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Background

• Traditionally dental services were provided in private dental practices
• Organizational structures for delivering oral health services are changing
• There is a noticeable trend to consolidation of small private dental practices into large groups
• Little is known about structures of these organizations, their workforce, or their patients.
• Study was intended to collect data about differing configurations in provider organizations known as dental support/service/management organizations (DSOs)
Objectives of the Study

• Major objectives of the study were to:
  o To collect data about DSOs to understand qualitative differences in organizational structures,
  o To describe variation in forms of engagement with dental and other clinical providers
  o To evaluate the contributions of DSOs to care for traditionally underserved populations, particularly the publicly insured.

• This study was conducted by the Oral Health Workforce Research Center (OHWRC) in cooperation with the Association of Dental Support Organizations (ADSO).

• This work was supported by funding from a cooperative agreement with the Health Resources and Services Administration.
Methods

• The study included a literature review, case studies of 6 DSOs operating in the US, and a survey of the 47 members of the Association of Dental Service Organizations (ADSO) in 2017.

• ADSO fielded emails to executive staff at each of the member organizations requesting study participation. Responses were directed to and resided on a dedicated server at OHWRC.

Survey Instrument

• The final survey instrument consisted of 15 questions with pre-defined and open ended response options about:
  
  o The structure and location of DSOs and their affiliate practices and the services provided to patients
  o The percentage of affiliated dentists who treated patients insured by Medicaid or CHIP
  o The percentage of the overall patient population that was publicly insured.

• The survey used a skip logic design to encourage survey completion and also gather more information where appropriate.

• The survey was web-based (built on the Qualtrics platform) and was open for approximately one month in May 2017.
The Literature Review Identified Many Drivers of Practice Consolidation to Achieve Economies of Scale

- Shift in health service delivery paradigm to an *emphasis on quality and value* based services
- Greater *reliance of payers on metrics* to describe quality
- Proliferation of *interoperative electronic health records*
- Pressure to reduce costs through innovation
- Increased *competition for patients*
- Decline in demand for dental services, especially among adults
- *Aging* of the population and of the workforce
- Increasing *diversity* in the population, *shifting disease patterns*, variation in care seeking behaviors, *variable ability to pay*
- Uneven *distribution of dentists* in certain geographic areas
- *More publicly insured* patients
- Increasing propensity for insurers to create *selective provider networks*
- *High student loan debt*
- Larger organizations are more able to *leverage assets*
Survey Respondents Identified Their Organizations in Various Ways

- In total, 32 of the 47 organizations solicited to participate responded to the survey for a response rate of 68.1%.

- DSOs defined their organizations in various ways, suggesting functional differences among similar organizations within the broader class known as “dental support organizations” (87.5%).

- DSOs were mainly for profit organizations (96.8%) and a

### Respondents’ Description of Their Organizations

<table>
<thead>
<tr>
<th>Classification</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Management Organization</td>
<td>11</td>
<td>34.4%</td>
</tr>
<tr>
<td>Dental Service Organization</td>
<td>15</td>
<td>46.8%</td>
</tr>
<tr>
<td>Dental Support Organization</td>
<td>28</td>
<td>87.5%</td>
</tr>
<tr>
<td>Dental Management Service Organization</td>
<td>9</td>
<td>28.1%</td>
</tr>
<tr>
<td>Large Group Practice</td>
<td>7</td>
<td>21.9%</td>
</tr>
<tr>
<td>Dental Accountable Care Organization</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Dental Health Maintenance Organization</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
DSOs Were Located in Most States and Many Had Multiple Affiliates Within Each

- DSOs in the survey were operating in 48 states and the District of Columbia.
- No presence among survey respondents in Alaska and Montana.
- Number of patients served by DSOs varied from 6,000 to 1,600,000.
- Some DSOs operated only in a single state, while others operated in multiple states (range was 1 to 17 states).
DSOs Mainly Provided Administrative Services for Affiliated Practices

- Accounting: 100%
- Appointment scheduling: 81%
- Billing: 94%
- Clinical care protocols: 72%
- Dental/nondental records: 47%
- Human resources management: 100%
- Information technology/infrastructure: 100%
- Internal continuing education: 81%
- Marketing: 97%
- Property rental and lease agreements: 97%
- Purchasing or leasing equipment: 100%
- Purchasing supplies: 81%
- Quality assurance: 97%
- Regulatory compliance services: 94%
- Other: 13%

Overall, DSOs provided predominantly administrative services, with specific areas such as human resources, information technology, marketing, purchasing, and regulatory compliance being particularly prominent.
DSOs Mainly Recruited Full-Time Dentists

- The mean number of full-time (FT) dentists affiliated with a DSO was 213.
- The number of FT dentists in DSOs ranged from a minimum of 6 to a maximum of 1500.
- Eighteen (56.3%) of the DSOs indicated they had some part-time dentists (mean=36, median=28).
- Dentists mainly affiliated with DSOs as associates (66.7%), owners (66.7%), and employees (53.7%).
- Approximately 90% of survey respondents indicated that between 61% and 100% of dentists in the DSO were general dentists.
- Eight percent (8%) of DSOs indicated that all dentists were pediatric dentists.
The median number of FT dentists Working with a DSO was 60.
Many DSOs Preferred to Recruit Experienced Dentists

- Sixty percent of survey respondents indicated that between 50% and 100% of new recruits to the DSO each year were experienced dentists.
- This was consistent with a strategy of affiliating with existing practices although some DSOs also recruited experienced professionals for practice in “de novo” practices along with new dentists.

<table>
<thead>
<tr>
<th>% of New Dentist Recruits to the DSO, Annually</th>
<th>% of DSO Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Dental School Graduates (N=27)</td>
</tr>
<tr>
<td>0 to 10%</td>
<td>44.4%</td>
</tr>
<tr>
<td>11% to 20%</td>
<td>7.5%</td>
</tr>
<tr>
<td>21% to 30%</td>
<td>18.5%</td>
</tr>
<tr>
<td>31% to 40%</td>
<td>7.4%</td>
</tr>
<tr>
<td>41% to 50%</td>
<td>3.7%</td>
</tr>
<tr>
<td>51% to 60%</td>
<td>11.1%</td>
</tr>
<tr>
<td>61% to 70%</td>
<td>7.4%</td>
</tr>
<tr>
<td>71% to 80%</td>
<td>0.0%</td>
</tr>
<tr>
<td>81% to 90%</td>
<td>0.0%</td>
</tr>
<tr>
<td>91% to 100%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
DSOs Contribute to Increased Availability of Oral Health Services for the Underserved

• More than a third of DSOs that responded to a question about the insurance status of patients indicated that 50% to 95% of the patient population was publicly insured.

• Eighty percent reported that at least some dentists affiliated with the DSO treated publicly insured patients.

• Almost 44.0% indicated that between 91% and 100% of the dentists affiliated with the DSO served some patients who were publicly insured.

• Nearly two-thirds (63.6%) of respondents stated that more than 60% of the Medicaid insured population served in affiliate practices were children.

• Twenty three percent of DSOs responded that between 91% and 100% of Medicaid insured patients were children.
Percentage of DSO-Affiliated Dentists Serving Some Patients Insured by Medicaid or CHIP by Percentage of DSO Respondents

<table>
<thead>
<tr>
<th>Percentage of Affiliated Dentists Treating Medicaid-or CHIP-Insured Patients</th>
<th>% of DSO Respondents (N=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% to 10%</td>
<td>13.0%</td>
</tr>
<tr>
<td>11% to 20%</td>
<td>13.1%</td>
</tr>
<tr>
<td>21% to 30%</td>
<td>13.0%</td>
</tr>
<tr>
<td>31% to 40%</td>
<td>0.0%</td>
</tr>
<tr>
<td>41% to 50%</td>
<td>4.4%</td>
</tr>
<tr>
<td>51% to 60%</td>
<td>0.0%</td>
</tr>
<tr>
<td>61% to 70%</td>
<td>4.3%</td>
</tr>
<tr>
<td>71% to 80%</td>
<td>8.7%</td>
</tr>
<tr>
<td>81% to 90%</td>
<td>0.0%</td>
</tr>
<tr>
<td>91% to 100%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
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</tbody>
</table>
Conclusions

• DSOs comprise a diverse group of management organizations
• DSOs provide a common core of business and information services but otherwise vary substantially in size and focus, types of services offered and patients served.
• DSOs described a focus on management services with only limited involvement in any aspect of clinical dentistry.
• DSOs mainly provided general dentistry services; some provided only specialty services while other provided a mix.
• DSO were actively recruiting workforce, including dentists, DHs, and DAs.
• DSOs appeared to have some difficulty in recruiting dentists to their organization due to the increasing variety of options available to dentists.
• DSOs leveraged size and market penetration to make dental services affordable and accessible to the publicly insured.