

Iowa's TOHSS Project Final Progress Report

Table of Contents

SECTION TITLE	PAGE NUMBER
Introduction	2
Goals, Objectives, Accomplishments, and Lessons Learned	
• Goal 1	2-10
• Goal 2	11-14
Accomplishments That Impact:	
• Medical/Dental Interface	14
• Access to Care for Children with Special Health Care Needs	14
• Improved Financing of Oral Health Care Services	14
• Statewide Expansion of Comprehensive Services	15
• Collaboration with Other State-based Federal Programs	15
• Sustainable Efforts	15
Achievement of Goals	15-16
Acronyms	17
Attachments	
• A – Summary and Plan for Oral Health Promotion	NA
• B – Iowa Oral Health Surveillance System	NA

Note: In January 2011, the Oral Health Bureau was merged with another bureau to form the Bureau of Oral and Health Delivery Systems. The Oral Health Center is within that bureau and oversees oral health programming at the Iowa Department of Public Health. Within this document, all references to what had formerly been reported as the Oral Health Bureau have been changed to the Oral Health Center.

INTRODUCTION

The Iowa Department of Public Health's (IDPH) Targeted Oral Health Service Systems (TOHSS) project had two goals. **Goal 1** was to promote the I-Smile™ dental home initiative to assure statewide recognition and understanding of the importance of early and regular dental care. **Goal 2** was to create an ongoing I-Smile™ surveillance system, to track oral health status of children ages 0-5 and the impact of I-Smile™.

GOALS, OBJECTIVES, AND ACCOMPLISHMENTS

GOAL 1: PROMOTE THE I-SMILE™ DENTAL HOME INITIATIVE TO ASSURE STATEWIDE RECOGNITION AND UNDERSTANDING OF THE IMPORTANCE OF EARLY AND REGULAR DENTAL CARE.

Objective 1.1: *By December 31, 2008, conduct focus groups and interviews with Iowa families and health care practitioners to assess oral health message needs.*

The first step in Iowa's TOHSS project was the creation of a new staff position with experience in health promotion. Shaela Meister began fulfilling her duties as the TOHSS project coordinator (PC) in February 2008. Until that time, an intern provided limited assistance to the TOHSS project director (PD) with health promotion assessment activities.

After receiving input from other IDPH programs (e.g. Healthy Child Care Iowa, Covering Kids and Families), the PC completed a statewide assessment of oral health promotion and education needs. It included face-to-face and written surveys conducted of clients at WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) clinics; written surveys of dentists, hygienists, and assistants at the Iowa Dental Association annual meeting; and written surveys of pediatricians via return postage-paid postcards. To encourage survey participation, drawings were held for incentive giveaways, such as instructional tooth brushing puppets and boxes of fluoride varnish.

The state assessment determined that many Iowans, including health care providers, are unaware of the importance of early prevention and regular dental care for children.

- 60 percent of WIC mothers interviewed did not know they could easily pass cavity-causing germs to their child.
- 25 percent of the WIC mothers were unaware that their child should see a dentist by the age of 1.
- Just 41 percent of WIC mothers were brushing their young child's teeth for them.
- Physician respondents believed that oral health messaging should involve a focus on parents brushing their child's teeth (and welcomed the use of posters, brochures, and fact sheets within their practices).
- Dental providers saw the need to emphasize the importance of parents providing daily oral health care for their child as well as the damaging effects of soda pop on tooth enamel (and most were willing to have oral health brochures and child activity sheets in their offices).
- 85 percent of responding physicians and 73 percent of dental professionals were willing to be contacted by their local I-Smile™ Coordinator or had already met with one.

A contract with the University of Northern Iowa's Center on Health Disparities during years one and two provided a review of oral health behaviors of African-Americans, Central Americans, Mexican, Sudanese, Liberian, and Horn of Africa immigrants in the state. They provided feedback to the PC on methods to reach culturally diverse populations, as well as input about state media outlets, such as radio stations that have large numbers of Latino or African-American listeners.

The PC used all of the information learned through the assessments to develop an I-Smile™ health promotion campaign.

Objective 1.2: *By December 31, 2009, implement the I-Smile™ health promotion campaign.*

The PC worked with the PD and other Oral Health Center (OHC) staff to begin a health promotion plan, using optimal oral health literacy and health promotion messages, as well as determining the best methods to reach Iowans regarding the importance of children's oral health. Throughout the TOHSS project, to achieve a more widespread oral health social marketing campaign, funding was leveraged through a public-private partnership with Delta Dental of Iowa Foundation (DDIF).

Funding from DDIF assisted in editing two public service announcements (PSAs), previously used in South Dakota. The focus areas of the PSAs are transmissibility of decay-causing bacteria, early dental visits, and prevention. A second proposal to DDIF assisted in a test market media campaign, using print media, the PSAs, and grassroots outreach activities by I-Smile™ Coordinators in one television market area in eastern Iowa.

Results from the test market campaign include the following:

- Eighteen of the 21 counties within the test market area saw an increase in Medicaid-enrolled (ME) children receiving a dental service from a dentist in the months during and following the media campaign.
- During the same time period, 13 of the 21 counties saw an increase in ME children receiving a dental service from Title V child health (CH) agency staff.
- Traffic on the I-Smile™ website increased steadily over the months when the campaign had activity. These dates included the official time period of the test market campaign as well as the entire month of July 2009.
- Traffic on the IDPH – oral health web pages also dramatically increased (71 %) between April and July 2009. The I-Smile™ page had a 110 percent increase in activity.
- I-Smile™ Coordinators within the television market area distributed 16,434 outreach materials during the campaign.
- The coordinators made 578 visits to dentists, physicians, and other community locations.
- An I-Smile™ Coordinator found a new dentist in her area to accept new Medicaid patients with no referral restrictions.
- An I-Smile™ Coordinator was able to schedule several I-Smile™ trainings with dentists who were previously reluctant.

- Many I-Smile™ Coordinators reported that several children they saw could recite the PSAs and imitated the germ characters.
- Parents reported that they found the messaging to be simple enough to understand and apply to their daily lives.

An additional proposal to DDIF helped to fund replication of the media campaign in the larger central Iowa television market. We were also able to extend exposure of the importance of children's oral health and the I-Smile™ initiative through sponsorship of the popular children's program, *Curious George*, broadcast statewide on Iowa Public Television (IPTV). For minimal cost, sponsorship advertisements were created using the PSAs and ran before and after *Curious George* aired weekday mornings. IPTV reaches more than 340,000 Iowa children ages 2-11 each week.

An I-Smile™ website was designed by the PC, who worked closely with a programmer at Iowa State University Extension on site development and maintenance. During the final year of TOHSS, the website was revised and updated. The PC consulted with the IDPH contracted vendor for marketing, ZLR Ignition, and web programmers within IDPH on the redesign of the website. As a result, the I-Smile™ site saw improvements on its layout and navigation, and the site was moved from an external host to within the IDPH system. The I-Smile™ website is now located at www.ismiledentalhome.iowa.gov. A small promotion was conducted in August 2011 to highlight the rollout of the updated site and new Universal Resource Locator (URL).

During the project period, the PC researched and purchased existing health promotion and education materials, as well as designed and created several items. Examples include:

- A three-foot tabletop I-Smile™ display used at conferences and meetings (Iowa Dental Association annual meeting, Early Childhood Iowa congress, Early Childhood Day on the Hill, Rural Health and Primary Care Advisory Council legislative breakfast, Iowa Public Health conference, Iowa Academy of Family Physicians conference, Iowa Association for the Education of Young Children conference, Iowa WIC conference, and Iowa State Fair);
- Pens and pads of paper with the I-Smile™ logo and contact information;
- Posters emphasizing early and regular dental care with contact information for I-Smile™;
- I-Smile™ one-year-old birthday postcards recommending parents seek a dental exam/screening for their child;
- I-Smile™ policy briefs;
- Lapel pins with the I-Smile™ logo distributed with I-Smile™ information on postcards to state legislators and other stakeholders for National Children's Dental Health month each February;
- An "Oral Health" day at the Iowa State Fair, during which OHC staff worked in the IDPH information booth handing out toothbrushes and education material and applying temporary I-Smile™ tattoos on children; and
- One-page educational fact sheets, available on the IDPH and I-Smile™ websites.

In addition:

- A camera was purchased and is used to photograph I-Smile™ activities used within materials created;

- The PC worked with the state Attorney General’s office to trademark the term “I-Smile™” and two logos;
- A toll-free I-Smile™ phone number is managed by Iowa State University Extension;
- Logos were developed for the Oral Health Bureau and now the recently formed Bureau of Oral and Health Delivery Systems;
- Social networking messages have been created and used on Facebook and Twitter;
- Radio spots were created highlighting I-Smile™ and good oral health habits and aired in 89 Iowa counties;
- OHC brochures and education materials were reprinted following flooding in Cedar Rapids which destroyed all that were stored in our clearinghouse;
- Postcards, bus signage, online advertisements, sponsorships on IPTV, email blasts, and traditional outreach materials were used to promote the revised I-Smile™ website; and
- The PC now participates on IDPH workgroups regarding social marketing and website development and is aware of possibilities for future health promotion venues.

The work done throughout the TOHSS project period now serves as the infrastructure for our current and future I-Smile™ oral health promotion efforts.

Objective 1.3: *Through August 31, 2011, use existing partnerships to obtain support for health promotion of the I-Smile™ initiative and identify new partners.*

During the TOHSS project, several organizations, including the Iowa chapter of the American Academy of Pediatrics, the Iowa Public Health Association (IPHA), the Rural Health and Primary Care Advisory Committee, the Iowa Dental Hygienists Association, the Iowa Prevention of Disabilities Policy Council, and Early Childhood Iowa, requested and included I-Smile™ fact sheets during legislative breakfasts and “days on the hill”.

A new partner, the IPHA sponsored a dental workforce summit in May 2008 on pediatric access to oral health care in rural Iowa – the first type of event like this the organization had sponsored. The summit resulted in renewed discussion among state organizations, including IPHA, the Iowa Dental Hygienists’ Association, IDPH, and the Child and Family Policy Center regarding new workforce models that may be needed in the state to meet the I-Smile™ dental home goals. In addition, the IPHA has routinely included oral health advocacy statements during legislative events and recently sponsored a webinar about community water fluoridation.

The public health dental director (DD) worked with the Iowa Dental Association (IDA) on its Mission of Mercy (MOM) events, held annually. An important result of his participation was successful negotiation for provision of state indemnity coverage for dental professionals participating in the I-MOM events. In addition, the PC created an I-Smile™ display that has been used at each I-MOM, listing the I-Smile™ Web site and toll-free phone line which would allow I-MOM participants a way to get contact information for their local I-Smile™ Coordinator.

IDPH staff also participated in the IDA’s annual meeting in 2008, manning a booth with the I-Smile™ display and information. It was at this event that dental professionals were asked to complete surveys about oral health promotion and education needs. Survey results were used by

the PC to help develop an overall health promotion plan. In addition, the DD collaborated with the IDA to define “dental home” in Iowa Administrative Code.

The relationship between the OHC and the Department of Human Services Iowa Medicaid Enterprise continues to be mutually beneficial. An interagency agreement each year funds the I-Smile™ project for Title V child health contractors, as well as supporting some OHC staff positions and operating costs. The collaboration between departments has played a role in reinstating periodontal and endodontic coverage for Medicaid-enrolled adults, determining and collecting statistics of paid claims data to evaluate I-Smile™, and pursuing methods to capture information about oral health services provided by community health center dental professionals. In addition, the interagency agreement also now includes assistance in management of a school dental screening requirement for children newly enrolling in school as well as allows more focus on low-income pregnant women to impact the oral health of infants and toddlers. The annual Inside I-Smile™ report has been written and distributed in conjunction with the TOHSS project.

The PD was actively involved in the state’s Title V Needs Assessment process, begun in the summer of 2009. Two oral health priorities were recognized by state stakeholders and are the focus of new state performance measures during the current five-year project period. Those priorities focus on improving access to oral health care for low-income pregnant women and improving access for children ages 5 and younger, including strategies to consider new providers types to increase access to restorative care.

The OHC partnership with the Iowa Chapter of the American Academy of Pediatrics (IAP) continues. The OHC was able to provide state funding to the IAP for creation of a web-based physician training about children’s oral health. State representatives of the IAP use OHC staff, particularly the DD, as a resource as they promote the importance of children’s oral health within their projects. In 2009, the TOHSS PD participated in the American Academy of Pediatrics “Future of Pediatrics” conference to discuss use of pediatricians within the I-Smile™ dental home and learn more about other medical-dental integration projects in other states and communities.

In the past few years, Iowa has begun several health care reform initiatives, including assurance of medical and dental home for Iowans. The DD and PD provide support for the recently merged Medical Home/Prevention and Chronic Care Management Advisory Council. The DD and PD have also given presentations about I-Smile™ at several state and national conferences and meetings, including the Early Childhood Iowa Congress, Child Care Resource and Referral conference, Rebalancing Health Care in the Heartland, and the National Oral Health Conference.

The TOHSS project has enhanced the public-private partnership that IDPH has had with Delta Dental of Iowa Foundation. This partnership with DDIF was crucial in order to implement the oral health promotion campaign developed by the PC for the TOHSS project period. As a result of DDIF’s increased awareness of OHC programs and statewide needs, they provide funds for toothbrushes - distributed through the I-Smile™ program, and work with OHC and local I-Smile™ Coordinators on recruitment and retention of dentists in underserved areas of the state. DDIF has also met with OHC staff to discuss other potential collaborative efforts with the goal

of preventing dental disease – including school-based sealant programs, fluoride varnish application, and the “dentist by 1” campaign.

TOHSS activities have been incorporated within Iowa’s Early Childhood Comprehensive Systems initiative. The PD continues to participate on the Early Childhood Iowa Alliance and provides newsletter articles, serves on a health professional development workgroup, and has provided presentations about oral health and early childhood.

The PD and other oral health staff are active on the state leadership team for the American Academy of Pediatric Dentistry’s Head Start Dental Home initiative. This has been an excellent opportunity to create awareness of I-Smile™ and the importance of early, regular care and prevention, as well as to distribute health promotion materials. In addition, the existing partnership between OHC and the state Head Start Collaboration Office continues to be strong. An oral health networking event is scheduled each year, linking Head Start and I-Smile™ stakeholders to strengthen local oral health collaborations and projects.

I-Smile™ promotion has increased the number of local communities requesting the DD to attend county board of health meetings and local dental professional development programs. The increased awareness of the I-Smile™ project is also serving to increase the interest of dental hygienists to seek public health as a career track. This is particularly important in building the comprehensive I-Smile™ dental home system and having effective advocates for oral health issues.

The PC is now a member of the IDPH social marketing team. Team members share how they use social marketing within their programs and ways the department could improve its public health promotion. The meetings provide useful information on availability of local media vendors, health literacy, fiscal management, and creativity in general. As a result of her membership on the team, the PC has contributed oral health articles to *The Des Moines Register* and provides input on the department’s strategic plan for marketing activities. As IDPH considers use of social media, the PC has volunteered the I-Smile™ dental home project as a potential pilot page on Facebook.

The PC also represents the Division of Health Promotion and Chronic Disease Prevention on the IDPH website advisory committee. This committee worked on redesign of the IDPH website and continues to work on methods to advance the ability of the public to access oral health information electronically.

The OHC partners with the IDPH Office of Multicultural Health, which is proving to be a good method for reaching Iowa’s minority populations. The office’s coordinator is updated on the OHC promotional and advocacy efforts for children’s oral health and often shares our materials with her stakeholders and target audiences at community meetings, conferences, and national events.

The impact of these partnerships has contributed to limited budget reductions for the I-Smile™ initiative, overwhelming support for legislation passed two years ago that allows a dental-only

option for Iowa's Children's Health Insurance Program, and better integration of oral health within the state's medical home system planning.

Objective 1.4: *Through August 31, 2011, evaluate the impact of the statewide promotion.*

Evaluation of various aspects of oral health promotion occurred in different ways.

For specific evaluation regarding the media campaigns, the PC was successful in pursuing funding from DDIF for two formal focus groups. The OHC subcontracted with The Meyocks Group, Inc. and Jefferson Davis Associates, Inc. to conduct the sessions with our primary target audience - mothers with young children. Sessions were held in Fort Dodge and Des Moines in July 2010. A total of 15 participants were selected through random phone interviews and asked to attend one of the group sessions. Discussion within the focus groups centered on the participants' knowledge of children's oral health, local oral health resources, recall of health promotion materials, perceived effectiveness of the materials, and recognition of the I-Smile™ program. The PC was able to attend the Des Moines session, receive information first-hand, and provide clarifying questions for the moderators.

Results from the two focus groups indicate positive impact of our health promotion. Recall was especially high – two of the 15 participants successfully remembered the television promotion and subject matter without prompting. I-Smile™ brand recognition was high as almost all of the participants from the two groups had heard of the program previously. Many associated I-Smile™ as a positive entity, and the brand provided legitimacy to the oral health educational content provided within our health promotion materials.

A short postcard mailer was sent to dentists within 35 counties to gauge their response to our oral health promotion and interest in the I-Smile™ program. From the respondents, over 61 percent believed our television media was effective in promoting children's oral health. Since many dental offices were visited through grassroots outreach conducted by local I-Smile™ Coordinators, dentists were also asked for their opinion of direct marketing materials, which included posters, take-home plastic bags, and stickers and featured our *Stop Germs. Stop Cavities* logo. Of the respondents who noted that they had received materials, over 78 percent believed they were effective in promoting oral health for kids. As a result of the media and grassroots outreach efforts, a majority of respondents (60 %) indicated that they were interested in more information on the I-Smile™ initiative now or possibly later in the future.

The PC monitored the website traffic monthly on the www.ismiledentalhome.org site and on the pages within the IDPH site (www.idph.state.ia.us/hpcdp/oral_health.asp). This data was useful especially during and after the months when large promotions were conducted. The I-Smile™ website has a good number of hits year round, averaging around 7,500 hits during lower promotion periods and peaking at over 12,000 during the media campaign. Increases in hits gave a solid indication of the "call to action" success of our marketing materials. The I-Smile™ website has since moved to a new URL and to within the IDPH system. Web traffic data collection is now limited.

Iowa State University Extension records data and demographic information from callers using the I-Smile™ phone line. Each quarter, a report is provided to the PC. However, the phone line has not received significant traffic, and we found that more people accessed our information via the website. The few calls that were received did increase or remain steady over the course of the media campaign, and the majority of the calls resulted in a referral to the regional I-Smile™ Coordinator.

Medicaid utilization rates were also reviewed during and after the months when large promotions were conducted. Data was provided by Iowa Medicaid Enterprise and was reviewed by an IDPH statistician. There were indicators that the 2009 media campaign had positive impact. Per the statistician's interpretation, the 21 county area had a significant increase of children (age birth through 20) seen by a dentist during the campaign when compared to an area where there was no exposure to our oral health promotion. An average of 109.2 children was seen per county per month in this 21 county area while only 78.6 children were seen in the area with no health promotion.

Anecdotal feedback from I-Smile™ Coordinators was incorporated into the OHC's evaluation methods as well. All I-Smile™ Coordinators involved in the promotional activities were required to report activity and material dissemination outputs as well as any stories of immediate impact. Their opinions on their participation in the grassroots outreach were collected through a web-based survey. Family and health provider feedback about the promotional campaigns were also provided by the coordinators.

Material distribution was also tracked through the Iowa Substance Abuse Information Center clearinghouse and order system. Each month, a report is issued on what materials have been distributed. The PC uses this list and personal contact with I-Smile™ Coordinators to determine what products are most useful for outreach across the state. During the test market media campaign, I-Smile™ Coordinators within the television viewing area were asked to complete an outreach materials distribution log that noted the quantity, anecdotal feedback, and where materials were distributed. This has also been very useful in assessing media promotion impact.

The PC had originally planned to conduct evaluative parent interviews at WIC centers. However, this measure was eliminated because of the plentiful data received from the focus groups. The PC consulted with the University of Iowa - College of Public Health's Assistant Director of the Center for Health Communication and Social Marketing for other evaluation options. Different options for evaluation were discussed, but no additional methods were pursued. Many of the options, such as surveying dentists and focus group testing, had already been completed. Others, such as a community longitudinal study, were too costly to implement.

The PC completed a summary report of these activities that includes a strategic plan for future oral health promotion activities (*Attachment A*).

Goal 1 – Lessons Learned:

Partnering with other entities for TOHSS activities has been critical in order to leverage and maximize our funds and will be necessary to sustain our promotional work post-TOHSS. DDIF

has been a key partner in promoting I-Smile™ and children's oral health, and the OHC anticipates collaborating with them further.

That said, proposals may not be funded as hoped – and there may be additional requirements when funded. The original plan for a statewide broadcast of PSAs was not initially accepted by DDIF. Rather, the DDIF board agreed to pay for just the editing of the South Dakota PSAs with Iowa-specific information and asked that we make another request at their next open funding period (six months later) to use them in one Iowa television viewing area. By limiting the viewing area, they felt we would be able to better measure impact of the messaging of the PSAs and also required some type of measure of that impact. In the end, although not statewide, the media campaign was executed in two television markets (covering the majority of the state) and our overall timeline was adjusted only slightly.

Redesign of the I-Smile™ website redesign was successful, yet there were a few deviations from the original plan. Initially, only the layout and navigation were to be updated; however, new department policy required the website to return to internal control. The incorporation of the I-Smile™ site into the IDPH system did increase sustainability with lower costs for hosting and maintenance, but it also resulted in a diminished capacity to collect web traffic data and new URL, which will require a re-establishment of branding and search engine optimization. In addition, the change in the URL has resulted in inaccurate website information on other materials that have been printed by the OHC. As supplies are depleted, this will be corrected.

Most of our promotion plans have been implemented as planned for the duration of the TOHSS project. However, heightened legislative wariness toward advertising by state programs affected a few activities in the past year. For instance, a planned grassroots outreach conducted by I-Smile™ Coordinators was to be tied into the website redesign promotion. This had been successful previously and was helpful to build and maintain relationships with dental offices, medical offices, and other community organizations. To promote the website, we planned to purchase computer mouse pads featuring I-Smile™ and the new URL which would be distributed by I-Smile™ Coordinators on outreach visits. Although the cost for the mouse pads was minimal and no state funds would be used in the purchase, it was thought that the expenditure could be perceived as advertising and was not allowed to move forward. With no materials to share with the offices, the outreach activity did not occur. Coordinators were asked to let their local partners know about the website, but it is likely that the number of people made aware of the new I-Smile™ website was less than originally planned.

Lastly, we found that evaluating impact of media campaigns and promotional activities can be difficult. Many times, the OHC relied on correlation, such as the Medicaid utilization rates during the months of the campaign, rather than an isolated sample or direct evidence. For a more comprehensive review of how our campaigns and media use impacted Iowa's children and their oral health, a longitudinal study over several years would need to be completed and would require a significant amount of funds. Even the evaluation methods that were completed proved to be more costly than anticipated. Because of this, we had to seek additional grant funds from DDIF in order to effectively evaluate our efforts.

GOAL 2: CREATE AN ONGOING I-SMILE™ SURVEILLANCE SYSTEM, TO TRACK ORAL HEALTH STATUS OF CHILDREN AND THE IMPACT OF I-SMILE™.

Objective 2.1: *By August 31, 2008, determine the locations, populations, and indicators for a statewide surveillance system.*

The PD researched surveillance activities done in other states and also consulted an IDPH statistician and staff from the University of Iowa College of Dentistry regarding forms, calibration of surveyors, survey protocols, and recommended oral health indicators to collect through open mouth surveys. Using this information, as well as incorporating tools used in previous IDPH oral health surveys, the PD developed tools for use in open mouth surveillance of children through the age of 5.

Target populations were determined based on meetings held with IDPH staff involved with early childhood programs. The first target group was children at Head Start/Early Head Start and the next was children seen at WIC. During the final year of TOHSS, the PD met with an epidemiologist for the Title V program to discuss surveillance of children within child care centers. It was decided that getting a random sample of all Iowa children younger than age 6 would be difficult, and with the addition of data captured on all children newly enrolling in kindergarten through the school dental screening requirement, the open mouth surveillance may be unnecessary. The epidemiologist's recommendation is to continue routinely surveying the children at Head Start/Early Head Start and WIC, to make determinations about the at-risk populations specifically targeted by I-Smile™.

The selection process for open mouth surveillance of children ages 5 and younger will be used again when the surveys are repeated in the future.

Objective 2.2: *Through August 31, 2011, implement a surveillance system focused on early childhood.*

Open mouth surveillance of children at Head Start/Early Head Start and also children enrolled on WIC was completed during the second and third years of the TOHSS project period. Details about the survey protocols and methodology are available within the written reports, available online¹. The surveys will be replicated every 3-5 years, as funding allows, to determine impact of programs and access to care for very young low-income children in Iowa.

Observations learned through surveillance are applied to program and policy development. For example, Medicaid data and results of the WIC and Head Start/Early Head Start oral health surveys indicate an increased need for provision of preventive dental services to children ages 0-5 within Iowa's public health system (*Tables 1 and 2*). As a result, the Title V CH programs are required to increase efforts to ensure at-risk children ages 0-5 receive preventive care. Also, in response to the Title V needs assessment and prioritization, the RFP guidance emphasized an increased focus on pregnant women, to improve birth outcomes and oral health status of infants.

¹ http://www.idph.state.ia.us/hpcdp/oral_health_reports.asp

Table 1 – Number of Medicaid-enrolled children ages 0-5 receiving a dental service by year of age and provider type in 2011

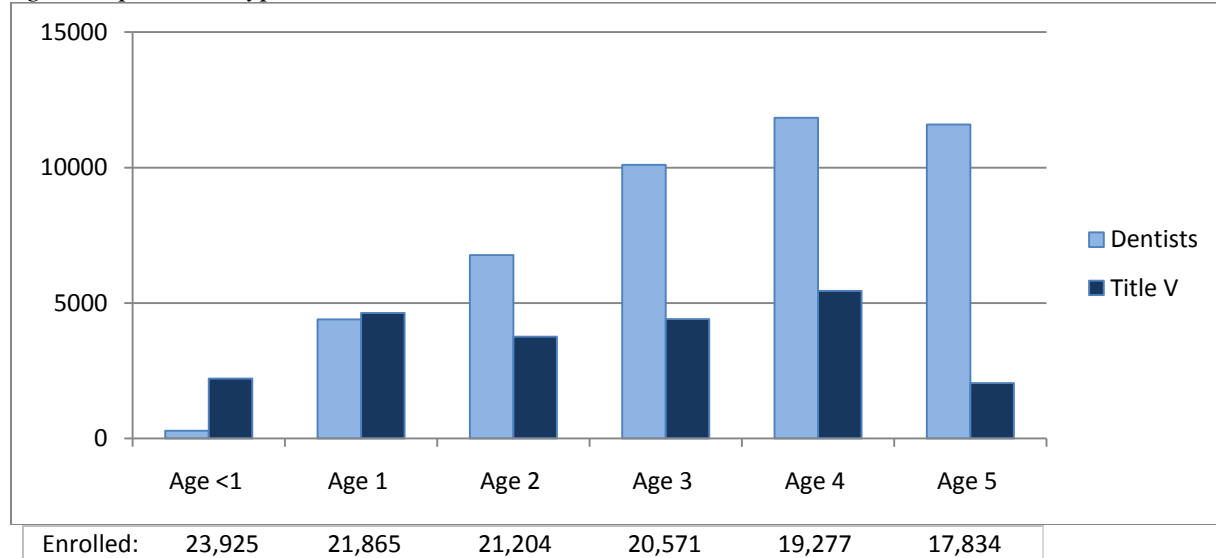


Table 2 - Demineralization, Untreated Decay, History of Decay of Children Ages 0-5

Oral Health Status Indicator	Oral Health Surveys	
	Head Start (2009)	WIC (2010)
Demineralization	34.9%	20.9%
Untreated Decay	14.1%	11.0%
History of Decay	19.2%	15.3%

During the TOHSS project period, changes were made to the Child and Adolescent Reporting System (CAREs) that provide more information about the oral health of low-income children served by the Title V program. Decay risk (low, moderate, or high) is entered for all children receiving a screening, based on the I-Smile™ Decay Risk Assessment, as well as the presence or absence of decayed, filled, and sealed teeth. Quarterly, OHC staff receives reports on these indicators for the 22 Title V child health contractors.

Iowa's Title V Women's Health Information System (WHIS) has also been enhanced to capture additional data reports regarding the oral health status of women. Reports are now available to determine the number of women screened who had untreated decay, inflammation, and/or restored teeth; payment source for dental care; and barriers to accessing dental services during pregnancy. Another project in Iowa, the Barriers to Prenatal Care Survey, added oral health questions in 2010 which will also provide insight to IDPH about the ability of pregnant women

to access dental care. The TOHSS PD worked with the Title V epidemiologist to determine what questions to include.

As previously mentioned, another component of oral health surveillance is Iowa's new dental screening requirement for children newly enrolling in elementary and high school. Data collected includes children with a dental treatment need and also what type of health care provider screened/examined the child to meet the requirement – which is used to review workforce and access issues.

Objective 2.3: *By August 31, 2011, evaluate the surveillance system.*

During the final year of the TOHSS project, the PD finalized a report on the Iowa Oral Health Surveillance System (*Attachment B*). Available data resources were considered before determining the core measures of the surveillance system. Some of these include children with untreated decay, children's payment source for dental care, adults receiving a dental service, and density of the dental workforce. Data sources for the core measures include CARES, WHIS, open mouth surveys, CMS (Centers for Medicare and Medicaid Services) 416 reports, Behavioral Risk Factor Surveillance System, and the Office of Statewide Clinical Education Programs.

The surveillance system also includes "other" measures that contribute to our understanding about oral health in Iowa. These include children with or without a dental treatment need (school dental screening data), children with an annual dental visit (*hawk-i* Outcomes of Care report), dental issues experienced during pregnancy (Iowa Barriers to Prenatal Care survey), and children's ability to access dental care (Iowa Child and Family Household Health Survey). This growing pool of data resources is critical to help tell the story about children's oral health needs in Iowa and to develop programs to address those needs.

Goal 2 – Lessons Learned:

We found that part of the methodology for the Head Start/Early Head Start survey was not necessary. Screeners were asked to first complete surveillance screenings according to protocol, and then they could go back and complete the dental screenings and fluoride varnish applications that they routinely provided as a separate step. The intent was to ensure calibration and standardization of screening results. However, input from the hygienists involved, as well as from Kathy Phipps, consultant to the Association of State and Territorial Dental Directors, led us to change this protocol for the WIC survey. At WIC clinics, screeners collected surveillance data as they completed documentation of the routine services provided at those clinics.

Having the existing I-Smile™ system throughout the state is a great benefit for carrying out open mouth surveillance in a way that is not cost-prohibitive. In previous years, when the I-Smile™ infrastructure was not in place, open mouth surveys were either completed by OHC and University of Iowa staff or by dental hygienists contracted by Title V agencies for the specific purpose of completing the survey because many did not have hygienists already on their staff. I-

Smile™ helps provide appropriate workforce, a funding source, and even a system for care coordination for children identified with treatment needs.

Oral health data is available through many different sources. OHC staff is able to identify these sources and monitor data sets, but have limited skills in methods of drawing conclusions about all of the information. The OHC would benefit from having more access to epidemiologists to assist in the use, maintenance, and growth of the Iowa Oral Health Surveillance System.

ACCOMPLISHMENTS THAT IMPACT:

Medical/Dental Interface – The health promotion aspects of our TOHSS project provided a specific means to have more interface with medical practitioners. Materials that were created could be used within medical practices as well as dental. I-Smile™ Coordinators are responsible for creating linkages with medical offices in their service areas. Having materials to offer medical offices when visiting them not only helps the coordinators to “break the ice” but also benefits families who visit the medical offices when they receive the oral health brochures or view the posters.

One example of promotion targeting medical offices was through a grant written to DDIF to promote children’s oral health with medical practitioners through use of children’s books. Three books were selected – targeting three different age ranges. I-Smile™ stickers were put inside each book and then every pediatric and family practice office in the state received the 3 books by mail, to be read by families in waiting rooms and exam rooms.

OHC staff continues to pursue methods that will further incorporate medical practitioners within the I-Smile™ dental home, including discussions with Iowa Medicaid Enterprise about potentially reimbursing physicians for oral screenings provided to children up to the age of 3 at well-child visits.

Access to Care for Children With Special Health Care Needs – The TOHSS project did not specifically target CSHCN. OHC staff has discussed methods to better incorporate I-Smile™ strategies within the state’s Child Health Specialty Clinics (CHSC) program, particularly training of health professionals that see the CHSC clients and care coordination for dental services.

Improved Financing of Oral Health Care Services – We have not seen improved financing of oral health care services as a result of the TOHSS project. However, having a surveillance system and gathering additional data about children’s oral health through open mouth surveys provides a foundation to better determine impact of our programs and access to care. This in turn should be significantly helpful to illustrate the need for financing of oral health services if/when that issue arises.

Statewide Expansion of Comprehensive Services – Surveillance has allowed us to see the need to expand direct services for children younger than age 3 within the Title V CH system. In 2011, just 17 percent of Medicaid-enrolled children younger than 3 saw a dentist. Until we can increase the number of dentists comfortable treating young children, these gap-filling services will continue within Title V. This also impacts our desire to increase the number of medical

practitioners who participate in the I-Smile™ dental home, in order to ensure that children begin to receive prevention as soon as teeth erupt and parents receive education about how to keep children's mouths healthy.

Collaboration with Other State-based Federal Programs – The OHC had excellent collaboration with other state-based federal programs prior to the TOHSS project. However, through both the health promotion activities and the surveillance activities, these collaborations were enhanced. In particular, partnerships with the Head Start State Collaboration Office and the state WIC program have strengthened.

Sustainable Efforts – Current budgets do not allow the same extent of health promotion activities that were funded through TOHSS. In addition, Iowa state government now limits advertising within state agencies, which makes it even more important to be able to distinguish how health promotion efforts are different from advertising. Promotion activities must be very carefully thought out and carried out. The PC is doing a good job of this, as well as developing health promotion efforts within current budget limits.

Seeking additional funds and partnerships with other programs are also necessary and beneficial. For example, the PD and PC recently submitted an Access to Care grant from the American Academy of Pediatric Dentistry Foundation to further promote age 1 dental visits and I-Smile™.

The merge of the Oral Health Bureau with another to form the Bureau of Oral and Health Delivery Systems has elevated the PC into the role of oversight of promotion for all bureau programs. This not only helps to sustain funding for the position, but also results in the inclusion of oral health within promotion to stakeholders that include the Iowa Hospital Association and the Iowa Rural Health Association.

At this time, the costs for early childhood open mouth surveillance are included within the I-Smile™ budget. If reductions occur, as is happening with the Title V block grant, it is likely that the frequency and methodology will need to be reviewed to determine feasibility of continuing the surveillance at the same level. The same is true regarding other data sources, such as the CAREs and WHIS databases – budget reductions may impact the maintenance and capabilities of those systems.

ACHIEVEMENT OF GOALS

Both of Iowa's TOHSS goals were achieved.

- Goal 1: Promote the I-Smile™ dental home initiative to assure statewide recognition and understanding of the importance of early and regular dental care.
- Goal 2: Create an ongoing I-Smile™ surveillance system, to track oral health status of children and the impact of I-Smile™.

We have a better understanding of the oral health status of very young children, which assists us in program planning focused on preventing disease as soon as children's teeth erupt. We have

also increased the awareness of Iowans about the importance of children's oral health, particularly as soon as teeth erupt.

Iowa's TOHSS activities play a significant role in recognition of the I-Smile™ project by stakeholders and policymakers in Iowa, as well as nationally. The importance of oral health is evident within state health reform efforts, including legislation passed in 2010 that allows income-eligible families, who have medical insurance coverage but not dental, to enroll in the state's Children's Health Insurance Plan on a dental-only option.

The last state Title V needs assessment process identified oral health issues for infants, children, and pregnant women as some of the highest priorities facing the state. As a result, there are two oral health state performance measures for the current 5-year Title V project period. It is likely that stakeholders who participated in that process have become more aware of these issues through some of the TOHSS project health promotion initiatives.

Due to the health promotion plan developed as part of TOHSS, we have incorporated health promotion requirements within I-Smile™ for local contract agencies. Each I-Smile™ Coordinator is required to oversee specific health promotion initiatives as part of their annual contract with IDPH for the Title V program. Assistance is provided by the TOHSS PC and other OHC staff as needed.

Another significant result is the creation of a state oral health surveillance system. Several data resources are available to oral health staff at IDPH, yet a systemized approach to determine core measures and to review trends has not been done. As part of the TOHSS project, open mouth surveillance now provides a baseline measure of the oral health status of children from low-income families (*See Table 2*). This baseline, in addition to the measures and data sources identified within the Iowa Oral Health Surveillance System will begin to provide comparison data, used to better understand program impacts and policy development needs for state and local oral health programs.

ACRONYMS	
CAReS	Child and Adolescent Reporting System
CH	Child Health
CHSC	Child Health Specialty Clinics
CMS	Centers for Medicare and Medicaid Services
DD	Public Health Dental Director
DDIF	Delta Dental of Iowa Foundation
<i>hawk-i</i>	Healthy and Well Kids in Iowa (Iowa's Children's Health Insurance Program)
IAP	Iowa Chapter of the American Academy of Pediatrics
IDA	Iowa Dental Association
IDPH	Iowa Department of Public Health
I-MOM	Iowa's Mission of Mercy
IPHA	Iowa Public Health Association
IPTV	Iowa Public Television
ME	Medicaid-Enrolled
OHC	Oral Health Center
PC	Project Coordinator
PD	Project Director
PHDD	Public Health Dental Director
PSAs	Public Service Announcements
Title V	Program to promote and improve the health of mothers and children
TOHSS	Targeted Oral Health Service Systems
URL	Universal Resource Locator
WHIS	Women's Health Information System
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

Summary and Plan for Oral Health Promotion

Over the past three years, the Iowa Department of Public Health – Oral Health Center (OHC) has successfully used the Targeted Oral Health Service Systems (TOHSS) grant to promote the importance of children's oral health within the state and to increase awareness of the I-Smile™ dental home program. Promotional activities have included:

- Two health promotion campaigns within multi-county, television markets (Cedar Rapids and Des Moines) that incorporated television media, print advertisements, and grassroots networking and distribution of direct marketing materials
- Radio advertisements
- Television sponsorships of Iowa Public Television (IPTV)
- A website dedicated to the I-Smile™ dental home project (former URL: www.ismiledentalhome.org and current URL: www.ismiledentalhome.iowa.gov)
- Newspaper advertisements for individual I-Smile™ Coordinators
- Postings on Facebook and Twitter
- Two I-Smile™ exhibit displays
- Annual promotion to state legislators and oral health stakeholders for February's National Children's Dental Health Month which included postcard and lapel awareness pins distribution
- Other policy and legislative reports such as *Inside I-Smile™* and annual policy briefs
- Various direct marketing materials – posters, brochures, t-shirts, stickers, tote bags, holiday and birthday postcards, etc.

During this fourth and final year of the grant, the OHC focused on the evaluation of these activities and on possible methods for sustainability for health promotion post-grant. This report will identify and detail our evaluation methods and subsequent results.

Focus groups

The OHC subcontracted with Jefferson Davis Associates, Inc. (JDA) to conduct two formal focus groups with our primary target audience - mothers with young children. Sessions were held in Fort Dodge, Iowa, and Des Moines, Iowa, in July 2010. A total of fifteen participants were selected through random phone interviews and were asked to attend one of the group sessions. Discussion within the focus groups centered on the participants' knowledge of children's oral health, local oral health resources, recall of health promotion materials, perceived effectiveness of the materials, and recognition of the I-Smile™ program. The TOHSS project coordinator was able to attend the Des Moines session, receive information first-hand, and provide clarifying questions for the moderators.

From the report provided by JDA, results from the two focus groups show promising impact of our health promotion. Recall was especially high as two out of the fifteen participants were able to successfully remember our television promotion and its subject matter without prompting. I-Smile™ brand recognition was high as almost all of the participants from the two groups had heard of the program previously. Many associated I-Smile™ as a positive entity, and the brand provided legitimacy to the oral health educational content provided within our health promotion materials.

The participants also provided constructive feedback on how the OHC could improve their health promotion efforts. Recommendations included having a stronger call to action within our materials and reworking our television media.

Dentist survey

A short postcard mailer was sent to dentists within thirty-five counties to gauge their response to our oral health promotion and interest in the I-Smile™ program. From the respondents, over 61 percent believed our television media was effective in promoting children's oral health. Since many dental offices were visited through grassroots outreach conducted by local I-Smile™ Coordinators, dentists were also asked for their opinion of direct marketing materials, which included posters, take-home plastic bags, and stickers and featured our *Stop Germs. Stop Cavities* logo. Of the respondents who noted that they had received materials, over 78 percent believed they were effective in promoting oral health for kids. As a result of the media and grassroots outreach efforts, a majority of respondents (60 percent) indicated that they were interested in more information on the I-Smile™ program now or possibly later in the future.

Website data

Website data was highly useful in measuring impact during promotional campaigns. Both the 2009 and 2010 media campaigns showed steady or increased web traffic during and after the months of promotion. Metrics for both the I-Smile™ Dental Home website and the IDPH – Oral Health Center webpage were reviewed.

2009

	May	June	July
I-Smile™ Website www.ismiledentalhome.org (former I-Smile™ website)	10,441	9,604	12,091
IDPH/OHC I-Smile™ Webpage www.idph.state.ia.us/hpcdp/oral_health.asp	458	449	1011

2010

	June	July	August
I-Smile™ Website www.ismiledentalhome.org (former I-Smile™ website)	5518	7293	7702
IDPH/OHC I-Smile™ Webpage www.idph.state.ia.us/hpcdp/oral_health.asp	372	391	476

Medicaid data

Medicaid utilization rates were also reviewed during and after the months when promotions were conducted. Data was provided by Iowa Medicaid Enterprise, and an IDPH statistician reviewed the data to find any trends that were impacted specifically by our promotion.

There were indicators that the 2009 media campaign had some signs of significant impact. Per the statistician's interpretation, the twenty-one county area showed a significant increase of children (ages 0 to 20) seen by a dentist during the campaign when compared to an area where there was no exposure to our oral health promotion. An average of 109.2 children was seen per county per month in this twenty-one county area while only 78.6 children were seen in the area with no health promotion.

It was also noted that the months after this promotion showed increases in children seen compared to the year before, which could be attributed to the media exposure. The statistician noted that it may take a more extensive, longitudinal study to fully track any impact from the health promotion conducted during the TOHSS grant period.

Anecdotal feedback

Anecdotal feedback was collected periodically by I-Smile™ Coordinators within the field. Many coordinators reported that during their dental office visits, dental providers and staff noted positive reactions to our promotion materials, especially our television media. One comment from dental staff noted, "I was surprised. The commercial was more informational than I thought it would be. It was cute and kept my attention."

There were also many reports from dental staff and other health and community locations that our direct marketing materials were well-liked and readily received. Some comments received and reported observations included:

- "The dentist office was very receptive to putting up the posters and using the bags and stickers."
- "The kids will love these."
- "Dental staff asked for more stickers."
- "They were excited to hear about the I-Smile™ program and were very impressed with the marketing materials."

The materials and networking visits provided an opportunity for I-Smile™ Coordinators to promote oral health issues with both dental and medical staff. I-Smile™ Coordinators were able to discuss issues such as patients on Medicaid and setting up referrals with dental offices and discussed issues such as the use of fluoride varnish with physicians. Coordinator reported that they were able to make new partnerships and scheduled more trainings due to these promotional efforts. One coordinator in particular noted that she was now able to add two dentists to her list who will accept new Medicaid patients from her. They were previously not interested in working with her or the I-Smile™ program. As a result of adding these providers to her referral list, this I-Smile™ Coordinator was able to immediately arrange treatment for a family in need.

Parents also reported positive comments on the I-Smile™ health promotion. One coordinator stated, "Several in the dental offices overheard the conversations (with dental staff), were interested, and joined the conversations." Due to the heightened awareness of I-Smile™ during the media campaign, a mother contacted an I-Smile™ Coordinator and discussed dental care for her child. The coordinator provided information on the *hawk-i* program and the importance of having her child seen by a dental provider on a regular basis.

The I-Smile™ Coordinators were asked for their opinions on the health promotion efforts, and many reported that this type of outreach helped them not only promote the program on a large scale, but it also helped them create awareness of their local programs.

- “I think that the outreach connects the dots...A teacher commented that she identified with the I-Smile™ program. However, she had no idea that this is what we do.”
- “I do think this project had a positive impact. I feel like it makes people take notice and know that we are the ‘real deal.’”
- “Parents took more interest in having their child seen and accepted the I-Smile™ program as a legitimate and successful program.”
- “I feel the PSAs and outreach campaigns were a great way to raise awareness of the I-Smile™ program to a diversified population. I feel that having the PSAs and marketing materials were a great conversation piece and will help to brand the I-Smile™ program.”
- “I had several people say they were interested in learning more about the I-Smile™ program. “

Other evaluation options

Other options for evaluation were also considered, but after further review, these were abandoned due to feasibility, duplication, or cost. These options included:

- Parent interviews – Initial planning for evaluation included conducting parent interviews within WIC agencies and other community locations. This initiative was abandoned due to the use of formal focus group testing. Parent interviews would utilize the same target audience and pose the same inquiries. It was anticipated that results would be similar to the data received from the focus groups.
- University of Iowa College of Public Health – The Assistant Director of the Center for Health Communication and Social Marketing at the University of Iowa was contacted for possible assistance and consultation on our health promotion evaluation. Different options of evaluation methods were discussed. Many of the options, such as surveying dentists and focus group testing, were already implemented by the OHC. Other suggestions, such as a community longitudinal study, would be too costly to implement.

Sustainability

The OHC will continue to use health promotion and social marketing tactics post-TOHSS grant as results have shown its importance for the I-Smile™ program and improving children’s oral health. Funding is a major concern, but there may be other resources available. Funds through an interagency agreement will provide a small, limited health promotion base budget for the OHC.

Foundation grants could also provide supplemental support as we move forward. One key public-private partnership may again lie with Delta Dental of Iowa Foundation (DDIF). They have initiated a “Dentist By 1” campaign, which fits an I-Smile™ focus of early preventive care, and they have already approached us to help distribute their materials. Their campaign could evolve to provide a continued opportunity to for our two entities to collaborate even further. It may also prove beneficial to approach DDIF about maternal oral health efforts as well. Although a part of the I-Smile™ initiative, maternal health promotion has not been pursued as frequently as those focused on children. This important

topic is highly important not only for the mother but also for infants and, again, could provide a great way to collaborate and expand our audience.

We have also submitted a letter of intent for an Access to Care grant through the American Academy of Pediatric Dentistry Foundation – Healthy Smiles, Healthy Children. Our proposal emphasizes the by age 1 dental visit through increasing general dentist participation and raising parent awareness. Health promotion will be a key component for our proposal's activities and will continue to highlight the I-Smile™ program.

The OHC's bureau has recently merged and now includes programs relating to health workforce and rural health. This could provide other opportunities to integrate and progress our oral health efforts while tapping into their resources. Possible collaboration could include marketing efforts to health care providers and critical access hospitals on I-Smile™ and children's oral health.

The I-Smile™ website has also been newly renovated. The updated site now has better navigation, cohesive design and layout, dedicated information for providers, and educational slideshows for parents. A small promotion for the new website and new URL location was conducted and included the following activities:

- Online and Facebook advertisements
- Direct marketing/mailing to dentists and physicians statewide
- Bus signage
- Public television sponsorship
- Grassroots outreach
- Social media and email listserv

The I-Smile™ website will provide an ongoing, online presence for the program post-TOHSS.

The department is currently looking into expanding its capacity within social media outlets. If implemented, the OHC could use social networks, such as Twitter and Facebook, more frequently to promote I-Smile™. These "free" methods could help sustain our branding efforts despite less available funding for more traditional marketing venues.

Summary

Utilizing the TOHSS grant for health promotion of the I-Smile™ program has been greatly beneficial. The activities completed by the OHC have far exceeded expectations and have provided many valuable tools and data that can be used and replicated in years to come. With the experience gained from the TOHSS grant, the OHC acknowledges that health promotion is a useful resource for oral health prevention and education and, when implemented properly, it can successfully influence positive and desired behavior changes. Any noted OHC health promotion activity and evaluation method can be replicated. It is our hope that other states can use this information and possibly utilize it within their individual oral health programs.

A REPORT ON IOWA'S ORAL HEALTH SURVEILLANCE SYSTEM

Overview

Surveillance systems are integral to assist public health practitioners to plan, implement, and evaluate programming. In effect, the core public health function of “assessment” drives the other core functions of “policy development” and “assurance”.

According to the Centers for Disease Control and Prevention:

Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.¹

Oral Health Center (OHC) staff within the Iowa Department of Public Health (IDPH) has several data reporting and resources available. Oral health data is collected through phone, written, and open mouth surveys; program databases; Medicaid claims; and other public health surveillance.

The OHC use available data to monitor the burden of oral disease on Iowans, determine program impact, develop new initiatives, and drive policy. A “reports” Web page is maintained in order to keep information and resources available to the public.

This report on the Iowa Oral Health Surveillance System (IOHSS):

- outlines the core measures,
- identifies additional resources and measures,
- categorizes the type and frequency of information available,
- provides current data for the core measures (benchmark measures and trend data),
- determines gaps in oral health data for the state, and
- includes recommendations for a schedule of system monitoring and updating.

IOHSS Core Measures

The following tables identify the core measures in the IOHSS and the source(s) for the data.

CHILDREN

Measure	Data Source			
	Child and Adolescent Reporting System (CAREs)	IDPH Open Mouth Surveys	IDPH School-based Sealant Program	Centers for Medicare and Medicaid (CMS) 416 Reports
Demineralization		•		
Untreated decay	•	•	•	
History of decay	•	•	•	
Sealants on permanent molars	•	•	•	•
Decay risk level	•			
Receiving a dental service	•			•
Payment source for dental care	•	•	•	
Barriers to receiving dental care	•			

ADULTS

Measure	Data Source	
	Women's Health Information System (WHIS)	Behavioral Risk Factor Surveillance System (BRFSS)
Untreated decay	•	
Restored teeth	•	
Disease risk level	•	
Payment source for dental care	•	
Barriers to receiving dental care	•	
Tooth loss		•
Receiving a preventive dental service	•	•

OTHER

Measure	Data Source			
	Water Fluoridation Reporting System (WFRS)	Office of Statewide Clinical Education Programs (OSCEP)	IDPH & Health Resources and Services Administration (HRSA)	Iowa Cancer Registry
Incidence of oral cancer				•
Mortality due to oral cancer				•
Population served by fluoridated water	•			
Public water fluoridation levels	•			
Density of dentist workforce		•	•	

IOHSS Additional Sources and Measures

Resource	Description	Measures
School Dental Screening Audits	Annual audits from all Iowa school districts regarding the number of kindergarten and ninth grade students who have a dental screening prior to enrollment	<ul style="list-style-type: none"> • Percent of children with or without a treatment need • Screening provider type
Title V Dental Data Reports	Quarterly reports that detail use of Title V dental funds by local child health contractors	<ul style="list-style-type: none"> • Number and age of children using the funds for dental care
Iowa Child and Family Household Health Survey	Phone survey conducted through the University of Iowa Public Policy Center to collect health information about children	<ul style="list-style-type: none"> • Payment source for dental care • Ability to access dental care • Barriers to dental care
Early Childhood Iowa (ECI) Performance Measure Reports	Annual reports submitted to the ECI program from local projects who use funding for dental services	<ul style="list-style-type: none"> • Percent of children with a dental home • Percent screened that needed follow up services/treatment
hawk-i Outcomes of Care Report	Annual report about children enrolled in the Healthy and Well Kids in Iowa (<i>hawk-i</i>) insurance plan	<ul style="list-style-type: none"> • Annual dental visit • Dental sealant on permanent molar
Child and Adolescent Reporting System (CAREs)	Database for local Title V child health contractors for documentation of services provided	In addition to core measures: <ul style="list-style-type: none"> • Services provided within Title V • Percent of children with a dental home
Women's Health Information System (WHIS)	Database for local Title V maternal health contractors for documentation of services provided	In addition to core measures: <ul style="list-style-type: none"> • Services provided within Title V
Iowa Barriers to Prenatal Care Survey	Questionnaire completed by birth mothers prior to discharge from maternity hospitals in Iowa	<ul style="list-style-type: none"> • Whether dental care was received • Barriers to dental care • Dental issues experienced during pregnancy
Dental Hygienist Public Health Supervision Annual Reports	Annual service reports from Iowa-licensed dental hygienists with collaborative agreements for public health supervision	<ul style="list-style-type: none"> • Number of services provided • Number of referrals for regular and urgent care

Appendix A includes more information about the type of data and the frequency of collection for each of the data sources.

IOHSS Core Measures: Current Data / Trends & Benchmarks**CHILDREN - Demineralization**

Monitoring the presence of demineralized enamel is done through open mouth surveys of children age 5 years and younger. Benchmarks for demineralization have been determined in the past three years for children in Head Start/Early Head Start (majority of children surveyed ages 4-5 years) and WIC (majority of children surveyed ages 1-3 years).

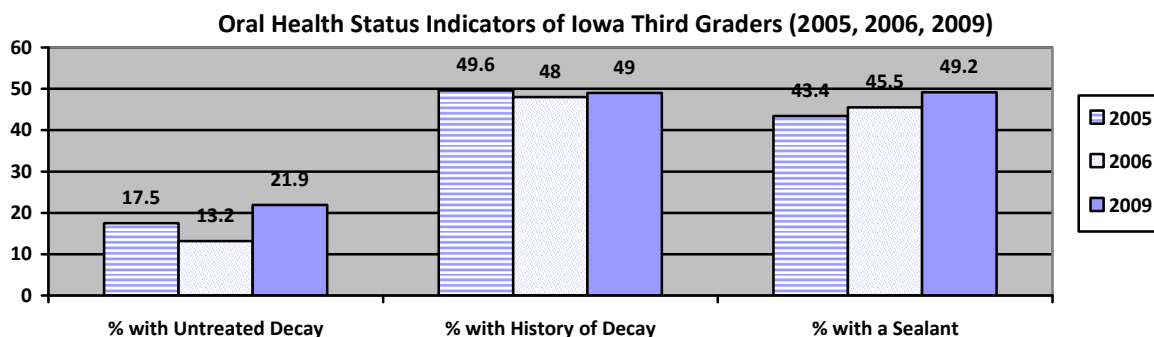
Oral Health Status Indicator	Oral Health Surveys	
	Head Start (2009)	WIC (2010)
Demineralization	34.9%	20.9%

CHILDREN - Untreated Decay, History of Decay, and Dental Sealants

Benchmark measures of untreated decay and history of decay for children age 5 years and younger has also been determined through the open mouth surveys at Head Start/Early Head Start centers and WICⁱⁱ clinics. Presence of sealants is not measured because sealants are not routinely applied to primary molars.

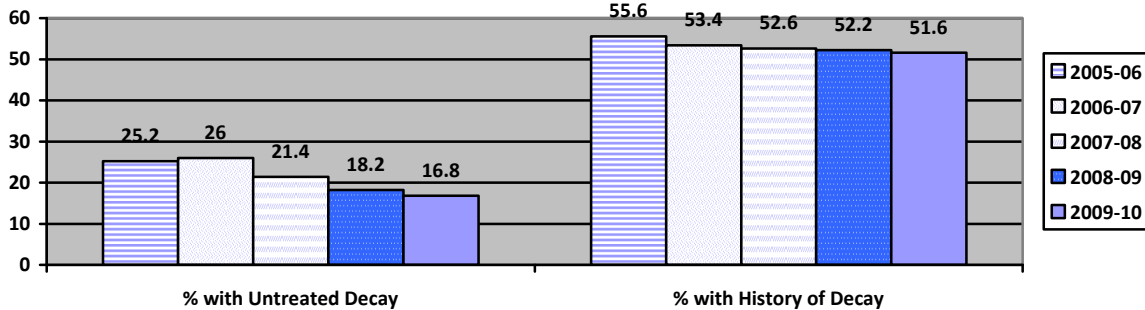
Oral Health Status Indicator	Oral Health Surveys	
	Head Start (2009)	WIC (2010)
Untreated Decay	14.1%	11.0%
History of Decay	19.2%	15.3%

Trend data of untreated decay, history of decay, and sealants on first permanent molars for third grade children is available from open mouth surveys conducted in 2005, 2006, and 2009. Another open mouth survey of third grade children will be conducted in 2012.



School-based dental sealant programs contracted by IDPH also collect data regarding untreated decay and history of decay. Children served by these programs are in second through eighth grade.

Oral Health Status Indicators of Children in IDPH School-based Sealant Program (2005/06 – 2009/10)



In addition, the Child and Adolescent Reporting System (CAREs) database now captures the presence of untreated decay and restored teeth for children ages 0-21 who receive dental screenings from Title Vⁱⁱⁱ agency staff. Annual state totals for these indicators will be reported at the close of each federal fiscal year (FFY), beginning with FFY2011.

CHILDREN - Decay Risk Level

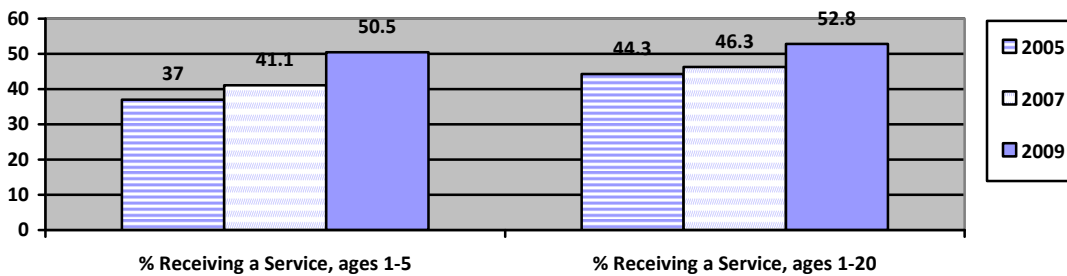
CAREs also captures the risk level for tooth decay of children receiving dental screenings from Title V agency staff. Risk levels are determined using the I-Smile™ Decay Risk Assessment. State totals for this indicator will be available at the end of FFY2011.

CHILDREN - Receiving a Dental Service

Trend data is available regarding Medicaid-enrolled children who receive a dental service within a federal fiscal year. In the past, the CMS 416 reports were compiled for children ages 1-20 and 1-5 receiving any dental service. Services included were provided by dentists (within dental offices and clinics) and by dental hygienists and nurses working for Title V agencies.

Medicaid-enrolled Children Receiving A Dental Service* by Age (2005, 2007, 2009)

*Includes services provided by dentists and Title V agency staff



Due to changes in the CMS 416 report categories for FFY2010, we have new benchmark measures for Medicaid-enrolled children. The reports now distinguish services provided within

dental offices/clinics (dental services) and those provided as part of the Title V program and/or fluoride varnish applications provided by physicians (oral health services).

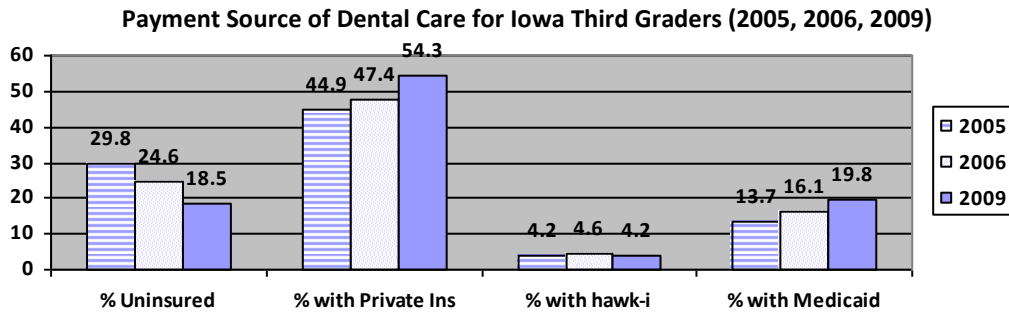
The new category which will be monitored is "any dental or oral health service". Also, IDPH is now using age breakouts that include children before they turn 1, to reflect the recommendation that children receive their first dental exam prior to their first birthday.

CMS 416 Report, 2010			
Indicator	Ages 0-5	Ages 0-14	Ages 0-20
Medicaid-enrolled Children Receiving a Dental or Oral Health Service*	45.8%	52.4%	51.6%

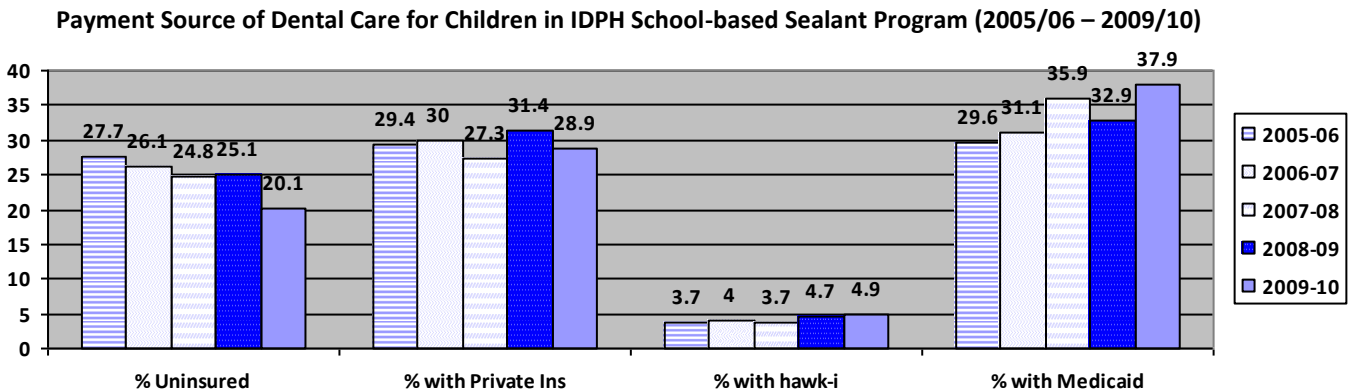
*Includes services provided by dentists, Title V agency staff, and medical practitioners

CHILDREN - Payment Source for Dental Care

How families pay for children's dental care is collected as part of open mouth surveys. The benchmark surveys of children at Head Start/Early Head Start (2009) and WIC (2010) found most with Medicaid as a payment source for dental services (72 percent and 81 percent, respectively), as would be expected based upon the survey locations. The table below shows the trend for third graders.



School-based sealant program data (children in second through eighth grade) also captures payment source for children's dental care.



Families interviewed for the Iowa Child and Family Household Health Survey (an additional resource) will also be asked about the payment source for their child's dental care. Results are not yet available for the most recent survey.

CHILDREN - Barriers to Receiving Dental Care

Barriers that families served by the Title V child health program may have to receiving dental care are recorded in CARES. Options include but are not limited to: dentist declines insurance; dentist will not see children under 4 years of age; fear of dental procedures; transportation; and unaware of need for well visit. Benchmarks will be determined following FFY2011.

Barriers to receiving dental care are also being requested of families interviewed for the Iowa Child and Family Household Health Survey.

ADULTS - Untreated Decay, Restored Teeth, and Disease Risk Level

The indicators of presence of untreated decay and/or restored teeth, as well as dental disease risk level, have recently been added to the Women's Health Information System (WHIS) database. This information is being identified and documented for women in the Title V maternal health program who receive a dental screening. Benchmarks will be determined following FFY2011.

ADULTS - Payment Source for Dental Care and Barriers to Receiving Dental Care

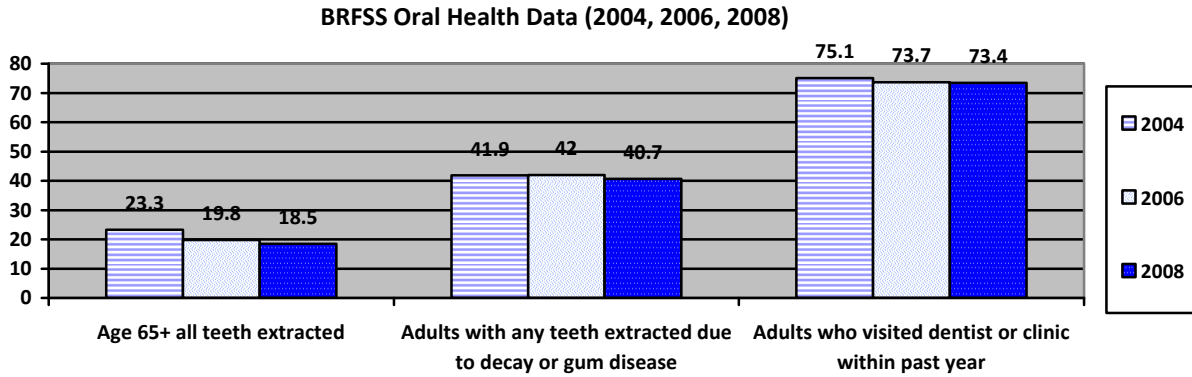
These indicators (payment source for dental care and barriers to receiving care) have been recently added to the WHIS database, and benchmarks will be determined following FFY2011.

Also, since January 2011, the Iowa Barriers to Prenatal Care Survey (an additional resource) includes questions about barriers to dental care during pregnancy. This survey is offered to all women giving birth in Iowa hospitals. Data will be compiled following calendar year 2011.



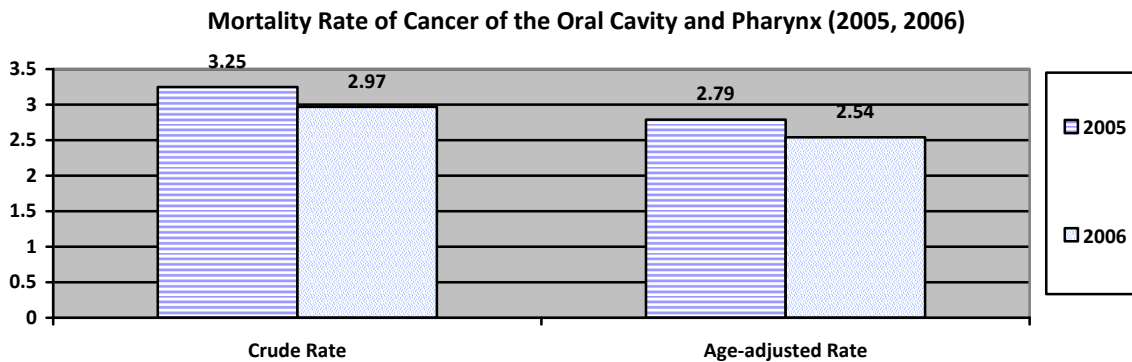
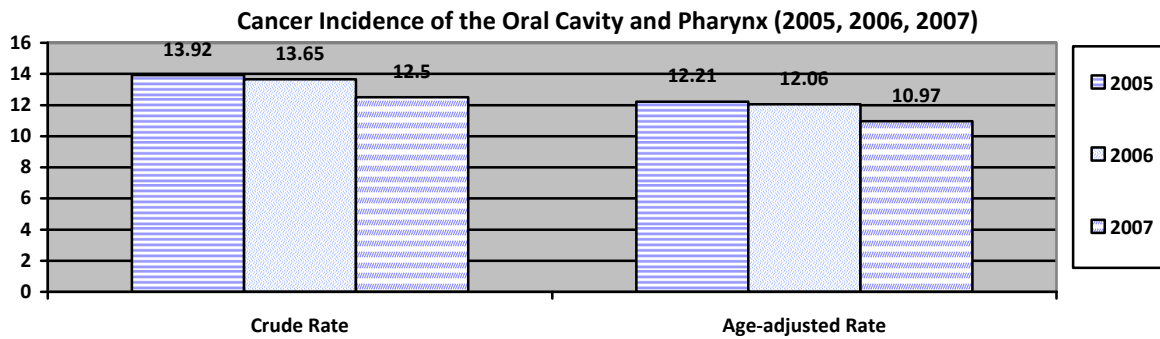
ADULTS - Tooth Loss and Receiving a Preventive Dental Visit

Some oral health indicators for adults are tracked through the Behavioral Risk Factor Surveillance System (BRFSS), a phone survey established by the Centers for Disease Control and Prevention (CDC). These include adults age 65 and older who have had all teeth extracted, adults who have lost any teeth due to decay or gum disease, and adults who visited a dentist or clinic in the past year.



OTHER - Incidence of Oral Cancer and Mortality Due to Cancer

Oral cancer incidence and mortality rates are tracked within the Iowa Cancer Registry, maintained within the University of Iowa College of Public Health. Cancer patient data are collected from hospitals, pathology laboratories, cancer treatment centers, and Iowa death certificates.

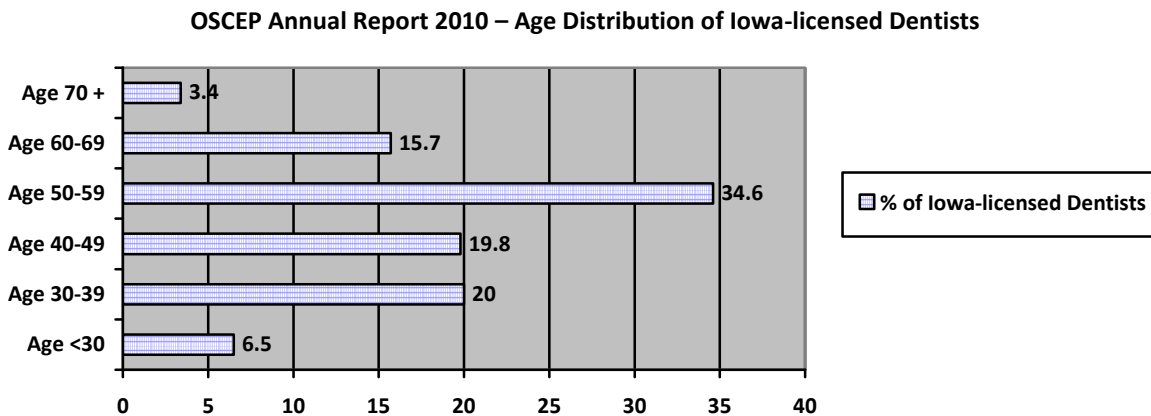


OTHER – Population Served by Fluoridated Water and Public Water Fluoridation Levels

The Water Fluoridation Reporting System (WFRS) is maintained by the Centers for Disease Control and Prevention (CDC). WFRS is a Web-based system to track water fluoridation levels. In 2006, 92.4 percent of Iowa's population was served by fluoridated public water supplies. The levels of fluoride in specific community water systems are also available through the CDC at <http://apps.nccd.cdc.gov/MWF/index.asp>.

OTHER – Density of Dentist Workforce

The Office of Statewide Clinical Education Programs at the University of Iowa operates the Iowa Health Professions Tracking Center. Originally created to track physicians, the center also monitors other health professions, including characteristics of the dentist workforce in Iowa such as age distribution.



Using guidance provided by the Health Resources and Services Administration (HRSA), staff within the IDPH Center for Rural Health and Primary Care determines dental health professional shortage area (HPSA) designations in Iowa. Determinations are based upon several factors that include demographics, travel time to nearest sources of care, and presence of high needs (e.g. poverty rate). Currently, 68 Iowa counties have a geographic or population-related dental HPSA designation, as well as a portion of Polk County.

Gaps in IOHSS Data

The most obvious gap in the IOHSS is the amount of information gathered about Iowa adults, particularly the elderly. As baby boomers age, the number of elderly with dental needs will greatly increase. Public health funding may be needed to assess the dental needs of these older Iowans and to develop programs to assist them with oral health issues. Although the BRFSS includes some questions about oral health, the information collected is self-reported and limited in its usefulness for program development.

Also lacking are quality measures looking at effectiveness of programs and policies. In order to determine whether early childhood preventive dental care provided in public health is resulting in less disease, more intensive, longitudinal studies are needed. Although the OHC sees this as a gap, the function of the OHC precludes this type of research.

IOHSS Monitoring and Updating

Several of the IOHSS core measures are tracked annually (see **Appendix A**). Open mouth surveillance of third graders is conducted every three years. The early childhood open mouth surveillance schedule has not been determined, but will likely be done on a similar schedule to the third grade surveys.

OHC is fortunate to have infrastructure for the I-Smile™ initiative in place, which offers a way to collect statewide surveillance data on low-income children and pregnant women, as well as accessibility to paid claims information from Iowa Medicaid Enterprise. At this time, more funding is not needed. However, IDPH funding for I-Smile™ has been decreased in the past few years and any additional cuts will result in diminished capacity to conduct surveillance activities at current levels.

OHC staff monitors data within the IOHSS, but does not have expertise to perform in-depth data analysis and make trend determinations. Use of epidemiology professionals to evaluate the measures within IOHSS would enable the OHC to boost program and policy planning. In addition to determining state programming impact, analysis of data by county or region can pinpoint specific areas that may be in need of more funding and technical assistance, as well as areas that may be able to offer best practice methodology of which other communities may benefit.

Future IOHSS considerations may include development of user-friendly methods to share data on the IDPH website and creation of county-specific data web pages. Indicators could include population per dentist; dental services rates for Medicaid-enrolled children; demographics; and population served by fluoridated water (see **Appendix B**).

At a minimum, IOHSS core measures should be reviewed annually by OHC staff and new measures updated when they are released (see **Appendix C**). Inclusion of an epidemiologist's evaluation of IOHSS should be part of regular OHC strategic planning and include identifying changes needed, new resources, and use of the data for program and policy development.

Respectfully Submitted by Tracy Rodgers, Community Health Consultant

ⁱ CDC: Updated Guidelines for Evaluating Public Health Surveillance Systems. MMWR July 27, 2001 /50(RR13);1-35.

ⁱⁱ Special Supplemental Nutrition Program for Women, Infants, and Children

ⁱⁱⁱ Title V of the Social Security Act, is a program to improve the health of all mothers and children consistent with the applicable health status goals and national health objectives