Grant No.: H47MC23165
Children's Oral Healthcare Access Program

Integrated Health Services, Inc.

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C. Progress

1. Planning and Implementation

a. Delivery System Design

The School Based Health Center (SBHC) dental program in East Hartford began in 2000 as a preventive program offering services provided by a dental hygienist to 275 children at Silver Lane Elementary School 20 hours per week. With additional funding in 2008 from the Department of Social Services (DSS) and the Department of Public Health (DPH) Integrated Health Services, Inc. (IHS) expanded the dental program to include O'Brien Elementary School, 7 School Readiness sites and the Connecticut River Academy High School.

In October of 2009, DSS funded a dentist to work at Silver Lane for 4 hours per week. Within one year the decay rate decreased from 24% to 8.5% proving the benefit of increasing access to dental services for children enrolled in the SBHCs. Unfortunately, despite the dental program's success funding to expand restorative services to other SBHCs was unavailable.

The award of HRSA funding in 2011 enabled IHS the ability to expand and increase its dental program and services, increase access, and deliver comprehensive oral health services to the children and youth of East Hartford at greatest risk for dental caries.

In the first year of HRSA grant funding HIS expanded services to include East Hartford Middle School. In Year 3 the dental program was expanded to include comprehensive dental care to Hockanum Elementary School, Mayberry Elementary School, and all grades at Connecticut River Magnet High School. This increased the total sites providing preventative and restorative dental care to 5, while also including screenings and oral health education to 7 School Readiness sites and East Hartford's homeless shelter.

During Year 1 the following staffing changes were made: dentist 20 hours per week, RDH position increased by 8 hours per week and the dental assistant increased to 24 hours per week. Staffing needs were re-assessed annually as we strived to maximize reimbursement by adjusting staff/resource allocation. Currently, at the completion of the grant the dental staff includes: one dentist 16 hours a week, one RDH 20 hours a week, and one dental assistant 20 hours per week. This has enabled the dental program the ability to meet the demands of the program and maintain fiscally viable. Supplemental per diem staff has also been hired to provide additional coverage as necessary.

Mid-way through the grant's second year, IHS hired an administrator to oversee the dental program whose administrative oversight resulted in a 62% increase in insurance reimbursements, a 45% increase in restorative services, a 21% increase in the number of sealants applied, and a 109% increase in the number of comprehensive examinations provided during Year 3. Additionally, there was in increase in staff efficiency and productivity.

IHS had initially offered dental services throughout the summer months to ensure access as a requirement to become certified as a Patient Centered Medical Home (PCMH). However, summer hours in Year 1 were curtailed due to late permission by the East Hartford School Board for use of the facilities. During the summer of the second and

third year of the grant IHS was able to offer 8 weeks of summer preventative and restorative services but experienced an extremely low volume of appointments with only 29 visits during the summer of Year 2. In Year 3, despite heavy marketing efforts made by the dental team there were only 27 visits made during the summer, deeming it cost prohibitive for the program to offer dental services during the summer. To ensure patients' access to care was uninterrupted, all students enrolled in the dental program received written information on how and where to access care over the summer. Meanwhile information on how to access urgent or emergency dental services was added to the SBHCs voicemail system.

In the first year of HRSA funding IHS purchased new computers and a comprehensive Electronic Health Records (EHR) system that included medical, dental and behavioral health records reflective of our integration of services. This ensured high quality, time-efficient, and cost-effective care was delivered to those enrolled in the SBHCs. The initial intent of the grant was to implement the EHR system over 4 years, however upon further investigation of the time and staffing requirements to implement the EHR system, it became far more time-efficient and cost-effective to implement in all sites at the same time. Therefore, we sought and received HRSA approval to purchase the EHR system in November of 2011 and installed it in all our SBHC sites by January 2012. Challenges and delays in training staff on the HER system led to technical delays issues that persisted through April 2012 when full conversion of the dental, medical and behavioral records into the EHR system was completed. However, the unanticipated and excessive time required to learn the HER system significantly reduced the number of visits our staff could provide.

The integration of dental records with health records has been essential in ensuring high quality and accessible health care to children by facilitating communication among clinicians seeing the same students. The EHR system has also resulted in more efficient and accurate billing operations, allowing us the ability to maximize reimbursements and ensure program sustainability.

Integral to the design of the dental program was the purchase of equipment and supplies. At the onset of the grant Silver Lane and O'Brien were long-standing stationary dental sites while the expansion sites) East Hartford Middle School and CTRA) utilized portable dental equipment that staff was required to transport between sites. The purchase of capital equipment in the grants' first year ensured that resources, particularly for medical asepsis, were available at each portable site. Additional dental supplies were procured and non-temperature sensitive supplies were stocked in a movable cart located in the dental van.

It soon became evident there was a loss of productivity due to the time required of the staff to unload, setup, transport, and break down the portable equipment. Moving equipment also resulted in several costly repairs. During Year 2 IHS was awarded a second HRSA grant to support renovation and capital equipment. Over the next 18 months funding from both HRSA grants was sufficient to purchase enough capital

equipment to equip all 5 SBHCs with stationary equipment, maximizing the time-efficiency and cost-effectiveness of the program.

b. Interdisciplinary Care

Since the first dental site was initially integrated into Silver Lane Elementary School's SBHC in 200, the dental staff has been part of a collaborative team that includes Nurse Practitioners, Licensed Clinical Social Workers, school faculty and staff. The greatest improvement to interdisciplinary care since 2011 has been the implementation of Electronic Health Records. The EHR allows SBHC clinicians access to students' complete medical history and record, the ability to ensure treatment compliance, refer as needed to the School Nurse and Child Welfare, use of the "Open Wide" curriculum at medical visits, and the integration of treatment of infection with medical and dental staff.

The dental team continues to collaborate with the medical, behavioral health and school staff by participating in monthly staff meetings, case conferencing, referrals and care coordination.

The SBHC staff has been highly successful in establishing and building relationships with providers of specialty care during the grant period. Referrals, appointments and follow-ups are made and tracked with endodontists, oral surgeons, and orthodontists in the community for specialty care beyond the scope of services the SBHC dental staff can provide.

c. Patient/Community Education

Oral health education, both group and individual, is provided to all students in the school through classroom presentations regardless of their enrollment in the SBHC. Students enrolled in the SBHC Dental Program (aka Galvin Dental-GDP) receive additional individual education on oral health practices during cleanings (prophylaxis), dental exams and restorative care visits.

At the grade K-2 level oral health education sessions are provided during the weeks the upper grade levels take mandatory Connecticut Mastery Tests. This allows the RDH staff the time to reinforce oral health education on such issues as proper brushing, nutrition and healthy food choices. It also provides a forum for children to ask questions and voice concerns about seeing a dentist.

In the first year of the grant all 6th grade health classes at the Middle School and homeroom classes at CTRA (total of 238) students received classroom education on oral health. Staff conducted an informal poll of teens' interest in oral health topics and identified oral cavity piercings, often associated with tooth breakage and infections, as a topic of interest for this population that would engage them in learning about the

importance of oral health along with general health. The presentations were well received by students and teachers and have been repeated on a yearly basis.

Additionally, an oral health program at the Middle School level was initiated to students attending the in-school suspension program. The dental staff focused their presentations on age-appropriate topics including nutrition, general oral hygiene and piercings. A question and answer period follows the presentation and students eagerly participate in discussions. This program has been integrated into the health curriculum.

Dental staff began attending all school open house meetings and new school orientations in Year 2 of the grant. At these events parents are provided with information on dental services offered through the SBHC, enrollment forms, and oral health education material.

Dental screenings are provided to all students enrolled in the participating 5 schools and 7 School Readiness sites and were initially conducted through an opt-out process. Two changes have been made in the process over the 4 year period. First, in order to ensure patient/guardian preference and HIPAA compliance the screening process was changed to an opt-in process instead of opt-out. Second, during Year 3 the screening process was changed to include only incoming 6th graders and newly enrolled 7th and 8th graders at East Hartford Middle School instead of the entire school population. This was in response to concerns of the teachers and staff about the significant time away from the classroom the screenings required, dental staff time limitations, and analysis from Year 1 and 2 screenings that revealed the highest decay rate was among incoming students not returning students. Despite these changes the amount of patient education increased on average by approximately 10% over the 4 year period.

At the community level, IHS developed an informational video highlighting the SBHC's role in serving the physical, dental and behavioral health needs of the students in East Hartford. This video has run on local cable access TV and has links to East Hartford Public Schools, the Health Department, and the local nonprofit ChildPlan.

The dental team has established relationships with additional outside providers for referrals to after-hours care or for services required outside the scope of our providers. This increased the total number of referral sources to 14 within East Hartford and the surrounding communities. The newest referral sources include a pediatric dentist with extended hours and an additional endodontist that accepts new patients insured by Medicaid. Both referral sources were educated on the mission of the SBHC dental program and how we can best work together to ensure adequate dental care for our clients.

A new oral health education program was initiated throught Silver Lane Elementary School's Family Resource Center for families of preschool children. The majority of families attending these sessions are recent immigrants and translators are available during the sessions. Information is provided on nutrition, brushing techniques for toddlers and pacifier related dental issues. Feedback from parents and teachers has been very positive.

2. Continuous Quality Improvement

The Electronic Health Record system has enabled the implementation of new Quality Improvement initiatives resulting in improved processes that are data driven.

Through the development of a recall report within the EHR all students due for oral prophylaxis are scheduled and completed in a timely manner. At the beginning of each month staff run reports listing students due for cleanings and the date they are eligible to be seen. Once the list is generated billing administrators have the ability to verify insurance eligibility before patients are scheduled. This has replaced a paper-based tracking system that had been used since the inception of the Galvin Dental program. Once the new process was instituted 99% of students due for recalls have been seen in the month they are due and accurate insurance coverage has been captured for reimbursement with 100% of Medicaid reimbursements being billed and paid.

Another significant initiative has been the monthly analysis of denied claims. Obtaining and tracking this data has allowed IHS to identify students receiving duplicative services and to inform families of the necessity in choosing a single provider. This process has resulted in a significant decline in the number of denied claims.

In an effort to maximize productivity and ensure correct staffing reports are analyzed on a monthly, semi-annual, and annual basis to identify the most efficient staffing configuration. There have been multiple staffing changes over the course of the 4 year grant and with each separation and new hire administration has re-evaluated financial and program trends to ensure appropriate staffing in order to meet the needs of the program.

Additional CQI initiatives include: the identification of an improved sterilization testing procedure resulting in a more cost-effective process, restructuring of the dental assistant position to one incorporating responsibility for team scheduling and supply ordering, the standardization of permission forms, and translation of all patient forms into Spanish and English.

SBHC dental staff developed a tracking system for referrals in order to ensure a timely follow-up for any services referred to an outside provider. Staff is now required to document reason for referral, referral source, and date of initial and follow-up appointment.

As noted previously, at the conclusion of Year 1 it was determined that the use of portable equipment had become labor and time intensive for the staff and minimized the amount of direct patient care. Through the generous funding of the 2 HRSA grants IHS

was able to purchase stationary equipment for all 5 sites resulting in an increase in the number of students that can be scheduled.

Incorporating all of the above Quality Improvement initiatives has maximized the efficiency in the operations of the Galvin Dental program while the continual review of policies and procedures ensures the highest quality care is provided to students in the most cost-effective manner.

3. Sustainability

The availability of federal funds has allowed IHS to create a sustainable oral health program by allowing us the time and funding to implement new systems that enabled us to provide administrative oversight to ensure the time efficiency of staff in the most cost-effective manner.

The EHR reporting system allows for the identification of inefficiencies in scheduling and billing and IHS has successfully implemented process improvement initiatives to minimize losses.

The impact of the EHR relative to the SBHC's billing and claims reimbursement has proven the key to sustainability of the program.. The number of children insured by Medicaid has increased 10% since Year 1, from 78% to 88% while the number of uninsured children fell from 22% to 9%. This can be partly attributable to expanded Medicaid eligibility in the state and also to the continual effort of the staff to assist uninsured families in enrollment. The number of dental services billed to Medicaid in 2012 was 711 compared to 1064 in 2015 with 100% of claims paid. This has resulted in a 40% increase in Medicaid revenues between 2011 and 2015, from $84,977 to $118,967.

The third year of the grant reflected the changes having the greatest impact on our ability to create a sustainable oral health program. Hiring an administrator provided the necessary oversight to ensure effective program development and management, increase cost-efficiency and maximize productivity. The analysis of data reported in the EHR by the administrator resulted in the institution of new processes to maximize reimbursement. Staff is now accountable for ensuring accurate information is obtained before the scheduling of any procedures. Additionally, a process has been developed for those students identified as uninsured to connect them with the resources available for enrolling in insurance programs available under the Affordable Care Act. This helps to further reduce the number of denied claims.

Through the tracking of productivity trends and billing claims it also became quite evident that hiring staff with the ability to think critically, work independently, and be attentive to productivity is imperative to the sustainability of the operation. Unlike a private dental practice staff employed at the SBHC dental clinics are responsible for many facets of patient care including scheduling, checking eligibility and billing for

procedures. It is important that attention be paid to each aspect of the visit as well as excellent clinical care.

Other administrative initiatives resulting in improved sustainability include stricter oversight of supply utilization and the identification of other funding resources for supplies. Both national and local resources were identified that provide free supplies including fluoride, sealant materials, toothbrushes, toothpaste, and floss. Staff was educated on the importance of supply tracking and is now required to obtain approval before any supplies are order.

D. Evaluation

Informed Consent: Each year the dental team distributes Informed Consent forms to all students at the beginning of the school year, at Open Houses, and for all dental screening events. Two different forms are distributed and collected: Screening consent and SBHC enrollment forms. Families may opt to have their child screened without becoming a member of the SBHC. If, however, they would like their child to receive services they must enroll in the SBHC and complete the Parent Permission Form (Appendix A). This process has been utilized since the Galvin Dental program has been in operation.

Year 1 of the grant period proved to be more difficult than expected in collecting data to be reported in the Minimal Data Set for evaluation of the program. Several factors contributed to this including the implementation of the EHR system, opening of new sites, and change in personnel. Of primary importance was training and the transferring of data from paper to the EHR system. The number of screening consent forms and enrollment forms were not tracked in Year 1 but were tracked in Years 2-4. The number of forms distributed varied during this time period, between 1525 and 1680, and the percent returned was between 56% and 78%.

Two changes occurred to the distribution of Informed Consent during the grant period. The first was in the number of students selected to be screened at EHMS. The combination of concerns from school staff on pulling all 6th, 7th, and 8th grade students for screening during valuable classroom time along with results from past year's screenings resulted in the decision to screen only 6th graders and newly enrolled 7th and 8th graders. This population was chosen in order to identify those students not previously followed by a dental provider. The 6th grade students are all new to the school and many come from elementary schools without a dental program and new 7th and 8th graders arrive from many different schools and may or may not have been followed by a dental provider.

The other significant decision was to make the screening Informed Consent opt-in instead of opt-out. This did not affect the number of forms distributed or returned but did have an impact on the number of parents returning the forms.

Enrollment: Enrollment in the SBHC's operating a dental program increased on average over 10% between Year 2 and 4. Two of the five sites were constructed during the grant period and opened at the beginning of Year 3. The Minimal Data Set for Year 3 (Appendix A)

reflects a drop in enrollment and the number of students receiving dental service that is in part reflective of the loss of staff and the opening of 2 new sites. Once the sites became fully staffed and operational enrollment increased to its highest level in Year 4.

On average 72% of those enrolled were covered by Medicaid, 17% were privately insured, and 11% were sliding scale. There was no significant change in insurance coverage over the grant period.

As with enrollment period, the wait time for the first appointment from time of enrollment was consistently between 16 and 18 days in Years 2-4. Data for Year 1 was gathered by conducting a random sample of charts to determine average wait time as the EHR system was not fully functional until the end of the academic year. The average wait time in Year 1 was estimated to be 75 days and was greatly reduced in Year 2 to 18 days. With the use of the EHR system the dental team is able to track the information necessary for scheduling appointments in a timely fashion. This includes the return of the necessary permission forms, insurance information, and eligibility of services. The most significant delay occurs when the forms are not signed and returned in a timely manner.

Reimbursements: One of the most significant improvements has been in the billing processes. As stated previously, the implementation of the EHR system has played a vital role in capturing reimbursements. Through the EHR and state websites staff is now able to determine when and if students are eligible for services and what services are covered. Bills are submitted electronically and in a timely fashion. Compared to the first year when 71% of the Medicaid bills submitted were paid and by the end of year 4 100% of Medicaid submissions were billed and paid.

Preventive Care: The number of students enrolled in the SBHC receiving preventive services including comprehensive oral exams, oral prophylaxis, x-rays, fluoride and sealants has averaged 53% over the 4 year period. After the hiring of the dental administrator, Year 3 saw the greatest increase in students receiving services (59% compared to 49% the previous year), specifically oral prophylaxis and sealants. Oral prophylaxis increased by 8% and sealants by 37%. These results are attributable to the combination of the ability of the EHR system to provide accurate data and the dental administrator tracking and analyzing that data. The significant increase in sealants was also a result of the RDH's identification of a large number of students at Silver Lane Elementary School whose teeth had never been sealed. The number of completed sealants in Year 4 then dropped after the successful campaign of the RDH to complete the sealing of all eligible students the prior year.

Treatment Services: The hiring of a dentist has been instrumental in providing restorative services to students enrolled in the SBHC. Beginning in Year 2 all children enrolled in the SBHC identified in need of restorative care have been seen by the dentist and the dentist has been able to complete 100% of their treatment plans by the end of the school year. Without this grant when the RDH identified a problem notification was sent home to parents referring their child to an outside provider and it was often unclear whether or not they had ever received care. Only if a child presented to the SBHC with oral pain was it clear the child had not been treated. Having a dentist available at all 5 sites has eliminated the time elapsed

between identification of an oral health problem and treatment and diminished the discomfort of the patient and the time away from the classroom.

As can be seen in the Minimal Data Set (Appendix A) the vast majority of students receiving restorative services are covered by Medicaid and by Year 4 97% of those services were all billed to Medicaid.

Dental Caries Outcome/Impact: Reporting of screening results varied for Years 1and 2 compared to Years 3 and 4. For Years 1 and 2 decay rates were reported for all students screened, whether or not they were registered SBHC enrollees. Years 3 and 4 were reported for enrolled students only.

Use of rescreening decay rates is the most useful in documenting the reduction in decay rates and the impact of the program. It is difficult to utilize the fall decay rates as we are unable to determine how many of those screened, both registered and non-registered, are new to the school system and those that have been seen before.

The dental program has been able to document success in the reduction in decay rates. By By the end of the grant spring re-screening in the spring was able to show that less than 1% of registered users were noted to have decay compared to 20% in Year 3. This can be attributable to the improved efficiency of the EHR scheduling system and the dentist, along with diligent follow up of those students whose families chose to seek care in the community. Without funding for the purchase and implementation of the EHR system the dental team would still rely on the inefficient and time-consuming paper system previously utilized. The funding available for hiring the dentist and dental assistant has also been pivotal in reducing the decay rate. As noted in the grant funding application services, prior to the Galvin Dental program hiring a dentist notification was sent to parents that their child had detectable decay and needed treatment and only 16% of the children identified with decay in the fall had seen a dentist and received restorative services by the spring re-screening.

Utilization of Dental Services: Another demonstrable link between the planned activities and progress made is the number of enrolled students who had dental examinations and their teeth cleaned. In Year 2 only 45% of those enrolled had cleanings and 48% had dental examinations. By Year 3 and continuing to the completion of the grant 100% of those students enrolled had both examinations and cleanings.

Year 2 was the first full year using the EHR system and having a full complement of staff. Although they had been trained in the spring of Year 1 staff began to utilize the system for the first time in the fall after returning from the summer break. By Year 3 they had gained experience using the system and the dental administrator was able to oversee the program in order to maximize efficiency resulting in the above.

E. Resources and Capabilities

Prior to this grant IHS has had a long history of serving the needs of children experiencing gaps in medical, dental, and behavioral health services. Based on a 1993 Community Needs Assessment East Hartford was awarded grant funding from the Connecticut Department of Public Health (DPH) to implement their first School Based Health Center to provide medical and behavioral health services. Shortly thereafter, the Town of East Hartford received its federal designations as a Medically Underserved Area (MUA) in 1995; a Health Professional Shortage Area (HPSA) in 1998; and as a Dentally Underserved Area in 1999 (DPSA).

In 1998 DPH released funding for SBHC expansion that would include funding for dental services at Silver Lane Elementary School, a school that had a 78% uninsured/Medicaid population and a 34% transiency rate. The dental program provided oral health education, screenings, cleanings, sealant and fluoride applications by a registered dental hygienist. Sadly, after a few years of attempts to refer students in need of restorative care to community resources, and despite the care coordination efforts of the SBHC RDH working closely with the East Hartford Community Health Center (EHCHC) dental program there still remained a 60% decay rate reported in the screenings. This occurred despite the willingness and flexibility of the EHCHC dental program to offer appointments to students. Most concerning was that only 16% of the children at Silver Lane identified with significant decay had been seen by a dentist one year later despite all efforts.

Realizing that access was indeed the issue to be addressed to impact the decay rate, the SBHC was awarded a **one year** grant from the Connecticut Department of Social Services (DSS) to hire a dentist and purchase restorative dental units. Within four months of a dentist working 8 hours per week, the rate of decay was reduced to 27% and within one year was less than 3%.

This experience working with the target population was invaluable in setting the goals and objectives of the Galvin Dental program. IHS was able to adequately assess the needs of the population, identify the resources needed, devise a plan to expand services to reach more students in need, and adapt those plans as necessary throughout the grant period. Having an established program also negated the need to create new policies and procedures necessary for the initiation of a dental program. At the onset of the grant IHS had been operational at Silver Lane Elementary School and O'Brien Elementary School and had the necessary clinic licensing, staff credentials and privileges, patient enrollment forms, and clinical standards of care necessary for program operation.

IHS recognized the necessity of an Electronic Health Record system to ensure the program could offer the highest quality of care while operating in the most time efficient and cost effective manner possible. IHS is committed to incorporating dental care and education into the comprehensive health care services that reduce morbidity and fosters healthy lifestyles for children and their families. Therefore, integrating the dental records with health records was essential to ensure that children receive and have access to the best possible health care. Despite extensive research into various systems and choosing the EHR system best suited to IHS's SBHC model implementation became significantly more time and labor intensive than

anticipated. Administration devoted the necessary clinical and support staff to ensure the successful transition to an electronic system but this was at a cost to productivity. Not only did the clinical staff need to be trained but additional staff was hired to implement the dental billing component of the EHR.

Initially, IHS planned on hiring an administrative director in Year 4 to take over responsibilities of staffing, scheduling, and reporting for grantors and IHS. However, despite changing the dental assistant's position to include additional responsibilities as a dental care coordinator it became apparent that without additional oversight by a dedicated dental administrator the viability of the program could not be guaranteed. IHS was able to adapt the plan and hired an administrator in Year 2. The administrator was instrumental in evaluating project activities and making changes to policies and procedures in the ongoing effort to ensure best practices and financial viability.

The purchase of portable equipment to be transported between sites was included in the original grant application. It was quickly discovered that several issues arose with the use of portable equipment. First, the time necessary to set up, clean, and break down the equipment each day interrupted the number of students that could be seen. This was further complicated when the team was sharing limited equipment and supplies needed by more than one staff member on any given day. Second, with the movement of equipment came an increase in the frequency of costly repairs. It was soon determined that stationary equipment should be purchased that could remain at each site.

An objective in the initial grant application was the creation of the infrastructure for certification as a Patient Centered Medical Home. The PCMH model of care incorporates comprehensive care coordination in order to ensure that patients have all health needs and risks addressed by one provider. Plans were to determine standards and certifications necessary to comply with the PCMH model for which providers will receive higher reimbursement rates. Requirements include such standards as Electronic Health Records and year round accessibility, both of which were implemented during the grant. IHS' President/CEO worked with the statewide Advisory Board on the plan but it was ultimately determined that IHS would be unable to meet all the standards for PCMH recognition. Since then IHS has been involved in a pilot program with a Primary Care Development Center (PCDC) on the development of standards specific to SBHCs for PCMH recognition.

Appendix A – Supporting Documents

Parent Permission Form – English

Parent Permission Form – Spanish

Permission for treatment – English

Permission for treatment – Spanish

Dental Screening permission form

Dental Screening results

Integrated Health Services brochure

Referral list

Referral form – East Hartford Orthodontics, LLC

Referral form – Care Endodontics

Referral form – Oral Facial Surgery Center

Sterilization log

Appendix B- Process Outcome and Impact Indicators

Minimal Data Set Years 1-4