

*Michigan Department  
of Community Health*



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**Jackson County Senior Smile Survey  
Oral Health Pilot Project Focused on the Aging  
January 2013**

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## **Introduction**

The number of Michigan residents aged 65 years and older continues to increase each year. In 2010, there were 1,361,530 in this age group, comprising 14% of the population. This proportion is expected to increase to 19.5% in 2030, which means an estimated number of 2,081,000 Michigan adults aged 65 or older.<sup>1</sup>

According to the Centers for Disease Control and Prevention “... oral health means much more than healthy teeth, and is integral to the general health and well-being of all Americans. Oral health must be included in the provision of health care and design of community programs.”<sup>2</sup>

Due to advancement in preventative measures over the decades, such as, community water fluoridation, dental sealants, and an abundance of knowledge on how to prevent dental disease, as time goes on it cannot be assumed that the aging populations are fully edentulous.

In 1945, community water fluoridation began in Grand Rapids, Michigan in time to benefit many of Michigan’s Baby Boomers (born between 1946-1964). Due to less decay, this population has more of their natural dentition than earlier generations. The number of Michigan adults in need of oral care will only increase as the number of adults over 65 years increases to over 2 million people by 2030.

The aging populations will have an elevated risk of poor oral health over the younger generations due to additional challenges, such as physical impairments preventing proper daily homecare, dry mouth due to prescription medications, and access issues stemming from financial and transportation barriers. The 2010 Michigan Behavioral Risk Factor Survey reported that 22.0% of those aged 65-74 years, and 27.3% 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 13.1% 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.<sup>3</sup>

As this population continues to benefit from their natural dentition, there may possibly be an increased cost associated with their oral healthcare delivery. It is important for Michigan to have a clear and sound understanding as it relates to the current oral health status of those 65 years of age and older to best tailor public health programs, workforce, and available funds to the healthcare system to appropriately provide the necessary preventative and oral health care.

The purpose of this report is to discuss the findings of a pilot project that focused on methods for gathering pertinent data on oral health and care needs among adults 65 and older. This 18-month pilot in Jackson County provides a basis for launching a statewide senior oral health screening.

## **Background**

The Jackson County Senior Smile Survey (JCSSS) was a pilot project that focused on identifying the best techniques to gather oral screening data from those 65 years and older in Jackson County. Obtaining the oral health data from the seniors living in Michigan is imperative to future strategic planning for the state, however there are numerous barriers to conducting an open mouth survey for this population. Michigan attempted a statewide senior survey in 2010 and the survey was a challenge due to several issues. First of all, it was focused on long-term care facilities which proved to be a challenge to gain access into the facilities alone. When access was gained, it was often problematic to obtain permission from the resident or patient advocate to perform an oral health screening. Once permission was granted, due to memory loss, it was extremely difficult to obtain a sound dental history for the participants. Due to these challenges, it was determined that the state would benefit from a pilot project focused specifically on what it takes for a significant statewide survey to be successful while screening this unique population.

The pilot carefully examined a variety of different types of sites, incentives, and techniques to determine the most efficient and effective way to gather the data. Over an 18-month stretch between July 2011 and January 2013, 13 different sites were established for screening. Within 48 hours of a completed screening a meeting would take place between the screeners and project manager to carefully examine the evaluations and details of the screening. The lessons learned would eventually be compiled to achieve a successful senior screening, as well.

Jackson County was selected as the pilot site due to its large community network of support services offered to senior citizens including Smiles on Wheels (SOW). Jackson has over 30 local Area Agencies on Aging (AAA), congregate meal sites (CMS), and assisted living facilities (ALF) in Michigan. Jackson County publishes a yearly guide called “Senior Preferences”, a quarterly newsletter, and a monthly newsletter to market opportunities for senior citizens. SOW is a non-profit 501(c)(3) organization which has a long standing history of increasing access to oral health. SOW began in 2006 and is staffed with two Registered Dental Hygienists who operate their program under the Public Act 161 (PA 161) status and one Project Coordinator. This PA 161 program allows a hygienist to practice under relaxed supervision on underserved populations. SOW delivers services within long term care facilities, has obtained donated clinic space within the Jackson Health Department, has coordinated a successful school-based dental sealant and varnish program, and provides fluoride varnish to local Head-Start Programs. SOW has worked closely with the MDCH Oral Health Program since 2006 under numerous grants. SOW is well known within Jackson County and has a working relationship with many of the AAA, CMS, and ALF locations. SOW is very effective in coordinating oral health events.

The purpose of the JCSSS was to determine a sound foundation in which to launch a statewide senior survey in Michigan.

## **Methods**

The Association of State & Territorial Dental Directors (ASTDD) *Basic Screening Survey for Older Adults* tool kit, as well as lessons learned from the 2010 *Senior Smiles Survey in Michigan*, was used to develop the pilot program. In efforts to support state-to-state comparisons of older adults' oral health status, Michigan utilized the screening forms that were developed by the ASTDD. The pilot was evaluation extensive, and offered multiple surveys. Surveys that were administered were:

- The *Jackson County Senior Smile Survey*: This survey was designed by the ASTDD, and is a series of 19 qualitative questions that asked the senior about their own oral health status, both currently and historically and is completed by the senior (see appendix A).
- The *Sample Oral Health Screening Form #2 Recommended and Optional Indicators*: This survey was designed by the ASTDD, and serves as the data collection tool for the open mouth survey and was completed by a calibrated Registered Dental Hygienist (see appendix B).
- The *JCSSS Unscreened Patient Evaluation*: This survey was designed to hear from those seniors that declined having an oral health screening performed to better learn about their concerns and determine changes that could be made to address the concerns for a higher participation rate (see appendix C).
- The *JCSSS Site Administrator Evaluation*: This survey was given to each specific site contact administrator; it offered feedback on how the screening flowed for their facility. This offered some internal feedback on how the screening might be more successful (see appendix D).
- The *JCSSS Smiles on Wheels Survey*: This survey was completed by Smiles on Wheels, the team of hygienists and the assistant that was charged with planning and implementing the events. This is where they noted on the specific logistics of the event (see appendix E).

The screenings took place at a variety of facilities, all of which included a congregate meal site for seniors. The sites were contacted by SOW by telephone and/or e-mail to seek permission to set up an oral screening station and to coordinate a date. The sites were randomly selected; all

were located within Jackson County, and they all offered the seniors a meal. Each screening was staffed by the same two registered dental hygienists and one assistant who attended all screenings. SOW provided all of the equipment, except tables and chairs which were located within each facility.

The pilot was to examine the ideal screening environment for seniors; therefore each screening was unique. Through extensive evaluation, the process examined the best foreseeable flow to the screening process which would result in the highest senior participation rate, along with a high reliability of data collected. Over the screening events, lessons were learned, and then implemented within the following event(s), until evaluations reflected no more changes were needed.

The overall implementation of the pilot project was completed by SOW and was managed by Jill Moore, RDH, BSDH, MHA, the Dental Sealant Coordinator of the Michigan Department of Community Health ~ Oral Health Program. All coordination was accomplished by SOW. The ASTDD tool kit was utilized closely throughout the duration of the project, and the State Office on Aging also assisted when needed with resources and direction.

Each screening event was set up prior to senior arrival, and remained open until all seniors were screened, denied screening, or had left from the event. At all events, the *Jackson County Senior Smile Survey* was completed before the open mouth screening. Once the written survey was completed the senior had an open mouth screening completed by a calibrated registered dental hygienist. The same two hygienists completed all the screenings at all sites, and were well calibrated.

The surveys for the coordinator and SOW were completed by the staff after the event was completed, and a meeting was held between the MDCH grant manager and SOW within 24 hours of each event to review findings, and to discuss changes to be implemented for the next screening event.

The surveys were administered as a paper-based tool and responses were collected on the paper surveys. Surveys were collected by the grant manager, and data-entry was performed using Survey Monkey to log data of all surveys at the MDCH by the grant manager. The data was then cleaned and analyzed by the epidemiologist using the statistical program SPSS.

### **Funding**

An 18-month grant was provided by the National Association of Chronic Disease Directors for \$25,000 to support the *Jackson County Senior Smiles* pilot project.

## **Results**

### *Screening Form*

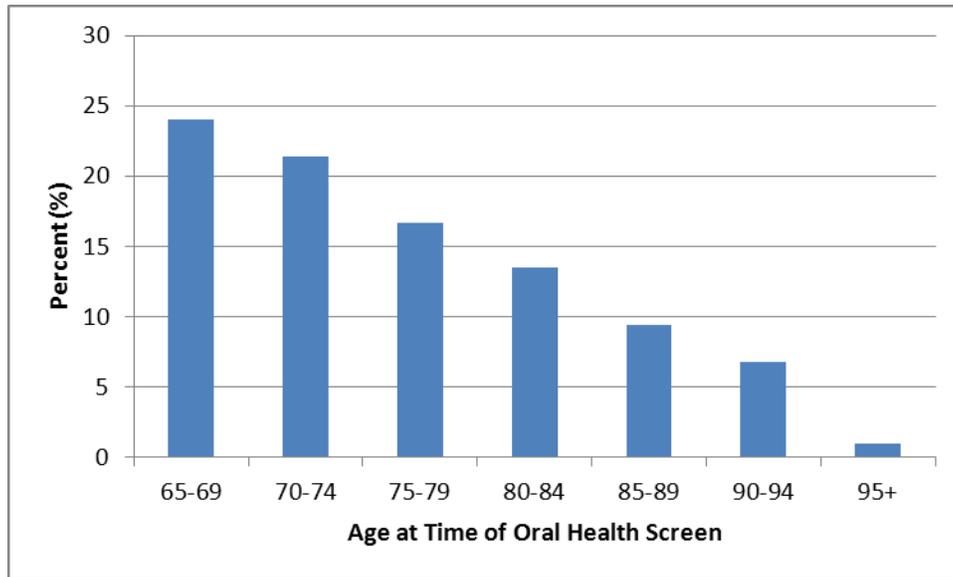
Between August 2011 and October 2012, 192 Michigan adults ages 65 years and older received an oral health screening at 13 different sites in Jackson County. Sites had a range of 7-30 adults screened, Table 1.

**Table 1. The 13 sites participating in the Jackson County Senior Smiles Survey by frequency of adults screened and type of site.**

<b>Site</b>	<b>Number (%)</b>	<b>Type of Site</b>
1	10 (5.2%)	Mall—Senior Event
2	17 (8.9%)	Senior Center
3	15 (7.8%)	Faith-Based
4	24 (12.5%)	Assisted Living Senior Center
5	9 (4.7%)	Township Hall—Senior Meal Site
6	7 (3.6%)	Township Hall—Senior Meal Site
7	14 (7.3%)	Township Hall—Senior Meal Site
8	10 (5.2%)	Senior Center
9	15 (7.8%)	Faith-Based
10	12 (6.3%)	Faith-Based
11	30 (15.6%)	Mall-Senior Event
12	21 (10.9%)	Assisted Living Senior Center
13	8 (4.2%)	Senior Center
<b>Total</b>	<b>192 (100.0%)</b>	

Of the 192 adults screened, 50 (26.0%) were male and 142 (74.0%) were female. They ranged in age from 65-99 years with the majority being between the 65-69 year age group (24.0%) and decreasing by increased age group, Figure 1.

**Figure 1. The age distribution of the screened population**



The majority of the adults screened were white (90.1%) or black (8.3%) with 1.0% reporting their race as Asian and 0.5% as multiracial. Comparing the screened population to the 2011 Jackson County census estimates demonstrate that the population was racially representative of the county, Table 2.

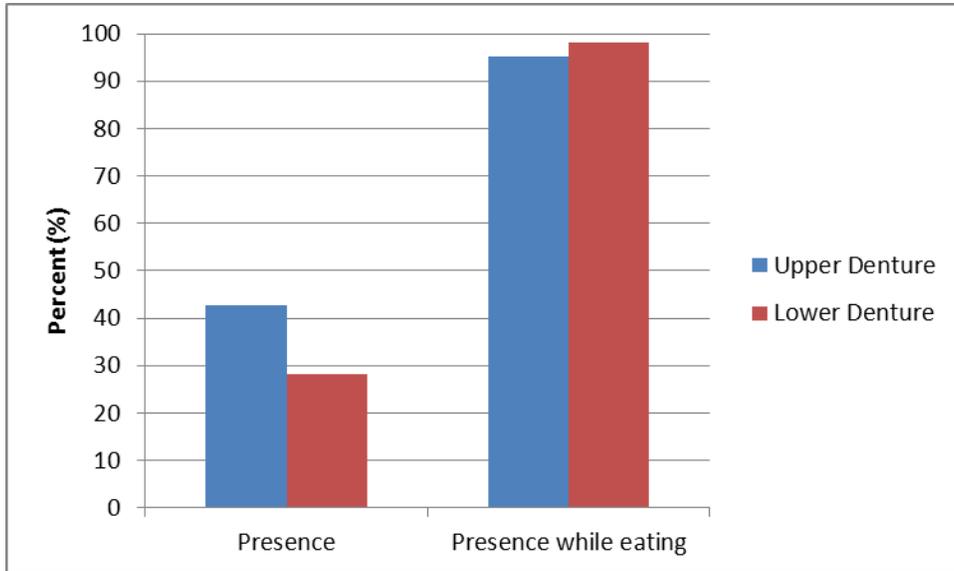
**Table 2. The racial distribution of the screened population and Jackson County**

Race	Screened Population Ages 65+ years	Jackson County* All ages
White	90.1%	88.3%
Black	8.3%	8.2%
Asian	1.0%	0.7%
Hispanic	0.0%	3.1%
Multiracial	0.5%	2.3%

\*US Census Bureau: State and County Quick Facts, 2011.

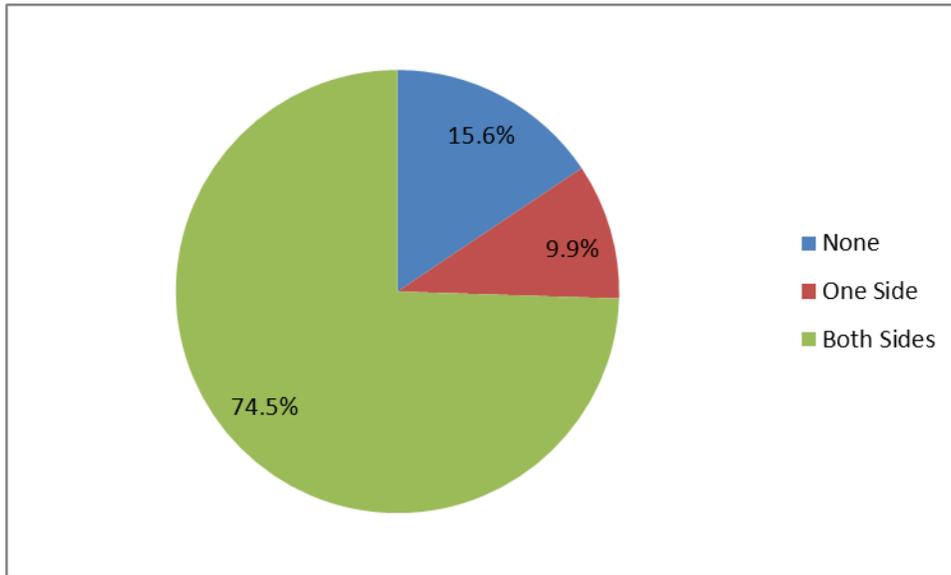
Of the 192 adults screened, 82 (42.7%) reported wearing a removable upper denture and 54 (28.1%) reported wearing both an upper and lower removable denture, Figure 2. Forty-nine wore removable dentures on both their upper and lower jaw. Of those that wore upper or lower removable dentures, 95.1% and 98.1% respectively, were able to wear the dentures while eating, Figure 2.

**Figure 2. Percent of screened adults with upper or lower removable dentures and percent that wear their dentures while eating.**



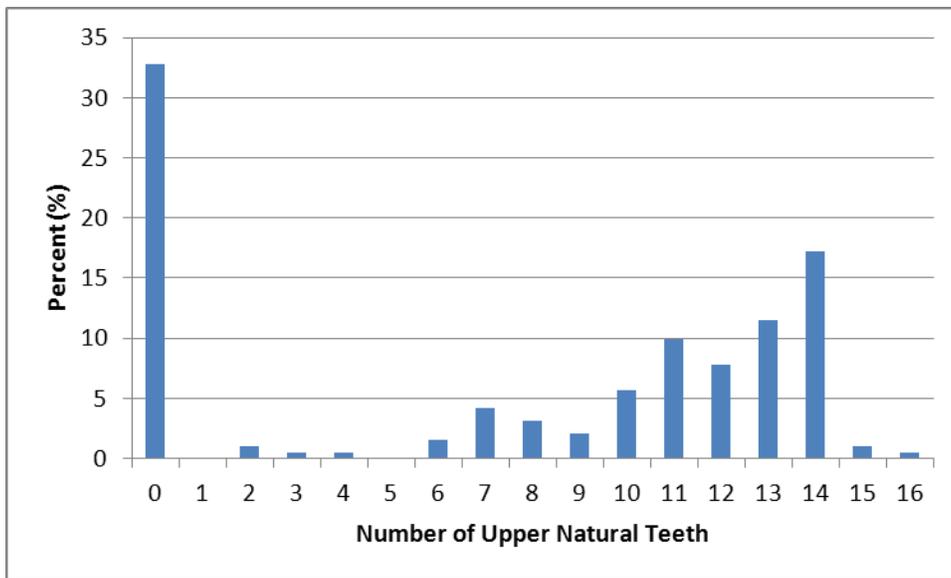
Three-quarters of the adults screened had functional posterior occlusal contacts on both sides of their mouth, 9.9% had it on only one side of their mouth and 15.6% did not have it, Figure 3.

**Figure 3. Percent of screened adults with functional posterior occlusal contacts.**



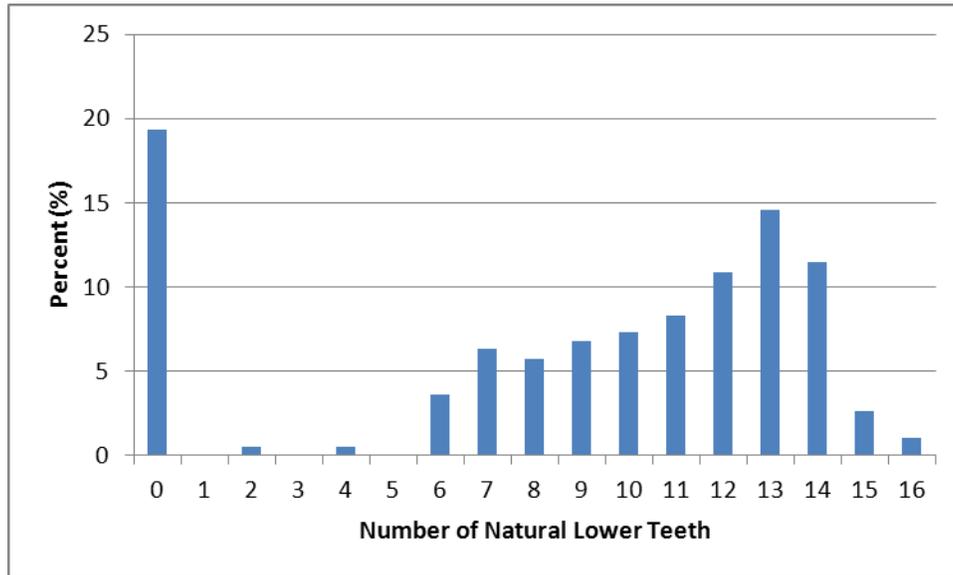
Sixty-three screened adults (32.8%) had no natural upper teeth in their mouth. Seven (3.6%) had between 1 and 6 natural upper teeth, 63 (32.8%) had 7-12 natural upper teeth and 58 (30.2%) had 13 or more natural upper teeth, Figure 4.

**Figure 4. Prevalence of natural upper teeth in screened adults**



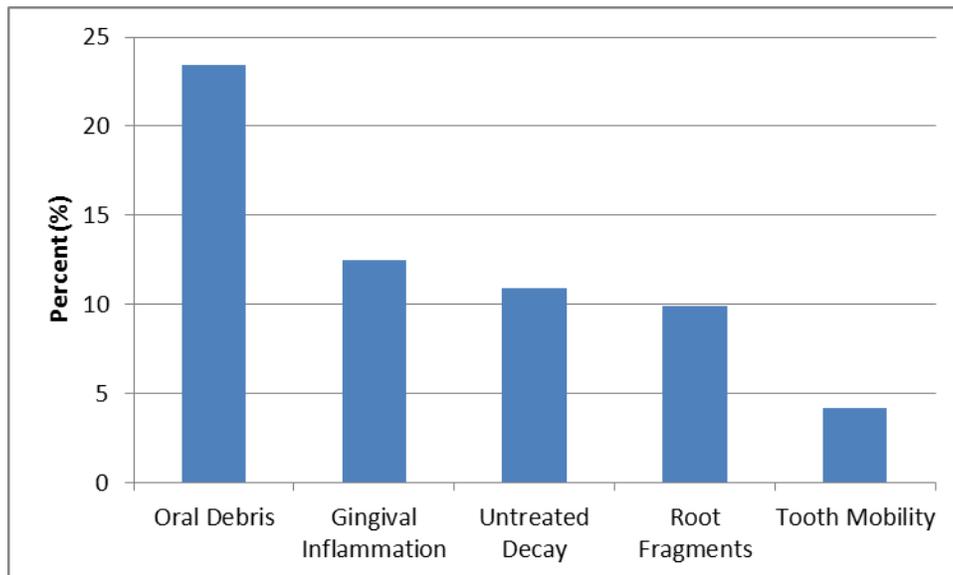
Thirty-seven screened adults (19.3%) had no natural lower teeth. Six (4.6%) had between 1 and 6 natural lower teeth, 87 (45.3%) had 7-12 natural lower teeth and 57 (29.7%) had 13 or more natural lower teeth, Figure 5. In total, 37 screened adults were edentulous, no natural teeth.

**Figure 5. Prevalence of natural lower teeth in screened adults**



Almost one-quarter (22.9%) of the screened population had severe dry mouth and 18 (9.4%) had suspicious soft tissue lesion(s). Several other poor oral health conditions were seen among the screened population including 45 (23.4%) with substantial oral debris, 24 (12.5%) with severe gingival inflammation, 21 (10.9%) with untreated decay, 19 (9.9%) with root fragments and 8 (4.2%) with obvious tooth mobility, Figure 6.

**Figure 6. Prevalence of poor oral health conditions in the screened adults.**

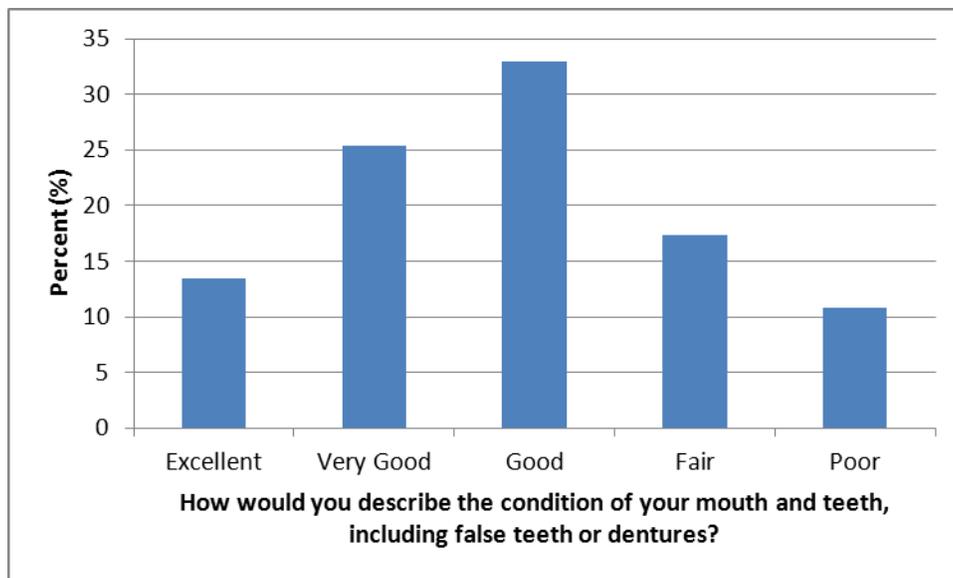


In total, 13 (6.8%) screened adults needed periodontal care in the opinion of the screener and 4 (2.1%) were in need of urgent treatment.

### *Screened Patient Self-Reported Survey*

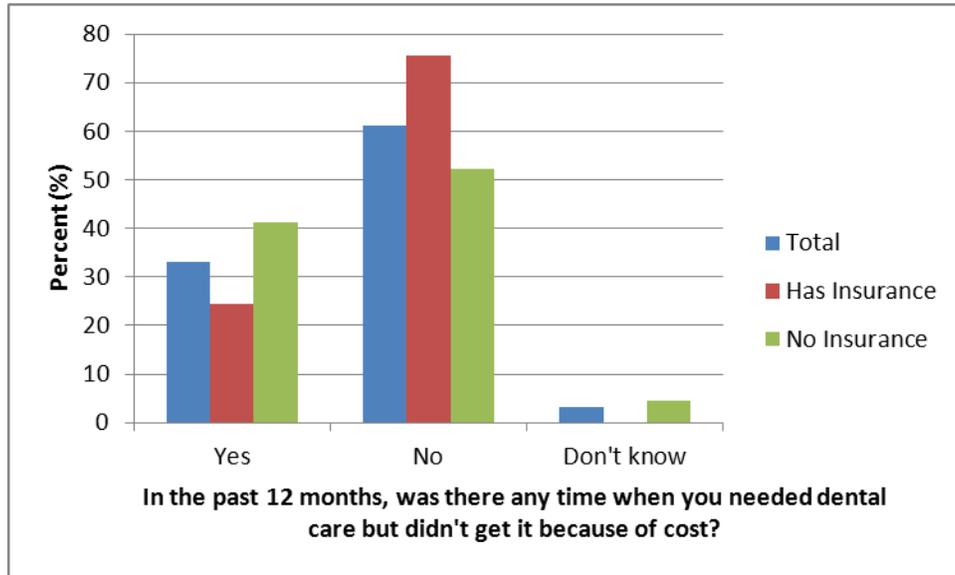
Of the 192 adults that had oral health screenings performed by a professional, 185 (96.4%) of these adults completed a survey on their behaviors and perceived condition of their oral health. Almost three-quarters (71.9%) of these adults thought their oral health was excellent, very good or good. An additional 17.3% thought their oral health was fair and 10.8% thought it was poor, Figure 7.

**Figure 7. Reported condition of mouth and teeth among adults who participated in an oral screening.**



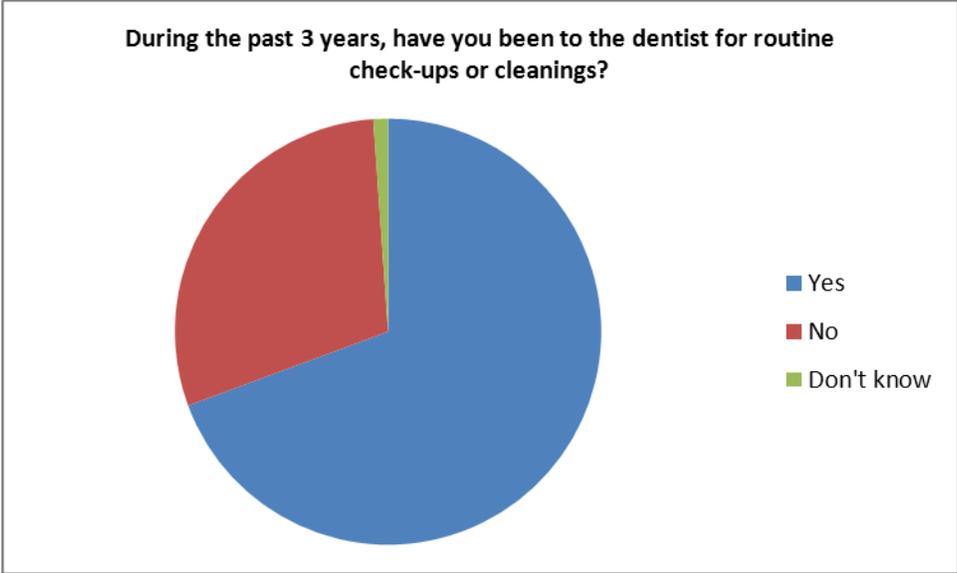
Of the 185 respondents, 81 (43.8%) reported they had some kind of insurance coverage that pays for some or all of their routine dental care including dental insurance, prepaid plans, or government plans. However, 90 (48.6%) reported they had no dental coverage. Overall, 33.0% of the respondents reported that they did not receive dental care because of cost. Among the respondents with insurance coverage this number drops to 23.5% and rises to 41.1% among those with no dental insurance coverage, Figure 8.

**Figure 8. Prevalence of adults by insurance status who did not receive dental care due to cost.**



Over two-thirds (68.6%) of the adults seen at the clinics had been to a dentist for a routine check-up or cleaning in the past 3 years. However, 29.2% reported that they had not seen a dentist in that time frame and 1.1% (n=2) were not sure if they had been, Figure 9. Of those 127 adults who visited a dentist in the past 3 years, 37.8% were seen 2 or more times per year, 18.9% went once per year, 5.4% went less than one time per year, and 3.8% went when it was needed.

**Figure 9. The proportion of adults in the past 3 years who visited a dentist for a check-up or cleaning.**



Three-quarters of this population (74.1%) reported that they had a particular dentist or dental clinic that they normally go to for dental care or dental advice. An additional 20.5% do not have a regular dentist or dental clinic. The remaining 3.8% were unsure if they had a regular dentist or dental clinic and 1.6% did not respond.

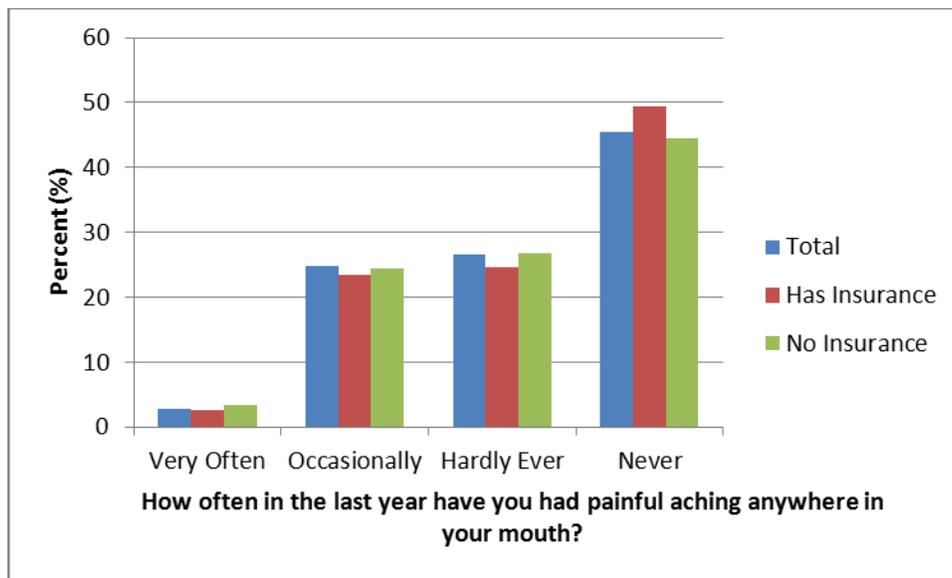
Reasons as why respondents did not go to a dentist in the past year, included not going to a dentist due to cost (43.8%), followed by not having a reason to go (20.0%) among 105 responses, Table 3.

**Table 3. Reported reasons respondents have not been to a dentist in the past year.**

Reason	Number	Percent (%)
Cost	46	43.8%
No reason to go (no problems, no teeth)	21	20.0%
Fear, apprehension, nervousness, pain, dislike going	8	7.6%
Other priorities	8	7.6%
Cannot get to the office/clinic (too far away, no transportation)	6	5.7%
Do not have/know a dentist	4	3.8%
Have not thought of it	3	2.9%

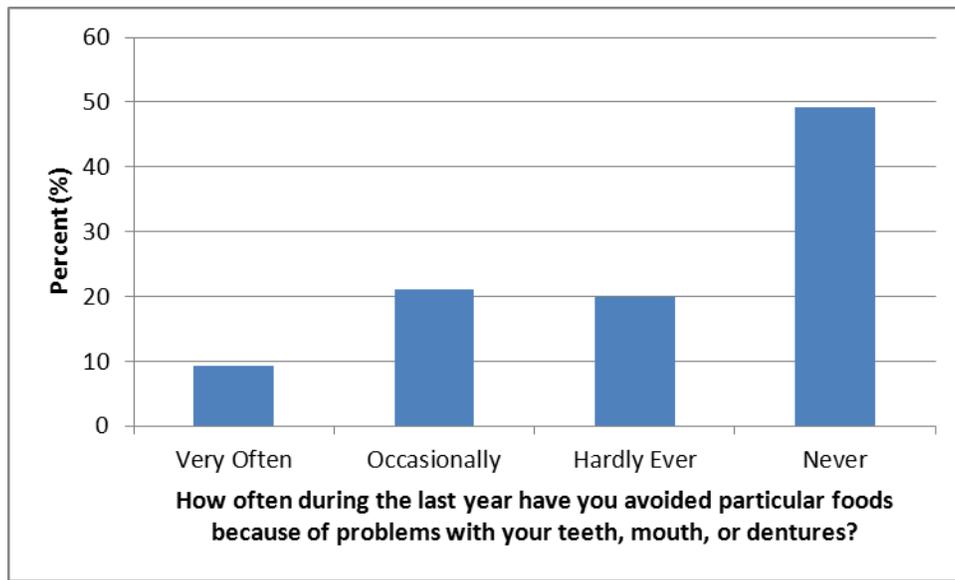
When they were asked about issues with their oral health 2.7% reported they had pain very often in their mouth over the past year. Half (51.4%) reported they occasionally or hardly ever had pain in their mouth in the past year and 45.4% reported they had no pain. Percent without pain was higher in adults who had coverage (49.4%) compared to those who did not have insurance coverage (44.4%), Figure 10.

**Figure 10. Reported pain in the mouth in the past year by insurance status.**



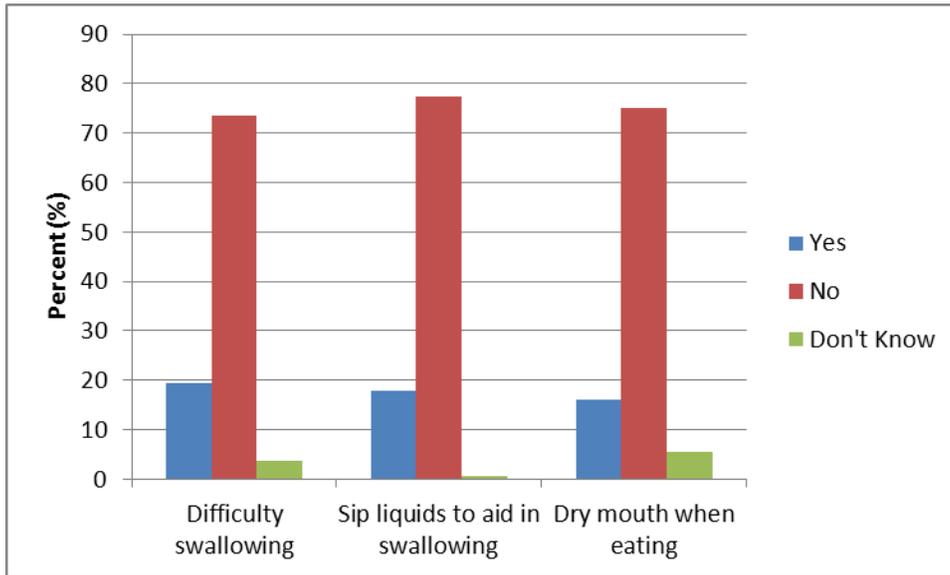
Half (49.2%) of the adults reported they had not avoided particular foods because of problems with their teeth, mouth, or dentures in the past year. However, 9.2% reported they avoided foods very often in the past year and an additional 41.1% occasionally or hardly ever avoided certain foods, Figure 11.

**Figure 11. Percent of respondents who avoided food in the past year due to oral problems.**



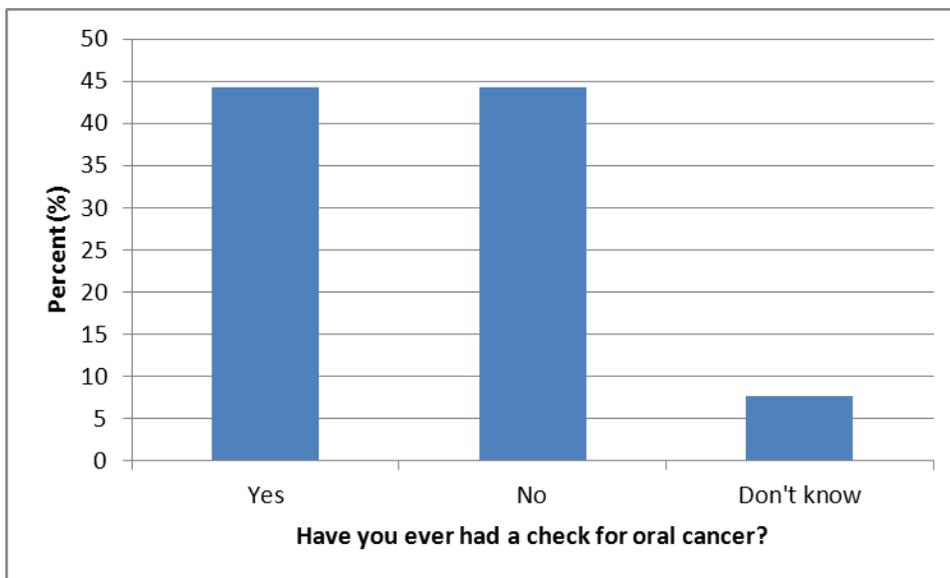
In addition to needing to avoid foods, respondents had other oral health trouble from eating or drinking including, 36 (19.5%) with difficulty swallowing food, 33 (17.8%) needing to sip liquids to aid in swallowing food, and 30 (16.2%) having a dry mouth when eating meals, Figure 12.

**Figure 12. Prevalence of difficulty while swallowing or eating.**



When respondents were asked about being examined for oral cancer by checking the tongue and cheeks, 82 (44.3%) said they had been checked and the same number, 82 (44.3%), said they have never been checked. There were an additional 14 (7.6%) adults who were unsure if they had been checked for oral cancer before, Figure 13.

**Figure 13. Prevalence of respondents checked for oral cancer by a dentist.**



### *Smiles on Wheels Evaluation*

Evaluation forms were completed by Smiles on Wheels staff after each of the 13 oral health screening day events for seniors. The SOW staff thought 13 event days ran excellent (n=8) or good (n=5). They also thought they were accepted, welcome and appreciated at 12 of the 13 sites by both the seniors and the site administrators.

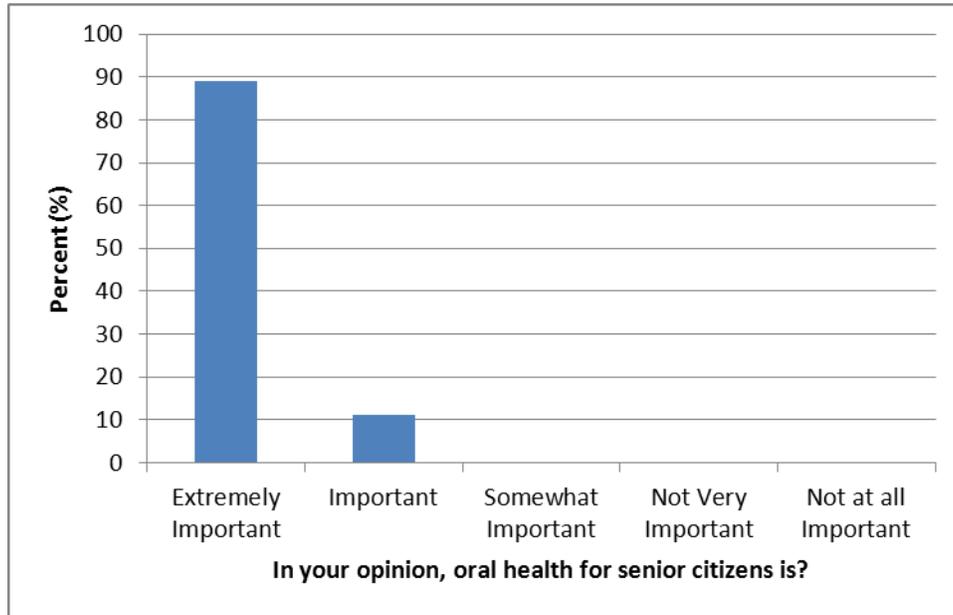
At 12 of the 13 sites, SOW reported that they had optimal working space and patient privacy but they did suggest dividers, a separate room or separate areas to perform the screenings might be beneficial for the exams. SOW also thought the day could have ran smoother if the seniors had assistance filling out the questionnaire or if the questionnaire was easier for them to fill out. They also thought that a reminder a day before the event would be beneficial for the seniors.

All sites thought that the Michigan Department of Community Health (MDCH) was very supportive of the screenings. One site recommended that MDCH should change the age range requirements from 65+years to 60+years and another thought it might be beneficial to have MDCH staff onsite for the screening day.

### *Site Administrator Evaluation*

Nine of the 13 site administrators completed an evaluation form for the day of the oral health screening event. Almost 90% reported that they thought oral health was extremely important for senior citizens and the other 10% thought it was important, Figure 14. All 9 sites reported an overall excellent experience working with Smiles on Wheels and planning the event. No one reported that they would not host another oral health screening day, 3 said they would consider hosting another event and 6 said they would host another.

**Figure 14. Reported importance of oral health for senior citizens by the site administrators at the oral health screening events.**



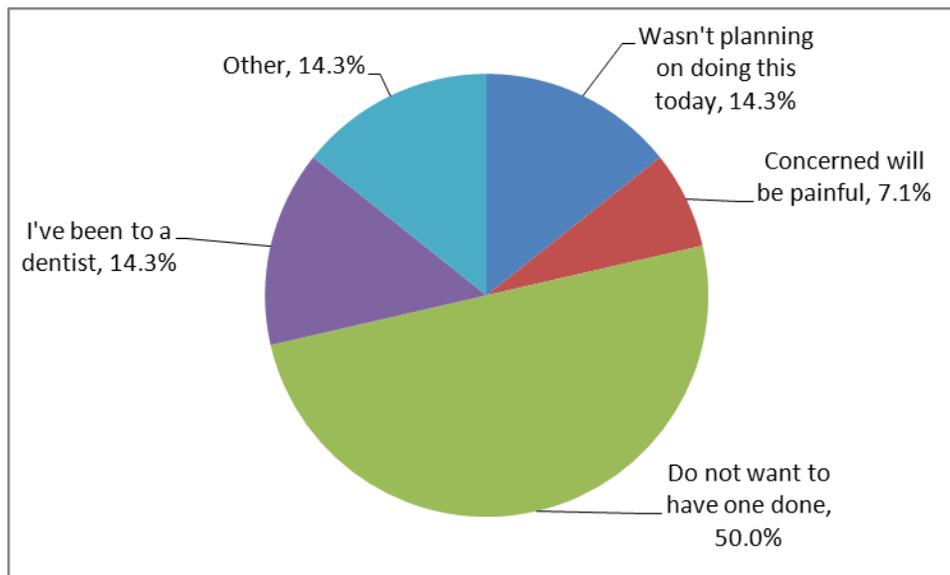
All 9 sites agreed that the consumers benefitted from the screening day. Seven of the 9 sites agreed that the oral health screen was accepted by the consumers and the other 2 sites somewhat agreed that the consumers accepted the screenings.

The sites thought the communication of the program to the seniors, the number of helpers/volunteers, and the courteous nature of the people running the event helped it run smoothly. They had no suggestions on how to make the event run more smoothly or to make the consumers feel more comfortable in the future.

#### *Unscreened Patient Evaluation*

Many seniors declined to participate in the oral health screening, however, 14 agreed to complete a survey to assess why they decided not to receive an oral health screening. Half (n=7) reported they did not want to have an oral health screening performed, 14.3% (n=2) reported they weren't planning on doing an oral health screening that day, 14.3% (n=2) reported they had already been to a dentist, and another 14.3% (n=2) did not report a reason. One person was concerned that the screening would be painful, Figure 15.

**Figure 15. Reported reasons for not participating in an oral health screening among unscreened adults in Michigan.**



One person reported they would be interested in having an oral health screening on a different day. This same person reported that they had not planned on having an oral screening on the day and that was the reason they did not participate in the screening.

### **Discussion**

The JCSSS helped reach 192 Michigan seniors and provided oral health screening and care to them. Of these, 17 (8.9%) were in need of periodontal care or urgent treatment that they may not have received otherwise. Almost half (48.6%) of the seniors that were screened reported that they did not have insurance that covered dental care and one-third (33.0%) did not receive dental care because of cost in the past year. This demonstrates a need in Jackson County for senior dental care. It will be a priority to see if this need is consistent throughout the state and to determine a way to get care for this age group.

The JCSSS was able to obtain a racially representative sample from Jackson County. However, Jackson County is less diverse than Michigan as a whole. For example, the Jackson County population is comprised of approximately 8.2% blacks where the state encompasses approximately 14.3% blacks. The screening population was also heavily female compared to males (74.0% vs 26.0%). In the future reaching a more diverse population is a priority to determine if oral health behaviors and needs differ by sociodemographic groups.

This screened population had several poor oral conditions including severe dry mouth (22.9%), suspicious soft tissue lesion(s) (9.4%), substantial oral debris (23.4%), severe gingival inflammation (12.5%), untreated decay (10.9%), root fragments (9.9%) and obvious tooth

mobility (4.2%). These oral health conditions do not represent a healthy oral cavity that is necessary for all people of all ages to achieve total health. Seniors specifically are at a higher risk of a healthcare emergency resulting from poor oral health, such as aspiration pneumonia and choking that can result from poor oral health. A complete statewide survey is needed to provide additional data on the oral health status of the aging population in Michigan to lead legislative action that can provide additional and necessary oral health care resources to seniors.

According to the respondent's survey, less than half of them (44.6%) had ever been checked for oral cancer. The survey was completed prior to the oral health screen in which 100% of the seniors were screened for oral cancer.

The majority of the unscreened population that participated in the survey (n=10, 90%) reported they would not be interested in having an oral health screening on a different day. Other ideas to get a higher screening rate need to be considered such as more education on the importance of oral health screenings, and to specifically educate site administrators on the importance of an oral health screen. The evaluation of this population could be expanded to determine more about why they chose not to have a screening. Methods such as focus groups or a more detailed survey could be applied in the future. In addition, the sample size of this survey was very small (n=14) and should be expanded into a statewide senior survey to fully represent the oral health status of the aging population in Michigan. The statewide survey will be completed as funding allows.

### **Lessons Learned**

Throughout the 18-month project, the screening events were closely examined for possible area of improvement to gain access to seniors, and to also increase the screening participation rates of the seniors. The following are some of the notable lessons that were learned:

- Location information:
  - Congregate meal sites—all of the screenings were at sites that provided lunch to seniors, except one. With administrators/coordinators support, these sites were a simple way to access seniors. It was demonstrated through the screenings that having the support of the coordinator was imperative for several reasons:
    - The coordinator is a familiar and friendly face to the senior. If the coordinator demonstrates the importance of the screening then the seniors will be more comfortable with consent;
    - Many, if not all, of these sites had activities going on (Bingo, Karaoke, card tournaments, exercise classes, etc.) that the

screening will be in competition with. If the site coordinator can plan the time so that seniors do not risk missing out on the social event it will increase the number of seniors screened;

- If the coordinator will announce the screening to the group in a positive and encouraging manner it naturally supports the project;
  - The coordinator can help with planning the best day to have access to the highest number of seniors because they are experienced in their positions, know the seniors well, and are good at forecasting attendance for food preparation needs.
- Faith-based location—one screening was completed at a faith-based location, incorporated into their nutritional meal site. This location only had four unscreened participants. Those who were friends would encourage each other to have the screening done.
  - Senior focused health fair—one screening was completed at a large senior health fair at the mall in Jackson County.
    - Very energetic large crowd;
    - Privacy screens very important, and the booth was in an out-of-the-way location to maximize privacy;
    - Coupons created because seniors are concerned with not getting around to all of the booths quickly enough for the freebies. When they had a coupon many returned to use their coupon in exchange for an oral screening and goodie bag.
  - Legislative focused events—one event was a senior event planned by the local elected official, Tim Walberg. The screeners (SOW) were actually mailed an invitation to attend the event to provide oral health screens. The event was significant with participation, and would be a recommended screening site in the future.
  - Holiday event—the day of Halloween, SOW planned a screen at a local senior center. Although the turn out of the seniors was extensive, the majority of them were dressed up and preferred to spend their time socializing than having an oral health screen done.

- Assisted living facility—one event was at an assisted living facility. This event had full support by the administrator of the home. This event was a successful one due to support, as well as the convenience of the screening being available most of the day and directly next to the dining room. The assisted living facility eliminated the possibility of the screening taking away from a short term social activity, such as Bingo or Karaoke, at a meal site location. It also brought an older group (75+) to be screened so a wider variety of data could be collected. This was in contrast to many of the congregate meal site locations where seniors tend to be upper sixties and low seventies, and still able to attend and travel independently. Since congregate meal sites are generally scheduled around three hours or less, entering the home of the seniors naturally offered the flexibility of a wider time frame which allowed more screenings to be completed.
- Successful tips
- Privacy screens—the addition of privacy screens was added at the fifth screening site location. The screens increased response rate of the screenings, the seniors appeared to be much more comfortable with the open mouth survey as well as removal of dentures and partials.
  - A supportive site coordinator who knows seniors by name and who can convince them to have screening done. Many seniors will respond that they do not need a screening done because they do not have natural dentition, or that they just went to the dentist. Several of the coordinators that understood why the State needs to collect this data was vital to explain to Seniors that they are actually helping others out who may be in need.
  - Have list of dentists nearby to refer for emergency situations. There were multiple times that a referral was given, and appointments were actually made by SOW on site of the screening for a senior in need.
  - Posters and advertisements will increase the turn out. The coordination of the screenings included a flyer on the event. On occasion the flyer was put into activity advertisements, and then the same flyer was developed into posters and was posted heavily within the locations of the event (see appendix F).

- Incentives are essential.
- Incentives—the success of the survey rested upon the significance of the incentive provided. The seniors received quality oral health aids as an incentive. The coordinator was also provided an oral health bag at the completion of the screening. The incentives were displayed behind the screening area so that they were visible to the seniors, with one sample bag on the front table so they could see/touch what they would get for participating. The following were considered an extremely important incentive to provide to seniors:
  - Crest spin brush—multiple comments were made on how they appreciated the power spin brush;
  - Denture adhesive—offering different types of adhesive was beneficial in supporting the seniors that wear dentures. Since they are there to socialize and eat with friends, they are very concerned that their denture may not be fixed in at the end of the survey. By having a wide variety of adhesives on hand, it is reassuring that their preferred adhesive (brand and type) is readily available to use, as well as provide them free products to take home.
  - Reusable shopping bags—the bags were ordered to put the incentives in, however the bags quickly became the most wanted item by the seniors. Displaying the large bag on the table was a simple way to attract seniors to the screening area.
  - Dry mouth aids—it is essential to have a lot of dry mouth aids on hand to provide. These aids were often used on the spot, as well as sent home.
  - Additional incentives—a wide variety of additional products were provided to the seniors: full size tube of toothpaste, Reach Access flossers, different types of disposable dental picks, mouth rinses, denture kits, oral care reminders to place on bathroom mirrors, etc. Each bag was packed for the individual and their individual oral health needs.
- Survey Information: Five different surveys were completed for each screening event.
  - The *Jackson County Senior Smile Survey*: This survey was designed by the ASTDD, and is a series of 19 qualitative questions that asked the

senior about their own oral health status, both currently and historically (see appendix A). Over the events, the font size and paper type (thick/thin) was manipulated in efforts to learn what worked best. Upon following gradual lessons learned at each location, it was determined that it is best to have the SOW assistant sit and read each question to the participants. Due to physical impairments and health literacy, the surveys were more accurate and complete when they were assisted verbally with this form.

- The *Sample Oral Health Screening Form #2 Recommended and Optional Indicators*: This survey was designed by the ASTDD, and serves as the data collection tool for the open mouth survey that was completed by a calibrated Registered Dental Hygienist (see appendix B). The careful calibration of the screeners is important in the validity of the study. The JCSSS pilot only used two hygienists who spent the first three sites calibrating their results to ensure reliability.
- The *JCSSS Unscreened Patient Evaluation*: This survey was designed to hear from those seniors that declined having an oral health screening performed to better learn about their concerns and determine changes that could be made to address the concerns for a higher participation rate (see appendix C). All seniors that declined a screening was offered this survey, however not all agreed to complete the survey.
- The *JCSSS Site Administrator Evaluation*: This survey was given to each specific site contact administrator; it offered feedback on how the screening flowed for their facility. This offered some internal feedback on how the screening might be more successful (see appendix D). At times, this survey needed to be e-mailed out to the site administrator if they were too busy to complete it that day.
- The *JCSSS Smiles on Wheels Survey*: This survey was completed by Smiles on Wheels, the team of hygienists and the assistant that was charged with planning and implementing the events (see appendix E). This is where they noted on the specific logistics of the event. The logistics were carefully looked at upon each survey to learn how the screening can be more successful.

## **Future Plans**

The JCSSS pilot project was an integral component of completing a statewide survey on the oral health status of older adults in Michigan. Due to the nature of the population being surveyed, it will be difficult to capture all of the necessary data within all aging populations within the state within one single survey. Our elders reside in a wide variety of locations and facilities, and all have a wide variety of limitations and daily events. The next step for the MDCH Oral Health Program is to take the valuable lessons learned from the JCSSS pilot project, and to launch a survey statewide that is focused on gathering oral health data from the seniors that utilize congregate meal sites and other senior focused events. The statewide survey will be completed when funds allow.

## References

<sup>1</sup>Gibson, Mary Jo, Fox-Grage, Wendy, Houser, Ari. *Across the States 2009: Profiles of Long-Term Care and Independent Living- Michigan*. Eighth Edition. AARP Public Policy Institute. Washington, DC.

<sup>2</sup>Centers for Disease Control and Prevention. *Oral Health in America: Summary of the Surgeon General's Report*: [http://www.cdc.gov/oralhealth/publications/factsheets/sgr2000\\_05.htm](http://www.cdc.gov/oralhealth/publications/factsheets/sgr2000_05.htm)

<sup>3</sup>Michigan Department of Community Health. Division for Vital Records and Health Statistics. [http://www.mdch.state.mi.us/pha/osr/CHI/POP/DP00\\_T1.asp](http://www.mdch.state.mi.us/pha/osr/CHI/POP/DP00_T1.asp)

<sup>4</sup>Riedel-Heller SG, Busse A, Angermeyer MC. Are cognitively impaired individuals adequately represented in community surveys? Recruitment challenges and strategies to facilitate participation in community surveys of older adults. *A Review*. *Eur J Epidemiol* 2000; 16:827-35

## Jackson County Senior Smile Survey

**1. How would you describe the condition of your mouth and teeth-including false teeth or dentures?**

- Excellent
- Very good
- Good
- Fair
- Poor

**2. How often during the last year have you had painful aching anywhere in your mouth?**

- Very often
- Occasionally
- Hardly ever
- Never

**3. How often during the last year have you avoided particular foods because of problems with your teeth, mouth or dentures?**

- Very often
- Occasionally
- Hardly ever
- Never

**4. Do you have any kind of insurance coverage that pays for some or all of your routine DENTAL CARE, including dental insurance, prepaid plans such as HMOs, or government plans such as Medicaid/Medicare?**

- Yes
- No
- Don't know

## Jackson County Senior Smile Survey

**5. Do you have any kind of insurance coverage that helps pay for any routine dental care including cleaning, x-rays and examinations?**

- Yes
- No
- Don't know

**6. How long has it been since you last visited a dentist or a dental clinic for any reason? include visits to dental specialists, such as oral surgeons.**

- Within the past year (anytime less than 12 months ago)
- Within the past 2 years (1 year but less than 2 years ago)
- Within the past 5 years (2 years but less than 5 years ago)
- 5 or more years ago
- Never

**7. About how long has it been since you last visited a dentist? Include all types of dentists, such as, orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists.**

- Within the past year (anytime less than 12 months ago)
- Within the past 2 years (1 year but less than 2 years ago)
- Within the past 5 years (2 years but less than 5 years ago)
- 5 or more years ago
- Never

**8. What was the main reason you last visited the dentist?**

- Went in on own for check-up, examination, or cleaning
- Was called in by the dentist for check-up, examination, or cleaning
- Something was wrong, bothering or hurting me
- Went for treatment of a condition that dentist discovered at earlier check-up or examination
- Other

## Jackson County Senior Smile Survey

**9. During the past 3 years, have you been to the dentist for routine check-ups or cleanings?**

- Yes
- No
- Don't know

**10. During the past 3 years, how often have you gone to the dentist for routine check-ups or cleanings?**

- 2 or more times a year
- Once a year
- Less than once a year
- Whenever needed
- No regular schedule

**11. Is there a particular dentist or dental clinic that you usually go to if you need dental care or dental advice?**

- Yes
- No
- Don't know

**12. During the PAST 12 MONTHS, was there any time when you needed dental care (including check-ups) but didn't get it because you couldn't afford it?**

- Yes
- No
- Don't know

## Jackson County Senior Smile Survey

### 13. What is the main reason you have not visited the dentist in the past year?

- Fear, apprehension, nervousness, pain, dislike going
- Cost
- Do not have/know a dentist
- Cannot get to the office/clinic (too far away, no transportation, no appointments available)
- No reason to go (no problems, no teeth)
- Other priorities
- Have not thought of it
- I have gone to the dentist
- Other

### 14. Do you sip liquids to aid in swallowing any foods?

- Yes
- No
- Don't know

### 15. Does the amount of saliva in your mouth seem to be too little, too much, or do you not notice it?

- Too little
- Too much
- Don't notice it

### 16. Do you have difficulties swallowing any foods?

- Yes
- No
- Don't know

### 17. Does your mouth feel dry when you eat a meal?

- Yes
- No
- Don't know

## Jackson County Senior Smile Survey

**18. Have you ever had a check for oral cancer in which the doctor or dentist pulls on your tongue, sometimes with gauze wrapped around it, and feels under the tongue and inside the cheeks?**

- Yes
- No
- Don't know

**19. If YES: When did you have your most recent oral cancer exam?**

- A year ago or less
- More than 1 year, but not more than 2 years
- More than 2 years, but not more than 3 years
- More than 3 years, but not more than 5 years
- Over 5 years ago

Appendix B: Sample Oral Health Screening Form

**Smiles On Wheels**  
**Sample Oral Health Screening Form #2**  
**Recommended and Optional Indicators**

**SITE INFORMATION**

Site ID Code <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Screen Date <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> / <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> / <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Screener ID Code <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
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**DEMOGRAPHIC INFORMATION**

Age <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Gender <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Male <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 2 = Female	Race/Ethnicity <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = White      5=AI/AN <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 2 = Black      6= Pacific Islander <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 3 = Hispanic    7=Multi-racial <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 4 = Asian      9=Unknown
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**ORAL SCREENING INFORMATION**

Do you have a removable upper denture? <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes	<b>If Yes</b> →	Do you usually wear your upper denture when you eat? <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes
Do you have a removable lower denture? <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes	<b>If Yes</b> →	Do you usually wear your lower denture when you eat? <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes
Functional Posterior Occlusal Contacts <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = None <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = 1 side only <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 2 = Both sides <span style="margin-left: 20px;">Assess with removable dentures in place.</span>	<b>Ask participant to remove partial/full dentures.</b>	
Substantial Oral Debris <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous	Severe Gingival Inflammation <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous	

**Remove excess oral debris if necessary.**

# of Upper Natural Teeth <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> Range: 0-16    Include root fragments	# of Lower Natural Teeth <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> <input style="width: 20px; height: 20px; margin-right: 5px;" type="text"/> Range: 0-16    Include root fragments
Untreated Decay <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous	Root Fragments <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous
Obvious Tooth Mobility <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous	Need for Periodontal Care <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 9 = Edentulous
Severe Dry Mouth <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes	Suspicious Soft Tissue Lesion <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0 = No <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1 = Yes
Treatment Urgency <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 0=No obvious problem – next scheduled visit <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 1=Early care – within next several weeks <input style="width: 20px; height: 20px; margin-right: 5px;" type="checkbox"/> 2=Urgent Care – within next week – pain or infection	Comments:

NOTE: If you are collecting information on age, gender and race using a questionnaire, you can delete those fields from this form.

Appendix B: Sample Oral Health Screening Form

## JCSSS Unscreened patient Evaluation

Please help us understand your concerns with having an oral health screening done.

**1. I am declining an oral health screening today for the following reason(s)...please check all that apply:**

- I was not planning on doing this today
- I am in a hurry
- I am embarrassed about my mouth
- I am concerned it will be painful
- I simply do not want to have an oral screening done
- I am concerned about my privacy
- Other: \_\_\_\_\_

**2. I would be interested in having an oral health screening on another day:**

- Yes
- No

# JCSSS Site Administrator Evaluation

By filling out this survey you will be assisting the State of Michigan's Oral Health Program to understand how to best collect oral health data on senior citizens.

## **1. In your opinion, oral health for senior citizens is:**

- Extremely important
- Important
- Somewhat important
- Not very important
- Not at all important

## **2. How was your overall experience working with Smiles on Wheels for the oral health screening today?**

- Excellent
- Good
- Fair
- Poor

## **3. What was your experience with planning the oral health screening day with Smiles on Wheels (planning prior to the day of)?**

- Excellent
- Good
- Fair
- Poor

## **4. How would you rate the effectiveness of communication with Smiles on Wheels?**

- Excellent
- Good
- Fair
- Poor

## JCSSS Site Administrator Evaluation

### 5. How likely would you be to host another oral health screening day?

- Yes, I would host another oral health screening day
- Maybe, I may consider hosting another oral health screening day
- No, I will not hold another oral health screening day

### 6. I feel as though the consumers benefited from the oral health screening day:

- Agree
- Somewhat agree
- Disagree
- Strongly disagree

### 7. I feel as though the oral health screen was accepted by the consumers:

- Agree
- Somewhat agree
- Disagree
- Strongly disagree

### 8. In your opinion, what did Smiles on Wheels do that assisted the day in running smoothly?

### 9. In your opinion, what could Smiles on Wheels have done to make the day run better?

### 10. In your opinion, what could Smiles on Wheels do to make the clients more comfortable?

### 11. Any additional comments are welcome to help us better our screening day:

Thank-you for your time!

# JCSSS Smiles on Wheels Survey

By filling out this survey you will assist the Michigan Department of Community Health better understand how to successfully collect oral health data on senior citizens.

## 1. Enter site location information

## 2. In my opinion the screening day ran:

- Excellent
- Good
- Average
- Poor
- Horribly

## 3. In your opinion, how could the day have run smoother?

## 4. In your opinion, what was the general feeling that you received from the seniors?

- Accepted, welcome, appreciated
- Neutral
- Unwanted, unwelcome, unappreciated

## 5. In your opinion, what was the general feeling that you received from the site administrator?

- Accepted, welcome, appreciated
- Neutral
- Unwanted, unwelcome, unappreciated

## 6. In your opinion, did the seniors like the oral health aids?

- Yes
- Neutral
- No

# JCSSS Smiles on Wheels Survey

**7. Do you need any additional oral health aids ordered?**

- Yes
- No

**8. What additional oral health aids are needed?**

**9. For those seniors who denied screenings, in your opinion, what could have been done to convince them to comply?**

**10. Did you feel as though you needed more supplies?**

- Yes
- No

**11. What additional supplies are needed?**

**12. Did you have optimal working space that allowed for patient privacy?**

- Yes
- No

**13. What could be changed to offer more privacy?**

**14. Did you take any photos of oral health issues?**

- Yes
- No

**15. If you took photos, please describe what was found which lead you to take a photograph?**

## JCSSS Smiles on Wheels Survey

### 16. At what point did you first contact the senior center?

- Less than one week ago
- 1-2 weeks ago
- 3-4 weeks ago
- 6 weeks ago
- Over 6 weeks ago

### 17. How would you rate your support with Michigan Department of Community Health for this screening date?

- Very supportive
- Somewhat supportive
- Not supportive

### 18. How else could the Michigan Department of Community Health assist you with your screening day?



## SMILES ON WHEELS

Mobile Dental Hygiene Care  
501c3 non-profit  
TIN # 20-5964778

# FREE Oral Health Screening

Who: Anyone 65 years and older—No Appointment Necessary

When: Screening date to be filled in

Where: Screening location to be filled in

What: Each participant will complete a survey and have an oral screening. The screening will include an oral cancer screen. Only a mirror and piece of gauze will be used.

Free: Each participant will also receive a free oral health aids (toothbrush, toothpaste, denture supplies, dry mouth products, etc.).

Purpose of this project: The Jackson County Senior Smile Survey is supported by the Michigan Department of Community Health Oral Health Program and funded by National Association of Chronic Disease Directors #HA2011. By participating in this survey you will help Michigan learn more about the oral health needs of its Senior Citizens. All of your information will be kept confidential.



For more information please contact: Smiles On Wheels at 517-740-2596