2009 Oral Health Care
of Vulnerable Elderly Patients
Survey of Dentists and Dental Hygienists
ACKNOWLEDGEMENTS

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<td>35</td>
</tr>
</tbody>
</table>
Introduction

Background

The Coalition for Oral Health for the Aging (COHA), formerly named the Michigan Geriatric Dentistry Coalition, began in 2007 to prepare a survey to identify dental providers who are currently meeting or who are interested in meeting the challenges of caring for frail and functionally dependent elderly. This work was endorsed by the Michigan Dental Association, Michigan Dental Hygienists’ Association, Michigan Department of Community Health (MDCH), University of Michigan School of Dentistry, Delta Dental of Michigan, Ohio, and Indiana, and Michigan Oral Health Coalition.

Under the guidance of Elisa M. Ghezzi, DDS, PhD, two surveys were developed by COHA, focusing on connecting providers and patients to existing resources, identifying educational needs, and developing strategies to meet existing challenges. The objectives of both surveys were to assess: who are providing dental treatment to the vulnerable elderly patients; the dental services provided; encountered barriers inhibiting dental care for this population; and the potential for referring vulnerable elderly clients to dental services. For the survey, vulnerable elderly patients were defined as patients over age 65 that have any of the following: limited mobility, limited resources, or complex health status.

Methodology and Results

The first survey (Appendix D) was prepared in October of 2007 and funded by Delta Dental Foundation ($4,904). All dentists and hygienists in the state of Michigan were asked to complete the questionnaire in hard copy form sent by mail. The survey was launched in November 2007. Of 15,147 dentists and dental hygienists in the state, 949 responded (6.3% response rate). From this survey, 80% (759) of respondents indicated that they provide oral health care in the state of Michigan to frail and functionally dependent elderly. A total of 721 (76%) of respondents provide care to adults with developmental disabilities/intellectual impairment. Nearly 80% (759) of respondents were interested in participating in a future survey.

A second in-depth follow-up survey was prepared in 2008 with three versions appropriate to dentists, hygienists, and public health clinic staff. Surveys were sent by mail or in electronic form made available on Survey Monkey in August of 2009 to the 750 dental professionals who agreed in the first survey to participate in a future survey with a total survey cost of $576, covered by the Delta Dental Foundation. The data analysis and report development were completed through MDCH.

The response rate was 42.5%, with 210 dentists and 109 hygienists responding. Very few surveys were returned from public health clinics, providing insufficient data to include in the final analysis. The survey results include fully and partially completed surveys (i.e., those with information missing for one or more variables). Results in this report are for responses from providers to which questions were applicable. Those responding that questions were not applicable or providing no response are not included in counts and percentages.
ORAL HEALTH CARE OF VULNERABLE ELDERLY PATIENTS

Most dentists (95%) and hygienists (93%) responding to this survey reported providing oral health care to vulnerable elderly patients (Figure 1). Only 10 dentists and 7 hygienists answered that their practice setting did not provide care to this subpopulation of patients.

Figure 1: Providers who offer Oral Health Care to Vulnerably Elderly Patients

![Graph showing percentage of dentists and hygienists providing oral health care to vulnerable elderly patients.](image)

N=210 DENTISTS, N=109 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 1 Appendices E & F)
Data compiled by Michigan Department of Community Health

About half (49%) of dentists and 34% of hygienists indicated that vulnerable elderly patients make up 5% or less of their patients (Figure 2). While most providers treat vulnerable elderly patients, survey responses indicate that very few dental professionals focus their practices on this population.

Figure 2: Vulnerable Elderly Patients Percentage of Practice

![Graph showing percentage of dentists and hygienists focusing their practices on vulnerable elderly patients.](image)

N=196 DENTISTS, N=98 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 4 Appendices E & F)
Data compiled by Michigan Department of Community Health
Among respondents, about three fourths of dentists (73%) and three fifths hygienists (59%) primarily practice in a solo private practice setting as shown in Tables 1 and 2.

Table 1: Dentists’ Primary Practice Setting (Percentage and Number of Responses)

<table>
<thead>
<tr>
<th>Setting</th>
<th>Percentage (%)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo Private Practice</td>
<td>73</td>
<td>151</td>
</tr>
<tr>
<td>Group Private Practice</td>
<td>23</td>
<td>47</td>
</tr>
<tr>
<td>Hospital</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Academic Institution</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Local Public Health Clinic/FQHC</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>*Other</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

N=207 DENTISTS (3 dentists with 2 responses)

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 23a Appendix E)
Data compiled by Michigan Department of Community Health

Table 2: Hygienists’ Primary Practice Setting (Percentage and Number of Responses)

<table>
<thead>
<tr>
<th>Setting</th>
<th>Percentage (%)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Practice</td>
<td>59</td>
<td>58</td>
</tr>
<tr>
<td>Group Private Practice</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Hospital</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Academic Institution</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Local Public Health Clinic/FQHC</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>*Other</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

N=98 HYGIENISTS

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 24a Appendix F)
Data compiled by Michigan Department of Community Health
Figure 3 displays the distribution of dentist and hygienist respondents by size of the community where they practice. A slight tendency can be seen for responding dentists practicing in larger communities than responding hygienists.

![Figure 3: Percent of Respondents by Size of Community](image)

The majority of dentists and hygienists (97% and 94% respectively) treated vulnerable elderly patients in their offices, but also offered treatment to a more limited degree in other care settings (Table 3).

Table 3: Settings Where Dentists Treated Vulnerable Elderly Patients (Percentage and Number of Responses)

<table>
<thead>
<tr>
<th>Treatment Settings (Select All)</th>
<th>Dentists</th>
<th>Hygienists</th>
</tr>
</thead>
<tbody>
<tr>
<td>My office</td>
<td>97 (193)</td>
<td>94 (92)</td>
</tr>
<tr>
<td>Nursing home/long term care facility</td>
<td>20 (40)</td>
<td>6 (6)</td>
</tr>
<tr>
<td>Assisted living facility</td>
<td>12 (23)</td>
<td>3 (3)</td>
</tr>
<tr>
<td>Patients’ home</td>
<td>7 (13)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Senior housing</td>
<td>6 (12)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>*Other, please specify</td>
<td>3 (6)</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Senior centers</td>
<td>3 (5)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Mobile or portable practice</td>
<td>2 (4)</td>
<td>2 (2)</td>
</tr>
</tbody>
</table>

N=198 DENTISTS, N=98 HYGIENISTS

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 5 Appendices E & F)

Data compiled by Michigan Department of Community Health
REASONS FOR NOT TREATING VULNERABLE ELDERLY PATIENTS AND REFERRALS FOR TREATMENT

Among the 10 dentists and 9 hygienists that reported their practice setting does not provide oral health care to vulnerable elderly patients, response frequencies of reasons for not providing care are displayed in Table 4.

Table 4: Reasons Oral Health Care Not Provided to Vulnerable Elderly Patients for Practice Setting (one dentist gave 3 reasons)

<table>
<thead>
<tr>
<th>Reasons Dental Professionals Did Not Provide Oral Health Care to Vulnerable Elderly Patients (Select All)</th>
<th>Number of DDS responses</th>
<th>Number of RDH responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefer not to treat medically complex patients</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Our clinic/facility is limited to children</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>*Other, Please specify</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Prefer not to treat them as I lack knowledge about treating such patients</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Our clinic/facility is not accessible to people with disabilities</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>They have difficulty arranging transportation to our facility</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Clinic/Facility is too busy to accommodate their needs</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No vulnerable elderly patients in my area</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

N=10 Dentists, N=9 Hygienists
*Category created from grouping similar ‘Other’ specify responses.
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 2 Appendices E & F)
Data compiled by Michigan Department of Community Health

REFERRALS FOR VULNERABLE ELDERLY PATIENTS

Providers were asked to indicate all possible sources of dental care to which they might refer vulnerable elderly patients. Responding dentists most commonly (80%) referred their elderly patients to oral and maxillofacial surgeons while hygienists most commonly indicated referring to endodontists (65%) (Table 5).

Table 5: Dental Referrals of Vulnerable Elderly Patients (Percentage and Number of Responses)

<table>
<thead>
<tr>
<th>Referral Type (Select All)</th>
<th>Percent (n)</th>
<th>Dentists</th>
<th>Hygienists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral and maxillofacial surgeons</td>
<td>80 (152)</td>
<td>62 (61)</td>
<td></td>
</tr>
<tr>
<td>Endodontists</td>
<td>70 (133)</td>
<td>65 (64)</td>
<td></td>
</tr>
<tr>
<td>Periodontists</td>
<td>61 (116)</td>
<td>58 (57)</td>
<td></td>
</tr>
<tr>
<td>Prosthodontists</td>
<td>38 (72)</td>
<td>35 (35)</td>
<td></td>
</tr>
<tr>
<td>Dental schools</td>
<td>21 (39)</td>
<td>19 (19)</td>
<td></td>
</tr>
<tr>
<td>No referrals</td>
<td>15 (29)</td>
<td>17 (17)</td>
<td></td>
</tr>
<tr>
<td>Local public health clinics</td>
<td>13 (24)</td>
<td>17 (17)</td>
<td></td>
</tr>
<tr>
<td>Dentists with experience in geriatric practice</td>
<td>11 (20)</td>
<td>7 (7)</td>
<td></td>
</tr>
<tr>
<td>Dental hygiene schools</td>
<td>10 (19)</td>
<td>14 (14)</td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>9 (17)</td>
<td>7 (7)</td>
<td></td>
</tr>
</tbody>
</table>

N=189 DENTISTS, N=99 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 3 Appendices E & F)
Data compiled by Michigan Department of Community Health
Providers were also asked about sources referring patients to them. As shown in Figure 4, equal numbers of dentists reported referrals from community service providers and from physicians or other health care providers. The largest number of hygienists reported having vulnerable elderly patients referred to their practice by physicians or other health care providers.

Figure 4: Referral Sources of Vulnerable Elderly Patients to Practices of Responding Providers

![Figure 4](image_url)

N=135 DENTISTS, N=69 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 18 Appendices E & F)
Data compiled by Michigan Department of Community Health

Dentists and hygienists were asked about vulnerable elderly patients that required consultation with a dental specialist or physician. About half of dentists (50%) needed to consult with a dental specialist (Figure 5). Dentists indicating higher need for consultation with physicians (Figure 6)

Figure 5: Responses on Percent of Vulnerable Elderly Patients Requiring Dental Specialist Consultation

![Figure 5](image_url)

N=182 DENTISTS, N=93 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 9-1 Appendices E & F)
Data compiled by Michigan Department of Community Health
As shown in Table 6, dentists and hygienists most commonly referred vulnerable elderly patients to transportation services (41%, 36%) and social services (13%, 11%).

Table 6: Non-Dental Referrals for Vulnerable Elderly Patients (Percentage and Number of Responses)

<table>
<thead>
<tr>
<th>Referral Type (Select All)</th>
<th>Percentage (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dentists</td>
</tr>
<tr>
<td>Transportation services</td>
<td>41 (86)</td>
</tr>
<tr>
<td>Social services</td>
<td>13 (27)</td>
</tr>
<tr>
<td>Financial counselors for medical or dental care</td>
<td>12 (25)</td>
</tr>
<tr>
<td>Mental health workers for depression</td>
<td>8 (16)</td>
</tr>
<tr>
<td>Case management</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Dieticians</td>
<td>2 (5)</td>
</tr>
</tbody>
</table>

N=210 DENTISTS, N=109 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 10 Appendices E & F)
Data compiled by Michigan Department of Community Health
Access to Care for Vulnerable Elderly Patients

Providers were asked the percentages of their vulnerable elderly patients that had private dental insurance, public assistance programs for their dental care, or no coverage for dental care. Figure 7 displays responses for dentists, and Figure 8 displays responses for hygienists. Figure 7 shows that dentists believed a slightly higher percentage of their vulnerable elderly patients had no coverage than private coverage, while relatively few of their vulnerable elderly patients had public program assistance for dental care.

Figure 7: Dental Insurance Coverage of Vulnerable Elderly Patients (Dentist Responses)

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 7 Appendix E)
Data compiled by Michigan Department of Community Health
Results from hygienists are somewhat similar to dentists, but hygienists believed that slightly more of their vulnerable elderly patients had private dental insurance than no dental care coverage. Few of their vulnerable elderly patients had public program assistance for dental care.

**Figure 8: Dental Insurance Coverage of Vulnerable Elderly Patients (Hygienist Responses)**

![Graph showing dental insurance coverage](image)

Private Insurance N=96 HYGIENISTS  
Public Assistance N=83 HYGIENISTS  
Not Covered N=94 HYGIENISTS  
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 7 Appendix F)  
Data compiled by Michigan Department of Community Health

Sixty percent of dentists report providing vulnerable elderly patients with discounted care and 42% reported providing free care (Table 7). For hygienists, 39% reported providing discounted care and 20% free care.

**Table 7: Percentage (number) of Dentists and Hygienists Providing Elderly Patients with Charitable Care**

<table>
<thead>
<tr>
<th>Charitable Care</th>
<th>Dentists</th>
<th>Hygienists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discounted care</td>
<td>60 (118)</td>
<td>39 (38)</td>
</tr>
<tr>
<td>Free care</td>
<td>42 (82)</td>
<td>20 (20)</td>
</tr>
</tbody>
</table>

N=196 DENTISTS, N=98 HYGIENISTS  
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 8a Appendices E & F)  
Data compiled by Michigan Department of Community Health
Two thirds (68%) of dentists were familiar with the Donated Dental Services program, while only 21% of hygienists were familiar with it. Among dentists who were familiar with the Donated Dental Services program, 48% reported participating in the program, while 52% of hygienists familiar with the program reported that their office participated. (Question 21 Appendices E & F).

Only 8% of dentists were familiar with the State of Michigan Public Act 161 (PA161), compared to 31% of hygienists who reported being familiar with it. Though relatively small numbers of respondents were familiar, 67% of responding dentists and 85% of responding hygienists indicated interest in learning more about State of Michigan Public Act 161 or collaborative practices (Question 22 Appendices E & F).

Asked if vulnerable elderly had problems obtaining dental care in their community, of responding dentists, 44% said "yes", 35% said "no", and 22% didn't know, while among responding hygienists, 54% said "yes", 27% said "no", and 19% didn't know (Question 11a Appendices E & F). A quarter of dentists (24%) and 40% of hygienists were aware of vulnerable elderly patients who dropped out of their practice due to access issues in the past two years (Question 20 Appendices E & F).

As shown in Table 8, the most commonly indicated barriers to dental care for vulnerable elderly patients as identified by responding dentists were as follows: inability to pay for services (90%), lack of providers willing to accept Medicaid (75%), lack of transportation to the dentist’s office (63%), lack of perceived need (60%), and not knowing where to access care (56%). The distributions and ordering of responses were similar for hygienists, with the noteworthy result that virtually all (99%) of responding hygienists indicated that lack of providers willing to take Medicaid was a barrier to care for the vulnerable elderly.

Table 8: Barriers to Dental Care for Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Barriers (Select All)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DENTISTS</td>
</tr>
<tr>
<td>Unable to pay for services</td>
<td>90</td>
</tr>
<tr>
<td>Lack of providers willing to take Medicaid</td>
<td>75</td>
</tr>
<tr>
<td>Lack of transportation to the dentist’s office</td>
<td>63</td>
</tr>
<tr>
<td>Lack of perceived need</td>
<td>60</td>
</tr>
<tr>
<td>Not knowing where to go</td>
<td>56</td>
</tr>
<tr>
<td>No equipment/space available for care in their housing facility</td>
<td>25</td>
</tr>
<tr>
<td>Lack of trained providers</td>
<td>24</td>
</tr>
<tr>
<td>Inadequate financial support for care from local, state and/or federal programs</td>
<td>22</td>
</tr>
<tr>
<td>*Other, please specify</td>
<td>1</td>
</tr>
</tbody>
</table>

N=97 DENTISTS, N=58 HYGIENISTS

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 11b Appendices E & F)

Data compiled by Michigan Department of Community Health
Regarding oral care for a subset of vulnerable elderly patients, one third of dentists and 16% of hygienists indicated that they provide treatment to hospice patients.

Figure 9: Percentage of dentists and hygienists who provide treatment to hospice patients.

![Percentage of dentists and hygienists who provide treatment to hospice patients.](chart)

DENTISTS  HYGIENISTS

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Practices</strong></td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>Hospital</strong></td>
<td>16%</td>
<td>84%</td>
</tr>
<tr>
<td><strong>Local public health clinic/ Federally Qualified Health Clinic</strong></td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Academic Institution</strong></td>
<td>84%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Mobile Practices</strong></td>
<td>16%</td>
<td>84%</td>
</tr>
<tr>
<td><strong>Other, please specify</strong></td>
<td>67%</td>
<td>33%</td>
</tr>
</tbody>
</table>

N=195 DENTISTS, N=100 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 6 Appendices E & F)
Data compiled by Michigan Department of Community Health

As asked to indicate oral health care resources for the vulnerable elderly in their area, 85% of responding dentists and 80% of responding hygienists indicated private practices. Percentages of respondents indicating other resources are displayed in Table 9

Table 9: Resources that Currently Exist in the Dentists’ Area that Provide Oral Health Care to Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Resources (Select All)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DENTISTS</td>
</tr>
<tr>
<td>Private Practices</td>
<td>85</td>
</tr>
<tr>
<td>Hospital</td>
<td>27</td>
</tr>
<tr>
<td>Local public health clinic/ Federally Qualified Health Clinic</td>
<td>26</td>
</tr>
<tr>
<td>Academic Institution</td>
<td>25</td>
</tr>
<tr>
<td>Unknown</td>
<td>23</td>
</tr>
<tr>
<td>Mobile Practices</td>
<td>22</td>
</tr>
<tr>
<td>*Other, please specify</td>
<td>2</td>
</tr>
</tbody>
</table>

N=199 DENTISTS, N=97 HYGIENISTS
*Category created from grouping similar ‘Other’ specify responses.
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 29 Appendices E & F)
Data compiled by Michigan Department of Community Health

When asked if their office setting was accessible to persons with disabilities only 8 dentists (4%) and 5 hygienists (5%) responded that their office settings were not (Question 24 Appendices E & F).
PROVIDER COMFORT LEVEL AND TRAINING

Asked about their comfort level in treating vulnerable elderly patients, most dentists and hygienists were ‘very comfortable’ or ‘somewhat comfortable’ as seen in Table 10.

Table 10: Comfort Level Treating Vulnerable Elderly Patients (Percentage (number) of responses)

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Percent (n)</th>
<th>DENTISTS</th>
<th>HYGIENISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very comfortable</td>
<td></td>
<td>51 (101)</td>
<td>65 (64)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td></td>
<td>42 (83)</td>
<td>31 (30)</td>
</tr>
<tr>
<td>Somewhat uncomfortable</td>
<td></td>
<td>7 (13)</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td></td>
<td>1 (1)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

N=198 DENTISTS, N=98 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 12 Appendices E & F)
Data compiled by Michigan Department of Community Health

Most dentists and hygienists reported feeling comfortable treating patients with late stage dementia and complex medical issues (Table 11), though a significant number are uncomfortable treating these patients. A greater percentage of hygienists than dentists reported feeling comfortable treating these patient groups.

Table 11: Comfort in Treating Vulnerable Elderly Patients With Late Stage Dementia and Complex Medical Issues

<table>
<thead>
<tr>
<th>Medical Condition</th>
<th>Percent (%)</th>
<th>DENTISTS</th>
<th>HYGIENISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late stage dementia</td>
<td></td>
<td>64 (125)</td>
<td>84 (82)</td>
</tr>
<tr>
<td>Complex medical issues</td>
<td></td>
<td>72 (139)</td>
<td>82 (80)</td>
</tr>
</tbody>
</table>

Late State Dementia N=196 DENTISTS, N=98 HYGIENISTS
Complex Medical Issues N=192 DENTISTS, N=98 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 13 Appendices E & F)
Data compiled by Michigan Department of Community Health
Of those responding, 47% of dentists and 58% of hygienists reported having formal or clinical didactic training in the care of vulnerable elderly patients (Question 28a Appendices E & F). Responding to a specific question about didactic continuing education classes in the past 3 years on treating vulnerable elderly patients, about two-fifths (39%) of dentists and 47% of hygienists reported taking such courses (Table 12). Dentists who had taken didactic continuing education courses had a median of 6 hours of didactic training in the past three years, while hygienists had a median of 4 hours. A small percentage of dentists (3%) and hygienists (2%) had taken hands-on courses on treating vulnerable elderly patients in the past three years.

Table 12: Reported Attendance of Didactic and Hands-On Continuing Education Courses on Treating Vulnerable Elderly Patients in the Past Three Years (Percent and Number of Responses)

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Percent (%)</th>
<th>DENTISTS</th>
<th>HYGIENISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didactic (lecture) course</td>
<td>39 (75)</td>
<td>47 (46)</td>
<td></td>
</tr>
<tr>
<td>Hands-on (clinical) course</td>
<td>3 (5)</td>
<td>2 (2)</td>
<td></td>
</tr>
</tbody>
</table>

N=194 DENTISTS, N=98 HYGIENISTS
N=181 DENTISTS, N=89 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 14 Appendices E & F)
Data compiled by Michigan Department of Community Health

Asked about different types of dental services that dentists provided to vulnerable elderly patients, a fairly full range of services was indicated, that would likely be similar to what is provided to all patients (Table 13). Hygienists responded similarly with high frequency to most types of procedures (Table 14).

Table 13: Percent of Dentists Providing Preventive Services to Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Services (Select All)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic and preventive</td>
<td>96</td>
</tr>
<tr>
<td>Restorative</td>
<td>94</td>
</tr>
<tr>
<td>Emergency services</td>
<td>94</td>
</tr>
<tr>
<td>Oral cancer examinations</td>
<td>93</td>
</tr>
<tr>
<td>Removable prosthodontics</td>
<td>92</td>
</tr>
<tr>
<td>Fixed prosthodontics</td>
<td>80</td>
</tr>
<tr>
<td>Periodontal</td>
<td>73</td>
</tr>
<tr>
<td>Oral surgery</td>
<td>73</td>
</tr>
<tr>
<td>Esthetic reconstruction</td>
<td>61</td>
</tr>
<tr>
<td>Implants</td>
<td>34</td>
</tr>
<tr>
<td>Tobacco Cessation</td>
<td>31</td>
</tr>
</tbody>
</table>

N=199 DENTISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 19 Appendix E)
Data compiled by Michigan Department of Community Health
Table 14: Percent of Hygienists Providing Preventive Services to Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Services (Select All)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prophylaxis</td>
<td>99</td>
</tr>
<tr>
<td>Oral cancer screening</td>
<td>99</td>
</tr>
<tr>
<td>Prosthetic appliance cleaning</td>
<td>97</td>
</tr>
<tr>
<td>Xerostomia management</td>
<td>88</td>
</tr>
<tr>
<td>Caries risk assessment &amp; home care</td>
<td>87</td>
</tr>
<tr>
<td>Fluorides</td>
<td>82</td>
</tr>
<tr>
<td>Education &amp; train caregivers</td>
<td>71</td>
</tr>
<tr>
<td>Tobacco cessation</td>
<td>51</td>
</tr>
</tbody>
</table>

N=93 HYGIENISTS
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 19 Appendix F)
Data compiled by Michigan Department of Community Health

Dentists and hygienists were asked to indicate if they would like more information on nine areas related to treatment of vulnerable elderly patients. The percentage of respondents indicating interest in each area is displayed in Table 15. The most commonly indicated area for dentists and hygienists was “managing patients with complex medical histories”, while hygienists also indicated “working with caregivers” with nearly the same frequency.

Table 15: Percent of Respondents Indicating Interest in More Information on Areas Related to Oral Care for Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Areas of Treatment (Select All)</th>
<th>Percent (%)</th>
<th>DENTISTS</th>
<th>HYGIENISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing patients with complex medical histories</td>
<td>68</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Managing xerostomia</td>
<td>58</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Managing caries</td>
<td>56</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Managing patients living with dementia</td>
<td>53</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Home care regimens for those with functional impairments</td>
<td>44</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Working with caregivers</td>
<td>43</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Home care regimens for those with mental impairment</td>
<td>39</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Reimbursement (Insurance/Medicaid)</td>
<td>24</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Portable equipment</td>
<td>16</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>*Other, please specify</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

N=161 DENTISTS, N=95 HYGIENISTS
*Category created from grouping similar ‘Other’ specify responses.
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 15 Appendices E & F)
Data compiled by Michigan Department of Community Health
PROMOTION TO VULNERABLE ELDERLY PATIENTS

Most dentists and hygienists do not actively promote their practices to vulnerable elderly patients. Only 15% of dentists and 18% of hygienists reported that they do actively promote their practices. (Question 16a Appendices E & F). Of those responding that they do actively promote their practices, the percentages of respondents indicating different methods of promotion are displayed in Table 16. For dentists, the most common response was advertising at health fairs (41%), while the most common response for hygienists was advertising in media targeted to seniors.

Table 16: Methods Used to Promote Practices to Vulnerable Elderly Patients

<table>
<thead>
<tr>
<th>Method (Select All)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health fairs</td>
<td>41</td>
</tr>
<tr>
<td>*Other, please specify</td>
<td>41</td>
</tr>
<tr>
<td>Advertise in media targeted to seniors</td>
<td>31</td>
</tr>
<tr>
<td>Speak at senior centers</td>
<td>28</td>
</tr>
</tbody>
</table>

N=29 DENTISTS, N=15 HYGIENISTS

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 16b Appendices E & F)
Data compiled by Michigan Department of Community Health

About three fourths of dentists and hygienists did not provide dental services outside of their offices for vulnerable elderly patients (Figure 10).

Figure 10: Provision of Dental Services for Vulnerable Elderly Patients Outside of Dentists’ Offices

DENTISTS

<table>
<thead>
<tr>
<th>Provided dental services at locations outside of office</th>
<th>Did not provide dental services outside of office</th>
</tr>
</thead>
<tbody>
<tr>
<td>27%</td>
<td>73%</td>
</tr>
</tbody>
</table>

HYGIENISTS

<table>
<thead>
<tr>
<th>Provided dental services at locations outside of office</th>
<th>Did not provide dental services outside of office</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>76%</td>
</tr>
</tbody>
</table>

N=195 DENTISTS, N=96 HYGIENISTS

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 17a Appendices E & F)
Data compiled by Michigan Department of Community Health
Of those who did provide dental services outside of their offices, only 15% of dentists and 9% of hygienists reported having a written contract with the facilities where they provided care (Question 17b Appendices E & F). Those who provide dental services for this population outside their clinic tended not to use portable equipment at facilities to provide care (Figure 11). Most of the small number of respondents reporting using portable equipment indicated that they own the portable equipment they use (Question 17d Appendices E & F).

Figure 11: Percent of Dentists and Hygienists Reporting Use of Portable Equipment at Facilities Outside of Their Offices to Provide Care for Vulnerable Elderly Patients

N=115
Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 17c Appendices E & F)
Data compiled by Michigan Department of Community Health
Finally, dentists and hygienists were asked about their interest in a series of activities to enhance oral health care for the vulnerable elderly. The activities and percentages of dentists and hygienists indicating interest are shown in Table 17. The most common area of interest for dentists was accepting referrals to their practice. High interest was also indicated by dentists in working with nursing homes and assisted living facilities to provide care at their office. The areas of greatest interest to hygienists both related to nursing homes and assisted living facilities. Hygienists indicated high interest in working with nursing homes and assisted living facilities to provide oral health education, and in collaborating with dentists and hygienists to provide care on site.

Table 17: Percent of Dental Professionals Indicating Interest in Different Activities to Enhance the Oral Health Care of Vulnerable Elderly Patients in the Community.

<table>
<thead>
<tr>
<th>Activity (Select All)</th>
<th>Percentage (%)</th>
<th>DENTISTS</th>
<th>HYGIENISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepting referrals to your practice</td>
<td></td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>Working with nursing homes and assisted living facilities to provide care at your office</td>
<td></td>
<td>51</td>
<td>34</td>
</tr>
<tr>
<td>Working with nursing homes and assisted living facilities to provide oral health education</td>
<td></td>
<td>35</td>
<td>74</td>
</tr>
<tr>
<td>Working with your local dental/dental hygiene society to establish referral sources</td>
<td></td>
<td>34</td>
<td>40</td>
</tr>
<tr>
<td>Working with nursing homes and assisted living facilities to identify providers</td>
<td></td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>Working with your local dental/dental hygiene society to sponsor didactic and/or clinical training</td>
<td></td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>Working with nursing homes and assisted living facilities to provide care on site</td>
<td></td>
<td>22</td>
<td>61</td>
</tr>
<tr>
<td>Collaborating with a dentist/dental hygienists in nursing homes and assisted living facilities</td>
<td></td>
<td>19</td>
<td>60</td>
</tr>
<tr>
<td>*Other, please specify</td>
<td></td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

N=134 DENTISTS, N=85 HYGIENISTS

*Category created from grouping similar ‘Other’ specify responses.

Source: 2009 Oral Health Care of Vulnerable Elderly Patients Survey of Dentists and Dental Hygienists (Question 30 Appendices E & F)

Data compiled by Michigan Department of Community Health
Summary:

Out of 6,453 dentists and 8,975 hygienists in the state of Michigan, this survey was completed by only 210 dentists and 109 hygienists who identified themselves as currently providing care to vulnerable elderly patients. This is by no means a true representation of all dental professionals in the entire state but merely a select few that responded.

The interpretation of a “vulnerable elderly person” may have been misinterpreted by many respondents to mean all of those over age 65. The definition was stated at the beginning of the survey: “Vulnerable Elderly Patients are patients over age 65 that have any or all of the following: limited mobility, limited resources, or complex health status”.

While most of the responding dentists and hygienists did see vulnerable elderly patients, few made that population the focus of their practices. About half of the respondents indicated this group makes up 5% or less of their total patients (49% of dentists; 43% of hygienists; Figure 2).

Many aging adults reside in assisted living facilities, and nursing homes. The vulnerable elderly often have difficulty finding appropriate transportation to a dental office for oral healthcare. Forty one percent of dentists and 36% of hygienists reported that they referred their vulnerable elderly patients to transportation services (Table 6). Of the respondents, 96% of dentists and 85% of hygienists work in solo or group private practice (Tables 1 & 2). The majority of the dentists only saw patients who were able to come to their dental office. Only 20% of the dentists and 6% of the hygienists indicated that they provided services to patients in nursing homes or long term care facilities (Table 3). About 75% of dentists and hygienists did not provide services outside their offices (Figure 10). Only one third of dentists and 16% of hygienists indicated that they provide treatment to hospice patients (Figure 9).

Referrals for dental services for the vulnerable elderly come from physicians, healthcare providers, community service providers and other dentists (Figure 4). Patients may not perceive a need for care until they feel pain or find eating a challenge. Therefore, when the physician considers referring the patient for care, it is likely the problem has progressed into a much more serious stage of development.

Management of complex health histories requires consultation of physicians by dental professionals. Dentists indicated the need for consultation with physicians when providing care for the vulnerable elderly (Figure 6). “Managing patients with complex medical histories” (Table 15) was identified as an area dentists and hygienists were interested in obtaining more information. Increased collaboration between the dental and primary care providers is indicated for this population.

It was mentioned previously that dentists and hygienists (41%; 36%) referred their patients for transportation services (Table 6). However, less than 15% of practices refer patients to social services, financial counselors for health care, mental health workers, case management, and nutrition experts. Dental professionals that service this group could be an excellent connection to other needed care for this population, but may need education on making appropriate referrals.

A large portion of people in nursing or long term care facilities rely on Medicaid for dental services. When asked about what kind of insurance most of their vulnerable elderly patients had, the majority of dentists and hygienists responded that their patients had no coverage or private insurance rather than public assistance (Figures 7 & 8). Few dental providers accept Medicaid reimbursement for adults. Medicare only provides for very limited dental services associated with hospitalization.
Many dentist respondents reported giving discounted care to their vulnerable elderly patients (60%), with 42% reported giving free care. Most dental hygienists do not have the authority to make this practice decision therefore the percentages were lower (39% and 20% respectively; Table 7).

Donated Dental Services is a state funded program to provide listings of dental providers to persons with disabilities and the vulnerable elderly. Sixty eight percent of dentists and 21% of hygienists were familiar with the program. Among those familiar with the program, 48% of the responding dentists reported actually participating with the program, acting as a referral source for these populations. From the hygienists familiar with the program, 52% responded that their offices participated as well.

The PA 161 program is managed through the Michigan Department of Community Health and allows dental hygienists to practice under a collaborative agreement with dentists to serve unassigned and underserved populations. Of the respondents only 8% of dentists and 31% of hygienists knew about this program. The majority of both groups indicated that they would like to learn more about this program (67% of dentists; 85% of hygienists).

Almost half of the respondents felt that the vulnerable elderly had problems obtaining dental care with an additional 22% of dentists and 19% of hygienists indicating they really did not know. A quarter of the dentists and over a third of the hygienists responded that they were aware of vulnerable elderly patients that had dropped out of their practices due to access issues in the past two years.

The largest barriers to dental care for the vulnerable elderly, as perceived by the respondents, is the inability to pay for services (90% of dentists; 93% of hygienists) and the lack of providers that accept Medicaid (75% dentists; 99% hygienists; Table 8). Transportation remains a barrier, as well as lack of perceived need for care. Education regarding the cost savings of prevention to providers, caregivers, legislators and patients needs to be made in order for these barriers to be reduced.

The majority of the providers indicated that private practices were the main resource that provided dental care in their area. Hospitals, public health clinics, and academic institutions were also listed (Table 9). Twenty-two to twenty-four percent thought mobile practices were available in their area for this population, but we did not ask if this was sufficient for the need. Most felt their practices were accessible for persons with a disability, but different levels of disabilities were not addressed.

Over half of the dentists and hygienists felt their comfort level treating vulnerable elderly patients was “very comfortable” (Table 10). Most also indicated they felt comfortable treating persons with late stage dementia and complex medical issues (Table 11). Of those responding, 47% of dentists and 58% of hygienists reported having formal or clinical didactic training in the care of vulnerable elderly patients.

Responders were asked to indicate the services they provided to their vulnerable elderly patients. The majority provided a full range of services with the exception of implants and tobacco cessation (Table 13). When asked where they might refer their vulnerable elderly, providers indicated oral and maxillofacial surgeons, endodontists, and periodontists (Table 5). Likewise, hygienists provided preventive services such as prophylaxis, oral cancer screenings, appliance cleaning, xerostomia management, caries risk assessment and home care, and fluorides (Table 14). General dental offices should be able to address most of the treatment issues for this population.

“Managing patients with complex medical histories” (Table 15) was identified as an area dentists (68%) and hygienists (74%) were interested in obtaining more information. 73% of hygienists and only 44% of dentists indicated interest in “working with caregivers”. Forty-six percent of hygienists and only 16% of dentists indicated “portable equipment” as a topic of interest.
Only 23% of those who provided services outside of their offices used portable equipment which they usually owned (Figure 11). Of those who did provide dental services outside of their offices, only 15% of dentists and 9% of hygienists reported having a written contract with the facilities where they provided care. Utilizing PA161 hygienists as prevention specialists in the nursing and long term care facilities would be a key component to reducing access issues for this population. Educating and encouraging more on site care by dentists would be beneficial as well.

Most dentists and hygienists do not actively promote their practices to vulnerable elderly patients. Only 15% of dentists and 18% of hygienists reported that they do actively promote their practices. For dentists, the most common response was advertising at health fairs (41%), while the most common response for hygienists was advertising in media targeted to seniors (Table 16).

When asked to indicate interest in different activities to enhance oral health care of vulnerable elderly in their communities, the majority of dentists (84%) indicated taking referrals. This information was used to develop a directory for this population. See www.michigan.gov/oralhealth Vulnerable Elderly Directory. The hygienists were most interested in education for nursing homes or assisted living, working with these facilities to provide on site care, and collaborating with dental professionals in these facilities (Table 17).
Key Findings:

About half of the respondents indicated vulnerable elderly patients make up 5% or less of their total patient population (49% of dentists; 43% of hygienists).

The majority of the dentists only saw patients who were able to come to their dental office. Only 20% of the dentists and 6% of the hygienists indicated that they provided services to patients in nursing homes or long term care facilities.

70% of dentists and 59% of hygienists reported that those on Medicaid comprised 5% or less of the vulnerable elderly for whom they provided care.

The PA 161 program is managed through the Michigan Department of Community Health and allows dental hygienists to practice under a collaborative agreement with dentists to serve unassigned and underserved populations. Of the respondents only 8% of dentists and 31% of hygienists knew about Public Act 161. The majority of both groups indicated that they would like to learn more about this program (67% of dentists; 85% of hygienists).

The largest barriers to dental care for the vulnerable elderly, as perceived by the respondents, is the inability to pay for services (90% of dentists; 93% of hygienists), and the lack of providers that accept Medicaid (75% dentists; 99% hygienists).

When asked to indicate interest in different activities to enhance oral health care of vulnerable elderly in their communities, the majority of dentists (84%) indicated accepting referrals to their private practice. The hygienists were most interested in education for nursing homes or assisted living, working with these facilities to provide on-site care, and collaborating with dental professionals in these facilities.

Future Recommendations:

Most vulnerable elderly are not receiving regular dental care. Given the current size of the elderly population, the anticipated increase in the size of the elderly population, as well as in the increase in the number of teeth retained by this population, more providers are needed to provide care to the vulnerable elderly.

The current trend is for the elderly to stay in their homes. Models of dental care are needed for persons who are unable to leave their home, nursing facility, or assisted living facility.

Most vulnerable elderly on Medicaid are unable to obtain care. Models of dental care are needed for persons on Medicaid which would provide adequate compensation to dental providers.

The PA 161 program is a working model to provide oral health care to the vulnerable elderly. Education and program facilitation for dental providers is needed to expand oral health care services to the vulnerable elderly.

The information collected in this survey has been used to develop a directory of oral healthcare providers of the vulnerable elderly population in the state of Michigan. The Vulnerable Elderly Directory is located at: www.michigan.gov/oralhealth. This directory will need to be regularly updated.

Appendix A: Schools and Graduation Years for Respondents (Questions 26 & 27 Appendices E & F)
### Dentist Survey

<table>
<thead>
<tr>
<th>Institution</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marquette University</td>
<td>2</td>
</tr>
<tr>
<td>Marquette/ U of M</td>
<td>1</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1</td>
</tr>
<tr>
<td>Northwestern</td>
<td>2</td>
</tr>
<tr>
<td>Ohio State</td>
<td>1</td>
</tr>
<tr>
<td>Penn</td>
<td>1</td>
</tr>
<tr>
<td>Temple</td>
<td>1</td>
</tr>
<tr>
<td>U of Colorado</td>
<td>1</td>
</tr>
<tr>
<td>U of Detroit Mercy</td>
<td>65</td>
</tr>
<tr>
<td>U of Illinois</td>
<td>1</td>
</tr>
<tr>
<td>U of Illinois Chicago</td>
<td>1</td>
</tr>
<tr>
<td>U of Iowa</td>
<td>1</td>
</tr>
<tr>
<td>U of Michigan</td>
<td>111</td>
</tr>
<tr>
<td>U of Pittsburgh</td>
<td>1</td>
</tr>
<tr>
<td>Univ of North Carolina</td>
<td>1</td>
</tr>
<tr>
<td>Washington University</td>
<td>1</td>
</tr>
</tbody>
</table>

Graduation Year: range = 1952-2006, median = 1981

### Hygienist Survey

<table>
<thead>
<tr>
<th>Institution</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS. Mott Community College</td>
<td>5</td>
</tr>
<tr>
<td>Delta Comm College</td>
<td>9</td>
</tr>
<tr>
<td>Ferris State University</td>
<td>23</td>
</tr>
<tr>
<td>GRCC</td>
<td>4</td>
</tr>
<tr>
<td>Grand Rapids Comm College</td>
<td>7</td>
</tr>
<tr>
<td>KCC/ East Tennessee State University</td>
<td>1</td>
</tr>
<tr>
<td>Kalamazoo Valley Comm College</td>
<td>8</td>
</tr>
<tr>
<td>Kellogg CC</td>
<td>2</td>
</tr>
<tr>
<td>Lansing Comm College</td>
<td>5</td>
</tr>
<tr>
<td>Marquette University</td>
<td>1</td>
</tr>
<tr>
<td>Michigan State</td>
<td>1</td>
</tr>
<tr>
<td>Oakland Comm College</td>
<td>10</td>
</tr>
<tr>
<td>U of Cincinnatti</td>
<td>1</td>
</tr>
<tr>
<td>U of Detroit</td>
<td>6</td>
</tr>
<tr>
<td>U of Mich</td>
<td>18</td>
</tr>
<tr>
<td>U of New Mexico, Albud</td>
<td>1</td>
</tr>
<tr>
<td>U. of Rhode Island</td>
<td>1</td>
</tr>
<tr>
<td>UCSF</td>
<td>1</td>
</tr>
<tr>
<td>WCCC</td>
<td>3</td>
</tr>
<tr>
<td>WW. CC</td>
<td>1</td>
</tr>
<tr>
<td>Wayne County Community</td>
<td>1</td>
</tr>
</tbody>
</table>

Graduation Year: range = 1952-2007, median = 1984
Appendix B: Suggestions to Help Improve Oral Health Care for Michigan Vulnerable Elderly (Question 31 Appendices E & F)

<table>
<thead>
<tr>
<th>Dentist Survey</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Include dental importance in information to family members.</td>
<td>Better reimbursement so more dentists would participate</td>
</tr>
<tr>
<td>2. If family members don’t know, don’t care, or don’t value for themselves, then dental is out of sight, out of mind.</td>
<td>Clinics need to be established in retirement/assisted living facilities: too difficult for the truly vulnerable elderly to be transported to and from.</td>
</tr>
<tr>
<td>A dentist usually responds as a result of family or care giver - inform these individuals (nursing homes, hospice etc).</td>
<td>Discount senior fees at the dental schools</td>
</tr>
<tr>
<td>Better reimbursement so more dentists would participate</td>
<td>Don’t partner with MDA - ACP - more aligned with treatment of geriatric population.</td>
</tr>
<tr>
<td>Clinics need to be established in retirement/assisted living facilities: too difficult for the truly vulnerable elderly to be transported to and from.</td>
<td>Emphasize prevention of root caries; Develop education for patients; caretakers to reduce caries</td>
</tr>
<tr>
<td>Establish a list of providers especially portable dental services through the Michigan Dental Association.</td>
<td>Getting more practices involved in sharing the load/responsibilities</td>
</tr>
<tr>
<td>Government sponsored training and improve reimbursement to the point where costs are covered (We don't need to lose money helping.)</td>
<td>Help establish funding for special needs patients. Open up hospital access to patients with high risk medical conditions for dental care.</td>
</tr>
<tr>
<td>Help them obtain access to state funded clinics</td>
<td>Help them pay for their dental care without limitations</td>
</tr>
<tr>
<td>Help them pay for their dental care without limitations</td>
<td>I treated institutionized patients in over 100 facilities early in my career. Many institutions did not take oral health seriously and therefore did not facilitate our aid to patients. This was frustrating and detrimental to their care.</td>
</tr>
<tr>
<td>Help them pay for their dental care without limitations</td>
<td>Improve provider reimbursement through Medicaid.</td>
</tr>
<tr>
<td>Improve provider reimbursement through Medicaid.</td>
<td>Improve the Medicaid program: 1) Easier claims. 2) Reduce or eliminate return claims. 3) Get payment scheduled to proper levels.</td>
</tr>
<tr>
<td>In this area the patients homes and other providers expect care to be free. Reasonable reimbursement, payment, is the problem</td>
<td>Help establish funding for special needs patients. Open up hospital access to patients with high risk medical conditions for dental care.</td>
</tr>
<tr>
<td>Increase easy access to transportation.</td>
<td>Help them obtain access to state funded clinics</td>
</tr>
<tr>
<td>Increase mobile dental services with state funding for equipment/education</td>
<td>Help them pay for their dental care without limitations</td>
</tr>
<tr>
<td>Information via public service announcements</td>
<td>Improve provider reimbursement through Medicaid.</td>
</tr>
<tr>
<td>Make it financially feasible to care for patients.</td>
<td>Improve the Medicaid program: 1) Easier claims. 2) Reduce or eliminate return claims. 3) Get payment scheduled to proper levels.</td>
</tr>
<tr>
<td>Many elderly patients have money, but are unwilling to spend on health care.</td>
<td>More Funding!</td>
</tr>
<tr>
<td>More Funding!</td>
<td>Program to pay for necessary services patients won’t - these patients take more time can’t do for low fees</td>
</tr>
<tr>
<td>Provide appropriate funding for difficulties associated with elder care.</td>
<td>Reimburse Medicaid.</td>
</tr>
<tr>
<td>Reimburse Medicaid.</td>
<td>Reimburse Medicaid for adults.</td>
</tr>
<tr>
<td>State should stop cutting off adult Medicaid dental whenever they have a budget crisis. Dental emergencies in hospitals end up costing more.</td>
<td>Too many dentists are replacing serviceable amalgam fillings with composite resin or other inferior restorations like cerec, all porcelain bridges, etc. This allows dentists to keep up their production and otherwise stay in larger metro areas leaving rural areas, like ours, underserved. Additionally many pharmaceuticals cause drymouth, which leaves elderly patients highly susceptible to caries. We are overwhelmed with rampant caries in many of these patients.</td>
</tr>
<tr>
<td>Train health care workers to assist with daily care in institutional setting.</td>
<td>TV ads referring the vulnerable aging population to dentists qualified to provide these services and taxing high income population to provide the cost</td>
</tr>
<tr>
<td>Train LPN and nurses assistants to assist with daily care.</td>
<td></td>
</tr>
</tbody>
</table>
| Training in school and continuing education funding for transportation and treatment. Funding to set up a dental clinic in facilities where many live. Proper funding not "under" funding. Many dentists would treat more of this population but due to lack of reimbursement and extra time involved in managing this group, one only has limited time and resources to consistently treat this population group. |}

26
**Hygienist Survey**

1. Allow RDH to practice without supervision of a DDS. 2. Transportation to and from.

1. Encourage implementation of Medicaid providership authority to RDH in PA 161 programs. 2. Find ways PA 161 can utilize an assistant. 3. Examine "Points of Light" structure to encourage DDS in PA 161 programs.

**A chair in the nursing homes so volunteers can help**

- Assist with transportation issues.
- Better easier reimbursement for patient care. People that have to pay for themselves seem to listen better to care instructions given.
- Come up with a program that will actually pay the provider what the services are actually worth. And pay providers sooner than 6 months after treatment date. Many people suffer due to no money for services needed.
- Don't allow socialized Healthcare/Medicine bill to be passed.
- Elderly patients have very limited financial resources - products need to be free or at a very discounted rate for them to be able to purchase.
- Encourage care and opinions to be aware of good adequate oral health for their vulnerable elderly friends, family, etc.
- Publicity from current dental offices would help - we all need to be more giving.

**Get AARP involved.**

- Giving RDH access to practice and be reimbursed by insurance. PA 161 allows us to go into the community without dentist supervision, but a lot of dentists don't sign off for this. I would love to go into the community to provide dental services for the underserved without so many stipulations.
- Improve and expand PA 161 programs.
- Increase Medicaid providers other than new clinics.
- Information needs to be more accessible - ie nursing homes.

**Insurance reimbursement directly to hygienists**

- Loosen the laws so hygienists can work in nursing homes without a DDS - Most DDSs do NOT want to visit a nursing home or senior facilities.
- Loosening regulations on patients in nursing care facilities that are unable to get to a dental facility, who have a dentist being able to receive care from a visiting RDH.
- Medicaid has to pay more on its part for dentists and RDH. Providers

**Must bring back Medicaid Dental Care for adults**

- Reinstates Medicaid benefits. Better education of caregivers. Nursing Homes need to assist more with care to patients and need more aides to provide care. Send people with patients that know what is going with patient.
- Require CNAs to provide proper oral care on a daily basis. Require oral exams at least yearly for all residents.
- State funding of their care. Restoring Medicaid dental benefits to adults.

**State wide education with Media Attention**

- Transportation and expense seem to be the largest obstacles
Appendix C: Dentist and Hygienist ‘Other’ Responses

Question 2/Table 4: If your office or practice setting does not provide oral health care to vulnerable elderly patients, why not?
- Hygienist: college setting
- Hygienist: licensed but not clinical (subbing)

Question 5/Table 3: In what settings do you treat vulnerable elderly patients?
- Dentist: Volunteer clinic
- Dentist: UM School of Dentistry
- Hygienist: Michigan Community Dental Clinics
- Hygienist: University of Michigan hospital

Question 11a: In your community, do vulnerable elderly have a problem obtaining dental care?
Question 11b/Table 8: If yes, what are their barriers to dental care?
- Dentist: Rely on family members

Question 15/Table 15: On which of the following areas of treatment related to vulnerable elderly patients would you like more information?
- Dentist: public trans

Question 16a: Do you actively promote your practice to vulnerable elderly seniors?
Question 16b/Table 16: If yes, how do you promote your practice?
- Dentist: community paper
- Dentist/Hygienist: word of mouth
- Dentist: adult foster home
- Dentist: general marketing
- Dentist: webpage
- Dentist: word of mouth
- Dentist: referrals of pts
- Hygienist: current pts

Question 23a/Table 1: What is your primary practice setting?
- Dentist: mobile
- Dentist: Medicaid clinic

Question 24a/Table 2: What is your primary practice setting?
- Hygienist: Perio specialty
- Hygienist: consulting firm
Question 28a: Have you received any formal didactic and/or clinical training in the care of vulnerable elderly patients?

Question 28b/??: If yes, specify the setting?
- Dentist: GPR program
- Dentist: HFA hospital
- Dentist: state mental health facility
- Dentist: initiated tx at numerous facilities
- Hygienist: worked with mobile DDS
- Hygienist: reading periodicals
- Hygienist: U of M 1980s 4hr course
- Hygienist: worked for traveling central co; went to nursing

Question 29/Table 9: What resources currently exist in your area to provide oral health care of vulnerable elderly patients? (Circle all that apply)
- Dentist: Native American clinics
- Dentist: VINA dental Clinic

Question 30/Table 17: Are you interested in participating in any of the following activities to enhance the oral health care of vulnerable elderly patients in your area?
- Dentist: carefree dental clinic
- Hygienist: hospital
- Hygienist: remove PA161 barriers
Appendix D: Vulnerable Elderly Provider Initial Survey

The goal of this correspondence is to identify providers who are currently meeting or who are interested in meeting the challenges of caring for frail and functionally dependent elderly and adults with developmental disabilities. These groups have chronic, physical, medical, or cognitive problems resulting in dependence on others and/or institutional residence.

The information collected will be used solely by the Michigan Oral Health Coalition. Please note that your response to this survey will NOT result in your practice being added to a referral list or your practice receiving multiple mailings. All information you provide will be kept confidential. A more detailed survey requiring 15-20 minutes of your time will be sent to you if you are willing to further participate in this effort.

Thank you for your consideration. - The Michigan Oral Health Coalition

1. I currently provide oral health care in the state of Michigan to:
   - Frail and functionally dependent elderly
   - Adults with developmental disabilities/intellectual impairment

2. I do not render treatment to special-needs patients. I am interested in providing oral health care in the state of Michigan to:
   - Frail and functionally dependent elderly
   - Adults with developmental disabilities/intellectual impairment

3. I currently receive requests but I am unable to provide oral health care in the state of Michigan to:
   - Frail and functionally dependent elderly
   - Adults with developmental disabilities/intellectual impairment

Contact Information

Name:__________________________________________________________________________

Specialty: _______________________________________________________________________

Address ( Office / Home ):___________________________________________________________

______________________________________________________________________________

City:______________________________________ State:__________  Zip Code:______________

Phone Number:___________________________________________________________________

E-mail Address:___________________________________________________________________

Survey Participation:
   - I am willing to participate in a future survey.
   - I am not willing to participate in a future survey.

Preferred method of contact:
   - Mail
   - Phone
   - E-mail
   - Web-based survey
Appendix E: Vulnerable Elderly Follow-up Survey (Dentists)

Michigan Oral Health Coalition/Michigan Geriatric Dentistry Coalition
Dentists in the State of Michigan

Oral Health Care of Vulnerable Elderly Patients Survey

FOLLOW UP FROM PREVIOUS SURVEY

Vulnerable Elderly Patients are patients over age 65 that have any or all of the following: limited mobility, limited resources, or complex health status.

Please answer the following questions only for vulnerable elderly patients as defined above.

Please answer all questions from your perspective as an individual practitioner. Do not include in your responses the practice of others with whom you work (i.e., other providers [DOS/RDH] in a group practice or clinic). Please provide a copy of this survey or website link to other providers that would be interested in completing it.

Please answer all questions by circling the number corresponding to the most appropriate response, except where a fill in the blank response is requested. PLEASE PRINT LEGIBLY.

1. Do you provide oral health care to vulnerable elderly patients (as defined above)?
   - Yes (Skip to Question 3.) .................................................. 1
   - No .................................................................................. 2

2. If you do not provide oral health care to vulnerable elderly patients, why not? (Circle all that apply.)
   1. Prefer not to treat medically complex patients. 1
   2. Prefer not to treat them as I lack knowledge about treating such patients. 2
   3. Practice is too busy to accommodate their needs. ..................................................... 3
   4. My practice is limited to children. ............................................................... 4
   5. My practice is not accessible to people with disabilities................................. 5
   6. They have difficulty arranging transportation to my office. .......................................... 6
   7. No vulnerable elderly patients in my area. .................................................... 7
   8. Don't know. ................................................................................. 8
   9. Other, please specify ____________________________

3. To whom do you refer vulnerable elderly patients? (Circle all that apply.)
   1. Dentists with experience in geriatric practice... 1
   2. Oral and maxillofacial surgeons .................. 2
   3. Endodontists .............................................................. 3
   4. Periodontists ............................................................ 4
   5. Prosthodontists .......................................................... 5
   6. Dental schools ......................................................... 6

7. Dental hygiene schools ........................................... 7
8. Local public health clinics ............................... 8
9. Hospitals ................................................................. 9
10. No referrals ......................................................... 10

If you do not treat vulnerable elderly patients, please skip to question 21a.

4. Approximately what percentage of all your patients are vulnerable elderly? (Circle one.)
   - 0-5% 6-25% 26-50% 51-75% 76-100%

5. In what settings do you treat vulnerable elderly patients? (Circle all that apply.)
   1. My office................................................................. 1
   2. Nursing home/long term care facility........... 2
   3. Assisted living facility ........................................... 3
   4. Senior housing .................................................... 4
   5. Senior centers ...................................................... 5
   6. Patients' home ..................................................... 6
   7. Mobile or portable practice.......................... 7
   8. Other, please specify ________________________

6. Do you provide treatment to hospice patients?
   - Yes ................................................................................. 1
   - No .................................................................................. 2

7. What percentage of your vulnerable elderly patients are (Total percentages for 7a, 7b, & 7c should equal 100%)
   a. covered by a private insurance program that pays or partially pays for their dental care? (Circle one.)
      - 0-5% 6-25% 26-50% 51-75% 76-100%
   b. covered by a public assistance program that pays or partially pays for their dental care? (Circle one.)
      - 0-5% 6-25% 26-50% 51-75% 76-100%
   c. not covered by an insurance program? (Circle one.)
      - 0-5% 6-25% 26-50% 51-75% 76-100%

Dentists Oral Health Care of Vulnerable Elderly Patients Survey
8a. Do you provide charitable care to vulnerable elderly patients? (Circle all that apply.)
1. Yes, free care .................................................. 1
2. Yes, discounted care ........................................... 2
3. No (Skip to Question 9.) ...................................... 3

8b. If yes, for what percentage of your vulnerable elderly patients do you provide:
1. discounted care? (Circle one.)
   0-5%  6-25%  26-50%  51-75%  76-100%
2. free care? (Circle one.)
   0-5%  6-25%  26-50%  51-75%  76-100%

9. Approximately what percentage of your vulnerable elderly patients require you to consult with:
1. dental specialists? (Circle one.)
   0-5%  6-25%  26-50%  51-75%  76-100%
2. physicians? (Circle one.)
   0-5%  6-25%  26-50%  51-75%  76-100%

10. Do you refer your vulnerable elderly patients to:
    Yes  No
1. dieticians? .................................................. 1  2
2. social services? ............................................. 1  2
3. case management? ........................................... 1  2
4. transportation services? ................................. 1  2
5. financial counselors for medical or dental care?  .... 1  2
6. mental health workers for depression? ................ 1  2

11a. In your community, do vulnerable elderly have a problem obtaining dental care? (Circle one)
1. Yes .............................................................. 1
2. No (Skip to Question 12.) ................................. 2
3. Don’t know (Skip to Question 12.) ...................... 3

11b. If yes, what are their barriers to dental care? (Circle all that apply.)
1. Lack of perceived need ..................................... 1
2. Not knowing where to go .................................. 2
3. Lack of transportation to the dentist’s office ....... 3
4. Lack of trained providers ................................. 4

5. Unable to pay for services ............................... 5
6. Inadequate financial support for care from local, state and/or federal programs .................. 6
7. Lack of providers willing to take Medicaid ...... 7
8. No equipment/space available for care in their housing facility ....................................... 8
9. Other, please specify ....................................

12. How comfortable do you feel treating vulnerable elderly patients? (Circle one.)
a. Very comfortable ........................................... 1
b. Somewhat comfortable ................................. 2
c. Somewhat uncomfortable .............................. 3
d. Not at all comfortable .................................. 4

13. Do you feel comfortable treating vulnerable elderly patients with the following conditions?
Yes  No
1. Late stage dementia ...................................... 1  2
2. Complex medical issues .................................. 1  2

14. In the past three years, have you attended CE courses which focus on treating vulnerable elderly patients?
Yes  No
1. Didactic (lecture) ........................................... 1  2
   If yes, how many hours? .................................
2. Hands-on (clinical) ......................................... 1  2
   If yes, how many hours? .................................

15. On which of the following areas of treatment related to vulnerable elderly patients would you like more information? (Circle all that apply.)
1. Managing patients with complex medical histories ......................................................... 1
2. Managing xerostomia ................................... 2
3. Managing caries .......................................... 3
4. Home care regimens for those with functional impairments .................................... 4
5. Home care regimens for those with mental impairment .............................................. 5
6. Managing patients living with dementia ...... 6
7. Working with caregivers ............................... 7
8. Portable equipment ...................................... 8
9. Reimbursement (Insurance/Medicaid) ............ 9
10. Other, please specify ....................................

16a. Do you actively promote your practice to vulnerable elderly seniors?
Yes .............................................................. 1
No (Skip to Question 17a.) ................................. 2

2

Denists Oral Health Care of Vulnerable Elderly Patients Survey
16b. If yes, how do you promote your practice? (Circle all that apply.)
   1. Speak at senior centers ........................................... 1
   2. Advertise in media targeted to seniors ......................... 2
   3. Health fairs .......................................................... 3
   4. Other, please specify ................................................

17a. Do you provide dental services for vulnerable elderly patients at locations outside your office?
   Yes ................................................................. 1
   No (Skip to Question 18.) ............................................ 2

17b. Do you have a written contract with any of these facilities?
   Yes ................................................................. 1
   No ......................................................................... 2

17c. Do you use portable equipment to provide care?
   Yes ................................................................. 1
   No (Skip to Question 18.) ............................................ 2

17d. If yes, do you own or borrow the equipment?
   Own ................................................................. 1
   Borrow .............................................................. 2

18. Which of the following refer vulnerable elderly patients to your practice? (Circle all that apply.)
   1. Community service providers ........................................ 1
   2. Other dentists ....................................................... 2
   3. Physicians or other health care providers ....................... 3

19. Which of the following services do you provide to vulnerable elderly patients?
   Yes No
   1. Diagnostic and preventive ......................................... 1 2
   2. Restorative .......................................................... 1 2
   3. Esthetic reconstruction .............................................. 1 2
   4. Fixed prosthodontics ............................................... 1 2
   5. Removable prosthodontics ........................................ 1 2
   6. Implants ............................................................. 1 2
   7. Oral surgery ........................................................ 1 2
   8. Periodontal .......................................................... 1 2
   9. Emergency services ............................................... 1 2
  10. Oral cancer examinations .......................................... 1 2
  11. Tobacco Cessation .................................................. 1 2

20. Are you aware of any vulnerable elderly patients within your practice that have "dropped out" because of access issues within the last 2 years?

21a. Are you familiar with the Michigan Donated Dental Services program (DDS)?
   Yes ................................................................. 1
   No ......................................................................... 2

21b. Do you participate in the Michigan Donated Dental Services program (DDS)?
   Yes ................................................................. 1
   No (Skip to Question 22.) ............................................ 2

22a. Are you familiar with the State of Michigan Public Act 161 or collaborative practice?
   Yes ................................................................. 1
   No ......................................................................... 2

22b. Would you like to learn more about the State of Michigan Public Act 161 or collaborative practice in the care of vulnerable elderly patients?
   Yes ................................................................. 1
   No ......................................................................... 2

23a. What is your primary practice setting? (Circle one.)
   a. Solo Private Practice .............................................. 1
   b. Group Private Practice .......................................... 2
   c. Hospital .................................................................. 3
   d. Academic Institution ............................................... 4
   e. Local public health clinic/FQHC ................................ 5
   f. Other, please specify .............................................

23b. What is the number of providers in your primary practice setting?
   1. # of dentists ....................................................
   2. # of hygienists ....................................................

24. Is your office accessible to persons with disabilities?
   Yes ................................................................. 1
   No ......................................................................... 2

Dentists Oral Health Care of Vulnerable Elderly Patients Survey

33
25. Size of primary practice setting community: (Circle one.)
   a. less than 1,500........................................ 1
   b. 1,500-5,000........................................ 2
   c. 5,001-10,000....................................... 3
   d. 10,001-30,000..................................... 4
   e. 30,001-75,000..................................... 5
   f. 75,001+............................................... 6

26. Name of dental school attended:

27. Year of graduation:___________________________

28a. Have you received any formal didactic and/or clinical training in the care of vulnerable elderly patients? (Circle all that apply.)
   1. Yes (Didactic)......................................... 1
   2. Yes (Clinical)......................................... 2
   3. No (Skip to Question 29)............................. 3

28b. If yes, specify the setting? (Circle all that apply.)

<table>
<thead>
<tr>
<th>Didactic</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dental school................................. 1</td>
<td>2</td>
</tr>
<tr>
<td>2. Residency (GPR/AEGD).......................... 1</td>
<td>2</td>
</tr>
<tr>
<td>3. Specialty program............................. 1</td>
<td>2</td>
</tr>
<tr>
<td>4. Continuing education.......................... 1</td>
<td>2</td>
</tr>
<tr>
<td>5. Other, please specify______________________</td>
<td></td>
</tr>
</tbody>
</table>

29. What resources currently exist in your area to provide oral health care of vulnerable elderly patients? (Circle all that apply.)

   1. Private Practices.................................. 1
   2. Mobile Practices.................................. 2
   3. Hospital........................................... 3
   4. Academic Institution............................. 4
   5. Local public health clinic/Federally Qualified Health Clinic........................................ 5
   6. Unknown............................................. 6
   7. Other, please specify_______________________

30. Are you interested in participating in any of the following activities to enhance the oral health care of vulnerable elderly patients in your area? (Circle all that apply.)

   1. Accepting referrals to your practice............ 1
   2. Working with your local dental/dental hygiene society to establish referral sources........... 2
   3. Working with your local dental/dental hygiene society to sponsor didactic and/or clinical training ...................................................... 3
   4. Working with nursing homes and assisted living facilities to identify providers ............ 4
   5. Working with nursing homes and assisted living facilities to provide oral health education..... 5
   6. Working with nursing homes and assisted living facilities to provide care at your office ...... 6
   7. Working with nursing homes and assisted living facilities to provide care on site ........... 7
   8. Collaborating with a dental hygienist in nursing homes and assisted living facilities .......... 8
   9. Other, please specify_______________________

31. Do you have any suggestions that would help improve the oral health care received by vulnerable elderly patients in the State of Michigan?

Please provide your contact information:

Name:___________________________
Specialty:_____________________
Address (Office / Home):___________________________
City:___________________________
State:______________Zip Code:________
Phone Number:_________________
E-mail Address:_________________

Thank you for completing this survey. Please return the questionnaire by folding and placing tape as indicated. Drop it in the mail; postage is already paid.

Please give the following link to other providers that would be interested in completing this survey online.

Dentists Oral Health Care of Vulnerable Elderly Patients Survey
Appendix F: Vulnerable Elderly Follow-up Survey (Hygienists)

Michigan Oral Health Coalition/Coalition for Oral Health for the Aging
Registered Dental Hygienists in the State of Michigan
Follow up Survey from the 2008 Dental Professionals in the State of Michigan
Involvement in the Treatment of Special Care Patients Survey

Oral Health Care of Vulnerable Elderly Patients Survey

Vulnerable Elderly Patients are patients over age 65 that have any or all of the following: limited mobility, limited resources, or complex health status.

Please answer the following questions only for vulnerable elderly patients as defined above.

Please answer all questions from your perspective as an INDIVIDUAL practitioner. DO NOT include in your responses the practice of others with whom you work (i.e., other providers [DDS/RDH] in a group practice or clinic). Please provide a copy of this survey or website link (http://tinyurl.com/cqyz52) to other providers that would be interested in completing it.

Please answer all questions by circling the number corresponding to the most appropriate response, except where a fill in the blank response is requested. PLEASE PRINT LEGIBLY.

1. Do you provide oral health care to vulnerable elderly patients (as defined above)?
   1. Yes (Skip to Question 3)................................. 1
   2. No ......................................................... 2

2. If your office or practice setting does not provide oral health care to vulnerable elderly patients, why not? (Circle all that apply.)
   1. Prefer not to treat medically complex patients. ............... 1
   2. Prefer not to treat them as we lack knowledge about treating such patients. ................................. 2
   3. Practice is too busy to accommodate their needs ................................................................. 3
   4. The practice is limited to children ......................... 4
   5. The practice is not accessible to people with disabilities ......................................................... 5
   6. They have difficulty arranging transportation to our office.................................................... 6
   7. No vulnerable elderly patients in our area ......... 7
   8. Don't know..................................................... 8
   9. Other, please specify ___________________________  

3. To whom do you refer vulnerable elderly patients? (Circle all that apply.)
   1. Dentists with experience in geriatric practice... 1
   2. Oral and maxillofacial surgeons....................... 2
   3. Endodontists.................................................. 3
   4. Periodontists.................................................. 4
   5. Prosthodontists............................................... 5

4. Approximately what percentage of all your patients are vulnerable elderly? (Circle one.)
   1. 0-5%  
   2. 6-25%  
   3. 26-50%  
   4. 51-75%  
   5. 76-100%  

5. In what settings do you treat vulnerable elderly patients? (Circle all that apply.)
   1. My office.................................................... 1
   2. Nursing home/long term care facility................. 2
   3. Assisted living facility..................................... 3
   4. Senior housing............................................. 4
   5. Senior centers............................................. 5
   6. Patients' home............................................. 6
   7. Mobile or portable practice............................ 7
   8. Other, please specify ___________________________

6. Do you provide treatment to hospice patients?
   1. Yes .............................................................. 1
   2. No .................................................................. 2

7. What percentage of your vulnerable elderly patients are:
   (Total percentages for 7a, 7b, &7c should equal 100%.)
   a. covered by a private insurance program that pays or partially pays for their dental care? (Circle one.)
      1. 0-5%  
      2. 6-25%  
      3. 26-50%  
      4. 51-75%  
      5. 76-100%  
   b. covered by a public assistance program that pays or partially pays for their dental care? (Circle one.)
      1. 0-5%  
      2. 6-25%  
      3. 26-50%  
      4. 51-75%  
      5. 76-100%  
   c. not covered by an insurance program? (Circle one.)
      1. 0-5%  
      2. 6-25%  
      3. 26-50%  
      4. 51-75%  
      5. 76-100%

RDH Oral Health Care of Vulnerable Elderly Patients Survey
8a. Do you provide charitable care to vulnerable elderly patients? (Circle all that apply.)
   1. Yes, free care ................................. 1
   2. Yes, discounted care ......................... 2
   3. No (Skip to Question 9.) ....................... 3

8b. If yes, for what percentage of your vulnerable elderly patients do you provide:
   1. discounted care? (Circle one.)
      0-5%  6-25%  26-50%  51-75%  76-100%
   2. free care? (Circle one.)
      0-5%  6-25%  26-50%  51-75%  76-100%

9. Approximately what percentage of your vulnerable elderly patients require you to consult with:
   1. dental specialists? (Circle one.)
      0-5%  6-25%  26-50%  51-75%  76-100%
   2. physicians? (Circle one.)
      0-5%  6-25%  26-50%  51-75%  76-100%

10. Do you refer your vulnerable elderly patients to:
   Yes  No
   1. dieticians?................................. 1  2
   2. social services?........................... 1  2
   3. case management?........................... 1  2
   4. transportation services?................... 1  2
   5. financial counselors for medical or
dental care?................................. 1  2
   6. mental health workers for
depression?................................. 1  2

11a. In your community, do vulnerable elderly have a problem
    obtaining dental care? (Circle one.)
    1. Yes ............................................. 1
    2. No (Skip to Question 12.) ................. 2
    3. Don’t know (Skip to Question 12.) ....... 3

11b. If yes, what are their barriers to dental care? (Circle all that apply.)
    1. Lack of perceived need ......................... 1
    2. Not knowing where to go .................... 2
    3. Lack of transportation to the dentist’s office... 3
    4. Lack of trained providers .................... 4
    5. Unable to pay for services .................... 5

   6. Inadequate financial support for care from
      local, state and/or federal programs .......... 6
   7. Lack of providers willing to take Medicaid ...... 7
   8. No equipment/space available for care in
      their housing facility .......................... 8
   9. Other, please specify ____________________________

12. How comfortable do you feel treating vulnerable elderly patients? (Circle one.)
   a. Very comfortable ............................. 1
   b. Somewhat comfortable ....................... 2
   c. Somewhat uncomfortable .................... 3
   d. Not at all comfortable ....................... 4

13. Do you feel comfortable treating vulnerable elderly
    patients with the following conditions?
    Yes  No
    1. Late stage dementia....................... 1  2
    2. Complex medical issues................. 1  2

14. In the past three years, have you attended CE courses
    which focus on treating vulnerable elderly patients?
    Yes  No
    1. Didactic (lecture) ................... 1  2
       If yes, how many hours? .................
    2. Hands-on (clinical) .............. 1  2
       If yes, how many hours? .................

15. On which of the following areas of treatment related to
    vulnerable elderly patients would you like more
    information? (Circle all that apply.)
    1. Managing patients with complex medical history...
       1  2
    2. Managing xerostomia ........................ 2
    3. Managing caries ................................ 3
    4. Home care regimen for those with
       functional impairments .................... 4
    5. Home care regimen for those with mental
       impairment .................................... 5
    6. Managing patients living with dementia ....... 6
    7. Working with caregivers .................... 7
    8. Portable equipment ......................... 8
    9. Reimbursement (Insurance/Medicaid) ........... 9
    10. Other, please specify ________________

16a. Does your office actively promote your services to
    vulnerable elderly seniors?
    Yes ............................................. 1
    No (Skip to Question 17a.) ................... 2

RDH Oral Health Care of Vulnerable Elderly Patients Survey
16b. If yes, how do you promote your services? (Circle all that apply.)

1. Speak at senior centers ........................................ 1
2. Advertise in media targeted to seniors .......... 2
3. Health fairs .................................................. 3
4. Other, please specify ......................................

17a. Do you provide dental services for vulnerable elderly patients at locations outside your office?

Yes .............................................................. 1
No (Skip to Question 18) ................................. 2

17b. Do you have a written contract with any of these facilities?

Yes .............................................................. 1
No .............................................................. 2

17c. Do you use portable equipment to provide care?

Yes .............................................................. 1
No (Skip to Question 18) ................................. 2

17d. If yes, do you own or borrow the equipment?

Own ............................................................. 1
Borrow .......................................................... 2

18. Which of the following refer vulnerable elderly patients to the setting where you work? (Circle all that apply.)

1. Community service providers ............... 1
2. Other dentists .......................................... 2
3. Physicians or other health care providers... 3

19. What preventive services do you provide to vulnerable elderly patients?

<table>
<thead>
<tr>
<th>Service</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prophylaxis</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fluorides</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Prosthetic appliance cleaning</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Xerostomia management</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Canines risk assessment &amp; home care</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Education &amp; train caregivers</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Oral cancer screening</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tobacco Cessation</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

20. Are you aware of any vulnerable elderly patients within your practice that have "dropped out" because of access issues within the last 2 years?

Yes ............................................................. 1
No ............................................................. 2

If yes, approximately how many? ____________

21a. Are you familiar with the Michigan Donated Dental Services program (DDS)?

Yes ............................................................. 1
No (Skip to Question 22) ................................. 2

21b. Does your office participate in the Michigan Donated Dental Services program (DDS)?

Yes ............................................................. 1
No .............................................................. 2

22a. Are you familiar with the State of Michigan Public Act 161 or collaborative practice?

Yes ............................................................. 1
No .............................................................. 2

22b. Would you like to learn more about the State of Michigan Public Act 161 or collaborative practice in the care of vulnerable elderly patients?

Yes ............................................................. 1
No .............................................................. 2

23. What type of employment setting do you work and how many hours per week at each?

<table>
<thead>
<tr>
<th>Setting</th>
<th>Hours/Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private practice</td>
<td></td>
</tr>
<tr>
<td>Specialty practice</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td>Academic Institution</td>
<td></td>
</tr>
<tr>
<td>Local public health clinic/FQHC</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

24a. What is your primary practice setting? (Circle one)

a. Solo Private Practice .................................. 1
b. Group Private Practice ................................ 2
c. Hospital .................................................. 3
d. Academic Institution .................................... 4
e. Local public health clinic/FQHC ...................... 5
f. Other, please specify

24b. What is the number of providers in your primary practice setting?

1. # of dentists ...........................................
2. # of hygienists........................................

24c. Is your primary practice setting accessible to people with disabilities?

Yes ............................................................. 1
No .............................................................. 2

RDH Oral Health Care of Vulnerable Elderly Patients Survey
25. Size of primary practice setting community: (Circle one)
   a. less than 1,500 ...................................................... 1
   b. 1,500-5,000 .......................................................... 2
   c. 5,001-10,000 ........................................................ 3
   d. 10,001-30,000 ....................................................... 4
   e. 30,001-75,000 ........................................................ 5
   f. 75,001+ ................................................................... 6

26. Name of dental hygiene school attended:

27. Year of graduation: ______________________________

28a. Have you received any formal didactic and/or clinical training in the care of vulnerable elderly patients? (Circle all that apply.)

   Yes (Didactic) .......................................................... 1
   Yes (Clinical) .......................................................... 2
   No (Skip to Question 29) ............................................ 3

28b. If yes, specify the setting? (Circle all that apply.)

   Didactic  Clinical
   1. Dental hygiene school........................................ 1  2
   2. Continuing education........................................ 1  2
   3. Other, please specify...........................................

29. What resources currently exist in your area to provide oral health care of vulnerable elderly patients? (Circle all that apply.)

   1. Private Practices .................................................. 1
   2. Mobile Practices .................................................. 2
   3. Hospital............................................................. 3
   4. Academic Institution ............................................ 4
   5. Local public health clinic/Federally Qualified Health Clinic ........................................ 5
   6. Unknown ........................................................... 6
   7. Other, please specify...........................................

30. Are you interested in participating in any of the following activities to enhance the oral health care of vulnerable elderly patients in your area? (Circle all that apply.)

   1. Accepting referrals to your practice ................. 1
   2. Working with your local dental/dental hygiene society to establish referral sources ................. 2
   3. Working with your local dental/dental hygiene society to sponsor didactic and/or clinical training .... 3
   4. Working with nursing homes and assisted living facilities to identify providers............................ 4
   5. Working with nursing homes and assisted living facilities to provide oral health education........... 5
   6. Working with nursing homes and assisted living facilities to provide care at your office ............. 6
   7. Other, please specify...........................................

31. Do you have any suggestions that would help improve the oral health care received by vulnerable elderly patients in the State of Michigan?

Please provide your contact information:

Name: ______________________________
S specialty: ______________________________
Address (Office / Home): ______________________________
City: _________________________ Zip Code: _________________________
State: ___________________
Phone Number: ______________________________
E-mail Address: ______________________________

Thank you for completing this survey. Please return the questionnaire by folding and placing tape as indicated. Drop it in the mail; postage is already paid.

Please give the following link to other providers that would be interested in completing this survey online.

RDH Oral Health Care of Vulnerable Elderly Patients Survey