The I-Smile™ Dental Home Initiative has positively impacted children’s oral health in Iowa for the past 10 years.

More children have access to dental care from dentists, more children receive important preventive services through local public health, and parents and the public are more aware of the importance of oral health through oral health promotion and education opportunities.

**BACKGROUND**

Well-established as an integral part of the state’s public health system, I-Smile™ is designed to help Iowa children have optimal oral health, beginning at birth. The program is administered by the Iowa Department of Public Health (IDPH) in collaboration with the Department of Human Services.

IDPH provides funding for I-Smile™ through contracts with public and private non-profit organizations as part of the state’s Title V maternal and child health program. Iowa-licensed dental hygienists are local I-Smile™ Coordinators within each of the 22 Title V service areas of the state, covering all 99 counties.

The original program plan and strategies for I-Smile™ have remained consistent since the program began 10 years ago. Through the connections they make within communities, I-Smile™ Coordinators help families receive the dental care that they need, as well as help the public better understand the importance of oral health. This is the result of a multi-pronged approach that includes the following strategies:

- Developing community partnerships and participating in health promotion and planning to strengthen the dental public health system;
- Linking with the local board(s) of health to assist in assessment, policy development, and assurance of local oral health initiatives;
- Providing oral health education and training for health care professionals;
- Providing training about oral health for all local maternal and child health program staff and ongoing training for staff that provide dental care coordination and/or preventive dental services;
- Developing protocols for maternal and child health program staff to facilitate how they provide oral health services (dental care coordination and direct dental services);
- Providing dental care coordination services; and
- Assessing risk and providing oral screenings and gap-filling preventive services, such as fluoride varnish and sealant applications.

The following results are determined using paid Medicaid claims for dental services, compiled by the Department of Human Services.

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¹ Title V is a federal block grant program to assure health services for low-income infants, children, adolescents, and pregnant women.
**I-Smile™ Results**

**More Children Receive Dental Services**

Since I-Smile™ began, the number of Medicaid-enrolled children receiving dental care has risen each year. State fiscal year² (SFY) 2016 was no different.

In 2016:

- **More than three times as many children** received gap-filling preventive care from a dental hygienist or nurse in a public health setting than in 2005, the year prior to the start of the I-Smile™ program (33,403 in 2016; 7,863 in 2005).
- **77 percent more** Medicaid-enrolled children 0-12 years old (54,873) saw a dentist than in 2005.
- **4,572 more children** received care from dentists than did a year ago, a 3.8 percent increase.

Also, during the past year, 6 percent of Medicaid-enrolled children ages 0-12 received care at one of Iowa’s Federally Qualified Health Center (FQHC) dental clinics.

![Figure 1: Number of Medicaid-enrolled children who received dental services (2005, 2010, and 2016)](chart)

The graph shows the number of Medicaid-enrolled children who received dental services from dentists, I-Smile™/Title V, and Federally Qualified Health Centers over the years 2005, 2010, and 2016.

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² Iowa’s state fiscal year (SFY) is July 1 – June 30.
More Dentists Provide Services
In SFY2016, 132 more dentists billed Medicaid for care provided to enrolled children than in SFY2005 (1,150 in 2016 and 1,018 in 2005). Also, more than twice as many dentists billed for at least $10,000 in services than in SFY2005.

Medicaid Costs For Dental Services Are Stable
The average annual cost of care for a Medicaid-enrolled child age 0-12 years was $6.16 more in SFY2016 than SFY2005 ($119.24 in 2016 and $113.08 in 2005). The 5 percent increase in cost per child is small by comparison to the fact that 77 percent more children received care from dentists and 325 percent more children received preventive care within public health settings in 2016 than in 2005. In addition, Medicaid reimbursement rates increased by 1 percent in 2014.

Table 1: Number of dentists and amount billed to Medicaid for services provided for children ages 0-12, 2005 and 2016 (includes out-of-state dentists)

<table>
<thead>
<tr>
<th>Dentists Enrolled as Medicaid Providers</th>
<th>Amount Billed by Enrolled Dentists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>Number of Dentists, 2005</td>
<td>1,613</td>
</tr>
<tr>
<td>Number of Dentists, 2016</td>
<td>2,274</td>
</tr>
<tr>
<td>Change</td>
<td>+661</td>
</tr>
</tbody>
</table>

Figure 2: Average dollars spent by Medicaid per enrolled child per year

![Average dollars spent by Medicaid per enrolled child per year](chartimage)
The largest increases in the average annual cost, by age group, are for children ages 0-2 and 3-5 years old. In SFY2016, the average annual cost for a child age 0-2 ($39.11) was $17.11 more than in 2005, and the average annual cost for a child age 3-5 ($146.05) was $17.75 more than in 2005. Several I-Smile™ health promotion activities focus on encouraging early and regular dental care for children, in particular, by a child’s first birthday. The success of this messaging may be evident through the improvements in numbers of very young children receiving care from dentists and also in numbers of very young children receiving care within public health settings, such as WIC clinics, preschools, Head Start centers, and child care centers. These increases in children accessing care are likely reflected in the increased Medicaid costs for the very young.

This improved access to early prevention may also be tied to lower costs as children age. Although the average annual cost per child for ages 6-9 years ($145.12) was $2.34 more than in 2005, the average annual cost per child for ages 10-12 years ($154.24) was $28.42 less than the average annual cost in 2005 for the same age group, despite the fact that 74 percent more children in this age group saw a dentist in 2016 than in 2005. The lower cost per child may be due in part to the increased preventive care that has been provided to children through I-Smile™ over the past 10 years, reducing the need for restorative treatment, as well as the increased assistance provided to families by I-Smile™ Coordinators to assure that regular care from dentists is received.

**Challenges To Address**

Although more Medicaid-enrolled children ages 0-2 years received care from a dentist and/or within a public health setting in 2016 than in 2005, far too many received no care. In SFY2016, four out of five children ages 0-2 years did not see a dentist. This is far less than the rate for children ages 3-12 years, of which just two of five did not see a dentist.

In SFY2016, 661 more dentists were enrolled as Medicaid providers than in 2005, yet just 51 percent of the enrolled providers billed Medicaid for care delivered to a child 0-12 years of age. Twenty-five percent of enrolled dentists provided $10,000 or more of care. Also, 28 fewer dentists billed Medicaid for services provided to children in 2016 than a year ago in 2015.

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3 WIC is the Special Supplemental Nutrition Program for Women, Infants, and Children, providing supplemental food, health care referrals, and nutrition education for low-income pregnant and post-partum women and to infants and children up to age five at nutritional risk.
**Discussion**

I-Smile™ is helping more at-risk Iowa children receive preventive services and access regular dental care. Further, the increases in provision of preventive care for very young and school-aged children and access to care from dentists is not causing greater financial burden to Medicaid.

Although there have been improvements with children seeing dentists before the age of 3 years, last year 80 percent of children younger than 3 did not receive care from a dentist. I-Smile™ and the state’s public health system must continue to serve as a safety net, offering gap-filling preventive care for at-risk children in public health settings such as WIC clinics. The Iowa Department of Public Health (IDPH) will also work with local I-Smile™ Coordinators to reach more pregnant women and new mothers with health promotion and education about the importance of early and regular dental care.

School-aged children will continue to receive preventive care through the I-Smile™ @ School program, last year reaching 16,244 children within 303 elementary and junior high schools with education, screenings, and fluoride and sealant applications.4

The gap-filling preventive services provided through I-Smile™ for very young and school-aged children offer unique opportunities to not only encourage regular dental care, but to also increase care coordination services and referrals to dentists. In SFY2016, more than 11,300 dental care coordination services were provided to low-income families through I-Smile™.5

Sixty percent of Medicaid-enrolled children ages 3-12 saw a dentist in SFY2016, nearing the rate of children with private insurance (64% of ages 0-20, 2013).6 However, fewer dentists provided care to a child on Medicaid in 2016 than in 2015, and only half of dentists registered with Medicaid provided care for a child on Medicaid. I-Smile™ has been successful developing local referral networks with dentists, but the Medicaid-enrolled patient load is more burdensome for some. Provider incentives may be needed to attract more dentists to become part of the I-Smile™ dental home system and accept Medicaid-enrolled children as patients.

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4 I-Smile™ @ School program data, Iowa Department of Public Health
5 Child and Adolescent Reporting System, Iowa Department of Public Health
6 [www.ada.org/statefacts](http://www.ada.org/statefacts)
To build a ‘no wrong door’ approach for families regarding access to dental care, IDPH and I-Smile™ Coordinators continue to identify strategies that will strengthen partner engagement at the state and local levels. This approach will build awareness about the work of the program and the availability of coordinators to provide referral assistance. For example, we are expanding efforts to include medical providers as part of the I-Smile™ dental home, through targeted outreach to local offices, state provider organizations, and even hospital systems. We hope to increase referrals of families to I-Smile™ Coordinators to provide care coordination for dental care, as well as increase opportunities for children to receive preventive fluoride applications during well-child exams.

Medicaid costs for children’s dental care have remained stable over the past 10 years, though many more Medicaid-enrolled children have received care each year since I-Smile™ began. To look into health care system costs further, IDPH is working with the Department of Human Services to compile and review data regarding the medical expense to Medicaid for hospital out-patient dental procedures. These costs are most often related to restorative dental care provided under general anesthesia for very young children with extensive tooth decay. Preliminary data indicates a reduction of more than $2.5 million from 2014 to 2015; 2016 data are not yet final. If a trend is identified that demonstrates reductions in the need and expense for these services, we believe such a trend positively reflects the I-Smile™ program focus areas of prevention, care coordination, and access to dentists.

The work of I-Smile™ over the past 10 years has been important for Iowa families. As we celebrate program successes, we also look ahead at ways to improve upon challenges. In the end, the statewide I-Smile™ system is working to reduce the amount of dental disease experienced by children, improve the ability of families to access dental care, and lower both medical and dental costs to Medicaid.
### Table 2: Number of Medicaid-enrolled children ages 0-12 receiving a dental service from dentists

<table>
<thead>
<tr>
<th>Ages 0-2</th>
<th>Ages 3-5</th>
<th>Ages 6-9</th>
<th>Ages 10-12</th>
<th>Ages 0-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>Current</td>
<td>Baseline</td>
<td>Current</td>
<td>Baseline</td>
</tr>
<tr>
<td>Number of children receiving a service</td>
<td>4,901</td>
<td>13,657</td>
<td>21,832</td>
<td>33,509</td>
</tr>
<tr>
<td>Total enrolled</td>
<td>48,573</td>
<td>68,334</td>
<td>40,396</td>
<td>59,235</td>
</tr>
<tr>
<td>Increase in number</td>
<td>8,756</td>
<td>11,677</td>
<td>21,557</td>
<td>12,883</td>
</tr>
<tr>
<td>Percent increase</td>
<td>179%</td>
<td>54%</td>
<td>80%</td>
<td>74%</td>
</tr>
</tbody>
</table>

### Table 3: Number of Medicaid-enrolled children ages 0-12 receiving a dental service from I-Smile™ (Title V) dental hygienists and nurses in public health settings

<table>
<thead>
<tr>
<th>Ages 0-2</th>
<th>Ages 3-5</th>
<th>Ages 6-9</th>
<th>Ages 10-12</th>
<th>Ages 0-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>Current</td>
<td>Baseline</td>
<td>Current</td>
<td>Baseline</td>
</tr>
<tr>
<td>Number of children receiving a service</td>
<td>3,104</td>
<td>12,566</td>
<td>3,246</td>
<td>13,161</td>
</tr>
<tr>
<td>Total enrolled</td>
<td>48,573</td>
<td>68,334</td>
<td>40,396</td>
<td>59,235</td>
</tr>
<tr>
<td>Increase in number</td>
<td>9,462</td>
<td>9,915</td>
<td>4,908</td>
<td>1,255</td>
</tr>
<tr>
<td>Percent increase</td>
<td>305%</td>
<td>305%</td>
<td>486%</td>
<td>250%</td>
</tr>
</tbody>
</table>