Oral Health:
The State of the State

State-wide Planning Council
Strategic Oral Health Initiative
January 15, 2009
Karen M. Yoder, MSD, PhD
What We Know About Indiana’s

- Workforce and Diversity
- Prevention
- Finance
- Safety Net
- Data
WORKFORCE AND DIVERSITY
Total Dentists & Dental Hygienists to Population (8-06)

- DDS
  - 3,213 practicing in Indiana
  - Statewide Ratio 1:1,952 people

- RDH
  - 3,661 practicing in Indiana
  - Statewide Ratio 1:1,713 people
More than 2/3 of IUSD graduates remain in Indiana to practice dentistry.

Indiana has wide range in the ratio of dentists to population among counties.

Range of Ratios of Dentists to Population by Indiana County 2006 (5 lowest and 5 highest)

Five lowest counties
Hamilton County 1:999
Marion County 1:1,370
Boone County 1:1,407
Floyd County 1:1,469
Howard County 1:1,1491

Five highest counties
Warren County 1:8,785
Switzerland County 1:9,718
Crawford County 1:11,216
Starke County 1:11,467
Ripley County 1:14,855

Source: Indiana Professional Licensing Agency
Indiana is likely to be eligible for more dental health professions shortage areas (DHPSA) than are currently designated.

Thirteen Indiana counties have dentist to population ratios higher than 1:5000; making them potential HPSA sites.

www.census.gov & Indiana State Licensing Agency
DHPSA designations enable $25K-35K annual tax free loan repayment plus salary – incentive for new graduates to practice in rural and inner city underserved areas.

More Counties qualify than are designated as Dental Health Professions Shortage Areas. Ratio of 1 dentist per 5,000 or more people or other qualifications.

Current Indiana Dental Health Professions Shortage Areas
Most of Indiana’s dentists are in private practice

<table>
<thead>
<tr>
<th>Primary Occupation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private practice (30+ hrs/week)</td>
<td>2,379</td>
</tr>
<tr>
<td>Private practice (&lt;30 hrs/week)</td>
<td>374</td>
</tr>
<tr>
<td>Dental School Faculty</td>
<td>74</td>
</tr>
<tr>
<td>Armed Forces</td>
<td>13</td>
</tr>
<tr>
<td>Other Federal Service</td>
<td>18</td>
</tr>
<tr>
<td>State or local government employed</td>
<td>14</td>
</tr>
<tr>
<td>Hospital Staff Dentist</td>
<td>4</td>
</tr>
<tr>
<td>Other Health/Dental Organization Staff</td>
<td>23</td>
</tr>
<tr>
<td>Graduate Student/Intern/Resident</td>
<td>50</td>
</tr>
<tr>
<td>Other Student</td>
<td>1</td>
</tr>
<tr>
<td>Not in practice/looking for openings/waiting for boards</td>
<td>697</td>
</tr>
<tr>
<td>Retired/no longer in practice</td>
<td>25</td>
</tr>
<tr>
<td>Other unrelated occupation</td>
<td>65</td>
</tr>
<tr>
<td>Missing</td>
<td>3,748</td>
</tr>
</tbody>
</table>

Source: 2005 Facts about Dentists ADA
The number of Indiana dentists is not keeping up with the population increase, but the number of dental hygienists is becoming more favorable.
<table>
<thead>
<tr>
<th>Year</th>
<th>Indiana Population</th>
<th>DDS</th>
<th>Ratio 1:</th>
<th>RDH</th>
<th>Ratio 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/2006</td>
<td>6,271,973</td>
<td>3601</td>
<td>1742</td>
<td>4059</td>
<td>1545</td>
</tr>
<tr>
<td>1/1/2004</td>
<td>6,226,537</td>
<td>3674</td>
<td>1695</td>
<td>3877</td>
<td>1606</td>
</tr>
<tr>
<td>1/1/2002</td>
<td>6,154,739</td>
<td>3667</td>
<td>1678</td>
<td>3660</td>
<td>1682</td>
</tr>
<tr>
<td>1/1/2000</td>
<td>6,080,485</td>
<td>3618</td>
<td>1681</td>
<td>3376</td>
<td>1801</td>
</tr>
<tr>
<td>1/1/1998</td>
<td>5,998,880</td>
<td>3569</td>
<td>1681</td>
<td>3146</td>
<td>1907</td>
</tr>
<tr>
<td>1/1/1996</td>
<td>5,906,013</td>
<td>3580</td>
<td>1650</td>
<td>2928</td>
<td>2017</td>
</tr>
<tr>
<td>1/1/1994</td>
<td>5,793,526</td>
<td>3732</td>
<td>1552</td>
<td>2880</td>
<td>2012</td>
</tr>
<tr>
<td>1/1/1992</td>
<td>5,674,547</td>
<td>3682</td>
<td>1541</td>
<td>2655</td>
<td>2137</td>
</tr>
<tr>
<td>1/1/1990</td>
<td>5,544,156</td>
<td>3598</td>
<td>1541</td>
<td>2444</td>
<td>2268</td>
</tr>
</tbody>
</table>
The ratio of dentists to county population has become less favorable.

1 dentist per x county residents
IDA Retired and Retired-Life-Membership Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>11.8</td>
</tr>
<tr>
<td>2001</td>
<td>12.8</td>
</tr>
<tr>
<td>2002</td>
<td>14.2</td>
</tr>
<tr>
<td>2003</td>
<td>14.8</td>
</tr>
<tr>
<td>2004</td>
<td>15.6</td>
</tr>
<tr>
<td>2005</td>
<td>16.8</td>
</tr>
<tr>
<td>2006</td>
<td>17.6</td>
</tr>
</tbody>
</table>
The ratio of dental hygienists to population is improving

1 dental hygienist per x county residents
2008 Legislative changes....

...prescriptive supervision can enable effective public health use of plentiful dental hygienists

- School-based dental sealant programs (strongly recommended by CDC)¹
- Long term care facilities
- Homebound

¹ MMWR November 30, 2001 / 50(RR21):1-13
Licensure of Foreign Trained Dentists

Expatriate physicians who graduate from specific medical schools, in India, Europe, Israel, the Caribbean, and other locations, can obtain an Indiana medical license by successfully completing a equivalency examination.

Dentists who graduate from any foreign dental schools must completely repeat dental school in Indiana, or obtain reciprocity through licensure in another state to obtain an Indiana license.
Indiana’s dental public health workforce has decreased over time

When this photo was taken in the 1970s Indiana Board of Health (now Indiana State Department of Health) had a staff of:
- 4 FT dental hygienists
- 4 FT dentists
- 1 PT dentist
- 4 FT fluoridation engineers
- 2 secretaries
Very little data…. but we know there is a dramatic lack of racial and ethnic diversity in Indiana’s dental workforce.

No Indiana agency, or association systematically collects race/ethnicity data on Indiana’s practicing dentists.
The percentage of dentists who are Hispanic does not reflect the percentage of the Hispanic population in Indiana: 5%

45 (1.54%) self identified Hispanic dentists in Indiana (only 8 were accepting Medicaid/Hoosier Healthwise)

6 (1.52%) self identified Hispanic dental hygienists in Marion County

2005 Indiana Chapter of the Hispanic Dental Association survey
Between 2000-2007 IUSD graduated the following under-represented minority (URM) dental students:
   9 African American
   17 Latino/Hispanic
   1 American Indian

Four of Indiana’s six dental hygiene programs reported graduating the following URM students between 2000-2007:
   13 African American
   14 Hispanic
   3 Native American

Of the 628 total dental hygiene graduates, 621 (99%) were female
Few Indianapolis dental offices have bilingual staff

Is there a staff member in your dental office who can translate Spanish to English?

3rd year dental students informal telephone survey of 373 Indianapolis dental offices
Knowledgeable people tell us, there are no African American Dentists south of Indianapolis’ 10th Street.

.....In the State
PREVENTION
Indiana has excellent water fluoridation coverage

Over 95% of residents who use community water systems receive optimally fluoridated water

397 community water systems adjust water F levels and 91 systems have naturally occurring optimal F levels

BUT, CDC funding for replacing obsolete fluoride systems is consistently decreasing

Indiana State Department of Health Reports
NATURAL FLUORIDE CONCENTRATION IN INDIANA PRIVATE WELLS BY ZIP CODE (N = 8,500)

In parts per million fluoride (ppmF)
Mortality from oral disease is low in Indiana and is primarily linked with oral cancer.

<table>
<thead>
<tr>
<th>Deaths</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoplasms Lip, oral cavity and pharynx</td>
<td>144</td>
<td>155</td>
<td>129</td>
<td>151</td>
</tr>
<tr>
<td>Diseases of oral cavity, salivary glands, and jaws</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Oral congenital malformations (cleft lip, palate &amp; others)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Centers for Disease Control and Prevention
Indiana does not have:

Required dental exam before entrance to kindergarten or middle school…or anytime in the school career

Medicaid reimbursement for physicians to provide fluoride varnish as part of their oral assessment for toddlers – 27 States reimburse MDs
Children with Hoosier Healthwise under-utilize dental services; but utilization was increasing.

- The number of enrolled children with any dental visit was:
  - 1977: 68,717 (18%)
  - 2000: 147,878 (32%)
  - 2003: 222,782 (36%)
  - 2005: 235,943 (40%)
  - 2006: no increase

A cross-section of Indianapolis children have high levels of untreated decayed teeth.

48% of 6-8 year old children in a cross section of the Marion County population had untreated decayed teeth.

Healthy People 2010 goal: 21-2b- reduce the proportion of children with untreated dental decay in deciduous and permanent teeth to 21%.

Indiana children from low-income families have high levels of untreated decayed teeth

51% 17,000 Indiana children examined by SEAL INDIANA had untreated dental decay.

Of that 51%, 17% of the children had urgent need for follow-up care often including pain and/or infection

Healthy People 2010 goal: 21-2b- reduce the proportion of children with untreated dental decay in deciduous and permanent teeth to 21%

2003-2008 SEAL INDIANA data
### Prevention

**What we suspect**

- Many undocumented immigrant children have poor oral health and we know they lack access to Medicaid/Hoosier Healthwise

**Why we suspect it**

- Case Study: Kyger School – Frankfort, Indiana
- 91% of children <poverty level
- 39% Hispanic
- 30% enrolled in Hoosier Healthwise vs 55% in other schools
- 29% had severe caries vs 17% in other schools
Although all major dental associations recommend a dental visit by age one; services are difficult to find for babies and toddlers in Indianapolis.

Indianapolis recommended age for first dental visit (N=373 unduplicated Marion County dentists)

IUSD 3rd year dental student telephone survey (not a controlled formalized study) 2008
Indiana Dental Association……

Is encouraging;

- dentists to accept toddlers by age one, and

- Parents to seek an exam for their child by age one, through it’s program called:

  Born to Smile

Indiana Dental Association
FINANCING DENTAL SERVICES
Medicaid enrollment & use of services has increased

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-17</td>
<td>546,155</td>
<td>173,496</td>
<td>562,122</td>
<td>206,260</td>
<td>584,879</td>
<td>335,858</td>
<td>604,711</td>
<td>350,212</td>
</tr>
<tr>
<td>18-20</td>
<td>47,860</td>
<td>12,920</td>
<td>49,571</td>
<td>15,041</td>
<td>52,133</td>
<td>22,096</td>
<td>54,737</td>
<td>22,088</td>
</tr>
<tr>
<td>21 AND OVER</td>
<td>306,427</td>
<td>108,211</td>
<td>357,772</td>
<td>120,994</td>
<td>374,418</td>
<td>159,643</td>
<td>387,138</td>
<td>161,831</td>
</tr>
<tr>
<td>Grand Total</td>
<td><strong>933,442</strong></td>
<td><strong>294,627</strong></td>
<td><strong>969,465</strong></td>
<td><strong>342,295</strong></td>
<td><strong>1,011,430</strong></td>
<td><strong>517,597</strong></td>
<td><strong>1,046,646</strong></td>
<td><strong>534,131</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-17</td>
<td>538,390</td>
<td>172,966</td>
<td>553,792</td>
<td>205,643</td>
<td>575,424</td>
<td>334,847</td>
<td>594,526</td>
<td>349,285</td>
</tr>
<tr>
<td>18-20</td>
<td>40,430</td>
<td>12,619</td>
<td>41,958</td>
<td>14,737</td>
<td>44,313</td>
<td>21,594</td>
<td>46,474</td>
<td>21,546</td>
</tr>
<tr>
<td>21 AND OVER</td>
<td>307,294</td>
<td>106,789</td>
<td>323,041</td>
<td>119,352</td>
<td>336,886</td>
<td>157,171</td>
<td>346,945</td>
<td>159,093</td>
</tr>
<tr>
<td>Grand Total</td>
<td><strong>886,114</strong></td>
<td><strong>292,374</strong></td>
<td><strong>918,791</strong></td>
<td><strong>339,732</strong></td>
<td><strong>956,623</strong></td>
<td><strong>513,612</strong></td>
<td><strong>987,945</strong></td>
<td><strong>529,924</strong></td>
</tr>
</tbody>
</table>
But, many people enrolled in Medicaid do not use the services in a given year.
Barriers to Medicaid Enrollment

- Undocumented immigrant children are eligible only for Pkg E Medicaid (E=Emergency only – no dental care unless it’s a true emergency)

Indiana Population
- 6,376,792 Indiana population 2008
- Estimated 5% are Hispanic
- 302,000 Hispanic citizens
- 60% born in USA
- Estimated 65,000-100,000 undocumented

* Pew Hispanic Center
Enrollment in Medicaid Package B and E have increased slightly.

- Pkg B is for pregnant women.
- Pkg E is for emergency only services for undocumented immigrants including children and labor/delivery.

Few enrolled 0-17 year old children received treatment using Package E: it is reserved for emergency dental & medical services.

- 2002: 7,765 enrolled; 530 (7%) used.
- 2003: 8,330 enrolled; 617 (7%) used.
- 2004: 9,455 enrolled; 1,011 (10%) used.
- 2005: 10,185 enrolled; 927 (9%) used.

OMPP Data Request #QR 006505
Indiana has a limited supply of dentists who accept new Medicaid patients.

Medicaid & ISDH Helpline lists of provider dentists may not necessarily reflect acceptance of new patients.

Of the 1118 dentists who submitted Medicaid claims in 2005 68% were for $10,000 or less, indicating that they accept relatively few Medicaid patients.
Indiana Medicaid/Hoosier Healthwise reimbursement does not cover dentists’ overhead costs.

In 2005
- 1118 dentists
- Submitted 782,450 claims
- Averaging 700 per dentist
- $341,825,586 was billed to Medicaid
- $133,863,208 was paid to the dentists (39%)

Dental office overhead is typically 50-60% of income

OMPP Data Request #QR006517 2/2007
Indiana Medicaid Providers

- 2/3 of dentists who submit Medicaid claims treat relatively few Medicaid/Hoosier Healthwise patients
- 68% of those who billed Medicaid in 2007 submitted bills for 10,000 or less.
- They are not likely to be accepting new Medicaid patients and/or are seeing a select few
Factors Contributing to Uninsured Status

- >30% of Hoosiers who are uninsured are employed by companies that offer coverage, but it’s not affordable, or they are not eligible (part time/seasonal)

- Indiana health insurance rates have increases are higher than the national average.

- Many Hoosier small businesses have dropped health and dental insurance benefits

Source: Kaiser Family Foundation
Residents in rural counties typically work in smaller businesses that are less likely to offer medical & dental insurance

- In 32 of 92 counties (35%) >75% of land is farmland
- 46 of 92 counties (50%) are officially designated as rural
- Nearly 2/3 of Indiana’s 23 million acres are farmlands
Rural vs Non-Rural: mean county ratio of Providers to Population (1:x)

<table>
<thead>
<tr>
<th></th>
<th>DDS</th>
<th>RDH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designated Rural Counties</td>
<td>1: 2,835</td>
<td>1: 2,185</td>
</tr>
<tr>
<td></td>
<td>+37%</td>
<td></td>
</tr>
<tr>
<td>Non-Rural Counties</td>
<td>1: 1,792</td>
<td>1: 1,613</td>
</tr>
</tbody>
</table>

22% of Indiana residents live in a designated rural county.
SEAL INDIANA

Program Sites Served One or More Times 2003 - 2006 & Percent Children < 18 in Poverty

Legend
SEAL Facility Types
- Comm. Health
- Head Start
- School
- Shelter

Percent Child Poverty:
- 4.5 - 6.5
- 6.6 - 8.5
- 8.6 - 10.5
- 10.6 - 12.5
- 12.6 - 14.5
- 14.6 - 16.5
- 16.6 - 18.5
- 18.6 - 20.5
- 20.6 - 22.5

Officially Designated Rural County = R

February, 2007
2004 Population Data
**Indiana** has federally qualified health centers, look-alikes, state funded community health clinics, but few with dental clinics and volunteer clinics.

**Indiana has:**
- 15 federally qualified community health clinics
- 1 look-alike
- 42 state funded health clinics
- 19 dental clinics linked with community health clinics
- ? Volunteer clinics
However...

Indianapolis is home to 10 of the 19 government funded dental clinics;

the other 91 counties share 9 dental clinics

*Indiana Dental Association is surveying volunteer dental clinics and will publish information on the Web*
Indiana University School of Dentistry Clinics provide reduced cost dental services for residents of the Indianapolis area

...including 2,872 unduplicated Medicaid recipients in 2008
The role of Head Start

Although Head Start is not a safety-net provider, they are bound by Federal Performance Standards requiring that all enrollees receive complete dental treatment; therefore they play an integral role in assuring a safety net for Indiana’s impoverished children ages 0-5 years.

17,518 children ages 0-5 are enrolled in Indiana’s Head Start programs
Indiana Head Start is not able to fulfill the Federal Performance Standards related to dental services.

Rural counties are especially compromised

90% completed is considered a critical accomplishment

<table>
<thead>
<tr>
<th></th>
<th>Completed Exam</th>
<th>Need Treatment</th>
<th>Received Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana</td>
<td>89%</td>
<td>22%</td>
<td>82%</td>
</tr>
<tr>
<td>Region V</td>
<td>85%</td>
<td>22%</td>
<td>75%</td>
</tr>
<tr>
<td>Nation</td>
<td>89%</td>
<td>24%</td>
<td>84%</td>
</tr>
</tbody>
</table>
What we know

- Early Head Start (ages 0-3 years) often faces a challenge securing dental exam for infants/toddlers

How we know it

- 79% received screening at well baby exams
- 36% received professional dental exam
What we know:

- 2007 191 Indiana pregnant women/teens who are Head Start moms often have Medicaid coverage but often don’t receive dental exams or

How we know it:

- 89% have health insurance
- 27% receiving dental exams or treatment
Other Organizations Provide Safety-net Dental Services

- **Indiana University School of Dentistry**, and its clinics at Riley, Regenstrief, Wishard, Grassy Creek and Cottage Corners are significant providers of discounted dental services for central Indiana residents.

- Approximately 2,000 children from low-income families receive preventive services from **SEAL INDIANA** at Title I schools, Head Start programs, community health centers, homeless shelters, summer migrant programs, and other locations that serve children from low-income families.
A variety of Other Organizations Provide Safety-net Dental Services

- **Indiana Donated Dental Services**
  Provides significant amounts of service at no cost for people with disabilities

- 677 dentists and 177 laboratories participate

- FY 2008: 299 individuals received $786,914 in services. An additional 201 were in treatment

- Since the program began in 1991: 2,752 individuals received $5.7 million in services without charge
Mobile Dental Programs in Indiana

For children

- Smile Mobile – Marion County Health Department
- Mobile Dentists/Children’s Dental Health Foundation – Michigan Based
- St. Mary’s Hospital Mobile Dental Program – Evansville
- SEAL INDIANA - IUSD
- Others?

For long-term-care

- MobileCare 2 U
- PrimeSource Healthcare
- Others?
The Most Frequent Request

For at least 10 years, the most frequent calls to the Family Helpline were requesting the name of a dentist who would accept Medicaid or provide low-cost services.
Indiana is lacking current oral health status data on all populations

- The last state-wide survey of children’s oral health was in 1992-93
- No other recent data exist for Indiana’s special needs populations such as:
  - Adults & children with developmental disabilities
  - Homeless populations
  - Residents of long term care facilities
  - Immigrant populations
  - Etc. etc.
Indiana’s Statewide Planning Council…

Envisioning a bright future for oral health in Indiana!