

## Community Dental Health Coordinators: Bringing Healthy Smiles to Underserved Older Adults in Tennessee

Holly Plemons<sup>1\*</sup>, Rhonda Switzer-Nadasdi<sup>2</sup>, Lalita Nekkanti<sup>3</sup>, and Rene Sobolewski Casali<sup>3</sup>

<sup>1</sup>*SMILE ON 60+, Nashville, USA*

<sup>2</sup>*Interfaith Dental, Nashville, USA*

<sup>3</sup>*Program Volunteer, Tennessee, USA*

Correspondence should be addressed to Holly Plemons, [holly@smileon60plus.com](mailto:holly@smileon60plus.com)

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### ABSTRACT

#### BACKGROUND

Many low-income older adults have significant levels of unmet dental needs, primarily because traditional Medicare offers no dental benefits and adult dental Medicaid programs are unpredictably funded, due to state budget constraints. Few older adults sign up for Medicare advantage plans (which involve private-sector health insurers), understand the benefits, or can access a provider. The safety net dental landscape can be confusing and overcrowded, often squeezing out older adults in favor of more vocal and savvy consumers.

Social determinants are a factor in accessing dental care, yet it is rare to have case management services supporting healthcare navigation in the dental world. While case management is an integral part of medical venues, patients presenting with oral health problems may experience compromised results due to a lack of dental knowledge by conventional (medical) case managers. The community dental health coordinator program (CDHC) is changing that paradigm by introducing case management into the dental arena.

#### METHOD

This case study examines the benefits of deploying four certified CDHCs to provide oral health case management services for Tennessee older adults via a new statewide program called SMILE ON 60+.

#### RESULTS

In year one of three, the program exceeded its goal by 223%: The CDHCs improved the access to dental care for 2500 older adults.

#### HIGHLIGHTS

Four dental hygienists/assistants utilized their training in the American dental association (ADA) community dental health coordinator program to educate more than 2500 older adults and connect them to dental services.

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## OBJECTIVES

1. Demonstrate that the CDHC team increased participation of older adult populations in oral health activities via SMILE ON 60+.
2. Illustrate the skill level of CDHCs in working with varying demographic populations of program participants.
3. Emphasize the value of CDHCs, based on a comparison of program participants' baseline oral health vs. oral health outcomes due to program intervention.

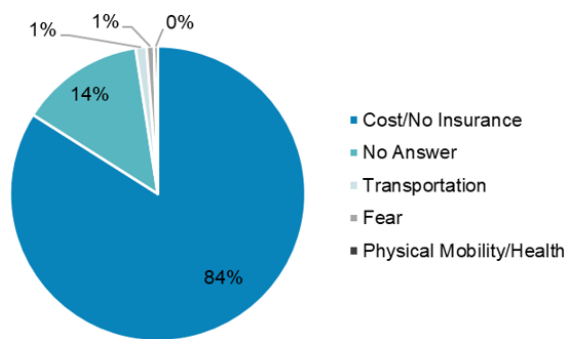
## KEYWORDS

Health literacy; Social determinants; Care coordination; Navigation; Access; Oral health

## INTRODUCTION

Oral health and general health are interwoven; yet oral health especially for older adults is not prioritized by society. Nationally, Medicare covers less than 1% of dental services for aging Americans; 70% of this population have no dental insurance of any kind [1]. Transportation, low health literacy, and financial obligations contribute to the list of major barriers to older adults having dental access (Figure 1).

**What Barriers Have Kept You From Finding a Consistent Dental Home?**



**Figure 1:** Collected data from program older adults at enrollment citing cost/lack of insurance as main barriers to care (84%; 97% if you exclude adults whose reason was not captured). CDHCs connecting older adults with safety net clinics addresses these barriers.

In Tennessee, the situation has reached critical levels. The state of decay, a report released by oral health America on the state of older Americans' oral health, shows the composite score for the state of Tennessee as a 4. A range of 0 to 49 is considered poor. Only one state

(Alabama) ranked lower than Tennessee [2]. The Tennessee state plan on aging finds that 69% of surveyed older adults reported dental care as among their top three needs [3]. The CDC states that 34% of retired Tennesseans have lost all their teeth due to dental disease [4].

With no state of Tennessee adult dental Medicaid program, no dental benefit in Medicare, and a limited number of dental providers who accept Medicare advantage plans, many Tennessee older adults suffer the pain and diminishment of overall health caused by untreated dental disease. Access to dental services is a critical unmet need for Tennessee older adults.

A statewide initiative called SMILE ON 60+ was designed to address this issue. The program improves the overall health and quality of life of low-income, mobile Tennessee older adults age 60+ through community dental health education and access to oral healthcare services. A one-time grant from the chancery court, *senior/elder trust*, funded this comprehensive three-year program, now in its second year. The year one goal of the program was to attract 1200 participants to educational workshops, and provide direct care services to 1320.

## METHOD

The SMILE ON 60+ program is managed by interfaith dental, a long-time leader in oral health services with 25-years of experience in providing excellent care to vulnerable populations. Interfaith dental used its

expertise in forming alliances, coalitions, and networks to create a diverse dental provider team to support the SMILE ON 60+ initiative. With 19 safety net clinics operating 29 sites across the state, dental care providers include member clinics in the Tennessee charitable care network (An association of free and charitable clinics) and the Tennessee primary care association (Federally qualified health centers). SMILE ON 60+ network ensures older adults from all Tennessee counties are now within 90 minutes of a partner clinic. Two mobile units operated and staffed by Meharry medical college and another by friends in need Appalachian miles for Smiles Bridge the access gap in the most remote areas.

The objectives of SMILE ON 60+ are to navigate low-income older adults into affordable dental homes; increase oral health knowledge and motivate positive behaviors that affect current and future overall health; use direct dental care to improve oral health and decrease overall health risks (Including enhanced social confidence and nutrition, as well as pain mitigation); and create a sustainable network of well-trained dental providers to care for a growing older adult population.

The in-the-trenches team powering the SMILE ON 60+ program across the state of Tennessee is comprised of four community dental health coordinators (CDHCs). Part of a 2007 national certification initiative by the American dental association (ADA), CDHCs are dental hygienists and assistants who are trained as community health workers to evaluate, educate, and navigate patients to appropriate dental services. CDHCs coordinate care and manage cases; build bridges from the community to the dental clinic by addressing social determinants of health; improve continuity of care; resolve barriers to care (Transportation, housing, language, etc.); and enhance the health literacy of patients. Their unique skill set includes motivational interviewing (MI) and community mapping. CDHC certification was a key component of the SMILE ON 60+ grant. The program

required key operational staff to undergo CDHC training because of the significant value of health navigation support for the older adult population.

#### *About the SMILE ON 60+ Service Population*

The target population of SMILE ON 60+ is mobile, dentally uninsured Tennesseans age 60-years or older experiencing poverty. The elder index of 200% poverty and below has been used as criteria for participation in SMILE ON 60+. The 2016 data reflect there are 533,409 older adults age 60+ in Tennessee. A 9% poverty rate indicates 98,800 are at risk for inaccessibility to dental services.

Older adults were recruited to participate in SMILE ON 60+ through senior centers, faith communities, nonprofits, the media, the council on aging, aging services providers, and SHIP (Senior health insurance program) navigators. Candidates also came from the SMILE ON 60+ hotline, staffed by family and children's services employees. When potential patients contact the program, they are screened for basic eligibility information, and then connected to a CDHC for navigation support into the closest partner clinic.

Of the older adults who registered for the new program in grant year one, 3641 were female and 1881 were male; 3399 were Caucasian, 1374 were African American (The remaining 408 were Hispanic, Asian, Native American/Alaskan/Pacific Islander, Multi-racial, and Undetermined). While the program serves older adults into their nineties, most of the registrants were ages 60 to 75 (4308) (Table 1).

When asked about a dental home, only 2743 had visited a dentist within the last 12 months; 3094 had not seen a dentist in 1 to 5+ years. Nearly half were limited in what they could eat, and more than half ranked their teeth health as poor to fair. The greatest barriers to access by far were cost (4405) and lack of insurance (2928). (Figure 2) Of 5626 potential participants, 3752 older

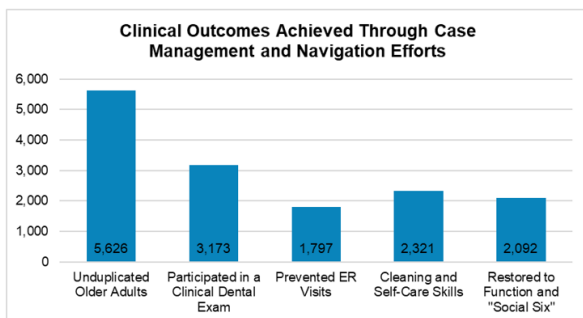
adults were eligible for the program. SMILE ON 60+ CDHCs referred most to a dental clinic; nearly all committed to the referral (Table 2).

| Demographic Questions                       | Responses with Values  |
|---|--|
| Gender                                      | <ul style="list-style-type: none"> <li>Female - 3,641</li> <li>Male - 1,881</li> <li>Unknown - 1</li> </ul>  |
| Race/Ethnicity                              | <ul style="list-style-type: none"> <li>African American - 1,374</li> <li>American Indian and Alaska Native - 38</li> <li>Asian - 86</li> <li>Caucasian - 3,399</li> <li>Hispanic - 196</li> <li>Multi-racial - 15</li> <li>Pacific Islander - 2</li> <li>Unknown - 71</li> </ul>   |
| Age   | <ul style="list-style-type: none"> <li>60-64 - 1,847</li> <li>65-69 - 1,330</li> <li>70-75 - 1,131</li> <li>76-79 - 490</li> <li>80-85 - 408</li> <li>86-89 - 156</li> <li>90+ - 82</li> </ul>   |
| What other assistance programs are you on?  | <ul style="list-style-type: none"> <li>SNAP - 1,060</li> <li>TennCare - 876</li> <li>Section 8 - 437</li> <li>SSI/SSDI - 2,180</li> </ul>  |
| How did you first hear about SMILE ON 60+?  | <ul style="list-style-type: none"> <li>Dental Clinic Staff - 2,801</li> <li>Other - 798</li> <li>Wisdom Tooth Project Presentation - 783</li> <li>SMILE ON 60+ CDHC - 559</li> <li>This Encounter - 402</li> <li>Senior Center - 271</li> <li>TV - 171</li> <li>Flyer - 103</li> <li>Newspaper - 72</li> <li>SHIP Navigator - 25</li> <li>Dental Hotline - 14</li> <li>Radio - 11</li> <li>Health Assist - 4</li> <li>Tennessee Alliance for Legal Services - 2</li> <li>Habitat for Humanity Greater Memphis - 2</li> </ul> |
| Did you help in these other areas?          | <ul style="list-style-type: none"> <li>Referred to State Partners Transportation - 121</li> <li>Referred to Legal - 36</li> <li>Referred to Housing/Repairs - 246</li> </ul>   |
| What is the next step for client encounter? | <ul style="list-style-type: none"> <li>Referred to Dental Clinic - 3,883</li> <li>Care Coordinator - 367</li> <li>Information Only - 292</li> <li>Not Interested in SMILE ON - 36</li> </ul>   |
| Did the client commit to referral?          | <ul style="list-style-type: none"> <li>Yes - 3,680</li> <li>No - 314</li> </ul>  |

**Table 1:** Demographic information of 5626 Tennessee older adults registered in the program database.

| Baseline Oral Health Status Questions   | Responses with Values   |
|---|---|
| When is the last time you visited your dentist?   | <ul style="list-style-type: none"> <li>Less Than 12 Months - 2,743</li> <li>1 to 2 Years - 1,014</li> <li>3 to 5 Years - 682</li> <li>More Than 5 Years - 1,398</li> </ul>  |
| What barriers have kept you from finding a consistent dental home? (Select all that apply)    | <ul style="list-style-type: none"> <li>Dental Cost - 4,405</li> <li>No Insurance - 2,928</li> <li>Transportation Availability/Access - 478</li> <li>Transportation Cost - 390</li> <li>Fear - 427</li> <li>Physical Mobility and Health - 272</li> <li>Personal Isolation - 73</li> </ul> |
| Are you limited in what you can eat?  | <ul style="list-style-type: none"> <li>Yes - 2,337</li> <li>No - 2,710</li> </ul>   |
| How would you describe the condition of your mouth and teeth?                                 | <ul style="list-style-type: none"> <li>Don't Know - 219</li> <li>Poor - 2,106</li> <li>Fair - 1,624</li> <li>Good - 958</li> <li>Very Good - 166</li> </ul>   |
| Have you ever felt that the appearance of your mouth and teeth affected your quality of life? | <ul style="list-style-type: none"> <li>Yes - 1,804</li> <li>No - 3,157</li> </ul>   |

**Table 2:** Baseline oral health status information of 5,626 potential patients registered in the program database.



**Figure 2:** Patient outcomes from clinical care achieved through CDHC case management and navigation.

### Oral Health Education and Outreach

The mission of the SMILE ON 60+ CDHC team is to guide older adults into dental homes and serve the broader community as a compass to resources and dental access. To accomplish this, each CDHC was assigned a safety net clinic home base representing different regions of the state. Because our CDHCs live in their assigned regions, and often have grown up and trained there as registered dental assistants (RDAs) and/or registered dental hygienists (RDHs), they were already entrenched, respected oral health advocates and trusted sources of dental information.

The first step was for the CDHCs to tackle the social determinants of health—those barriers that were limiting the service population’s access to dental as well as other care. Partnership was vital. Our team built banks of resources and developed relationships with organizations to connect older adults to resources beyond dental services (legal, housing, transportation, etc.). A continuous and evolving process, they use community mapping to gain a basic working knowledge of available services and contact information (Figure 1).

In year one, CDHCs successfully educated 40 aging services agencies including senior resource groups. The CDHC team continuously updates resources and services by region. Collaborating with area aging services providers and SHIP navigators, as well as conducting joint outreach events have been invaluable in identifying common barriers and sharing information, in real time.

Along with partnering on information-sharing with other service providers, our CDHCs also provided direct support to patients. They establish preliminary program eligibility using specific criteria, and then clinically screen, triage, and shepherd low-income, uninsured older adults to participating clinic sites throughout Tennessee (Figure 2 and Figure 3).



**Figure 2:** CDHC Kim Isom uses a translation service to assist a patient in completing program forms.



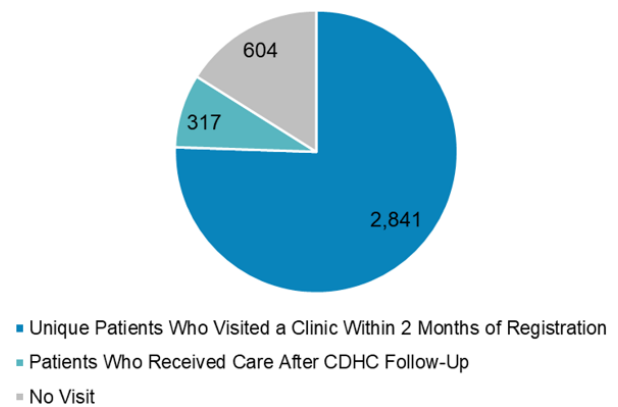
**Figure 3:** CDHC Nicki Raines performs an oral screening at an outreach event pre-COVID.

Follow-up is a critical component to care. Our CDHCs follow up on all patients who register for the program but did not visit a clinic within two months of registration (participants who failed to follow through). We set the two-month time frame to allow for clinic waitlists and the normal information exchange throughout the network. CDHCs followed up with 921 of the 3752 eligible older adults referred to dental clinics, but had not yet been seen by a provider within two months. The follow-up encounter removes the barriers that prevented the visit (unmet transportation needs or concerns about treatment). Further in-depth case management is delivered a second time, if needed (Figure 4).

A key component of the program is education. Our CDHCs use evidence-based dental resources, such as the wisdom tooth project interactive curriculum developed

by oral health America for community dwelling older adults [1], a validated tool for increasing the oral health knowledge of participants. An important part of community health education is tailoring the oral health message to the older adult audience, including the best time of day to schedule outreach and follow-ups, and the importance of a larger font size on health education pamphlets.

#### SMILE ON 60+ Registration Breakdown



**Figure 4:** Of 921 unique CDHC follow-ups, 317 followed through with an appointment, yielding a 34.4% success rate.

An example of targeted outreach is our dental bingo game, designed to increase interest, participation, and retention of information. A long-time favorite of older adults, SMILE ON 60+'s version of bingo packages the main points of the tooth wisdom curriculum in a health-literate, senior-friendly way. Typically, a game features three rounds, for repetition of information. Instead of numbers, the emcee calls out dental terms for players to mark: Brushing, caring for dentures, going to the dentist, etc. The games are so popular players are now defining the terms, instead of the emcee educator. We hosted 21 bingo events, drawing a total of 437 senior participants.

#### Tracking and Records

To facilitate navigation and transparency, we created a shared, cloud-based database to serve the network of CDHCs, dental providers, and SMILE ON 60+ administrators across the state. The database houses basic demographic information, program eligibility criteria,

and baseline oral health status, enabling authorized program staff to quickly and seamlessly view a patient's status or requested resources. The oral health status questions are modeled after the Association of state and Territorial dental director's basic screening survey patient questionnaire. We incentivized data collection by using the database to invoice for reimbursement.

All potential program candidates are registered in the database by our team: CDHCs, clinic staff, hotline workers, referral partners, and program administration. During the first year of the program, 5626 potential participants were entered into the database; 3752 were eligible for the program. CDHCs utilize the database to document encounters with patients, flagging those needing follow-up. The database generates a number of helpful reports, extractions of raw data allowing for quantitative analysis of program participants.

### ***The Impact of Good Communications***

Thanks to extensive training in motivational interviewing (MI), CDHCs are well equipped to drill down deeper in conversations with patients. We found that listening for what is not being said is sometimes the most valuable aspect of communication.

For example, during follow-up with a patient who had cancelled multiple appointments with a dental provider, the patient shared that she preferred to schedule her visits at the beginning of the month but the front desk staff were unable to help her do this. The CDHC worked through the issue with the patient, finally determining that the patient was actually concerned about running out of money near the end of the month and having to miss the clinic visit. The patient shared that she did not feel comfortable sharing this concern with the front desk scheduler at the time. Without strong interviewing and listening skills and the ability to advocate for the individual, the cycle of cancellations would have

continued and the patient would not have gotten the care she needed.

Because the dental providers in the SMILE ON 60+ network vary widely in size, capacity, staffing models and support, our CDHCs serve as liaisons between patients and clinic providers. Plus, as dental professionals, they can help identify patients with potential emergent needs and quickly triage them for clinic staff. The CDHCs are also able to pitch in clinically occasionally, helping to shorten waitlists by working as assistants and hygienists alongside the regular clinical team. A bonus of being present in the clinical environment is that it helps CDHCs identify staff training needs related to communication and older adults' special considerations that may have gone unnoticed.

### ***Barriers and Challenges***

One of the biggest challenges facing the SMILE ON 60+ team was the same challenge facing the older adults we serve: Trying to understand the Medicare advantage plan landscape. We discovered patients had benefits they didn't know about. They did not know how to use the few benefits they had, and could not find providers to meet their needs. Communicating this information to program participants was difficult. Plus, Medicare advantage prioritized medical healthcare, so the dental component was small. Our CDHCs overcame this barrier by completing senior health insurance program (SHIP) navigator training, to be better able to speak the plan language and educate patients. They went one step farther and presented a workshop on the importance of dental care at the SHIP navigators' statewide conference.

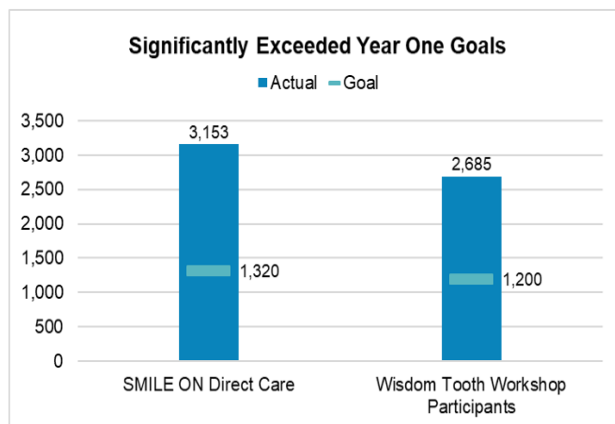
Another barrier was the COVID-19 pandemic. Figuring out how to work an outreach program during safer-at-home orders inspired creativity instead of frustration. Our CDHCs organized drive-through bingo and teledentistry to maintain contact with program participants. Beyond the health and isolation impacts, coronavirus also

revealed the further barriers of technology and cost. Older adult patients were not tech savvy and often unable to successfully navigate the Internet. While cell phones were a good fallback communication resource, cost was again a barrier if patients on fixed incomes had limited minutes in their phone plans.

## **RESULT**

In year one, our CDHC team exceeded the education goal of 1200 workshop attendees by 223%. They educated 2685 older adults on the importance of oral health, shared self-care tips, and connected older adults with dental care providers. CDHC case management and navigation helped more than 2532 older adults find dental homes.

CDHC follow-up of 921 of the 3752 eligible older adults referred to dental clinics who had not seen a provider within two months resulted in an impressive 34.4% (317) following through with an appointment.



**Figure 5:** Year one goals exceeded expectations for both direct care services and education.

The direct care services for year one also exceeded the projection of 1320 patients: The program provided services to 3153 unduplicated older adults (Figure 5). In year one, a total of 3153 patients received 32,892 total dental care procedures, including fillings/cleanings; extractions; dentures without extractions; dentures with extractions; and dentures, extractions, and fillings. Direct care capacity is expected to grow at a faster rate with the

addition of more providers in the second year of the program.

## **CONCLUSION**

We have learned that low-income older adults face significant challenges accessing adequate dental care. Most SMILE ON 60+ patients stated that the condition of their mouths is only poor or fair, and cost and lack of insurance are the most common barriers to oral health care. This is compounded by lack of access to a dental home. These factors illustrate the need for intervention on a large scale. But there are no large-scale solutions as yet. Sustainable dental care begins with a system of dental care. That system for underserved older adults is missing from Medicare in most states.

The increase in patient visits, education, and direct care services due to CDHC case management and follow-up demonstrates the value and effectiveness of their role. But it also confirms the overall value of implementing case management in the dental world, especially for underserved populations. We believe case management in the dental arena will match the success of navigating patients to care in the medical arena. The focused attention on community mapping and navigation was successful in overcoming barriers to care. Without dental case management and the education it provides as well as the barriers to care and lack of access it helps patients overcome, we fear low-income and underserved populations will miss out on vital oral health care, which directly affects overall health. Community dental health coordinators (CDHCs) are an integral part of successful dental case management and the navigation of patients to the care they need and deserve. It is neither cost-effective nor appropriate for dental providers to perform this service for patients. We have proven funding for CDHCs is money well-spent.

By the end of program year three, the goal is to reach 20,000 unduplicated older adults: providing direct care to

more than 12,000 and educating an additional 8000 on the importance of oral health. Community dental health coordinators (CDHCs) will continue to play a crucial role in achieving these goals through their one-on-one contact with patients and participating clinics.

Howard, a SMILE ON 60+ patient, was seen at interfaith dental in Nashville for care. He reported having difficulty chewing food, avoiding smiling, experiencing pain and discomfort, and feeling embarrassment about his mouth and teeth over the past 12 months. After completing his treatment, he shared with the clinic team: "I have an outgoing personality, but I felt like I was living under a rock. It was taking a big effect on my mental health. I am so grateful for this program. It brings tears to my eyes."

SMILE ON 60+ is committed to making a lasting impact in the lives of older adults like Howard. But right now, the impact is based on the charitable dollar and is unsustainable without a sizable public and/or charitable investment in dental care for older adults. Our grant-funded, three-year program is not free; participants make

a \$25 co-pay per visit. In the coming years, efforts for sustainability to continue this important program must include advocating for systems change, increasing awareness of the problem of unmet dental needs in older adults, educating dental providers about the need for a sustainable system of care for all populations, and fiercely advocating for the value of dental case management to improve oral health for a lifetime [5,6].

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### **CONFLICT OF INTEREST**

The authors attest there is no conflict of interest in the creation of this article.

## **REFERENCES**

1. Center for Medicare Advocacy (2013) New report: Expanded dental coverage needed to confront health crisis.
2. (2016) Oral health America and wisdom tooth project<sup>®</sup>. A state of decay. Are older Americans coming of age without oral health care.
3. (2013) Tennessee state government. Tennessee state plan on aging 2014-2018.
4. (2001) Centers for disease control (CDC) morbidity and mortality weekly report. Tooth loss among persons aged greater than or equal to 65 years - selected states 1995-1997.
5. (2017) Oral health America.
6. Casali Rene (2020) SMILE ON 60+ data analysis.