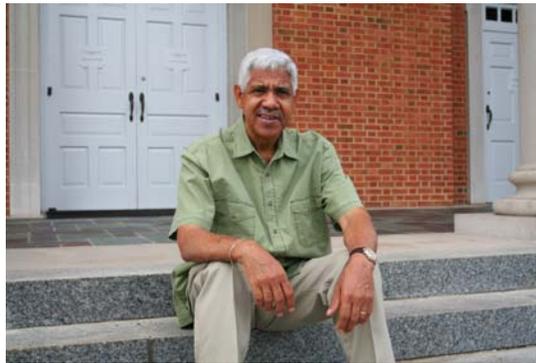


Michigan Senior Smiles Basic Screening Survey Report

Results from a 2010 Oral Health Screening and
Needs Assessment of Michigan Residents and
Managers of Alternative
Long-Term Care Facilities



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Executive Summary

The number of Michigan residents aged 65 years and older continues to increase each year. In 2008, there were 1,304,322 in this age group, comprising 13% of the population. This proportion is expected to increase to 19.5% in 2030, which means an estimated number of 2,081,000.¹

Poor oral health disproportionately affects residents in this age group yet access to dental care is limited. The 2008 Michigan Behavioral Risk Factor Survey* reported that 24.9% of those aged 65-74 years and 27.7% of seniors aged 75 years and older had not visited a dentist or dental clinic within the past year. In addition, it was reported that 15.6% of those aged 65 and older had all of their natural teeth extracted. While the number of residents in this age group continues to grow, it is important to assess oral health status in order to determine which areas can be improved upon.² In addition, the cost of dental care must be evaluated as it may increase with improving access as more services become available to this population. For instance, increasing the percent of those that retain their natural teeth would also mean more cost for subsequent needed dental care.

The purpose of this report is to provide results from an the Senior Smiles Basic Screening Survey (BSS), an oral health screening assessment and survey of Michigan residents aged 65 and older living in Alternative Long Term Care Facilities (ALTCF) as well as an assessment of ALTCF managers' oral health practices within their facilities and beliefs concerning the needs of residents. From 2009 to 2010 the Michigan Department of Community Health in collaboration with the Coalition for Oral Health for the Aging, Michigan Primary Care Association, Michigan Dental Association, University of Michigan School of Dentistry, and the Michigan Oral Health Coalition developed and implemented the Senior Smiles BSS. The study tool was comprised of three modules which included a dental screening provided by a trained volunteer dental hygienist, a survey of the residents that participated in the dental screening, and a survey of ALTCF managers that was mailed to the 122 facilities selected in the sample to participate in the BSS. The survey and screening was conducted within 37 ALTCF, 187 subjects were screened, and 186 of those that were screened participated in the survey. In addition, 35 managers participated in the mailed survey. The focus of the Senior Smiles BSS was to gather data describing the oral health status of Michigan's elderly population in order to help in making recommendations regarding their needs.

The Senior Smiles survey results showed that:

- The majority of participants were white females: 69.2% (N=119) were female, 98.3% (N=116) of females were white and 1.7% (N=2) of females were black (race data was missing for 1 female).
- About 22% of senior participants reported not visiting a dentist in at least three or more years prior to their screening.
- Close to 52% of participants screened reported that they did not have dental insurance while for 12.7% of participants dental insurance status was unknown.
- Of the participants that were fully or partially edentulous (N=98), close to 43% were fully edentulous.
- Of the 30.4% (N=45) seniors that had untreated decay, 82.2% (N=37) had restorative dental care needs and 17.8% (N=8) had major or urgent dental needs.

The Managers Survey results showed that:

- 60% (N=21) of managers answered “definitely yes” regarding whether or not prompt treatment of resident dental problems would prevent serious illness while 28.6% (N=10) answered that it probably would not prevent serious illness.
- 20.6% (N=7) of managers reported that their facilities offered a detailed dental screening or exam by a dentist or dental hygienist upon new resident admission.
- Managers that participated in the survey rated the most significant potential barriers to good oral health for residents at their facilities as: financial concerns of resident or family (88.2%), willingness of a dentist to treat residents at the ALTCF (76%), and willingness of a special dentist such as an oral surgeon or denture specialist to treat residents (74%).

* The Michigan Behavioral Risk Factor Survey is conducted by an annual, state-level telephone survey of Michigan residents, aged 18 years and older.

** Due to some unexpected changes in the administration process, the managers that responded to the survey are not necessarily from the facilities that had residents that participated in the screening and survey portions of the study. Therefore, the Managers' Survey could not be linked in the analysis to the patient screening and survey data.

Introduction

The Senior Smiles BSS was a screening assessment of Michigan residents aged 65 and older living in Alternative Long Term Care Facilities (ALTCF). The focus of the survey was to gather data describing the oral health status of Michigan's elderly population in order to help make recommendations regarding their needs. These results provide scientific evidence concerning the oral disease prevalence of the elderly Michigan residents that participated in the survey.

Methods

This survey followed the methods outlined by the Association of State and Territorial Dental Director's Basic Screening Surveys: An Approach to Monitoring Community Health. Following the examples of several similar state surveys (Kentucky, Massachusetts, Nevada), a descriptive design was utilized that provides an examination of facts about people, their opinions and attitudes. It does not assess in detail the relationships between events, but just simply draws attention to the degree in which two events or phenomena are related. The descriptive methods of this study included:

- 1) Collection of facts that describe existing oral disease prevalence;
- 2) Identification of problems or justification of current conditions and practice;
- 3) Project evaluation;
- 4) Comparison of the oral health of the elderly population with Healthy People 2010 objectives;
- 5) Comparison with MiBRFS 2008 data

In Michigan, the definition of an ALTCF is defined as constituting of one of the following types of facilities: family home, home for the aged, large, medium or small group home, and congregate facilities. In this study, oral health status data was collected on a statewide sample that was randomly drawn and included all ALTCF types. The sample consisted of 122 ALTCF and 760 residents. The survey instruments required positive consent and included an interview of ALTCF residents aged 65 or older on their perception of their oral health, a screening assessment which included an oral cancer screening, and a survey of ALTCF managers regarding their perception of oral health of the residents in their facilities.

The screening assessment was conducted by 12 hygienists and 1 dentist. The screeners were recruited by an informal announcement to dental professionals that had participated in previous studies conducted by the Michigan Department of Community Health. Most screeners were paid \$100 per facility, while 1 volunteered their services and was not paid. Trainings consisted of either a one hour-long presentation via a webinar or a meeting at a predetermined location. Screeners were provided with a Senior Smiles BSS protocol and guidelines manual as well as supplies based on the number of facilities they would attend.

Respondents

A limited number of studies have considered the challenges with recruiting high risk older adults for oral health-related problems. Epidemiologic reports concluded that those who are cognitively impaired are likely to be underrepresented in most community studies.³ Therefore it has been suggested that older adults, particularly those experiencing cognitive impairment, should be considered members of underrepresented groups that are at a high risk for oral health problems that would benefit from interventions.⁴ In addition, it was important to assess the perceived need of oral health related issues from the ALTCF managers' point of view in order to determine gaps in knowledge as well as available resources.

In the Senior Smiles BSS, of the 122 ALTCF selected in the sample, 34 (27.9%) participated. An additional 3 ALTCF that were not included in the sample requested to take part in the study which resulted in a total of 37 participating facilities. In addition, of the 760 residents selected in the sample, 167 (21.9%) participated in the screening and 166 (21.8%) participated in the survey portion due to the refusal of one screening participant to take the survey. There were an additional 19 participants in the patient screening and survey from the 3 additional facilities that participated that were not included in the initial sample. There were 35 (28.7%) participants in the Managers' Survey.

Demographics

In 2008, there was a total of 1,304,322 Michigan residents 65 years and older which comprised 13% of the overall population.² With the increasing number of Michigan residents in this age group, it is estimated that in 2030 they will make up a proportion of 19.5% (2,081,000 residents) of the total population. In 2007 only 13% of residents 65 years and older were reported as racial and ethnic minorities (9.9% Black; 1.4% Hispanic; 1.2 % Asian/Pacific Islander***), and there were more than twice as many women as men (46 men per 100 women).¹

The demographics of screening participants were as follows:

- Age: 20.8% were 65-74, 70.8% were 80 years and older, (Figure 1).
- Gender: 69.2% were female and 30.8% were male, (Figure 2).
- Race: 96.8% were white and the remaining 3.2% were of other races, (Figure 3).
- Geography: 68.8% resided in ALTCF in the southern part of the state, 15.6% lived in the northern part of the Lower Peninsula, 8.6% lived in Wayne, Oakland, or Macomb counties, and 7% lived in the Upper Peninsula.

*** Categories do not sum because individuals may belong to more than one racial/ethnic group

Figure 1. Age of participants

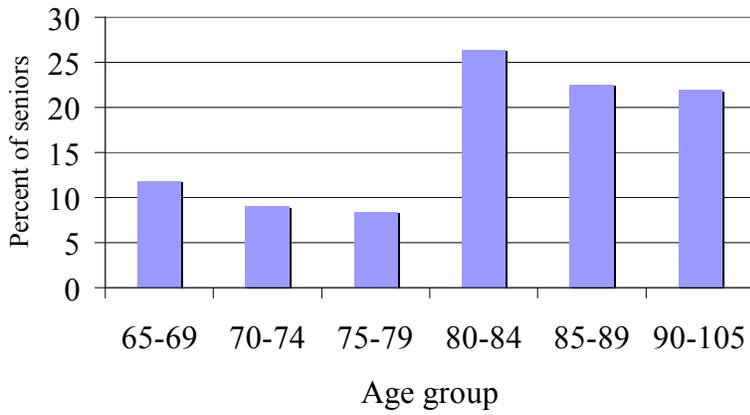


Figure 2. Gender of participants

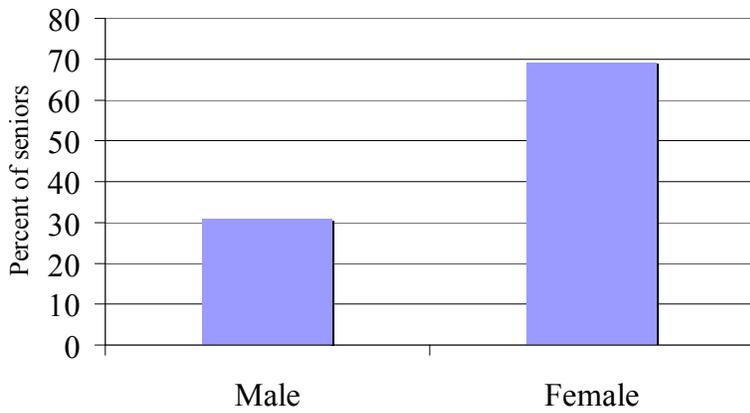
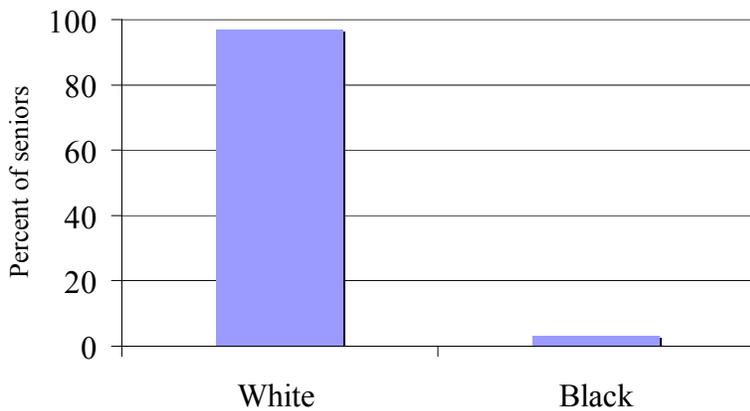


Figure 3. Race of participants



Access to Dental Care and Insurance Status

The 2008 MiBRFS report states that 57.9% of residents 65-74 years of age and 55% of residents 75 years of age and older had dental insurance. In addition, 24.9% of those aged 65-74 years, and 27.7% of seniors aged 75 years and older had not visited a dentist or dental clinic within the past year. The Healthy People 2010 target for dental visits in the past year for adults in long term care is 25%.

Cost was mentioned as the main reason for not visiting a dentist in the 2008 MiBRFS by 9.7% of those 65-74 years old compared to 6.3% in the 75 and older age group. Further, disabled patients were less likely to have accessed dental care in the past year also due to cost (23% vs. 13%).

There are other barriers to having access to and receiving dental care. A survey of nursing home facilities and alternative long-term care facilities found that willingness of general dentists to treat residents at an ALTCF was the greatest barrier to dental care for its residents. Nursing home facilities identified treatment at a dental office, treatment by specialty dentists, and financial concerns as important barriers facing their residents.⁵ It is important to assess and identify other barriers to access to care in order to improve the oral health care of elderly citizens.

Findings from the Senior Smiles Survey are as follows:

- A total of 63% (N=114) of participants reported having a dentist, (Figure 4).
- At least 38.3% (N=69) of participants had not visited a dentist in the past year, (Figure 5).
- About 22% (N=40) of senior participants reported that they had not visited a dentist in three or more years, (Figure 5).
- Close to 52% (N=93) of participants screened reported that they did not have dental insurance while 12.7% (N=23) of participants' dental insurance status was unknown, (Figure 6).
- Only 16.7% (N=25) of participants had private dental insurance and 20.7% (N=31) had Medicaid, (Figure 7).

Figure 4. Participants that had a dentist

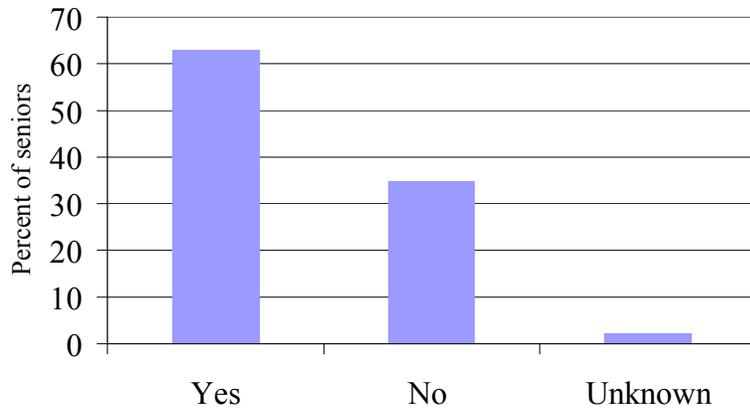


Figure 5. Time since last dental visit

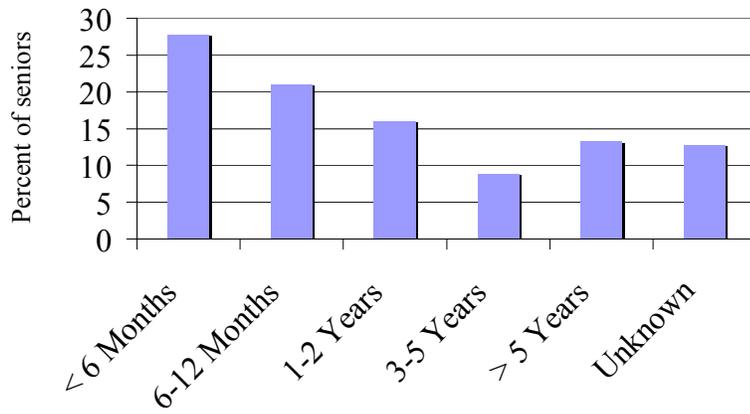


Figure 6. Participants with dental insurance

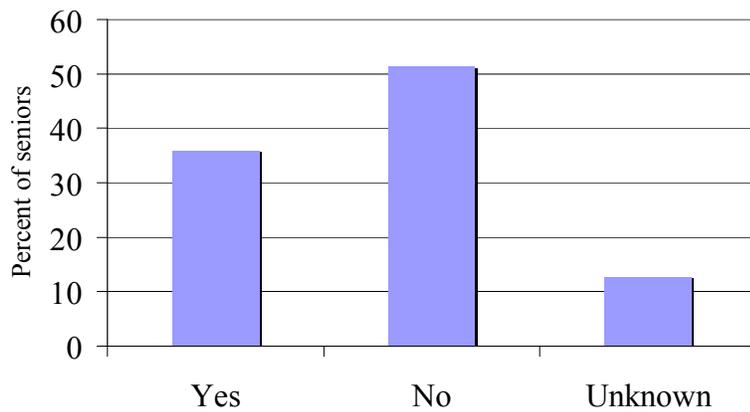
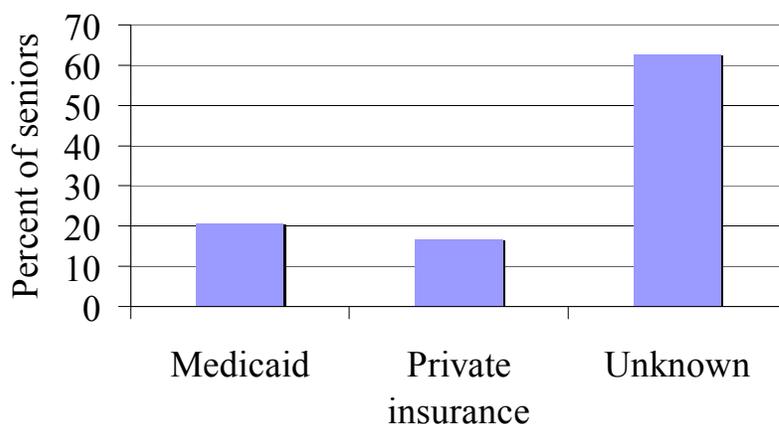


Figure 7. Participant dental insurance type



Edentulism

A full dentition is defined as having 28 natural teeth excluding third molars (wisdom teeth) and teeth removed for orthodontic treatment or as a result of trauma.⁶ Edentulism refers to the absence of teeth. It is important to note that in this report partial edentulism is defined as the absence of at least three teeth, while full edentulism is defined as having no teeth.

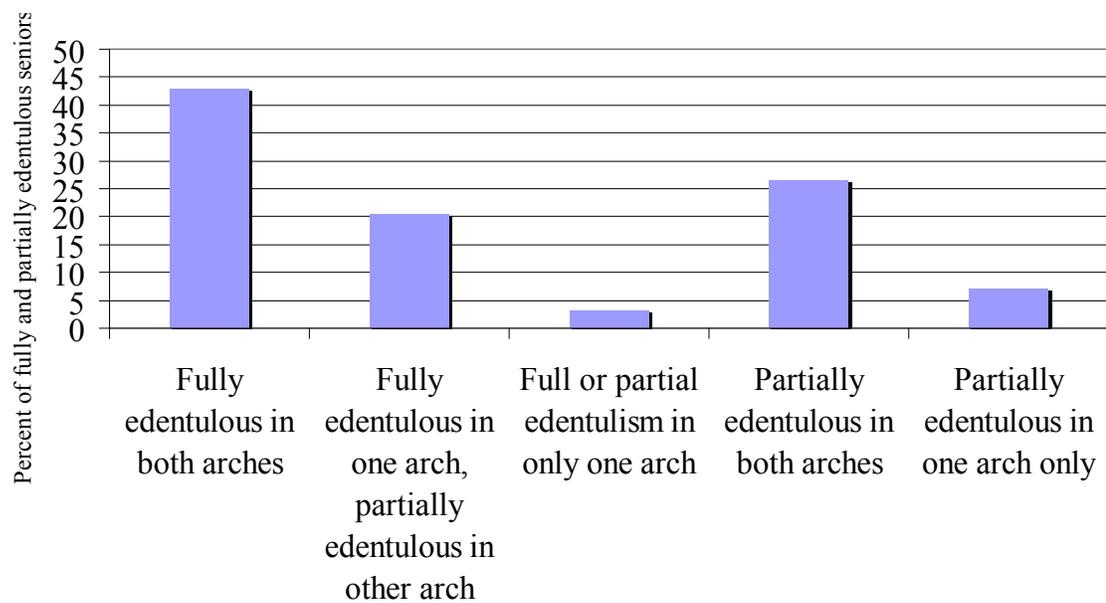
According to the 2008 MiBRFS survey, 15.6% of Michigan residents age 65 and older had lost *all* their natural teeth. Participants in this study were close to three times more likely to be fully edentulous compared to the MiBRFS report. It is important to note that the Senior Smiles Survey respondents were proportionally older compared to the MiBRFS, (Table 1).

Table 1. Adults aged 65+ who have had all their natural

Age		MiBRFS		Senior Smiles Survey	
		Yes	No	Yes	No
65-74	%	13.1	86.9	20.6	79.4
	N	206	1266	7	27
75+	%	18.4	81.6	24.3	75.7
	N	250	1041	33	136

- Out of all participants that were fully or partially edentulous (N=98), 42.9% (N=42) were fully edentulous, (Figure 8).
- Only 7.1% (N=7) of participants that were fully or partially edentulous had most of their teeth (i.e., were partially edentulous in both arches), (Figure 8).

Figure 8. Prevalence of total and partial edentulism in fully or partially edentulous seniors (N=98)

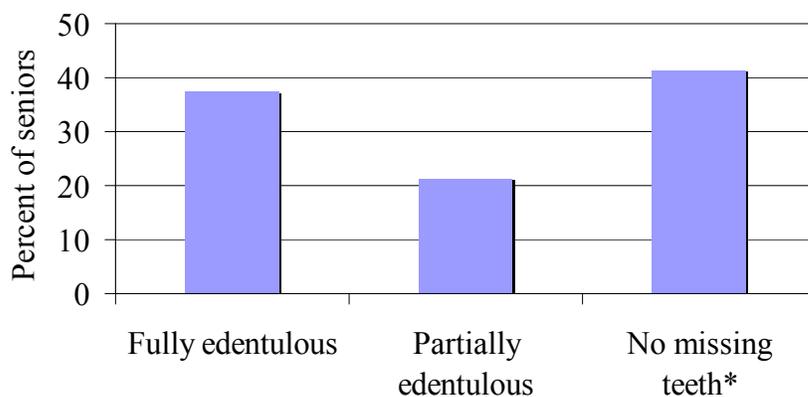


Participants in the Senior Smiles BSS could have been edentulous in either the maxillary arch, the mandibular arch, or both arches. The implications of edentulism may be different and are therefore reported separately by arch. The results from the Senior Smiles screening are as follows:

Maxillary Arch

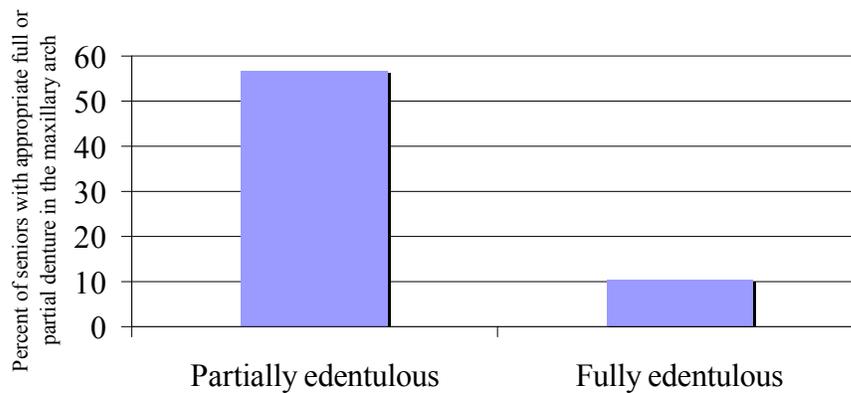
- 58.6% (N=99) of participants were either fully or partially edentulous in the maxillary arch, (Figure 9). Of these, 37.3% (N=63) were fully edentulous.
- 56.7% (N=17 out of N=30 due to missing data) of participants that were fully edentulous and 10.4% (N=5 out of N=48 due to missing data) that were fully edentulous in the maxillary arch did not have a maxillary denture, (Figure 10).
- Of the participants that were fully or partially edentulous in the maxillary arch and had a maxillary denture, the number of participants that reported on the quality of their denture was too small to report.

Figure 9. Prevalence of teeth lost in the maxillary arch



*No partial or full edentulism (<3 teeth lost)

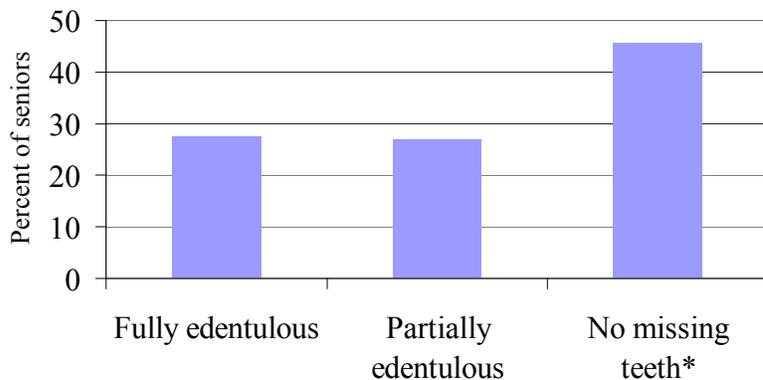
Figure 10. Absence of maxillary denture in seniors
fully
(N=30) and partially (N=48) edentulous in
the maxillary arch



Mandibular Arch

- 58.6% (N=91) of participants were either fully or partially edentulous in the mandibular arch, (Figure 11). Of these, 27.5% (N=46) were fully edentulous.
- 48.7% (N=19 out of N=39 due to missing data) of participants that were partially edentulous and 31.3% (N=10 out of N=32 due to missing data) that were fully edentulous in the mandibular arch did not have a mandibular denture, (Figure 12).
- 68.4% (N=13) of participants that were fully edentulous in the mandibular arch and had a mandibular denture had adequate denture function, (Figure 13).
- Of the participants that were partially edentulous in the mandibular arch and had a mandibular denture, the number of participants that reported on the quality of their denture was too small to report.

Figure 11. Prevalence of teeth lost in the mandibular arch



*No partial or full edentulism (<3 teeth lost)

Figure 12. Absence of mandibular denture in seniors fully (N=32) and partially (N=39) edentulous in the maxillary arch

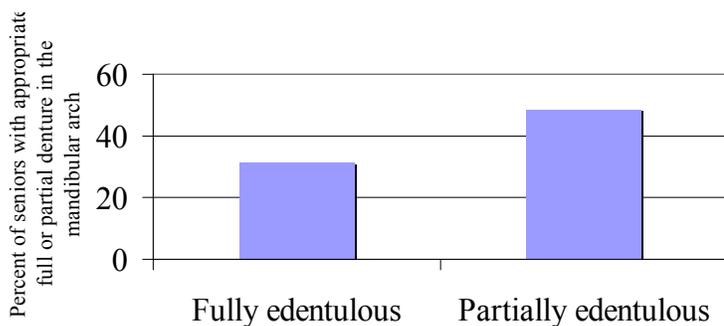
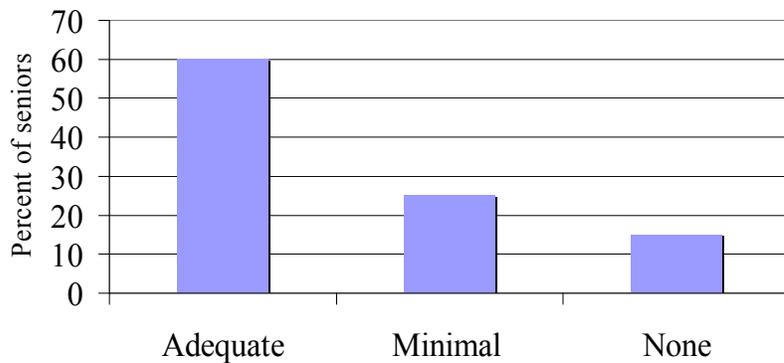


Figure 13. Mandibular denture function in seniors with a fully edentulous mandibular arch (N=20)



Gingivitis

Gingivitis is characterized by localized inflammation, swelling, and bleeding gums without loss of the bone that supports the teeth. Gingivitis is reversible with good oral hygiene, but can progress to destructive periodontal disease.⁷ Aging adults or people with a disability often have more difficulty with simple oral health hygiene, such as brushing or flossing their teeth.

In 2007, of the state's residents 65 years and older: 31% had a physical disability, 17% had a mobility disability, 10% had a self-care disability and 12% had a cognitive disability.¹ Overall, 41% had at least one or more disability. As the population ages, it can be deduced that the number of disabilities will increase as well. It is important to assess the status of gingivitis in the vulnerable elderly population due to an increased risk of a reduced ability to maintain proper oral hygiene habits as a result of decreased mobility and a higher risk of dementia.

In the screening part of this study, gingivitis was measured and recorded only for the mandibular anterior teeth. Gingivitis in the screening was defined as inflammation of the gingival tissues which included the following symptoms: bleeding, redness, spongy marginal gingival, and gingival enlargement. The presence of these symptoms was associated with a poorer score in terms of the presence of gingivitis.

- 38.2% (N=42) of screened seniors that were not fully edentulous were rated as 'excellent' in terms of the presence of gingivitis, (Figure 14).
- 45.4% (N=50) of screened seniors that were not fully edentulous were rated as 'fair' or 'poor' in terms of the presence of gingivitis, (Figure 14).

Figure 14. Gingivitis among participants that were not fully edentulous (N=110)



Untreated Decay

Untreated tooth decay is a common chronic disease in which acids produced by bacteria on the teeth leads to loss of minerals from the enamel or dentin, the hard substances of teeth. Untreated decay can lead to infection, severe pain, dental abscesses, loss of tooth structure, increased emergency room visits, and mouth odor, and may cause negative effects on an individual’s self-esteem.



- 30.4% (N=45) of all seniors had untreated decay, (Figure 15).
- Of those with had untreated decay, 82.2% (N=37) had restorative dental care needs and 17.8% (N=8) had major or urgent dental needs, (Figure 16).

Figure 15. Untreated decay among participating seniors regardless of edentulism status (N=148)

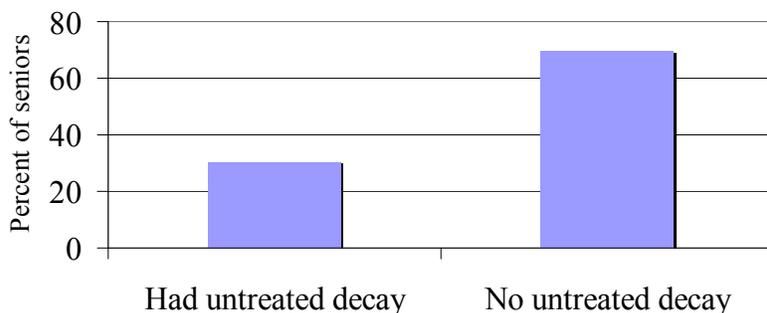
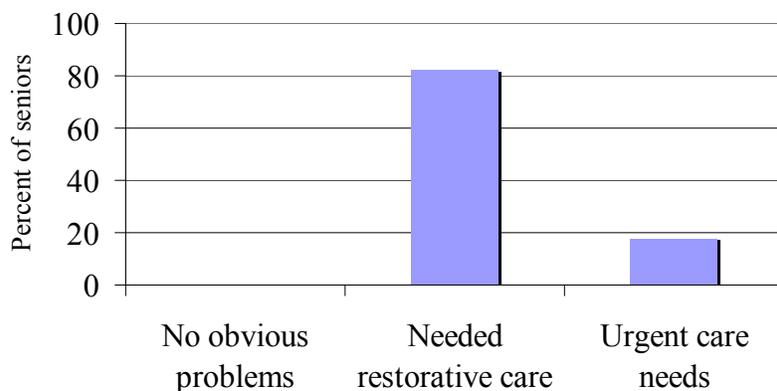


Figure 16. Treatment urgency in seniors with untreated decay (N=45)



Xerostomia (Dry Mouth)

Xerostomia, or dry mouth, is a result of a decrease in salivary flow and is more prevalent in elderly adults compared to younger populations due to a greater utilization of medications and medical treatment. Reduced salivary function can result in a decreased quality of life by hindering the ability to chew, swallow, and speak. Reports of xerostomia incidence in older adults range from 10% to 40%.⁸

Among the seniors screened:

- 38.2% (N=47) of participants that were not fully edentulous suffered from xerostomia, (Figure 17).
- 44.4% (N=16) of participants that had had xerostomia also had untreated decay, (Figure 18).

Figure 17. Xerostomia among seniors that were not fully edentulous (N=123)

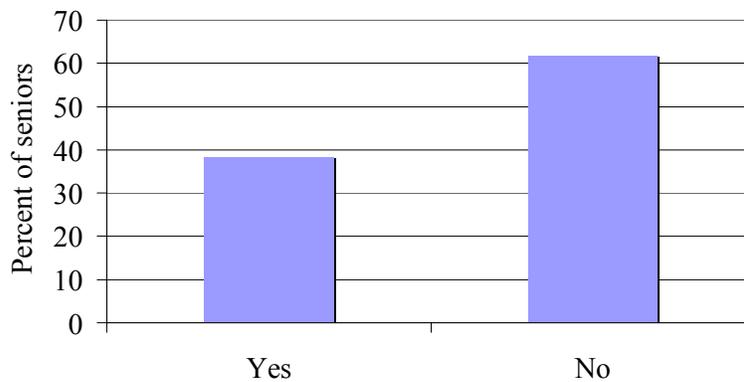
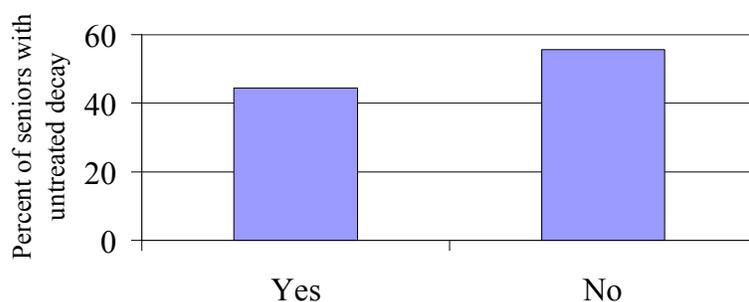


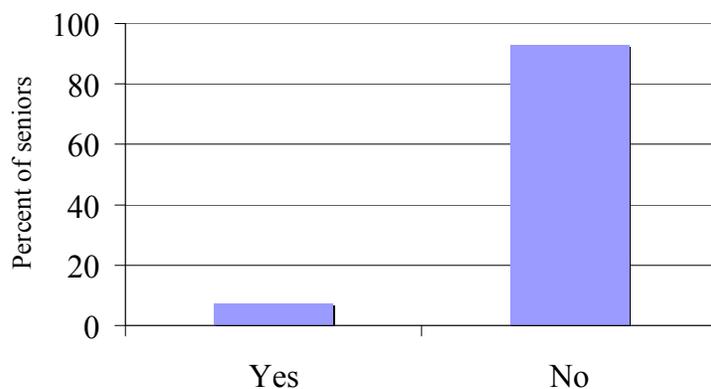
Figure 18. Presence of untreated decay among all seniors with xerostomia that were not fully edentulous (N=36)



Soft Tissue Lesions

An oral soft tissue lesion can be a precursor to oral cancer. Ill-fitting or partial dentures, broken restorations, smoking and other tobacco products, excessive alcohol consumption, radiation exposure, and other dietary factors lead to an increased risk for lesions. The detection of soft tissue lesions at later stages of development is associated with an increased risk of mortality. Participants in the Senior Smiles BSS were screened for oral cancer. Of those who were screened, 7.1% (N=12) of seniors had a soft tissue lesion upon examination, (Figure 19).

Figure 19. Presence of soft tissue lesion



Managers' Survey

In order to gain knowledge regarding overall facility oral health practices, beliefs and needs of residents, the Managers' Survey was sent via mail to managers of the 122 ALTCF selected to participate in the Senior Smiles BSS. It is important to note that the managers that participated in the survey are not necessarily from the same facilities that participated in the resident screening and survey parts of this study.

The Managers' Survey showed that:

- 70.6% (N=24) of managers reported that their facility did not have a written plan of care for dental needs, (Figure 20).
- 60% (N=21) of managers answered “definitely yes” regarding whether or not prompt treatment of resident dental problems would prevent serious illness while 28.6% (N=10) answered that it probably would not prevent serious illness, (Figure 21).
- 20.6% (N=7) of managers reported that their facilities offered a detailed dental screening or exam by a dentist or dental hygienist upon new resident admission, (Figure 22).
- In 31.8% (N=7) of facilities, most residents received dental care within the last year (76-100%). However an additional 31.9% (N=7) of facilities reported that 0-10% of their residents received dental treatment in the past year, (Figure 23). There is a wide variability in the distribution of the percent of residents that received dental care in the last year.
- When asked to rate how significant potential barriers were to good oral health for residents at their facilities on a scale of 0-5 (5 being highly significant), the highest percent of managers most commonly chose 3, 4 or 5 for: financial concerns of resident or family (88.2%), willingness of a dentist to treat residents at the ALTCF (76%), and willingness of a special dentist such as an oral surgeon or denture specialist to treat residents (74%), (Table 1).

Figure 20. Presence of a written plan of care for dental needs in participating ALTCF

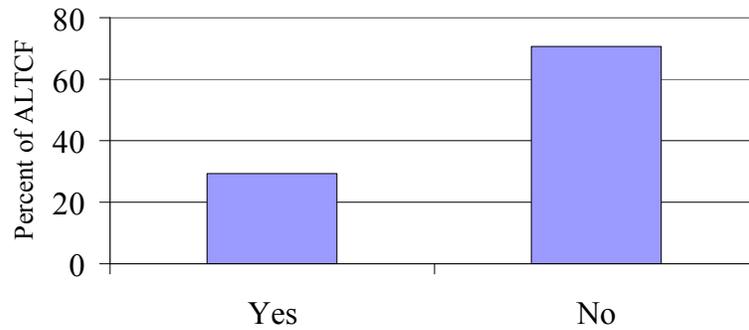


Figure 21. Managers' belief regarding prompt treatment of resident dental problems resulting in serious illness prevention

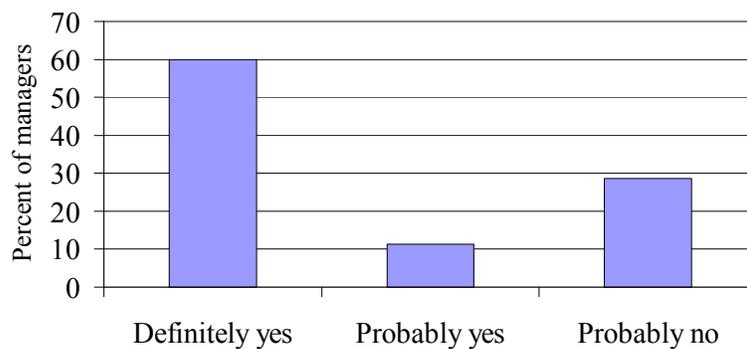


Figure 22. Detailed screening or exam by dentist or hygienist offered by facility to new residents

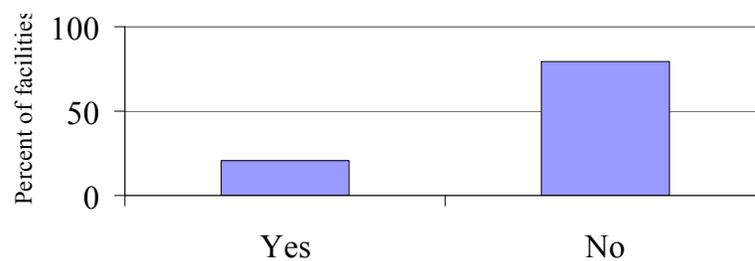


Figure 23. Percentage of all residents in facility that received dental treatment during the past 12 months

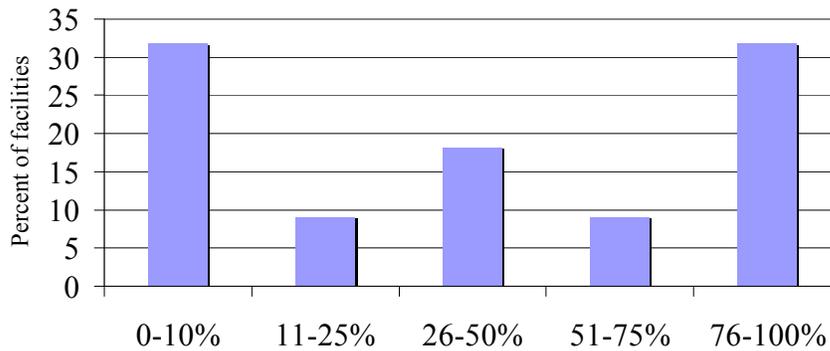


Table 2. ALTCF Managers that Rated Barriers to Residents Receiving Care a 3,4, or 5 on a Scale of 0-5*

Barrier	%	N
Resident transportation to dentist or hygienist	55.9	19
Willingness of general dentist to treat resident at ALTCF	76	23
Willingness of general dentist to treat resident at private office	35	12
Willingness of special dentist to treat resident at ALTCF	74	23
Willingness of special dentist to treat resident at private office	38	13
Time constraints on facility staff	37.5	12
Apathy of dental consultant	31	9
Apathy of facility administration	20	6
Apathy of facility staff	23	7
Resistance to care by resident	47	16
Resistance to care by resident's family	33.3	11
Financial concerns of resident or family	88.2	30
Availability of suitable dental treatment space	60.6	20
Availability of suitable dental treatment equipment	66.7	22

*5 was most significant, 0 was least significant

Limitations

There were many limitations in conducting and interpreting the data analysis in this report. First, there was a low response rate for both the ALTCF and senior residents. Second, the facilities whose residents participated in the study did not all come from the original random sample. Three additional facilities not included in the initial sample requested to participate and were included in these results. Third, due to some unexpected changes in the administration process, the patient screening and patient survey data could not be linked to by facility to the managers' survey and therefore limited the extent of the data analysis. The results from this study are not to be generalized to Michigan's overall population of those 65 years of age and older living in ALTCF.

Conclusion

The findings from this study can be used to improve the now standardized Basic Screening Survey tool for older adults. The results show that there are barriers to obtaining dental care for the participants in the study such as lack of dental insurance, high cost and access to an appropriate dental provider. In addition, there is a great need for an improvement in dental care in the participants of the Senior Smiles BSS. The participants in this study experienced a high prevalence of edentulism and many had dentures. Recommendations for this group include obtaining appropriate denture-related care and the appropriate education regarding the importance of receiving an annual inspection of the oral cavity and dentures.

Appendices A-D

Appendix A: Data Tables for Previous Figures

In this report *partial edentulism* is the absence at least three teeth in each arch, while *full edentulism* is defined as having no teeth. It is important to note these definitions when interpreting the data in the following tables.

The number of each data table below corresponds with the respective figure presented in the report.

Table 1. Age group of individuals screened

	%	N
65-69	11.8	21
70-74	9.0	16
75-79	8.4	15
80-84	26.4	47
85-89	22.5	40
90-105	21.9	39
Total	100	178

Table 2. Gender of participants

	%	N
Male	30.8	53
Female	69.2	119
Total	100	172

Table 3. Race of participants

	%	N
White	96.8	179
Black	3.2	6
Total	100	185

Table 4. Participants that reported having a dentist

	%	N
Yes	63.0	114
No	34.8	63
Unknown	2.2	4
Total	100	181

Table 5. Time since last dental visit

	%	N
<6 Months	27.8	50
6-12 Months	21.1	38
1-2 Years	16.1	29
3-5 Years	8.9	16
>5 Years	13.3	24
Unknown	12.8	23
Total	100	180

Table 6. Participants with dental insurance

	%	N
Yes	35.9	65
No	51.4	93
Unknown	12.7	23
Total	100	181

Table 7. Participant's dental insurance type

	%	N
Medicaid	20.7	31
Private insurance	16.7	25
Unknown	62.6	94
Total	100	150

Table 8. Participants with total and partial edentulism

	%	N
Fully edentulous in both arches	42.9	42
Fully edentulous in one arch, partially edentulous in other arch	20.4	20
Full or partial edentulism in only one arch	3.1	3
Partially edentulous in both arches	26.5	26
Partially edentulous in one arch only	7.1	7
Total	100	98

Table 9. Tooth loss in maxillary arch

	%	N
Fully edentulous	37.3	63
Partially edentulous	21.3	36
Less than 3 missing teeth	41.4	70
Total	100	169

Table 10. Absence of a maxillary denture for partially and fully edentulous participants

	%	N
Partially edentulous	56.7	17 out of 30 possible
Fully edentulous	10.4	5 out of 48 possible

Table 11. Tooth loss in mandibular arch

	%	N
Fully edentulous	27.5	46
Partially edentulous	27.0	45
No missing teeth*	45.5	76
Total	100	167

*No partial or full edentulism (or < 3 teeth lost)

Table 12. Absence of mandibular denture for partially and fully edentulous participants

	%	N
Fully edentulous	31.3	10 out of 32
Partially edentulous	48.7	19 out of 39

Table 13. Mandibular denture function in fully edentulous participants

	%	N
Adequate	15.0	3
Minimal	25.0	5
None	60.0	12
Total	100	20

Table 14. Gingivitis among participants that were not fully edentulous

	%	N
Excellent	38.2	42
Good	16.4	18
Fair	22.7	25
Poor	22.7	25
Total	100	110

Table 15. Presence of untreated decay among participants

	%	N
Had untreated decay	30.4	45
No untreated decay	69.6	103
Total	100	148

Table 16. Treatment urgency in participants with untreated decay

	%	N
No obvious problems	0	0
Needed restorative care	82.2	37
Urgent care needs	17.8	8
Total	100	45

Table 17. Xerostomia among patients that were not fully edentulous

	%	N
Yes	38.2	47
No	61.8	76
Total	100	123

Table 18. Presence of untreated decay among participants with xerostomia that were not fully edentulous

	%	N
Yes	44.4	16
No	55.6	20
Total	100	36

Table 19. Presence of soft tissue lesion among participants

	%	N
Yes	7.1	12
No	92.9	158
Total	100	170

Table 20. Presence of a written plan of care for dental needs in participating ALTCF

	%	N
Yes	29.4	10
No	70.6	24
Total	100	34

Table 21. Managers' response to whether or not they believed prompt treatment of resident dental problems would prevent serious illness

	%	N
Definitely yes	60.0	21
Probably no	11.4	4
Probably no	28.6	10
Total	100	35

Table 22. Managers' response to whether or not their facility routinely offered a detailed screening or exam by a dentist or dental hygienist for new residents

	%	N
Yes	20.6	7
No	79.4	27
Total	100	34

Table 23. Managers' response to the percent of residents in their facility that received dental treatment during the past 12 months

	%	N
0-10%	31.8	7
11-25%	9.1	2
26-50%	18.2	4
51-75%	9.1	2
76-100%	31.8	7
Total	100	22

Appendix B: Senior Smiles BSS Screening Form

Screening Date: _____ Site: _____ Screener: _____ Patient ID # _____

Gender: M F **Patient Age:** _____ (in years)**Race:**

- White Hispanic Black/African American
- Asian Native American/Pacific Islander
- American Indian/Alaska Native Unknown
- Other: _____

Edentulous: (3 or more missing teeth in 1 arch) a. Y b. N**Maxillary** Full Partial**Mandibular** Full Partial**Dentures:** Y N Full (Maxillary Mandible) Partial (Maxillary Mandible)**Function of dentures (Max):** None Minimal Adequate Unknown**Function of dentures (Mand):** None Minimal Adequate Unknown**Soft Tissue Lesions:** Y N **Location:** _____**Xerostomia:** Y N**Gingivitis** Excellent 0 Good .3 - .4 Fair .5 - .6 Poor .6 - 1 N/A

#2-3 #8-9 #13-14 #18-19 #24-25 #30-31

Bleeding 0 1 0 1 0 1 0 1 0 1 0 1*If the teeth are not present, use the adjacent teeth***Y = 1 point****N = 0 point**

Total bleeding index: _____ = _____

Number of teeth scored = 6

Oral Hygiene Index:

- Excellent 0 Good 1.1 – 1.2 Fair .7 – 1.8 Poor 1.9 – 3.0

Total debris score: _____ Total calculus score: _____

	#3 B	#8F	#14 F	#19L	#24L	#30L
Debris	_____	_____	_____	_____	_____	_____
Calculus	_____	_____	_____	_____	_____	_____

(0= no debris/calculus; 1 = soft debris/calculus not more than 1/3 of tooth surface;
 2= soft debris/calculus = > 1/3 of the tooth surface but not more than 2/3 of the tooth surface;
 3 = soft debris/calculus covering more than 2/3 of the exposed tooth surface)

Total debris scores

Total calculus scores

Number of teeth scored = _____ Number of teeth scored = _____

Untreated Caries:

- Coronal Caries None 2-4 teeth 5-8 teeth > 9 teeth
- Root Caries None 1-2 teeth 3-5 teeth >6 teeth

Treatment Urgency Needed:

- Code 0: No Obvious Problems
- Code 1: Needs Restorative Care
- Code 2: Urgent Care Needs

REFERRAL Y N

Additional conditions or notes:

Appendix C: Senior Smiles! Survey Oral Health Interview Questions

Your response will remain confidential. Our purpose is solely educational.

1. Would you rate your overall oral health (that is, the condition of your teeth and gums) as being:

If you have no teeth, then the rating is for your gums and other oral tissues.

- Excellent Good Fair Poor

2. Are you able to clean your mouth?

- Yes, without help Yes, with help No Don't know/Not sure

3. Are your teeth or dentures brushed daily?

- Yes No Don't know/Not sure

If yes, how many times per day? Check only one box.

- 1-2 times per day 3-4 times per day 5 or more times per day

If No, why not?

4. Overall, are you satisfied with: (whether you have natural teeth or have dentures)

a. Your ability to **chew any foods** that you want?

- Yes No Don't know/Not sure

b. Your ability to **speak clearly**?

- Yes No Don't know/Not sure

c. The **appearance of your teeth**?

- Yes No Don't know/Not sure

5. Do you have any current dental problems? Yes No Don't know/Not sure

6. Do you have any pain in your teeth, gums, or jaws?

Yes No Don't know/Not sure

If yes, is the pain:

Most of the time Occasionally

Only when: _____

Pain indicates pain in the teeth, gums, oral tissues, jaws, TMJ or oral musculature.

If NO, skip to Question #8.

7. How long has your pain been present?

1 to 2 weeks or less 1 to 3 months
 2 weeks to 1 month More than 3 months
 Don't know/Not sure

8. Regarding your gums:

a. Do they bleed with you brush or floss? Yes No Don't know/Not sure
b. Are they red, tender or swollen? Yes No Don't know/Not sure

9. Do you frequently have bad breath? Yes No Don't know/Not sure

10. Do you wear dentures or partials? Yes No Don't know/Not sure
If yes, skip to Question #13

11. Do you regularly floss or clean between your teeth?

Yes No Don't know/Not sure

If yes, how many times per day? *Circle only one answer.*

1-2 times per day 3-4 times per day 5 or more times per day

If No, why not?

12. Are your teeth loose or separating? Yes No Don't know/Not sure

Persons with Dentures and Partials

13. Do you wear partials and/or dentures? Yes No Don't know/Not sure

a. Do you *wear* both upper and lower partials and/or dentures?

- Upper partial and/or denture only
- Lower partial and/or denture only
- Both upper and lower partials and/or dentures
- Don't know/Not sure

b. How often do you wear your partials and/or dentures?

- less than 2-4 hours per day 4-8 hours per day
- both day and night (24 hours per day)
- only when eating only when I have visitors
- other: _____

c. If you don't wear your partials and/or dentures, why not?

14. How do you feel your dentures fit?

- Excellent Good Fair Poor

15. Do you have any sores or ulcers in your mouth or on your gums that you feel are caused by your dentures? Yes No Don't know/Not sure

If yes, how often do you have them?

Frequently Sometimes Rarely Don't know/Not sure

Dental Services Utilization

16. Do you have a dentist? Yes No Don't know/Not sure

17. When was your last visit to a dental office?:

Less than 6 months 6 months - up to 12 months Over 5 years

12 months -24 months 3-5 years Unknown

a. Did you have a mobile dentist or dental hygienist provide dental care to you in this facility? Yes No Don't know/Not sure

If yes, was it a Mobile dentist? Mobile dental hygienist?

b. What was the purpose of the most recent visit to the dentist? *Check only one answer – the main reason you have visited the dentist?:*

Prevention/Cleaning Pain/Dental Emergency/Extraction

Restorative/ Fillings Crowns/Bridges

Dentures/Partial Dentures or Repair Root Canal/Endodontics

Gum Therapy/Periodontal Other: _____

18. If you *have not* visited a dentist in more than 1 year, what is the main reason?

Check

only 1 answer.

Does not apply, have been to the dentist office Cannot get to a dentist's

Fear, apprehension, nervousness No reason to go

Dislike going Cost

Other:

19. Do you have dental insurance: Yes No Don't know/Not sure

If yes, Medicaid? Private insurance?

20. Would you rate your overall general health as being:

Excellent Good Fair Poor

21. Are you diabetic? Yes No Don't know/Not sure

22. Are you taking any medication now? Yes No Don't know/Not sure

23. Do you use tobacco products?

a. Currently In the past Never Don't know/Not sure

b. How long did you use tobacco products? _____ years
 N/A Don't know/Not sure

c. What type of tobacco? Cigarette Cigar Pipe Chew N/A

24. Do you drink alcohol? Yes No Don't know/Not sure

If yes, how many drinks do you have per week? 0-1 2-5 6-10 11-14 15+

25. Do problems with your hands, shoulders or arms prevent you from cleaning your

Teeth as well as you would like? Yes No Don't know/Not sure

Comments:

Appendix D: ALTCF Manager Survey

1. Does your facility have a **written plan** of care for dental needs? Yes No
 - a. If yes, did a **dental professional assist** in drafting it? Yes No
 - b. If yes, who is **primarily responsible** for the day-to-day coordination of your facility's dental plan of care? *(please check one)*

<input type="checkbox"/> Facility administrator	<input type="checkbox"/> Director of Nursing
<input type="checkbox"/> Unit charge nurse	<input type="checkbox"/> Other RN
<input type="checkbox"/> LPN	<input type="checkbox"/> Dentist or hygienist
<input type="checkbox"/> Other: _____	

2. Do you have **dental equipment** located within your facility? Yes No
 - a. If yes, is the equipment **mobile** or **stationary**?

3. Does your facility routinely offer a **detailed screening or exam** by a dentist or dental hygienist for new admissions? Yes No

4. Does your facility/agency have an agreement with a dentist to provide dental care when needed? Yes No
 - a. If yes, who pays the dentist for this service?
 Your facility **OR** The resident

 - b. If yes, does the dentist
 Visit your facility regularly? **OR** Is this for **emergency care only**?

 - c. If yes, what services are provided?
 comprehensive services (i.e. cleaning, x-rays, fillings, extractions, dentures and denture repair)?
 prevention only services (i.e. screening/exam, cleaning)

5. What percentage of your residents can **perform daily oral hygiene**?
- a. Independently _____% (percentages should
b. With some assistance _____% total 100%)
c. **Not** able, requires total assistance _____%
6. **Does your facility** have one or more regular staff member(s) who is/are primarily responsible for:
- a. Checking patient's mouths for problems (screening)? Yes No
b. Daily dental cleaning of patient's mouths/dentures? Yes No
c. If yes, to a or b above, has this person(s) received formal training to provide these services? Yes No
7. **Please rate your satisfaction** with the way the oral hygiene needs of residents at your facility are being met by facility staff? (*Please check only one box*)
- Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied
8. Please estimate what percentage of your residents/clients have a:
- a. **Private** dentist _____ %
b. **Family member** who takes them to the dentist as needed _____ %
c. Dental care provided by a **dentist who visits your facility** _____ %
d. **No regular sources of dental care** _____ %
e. **Other** way of getting dental care _____ % (*Please describe below*)
9. **What percentage of all residents** in your facility **received dental treatment** during the past 12 months? Approximately _____ % **OR** Don't know

10. What **percentage of residents have dental services paid** for by the following:

- a. Paid by **your facility** _____ % of residents
- b. Medicaid _____ % of residents
- c. **Private** health/dental **insurance** _____ of residents
- d. Paid by the **resident** _____ % of residents
- e. Paid by the **resident's family** _____ % of residents
- f. **Free dental care** from a volunteer dentist/hygienist _____ % of residents
- g. Don't know _____ % of residents
- h. Other _____ % of residents (Please describe)

11. Please rate your satisfaction with the **quality of dental treatment** provided by dental professionals to residents of your facility: *(Please check only one box)*

- Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied

12. Do you think **prompt treatment** of resident dental problems would prevent serious illness?

- Definitely Yes Probably Yes Probably No Definitely No

13. When a **resident has an oral/dental need/problem**, how is the situation handled (who is responsible for obtaining care)? *(Please check only one box)*

- Your facility calls a private dentist
- Your facility calls a family member
- The resident facilities their own care
- Other _____

14. Please rate how significant the following potential barriers are to good oral health for residents at your facility. *(Mark ONE NUMBER in each row – please do not mark intermediate scores).*

Not significant barrier = 0, Highly significant barrier = 5

a) Transporting resident to dentist or hygienist	0	1	2	3	4	5
b) Willingness of general dentist to treat residents						
1. At your facility	0	1	2	3	4	5
2. At private office	0	1	2	3	4	5
c) Willingness of special dentist (i.e. oral surgeon or denture specialist) to treat residents						
1. At your facility	0	1	2	3	4	5
2. At private office	0	1	2	3	4	5
d) Time constraints on facility staff	0	1	2	3	4	5
e) Apathy of						
1. Dental consultant	0	1	2	3	4	5
2. Facility administration	0	1	2	3	4	5
3. Facility staff	0	1	2	3	4	5
f) Resistance to getting dental care by						
1. Resident	0	1	2	3	4	5
2. Resident's family	0	1	2	3	4	5
g) Financial concerns of resident or family	0	1	2	3	4	5
h) Availability of						
1. Suitable dental treatment space	0	1	2	3	4	5
2. Suitable dental treatment equipment	0	1	2	3	4	5
Other: <i>(Please specify)</i>	0	1	2	3	4	5

15. What percentage of your resident population is "private pay"?

Approximately _____ %

16. Please share **your thoughts** on how the oral health care of your residents could be improved. Check any of the following that you would like to see happen.

- Free training by a dentist or hygienist** for your staff on oral health care
 - Dentist or hygienist you pay to provide training** for your staff on oral health care
 - Dentist you pay** to visit facility and serve residents on a **regular schedule**
 - Dentist the residents pay** to visit facility and serve residents on a **regular schedule**
 - Dentist you pay** to visit facility and serve residents on **as needed**
 - Dentist the residents pay** to visit facility and serve residents on **as needed**
 - Volunteer Dentist** to visit facility and serve residents on **as needed**
 - Hygienist you pay** to visit your facility and clean your resident's teeth **regularly**
 - Hygienist the residents pay** to visit your facility and clean your resident's teeth **regularly**
 - Hygienist you pay** to visit your facility and clean your resident's teeth **as needed**
 - Hygienist the residents pay** to visit your facility and clean your resident's teeth **as needed**
 - Volunteer hygienist** to visit your facility and clean your resident's teeth **as needed**
 - Other** suggestions for improving oral health care in your facility/agency (*please specify*)
-

Appendix E: References

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