial and recall exams
  Charting and treatment plan
    Indicate sealants to be placed
    Indicate restorative work to be done
    Indicate if outside referral made and why
  Restorative Services as needed
**Dental Assistants**

Schedule patients:
- Maintain dentists appointment schedule to assure restorative work continues to completion
- Keep list for hygienists of patients designated by dentists for cleanings/fluoride treatments/sealants

Chairside Assistance for Dentist

Maintain Dental Clinic:
- Instrument Sterilization/Supply/Set-up/Clean-up

**Medical Assistants**

Intake:
- Track permission forms
- Record Patient data
- Make and maintain patient charts/records
- Notify appropriate divisions of services requested by parent (when dental services are requested - send copy of permission to dental staff for necessary appointments)

**Outreach worker**

- Explain services available at school based clinics
Follow up on non-returned permission slips
Follow up on reported need for services and non-compliance issues
Address access to care issues (transportation, insurance, etc.)

Step by Step Procedure - Dental services SBHC Clinic Sites

1. After Distribution/collection of Sign-Up forms - dental services requested sent to dental division and initial visit scheduled

2. Initial visit - exam, charting, treatment plan, referral for cleaning, fluoride, sealants and appointment plan for restorative work. If referral outside necessary indicate reason.

3. Preventive services scheduled and completed

4. Restorative Treatment appointments as necessary

5. Recall visit
HARTFORD PUBLIC SCHOOLS DENTAL PROGRAM

PRESENTS

KidSeal Spectacular!

Help prevent cavities in your children’s teeth.

Sign up today!

Stop in or call your School Nurse today
PROGRAMA DENTAL DE LAS ESCUELAS PÚBLICAS DE HARTFORD

PRESENTA

¡KidSeal espectacular!

Ayude a prevenir las caries en los dientes de sus niños.

¡Alísstese hoy!

Venga o llame a la enfermera de la escuela hoy
HARTFORD PUBLIC SCHOOLS DENTAL PROGRAM
THE SEALANT PROGRAM

To all ________________________ School Staff:

I would like to introduce myself, Debbie Arslan, Lead Dental Hygienist and our new Sealant Program, to you. The Hartford Public Schools has operated a dental screening and referral program, here at ___________ School for many years. This new program is an expansion of this service. Hartford Public Schools (HPS) now operates 10 full-service dental clinics, 4 preventive-only dental clinics, and the Molar Express (our mobile dental van) in HPS Elementary Schools.

Through our screenings we have identified your school as a high need population that would benefit from the expanded services that our program can offer to you. We saw all the students for a dental screening in the spring of 2005.

**Sealants are a protective plastic coatings placed over the chewing surfaces of the back permanent teeth to help prevent cavities. Sealants keep food particles and germs that cause cavities off the surfaces of teeth.**

This program will be targeting 3rd graders as their 1st permanent molars have erupted. We will be re-screening the 3rd grades to identify those students in need of sealants. We will be coordinating with each classroom teacher to come in and distribute permission slips to children. These permission slips need to be completed and signed by the parent/guardian and returned to me as soon as possible. (We will have a mailbox in the main office that can be used.)

**We are unable to treat students without permission, so this form is very important. [NOTE: THIS PROGRAM DOES NOT REPLACE THE CHILD’S PRIMARY DENTIST.]**

We schedule the children in advance, so you will know ahead of time which children we will be seeing for every day that we are at your school. We will be using the pink appointment slips (attached) to call for the students we need to see. If you receive a pink slip in your mailbox and the student is absent, withdrawn or unable to keep the appointment for any reason, please call and let us know as soon as possible. You can either call us or put the slip back in our box with a quick note as to why the student cannot keep the appointment.

The result of having The Sealant Program here in school is that sealants help prevent decay, thus preventing pain and loss of school time due to poor oral health. HPS dental clinic students have much better dental health than similar students in other Hartford Schools. We know that without good health, children cannot achieve their optimal learning potential.

We are looking forward to working with all of you for a happy, healthy and productive school year. Our door will always be open, and we invite all of you to tour our new facility.

Thank you for all your support,

Debbie Arslan, RDH