

5-2017

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Recommended Citation

Cornett, Micaela J., "Dental Disparities and the Safety Net in Blount County" (2017). *Undergraduate Honors Theses*. Paper 381.
<http://dc.etsu.edu/honors/381>

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Dental Disparities and the Safety Net in Blount County

In Fulfillment of Honors

by

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The Honors College

East Tennessee State University

to

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Dental Hygiene

February 22, 2017

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Date

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Date

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Background

Dental disparities occur around the world, but the focus of this study will be Blount County, Tennessee. Residents without access to dental care include every socioeconomic class; residents of all racial and ethnic groups, adults and children, both genders, and the homeless are affected (CDC, 2015). Social factors also contribute to dental disparities including tobacco use, drug use, diet, job status, and the ability to afford and maintain dental insurance (CDC, 2015).

Education about the importance of oral health is needed so adults can maintain their own oral health (National, 2014). Not every individual understands how the health of the oral cavity affects overall health. Americans often have the ability to access healthcare, but is it different for oral healthcare? Individuals and families must make oral healthcare a priority. However, if dental disparities exist, not everyone can afford oral health care (Sanders, 2012). Dental disparities should be non-existent so that adults, children, the homeless, the uninsured, and the unemployed can still access oral healthcare at a reasonable cost. So, what are the dental disparities in Blount County, and are there enough dental clinics within the dental safety net?

Literature Review

Oral disease is known as a “silent killer”. Seventy-eight percent of the population is affected by tooth decay by the young age of seventeen and 98% by the age of forty-four (Ebersole, D’Souza, Gordon, & Fox, 2012). Periodontal disease affects 25% of adults between the ages of 35 and 44 (Ebersole et al., 2012). These numbers are astronomical, so prevention is key. Unfortunately, individuals with limited resources are affected the most when dental care is neither affordable nor accessible. According to the Surgeon General’s report on *Oral Health in America*, “oral health is essential to the general health and well-being of all Americans and can be achieved by all Americans” (Ebersole et al., 2012, p. 997). The U.S. Surgeon General is

committed to universal dental access. Sixty-eight percent of adults eighteen years or older have visited a dentist in the past twelve months (Ebersole et al., 2012); 32% of Americans did not see a dentist or dental hygienist during that year. The Centers for Disease Control and Prevention (CDC, 2015) reported that 83% of American children ages 2 to 17, 61.7% of adults ages 18 to 64, and 60.6% of adults ages 65 and over visited a dentist in the past year.

Lack of access is the primary reason individuals do not seek dental care. According to Wallace and MacEntee (2011), “the availability of healthcare can be viewed from three perspectives: the geographical distribution of services; the fit between services and needs; and the willingness and resourcefulness to service the needs of a particular community” (p. 36). Dentists have argued for stability between requests for care and the number of dental practices in the regions where they serve (Wallace and MacEntee, 2011). Others acknowledged the reality of distance in rural areas (Wallace and MacEntee, 2011). In other words, dentists are not concerned with making a lengthy trip to treat individuals in rural areas. Another obstacle low-income patients have is “balance billing,” “whereby dentists expect patients to pay an extra fee to balance or cover the difference between their usual professional fee and the fee paid by public benefits, and also to pay the total fee in advance of treatment” (Wallace and MacEntee, 2011, p. 36). A limited number of dentists will accept income assistance rates or sliding fee scale which adjust for income (Wallace and MacEntee, 2011). Balanced billing often results in unresolved debt. An edentulous (toothless) man only has one denture because he still owes \$300; he cannot order the bottom denture until he resolves the debt (Wallace and MacEntee, 2011). The third perspective of access is “concerned with the expectations between providers and recipients of dental services” (Wallace and MacEntee, 2011, p.36). Disabilities including substance abuse,

homelessness, mental illness, immobility, or sedation requirements can be obstacles to accessing dental care in traditional settings (Wallace and MacEntee, 2011, p.36).

Blount County

According to the United States Census Bureau (2014), Blount County is home to 126,339 residents. The statistics from 2009 to 2013 reported 13.7% of Blount County residents living below the poverty level, about 17,308 individuals. In Blount County, only one dental clinic serves this low-income population. Trinity Dental Clinic is a non-profit organization that opened in 2006 to provide care for the uninsured, low-income, and underserved adults of Blount County. The services they currently provide include preventive care, extractions, cleanings, and x-rays. Patient qualifications include: Blount County resident, over 21 years of age, picture ID, proof of residence, and one of the following documents: BCCAA (Blount County Community Action Agency) ID card, good neighbors ID card, food stamp card/letter, Cherokee Good Samaritan Clinic patient, public housing voucher, or supplemental security income letter. These patients can access any of the provided services for the low cost of \$15 to \$20. This arrangement may appear to be an effective way for residents to receive care, but only one clinic is available for over 17,000 Blount County residents who live in poverty. Additional dental resources must be created.

Methods

To study the research question, what are the dental disparities in Blount County and how strong is the safety net, two studies will be conducted. The first study is a qualitative descriptive study, which will consist of a number of surveys and personal interviews with service providers and current members of organizations such as the Salvation Army, Alcoa Good Samaritan Clinic, the health department, Trinity Dental Clinic, Volunteer Ministry Center, Remote Area

Medical, and Blount Memorial Hospital. I will conduct between 3 and 5 interviews among individuals who use the services of the organizations listed above and staff members who know the circumstances of their members. Inclusion criteria included: homeless or living below the poverty level, uninsured, 18 to 65 years of age, has not seen a dentist in the past year and currently suffering a dental problem. These interviews will consist of open-ended questions so that the respondents can answer based on their personal knowledge and feelings. One important question that will be asked is: What are the dental disparities in Blount County? After each interview, questions will be refined based on the past interview to support particular themes among the individuals being interviewed. The interviews are important because they provide qualitative data about individuals' experiences.

The second study will analyze secondary data including the number of Blount County residents who seek dental care in hospitals and walk-in clinics, the number who do not see a dentist at all, the number who are edentulous, and the number who want dental care, but dentists will not accept their insurance coverage. The health educator at the health department will assist the researcher in accessing appropriate secondary data.

Potential Outcomes

A program known as 'pay-it-forward' is located in Battle Creek, Michigan. This program is a great model for Blount County to adopt. Low income individuals can volunteer their time for dental care (Galewitz, 2013). Since 2007, more than 4,000 adults have exchanged volunteer work at local non-profits (e.g., homeless shelters, Salvation Army, and Red Cross; for dental care (Galewitz, 2013). Kip Etheridge, one of the volunteer dentists, stated that- exchanging volunteer work for dental care helps patients be more vested in their care (Galewitz, 2013). Everyone wins in this type of program. Services are provided to community residents, and low income or

uninsured individuals receive dental care. Patients must volunteer four hours for every \$100 worth of care (Galewitz, 2013). Some people do the minimum, some go above and beyond and accrue hours to cover them for years. Another aspect of this program is that patients are required to attend a two-hour oral health class and see a dental hygienist, who reviews their health histories and offers dental screenings and cleanings before they see a dentist (Galewitz, 2013). Not only are these individuals receiving care, but they are learning about dental health. In conclusion, the ‘pay-it-forward’ model is a phenomenal program that could possibly be an option for Blount County.

Summary

In conclusion, this research is needed. The residents of Blount County deserve a place to receive free or low cost dental care without discrimination. The main objective of this research is to identify ways to eliminate dental disparities and improve the dental safety net in Blount County. If dental disparities are identified in Blount County, programs and services can be developed that meet these identified needs.

Results

The interviews—consisting of staff members, patients, case managers, and dentists—were completed over the course of two weeks in the summer of 2016 and they were transcribed from oral recordings to word-for-word documents which will be included in this section. There are many similarities in these interviews that will also be evaluated and included in this section. Each question will be listed and the patients’, dentists’, and case managers’ answers will be grouped, evaluated and common themes listed. Following these evaluations, common themes that cross over among the patients, dentists, and case managers will be provided. Some of the questions were omitted during some of the interviews and the reasons are listed below with the

questions that were omitted. Following the initial questions and answers, the parallels will be assessed.

Questions and answers for the participating patients (eleven participants):

1. Do you struggle with getting dental care?
 - No: four participants
 - Yes: six participants
 - Well, I know that when I was younger my brother and sister got braces, and they said I didn't need them. Other than that, I really haven't worried about them from that point on.
2. Do you have anything that is bothering you right now...toothaches [or anything like that]?
 - No: seven participants
 - Yes, my teeth [need] work.
 - Actually, I have a [blister] in my mouth.
 - Yeah, I've got some cavities.
 - I had a stroke, it's been hard.
3. When was the last time you had any dental services?
 - Probably about two years ago.
 - Been about two to three years.
 - I don't know, it's been several years.
 - It's been ten years probably.
 - Sometime probably before I was seven.
 - Well my mom and dad [kept me on their insurance] until I was 28. I'm 41 now.

- Probably fifteen years ago.
 - About two years ago.
 - Twenty years ago.
 - Six years ago?
 - Last year.
4. Have you ever been shown proper brushing and flossing techniques? One patient had this question omitted because he did not have many teeth and wasn't very interested in the interview process.
- Yeah, in kindergarten.
 - Yes: five participants
 - Yeah, I think so.
 - I don't know.
 - Yes mam, by a dentist.
 - Yes, by a dental hygienist.
5. How many times a day do you get to brush your teeth?
- Twice, sometimes once.
 - Once: two participants
 - Twice: four participants
 - I don't...there's nothing to brush.
 - About two-three times a day. I do take care of my teeth.
 - About twice.
 - Once, in the morning.

6. Do you floss your teeth? One patient had this question omitted due to his teeth not contacting.

- I don't floss. I do if I've got something in my teeth...
- Yes: two participants
- Usually several times a day.
- No: four participants
- No, I don't use that very much.
- Same (as brushing) [two times per day]

7. Is transportation a problem with getting dental care? One patient had this question omitted because he was not very interested in the interview so the interview was cut short.

- Just depends on if I can find somebody to take me.
- No: six participants
- Yes: three participants

8. Would you be opposed to going to a non-profit dental clinic for low-income or uninsured individuals? One patient had this question omitted because he was not interested in the interview process.

- I'd look into it.
- No: six participants
- I'd be happy to go over there.
- No, I need one bad...it's hard [to get in].
- That wouldn't be a problem.

9. Have you ever found a clinic or an office and been turned down because of income? If yes, were you told why?

- [No] I always pay cash.
- No: six participants
- Yes: Well, I can't afford insurance because I'm disabled.
- Yes (turned down): no (they were not told why): two participants
- Yes: I have insurance now

10. Are you aware of any non-profit dental clinics for low-income or uninsured individuals?

The question was overlooked on the list when conducting the interview with one patient.

- Yes: two participants said VMC
- No: eight participants

11. Would you be willing and/or able to pay \$5-\$10 for dental services?

- Yes: nine participants
- No: two participants

12. Are there any reasons other than cost of dental care that discourage you from going to the dentist? If so, what is the reason(s)?

- No: eight participants
- I hate the dentist
- Transportation...that's about it
- Scared

13. Do you think we need another clinic? This question was asked at random, there weren't any reasons why this was omitted from patients.

- Yes: two participants

- I don't know to tell you the truth.
- Absolutely... would go to one.

Common themes among the participating patients:

Following these interviews, it was very easy to see the parallels among the patients. The patients that were interviewed had similar characteristics including: low-income, homeless, disabled, not highly-educated, grew up in financially poor homes, recovering alcoholics and recovering drug addicts. The most obvious theme is that they struggled with getting dental care. Out of the eleven participants over half of them said that they struggled with getting dental care. The patients that said no could have said no because they were embarrassed or ashamed of the way they had taken care of their teeth. Patients were asked when the last time they had seen a dentist and the answer was years ago, most over ten years ago. Almost all the participants said yes that they had been shown proper brushing and flossing techniques. Now whether they were putting those techniques into place is a different story, but at least they had been shown proper techniques at some point in time in their lives. Along with the participants being educated, they knew that it was important to brush their teeth twice daily. Most of them did say they brushed twice a day. Only four participants said they flossed their teeth daily. This is something that most people need to work on, but at least those four were trying. Their tone of voice led the interviewer to believe that they cared; they knew oral hygiene was important, but they did not have a way of getting the care they needed. The facility where these patients were interviewed is very close to a bus stop, so this is the reason that transportation is not much of a problem. All eleven patients said they would attend a non-profit clinic; this shows that the stigma of going somewhere for low-income individuals is null-and-void. The problem here is that eight patients did not know of any facilities they could go to. Here lies the problem with the dental safety net.

Nine patients did not mind paying a small fee for dental services, the other two patients did not have an income, but the nine that said yes they knew the importance of dental care and \$5-\$10 was not an unrealistic request. Cost is the main problem with patients not seeking out care; eight patients said that cost was the problem. Affordable clinics are not available to patients without insurance, patients on disability, patients on social security, or patients that are temporarily unemployed.

The parallels are clear. The lack of available and affordable dental care is a problem.

Questions and answers for the participating dentists (two participants):

1. What are the dental disparities you see among the people here? Why do you think we have this problem?

- -Adult-wise...on the low-income side, they really don't have any place to go except, you know, Trinity. We do get a lot of calls. We get calls every day. [We have to tell them] a toothache is not an emergency. We try to tell them, well, get in the phone book and try to find someone who will work with you as far as payments and things like that. If it is a true emergency...abscess, jaw swollen, tremendous amount of pain...we'll see them, put them on antibiotics, take an x-ray and refer them to Trinity.

- [As far as personal reasons], if you're not in pain you don't go to see the dentist. If you go every six months like you should to maintain... with x-rays, make sure things are caught early... then hopefully you won't have any problems. That's not the case with a lot of people. When they start feeling pain, they want a dentist right then.

- -Probably the biggest is access to care, because that is giving a false impression, there are dentists on every corner, but it's lack of financial choices that ends up

being the biggest barrier towards adults receiving care. This is part of the reason children do not have a problem because of TennCare or state grants.

-This is more of a socioeconomic question. I think so many people are brought up in this region without proper education, not only dental but dietary, the importance of early preventative care. That's one aspect of it. The second aspect would be choosing to use financial resources towards dentistry as opposed to retrospective, meaning waiting for it to happen, a problem. They don't take advantage of preventative care they have access to and they don't do it in a timely fashion. And once it gets bad they lose teeth and once you lose teeth, it's a domino effect.

2. This question has been adjusted for both dentists because of the facilities they worked in.

The first dentist was asked: for these parents that are bringing their kids here, do you think that [getting care for their own teeth] is important, or do you think they're more focused on their children at that point, and why do you think they don't care? The second dentist was asked: do you think getting dental care is important to them?

- Dentist #1 part 1: A lot of them don't. We bring a parent back and talk to them about their kid, brushing habits, and a lot of the parents have worse teeth than their kid...periodontal problems, you can pretty much smell it, see it. We see a lot of that.

-Dentist #1 part 2: The education, priorities, where they were raised.

- Dentist #2: It only becomes important when all the other priorities are put aside. Very much like having a bald tire not being important to you until it's blown and you can't get to work. And maybe that's probably looking at it from one aspect. I think once you are burned, have an abscess, you are stuck in a cycle and it becomes difficult to break.

3. The first dentist was asked: the only facility we know of [that] they can go to in this area is Trinity, correct? The second dentist was asked: are you aware of any other facilities besides VMC and the health department?

- Dentist #1: yes.
- Dentist #2: Interfaith- a clinic here in Knoxville that is supported by outside donations. VMC has no restrictions. Blount County [residents] could come, but there is a problem with transportation.

4. What do you think a good solution would be for this problem?

- [We] have to get some kind of state funding. Knox County Metro, they have their own funding. Monroe County, they have their own entity. They see adults over there and Loudon, they see adults too. I know, sometime in the future, the [University of Tennessee] dental school [are starting] some kind of a pilot dental program. They're going to do [that] here, also, somewhere in the UT area. The students [from Jackson] will come to Knoxville and work and do rotations.
- There are so many uphill struggles to try and break the struggle of poverty. This is not just about dental disparities and poverty, it's about widespread poverty. It's about the choice of do I put food on the table or do I fix my teeth. What I think would be a great place to start would be to have a registry for people to sign up and be contacted when their time is up and have a certain dollar amount for a certain level of dentistry to be taken care of. I think triage level dentistry, stabilize them and get them healthy and let that be a baseline. Again, I don't have great strategies on how to do this on a broad scale, but other than create some sort of database or registry so we can work through these problems. You can't hold that

for everybody because there will always be some sort of emergency care that will trump the registry, but at least you could start with that. You could do it on a county basis.

5. Dentist #2 was asked: do you think, knowing what you know about Knox County, do you think having this type of clinic in Blount County would be helpful?

- Absolutely. What I have done personally, is work through faith-based clinics. That is harder to nail down, but the desire, I can promise you is there (volunteers). Pairing those two together is most difficult to do. Having an army of volunteers wanting to help but not knowing how. And having a huge need, but not knowing how to develop the access to it. It's all about money. If we could find a way to access money.

6. Dentist #1 was asked some questions that dentist #2 was not because of time constraints. Those questions and answers will be listed here under question 6.

- Do you refer them to an oral surgeon if they need that, too?
-Well, we really don't have any oral surgeons that work like that here. It's 100% Trinity. If they call in, if they're on food stamps, have an SSI letter, public housing...those three [things]...they automatically qualify for Trinity. Then, say if they come in...true emergency...if they're not on [any] of those [three things] then we can refer them over there. So, they can get in that way.
- So, you see children here mostly?
-If [they're] from three to twenty-one [years old] ...if they're in DCS custody, we see them as infants.

- So, when parents come in with their child, do they ask, “Can we come too? Can we get dental care”?
-Oh yeah. They ask.
- Do you [know] why these people are coming here?
-We see kids on TennCare... We’ve started seeing the [inaudible] kids, too. If the child doesn’t have any insurance, we see them. So, TennCare or no insurance.
- Do you think cost is a big thing for them not wanting to get care?
-Yeah, it’s, I guess, how they rationalize [the] cost. They don’t want to pay a lot for dental, but they go off and have other habits or whatever.
- Do you feel that knowledge is a big deal, that they just don’t have enough knowledge about how the mouth affects the entire body?
-Yeah, it’s education. Family, as far as [being] cared for, have a parent that keeps them informed, taking them to the dentist.
- Do you do any kind of education [here] while they’re in the chair or anything like that?
-Yeah, we also see pregnant women [who] are over 21. They’re referred to [us] through [inaudible] program. We just bring them in, do an exam... no x-rays since they’re pregnant. We do a cleaning and we do oral hygiene instruction. That way we teach them about oral hygiene, that way they can pass it on to their kids. We don’t do any dental work itself. We don’t do fillings or anything like that. We tell them that they need to seek a private practice to get those restorations and all that done.

- Do you think people [would] be opposed to going to a nonprofit clinic? Do you think there's a stigma behind that?
-If you're in need I wouldn't think so...pain or you need to go.
- Do you think they would be willing to pay a small fee or do a sliding fee scale?
-It would be better than nothing.
- Do [parents of patients] tell you that they've gone to hospitals to try to get care?
-Yeah, they go to the emergency room.
- To recap, you think the solution we need is state funding?
-Yeah.
- Do you think we're in need of another clinic for adults?
-Yes.

Common themes among the participating dentists:

The very first question the dentists were asked was what are the dental disparities you see among the people at this facility and why? Both dentists' answers were the same, they don't have anywhere to go and access to care. As the second dentist stated there are dentists on every corner, but the affordability factor is what deters patients from getting care. The second part to the question was why; both also said that patients wait too long to reach out for care, the pain at this point is so great they end up needing emergency care. Another aspect is that people aren't educated in preventative care. If they don't know that routine appointments, every six months, are important, then they won't go until the pain starts. There are clinics in Knox County that one of the dentists spoke about, but these are for Knox County residents. The other dentists mentioned the clinic in Blount County, but that is the only one that serves the underserved in Blount County. Knoxville still struggles with providing adequate dental services to the people in

its own city. Knowing that Knoxville has multiple available clinics and they can't serve all those in need, it is obvious that Blount County having one clinic is serving a very small portion of the underserved. Both dentists expressed that finances are the major problem in finding a good solution. One said grants would be a solution, and the other said that the problem is not only dental disparities and poverty, but also widespread poverty. The poverty level per the United States Census Bureau (2014) in Blount County is 126,339 residents. One clinic cannot treat over 17,308 people, there must be a better solution. The community needs to start on a small scale and build up to, so hopefully those ideas will spread to other communities. As the dentist stated there are many volunteers out there, but they don't know where to give their time. If a clinic was to be started in Blount County, there would be staff to manage it. Both dentists gave great insight to the patients they see in the facilities they serve. Their answers were expected, dental professionals know of the needs of their community. The major themes that were analyzed between the dentists is cost, access to care, and education. If these three components are put into place, patients will have an overall healthier way of living.

Questions and answers for the participating case managers (five participants):

1. What are the dental disparities or the needs you see among the people that your agency serves?
 - Every single week we have people who are in a great deal of pain. Many folks in their fifties—even sixties—have never experienced a dental cleaning in their life.
 - There is a real need for complete sets of dentures. Occasionally we will have someone come in with an abscess.
 - Our biggest in this area are routine dental care. Our resources in this area besides the clinic here at VMC would be the health department and they only do limited

things, primarily extractions. Dental cleanings are few and far between. Dentures as well is probably a big one. VMC does some work with dentures, but the list is very long.

- Everything. Most of our folks have not seen a dentist their entire lives. Usually when they are asking us for care, it's because they have an abscess or need a tooth pulled, they need dentures, they need whatever other expensive things. But people also don't have access to regular cleanings, more preventive services that could be offered. We tend to see people whose teeth have gotten bad, mostly they are asking for teeth to be pulled.
- Primarily removals, cleanings, dentures.

2. Relating to the answers given in question #1, why?

- I just think that affordable dental care is difficult for people who live in a place where they're living paycheck-to-paycheck. Many times, it's SSI or some sort of government funding and it just doesn't pay enough each month to take care of your teeth the way they need to be kept.
- Socioeconomics, it's money.
- The clients we serve here do not take care of their teeth, it falls by the wayside. If folks have other problems, mental health or substance abuse, dental hygiene slides farther and farther down the list. Another problem, I think, is that we don't properly fund clinics, we don't make it a priority.
- Because they don't have anywhere else to go. Most of our folks that we see in the resource center are homeless and don't have any insurance, and those that don't have any dental coverage, there is nowhere else for them to go.

- We do offer a dental program; some people know that and come and see that there is a compilation of other services and then see that we have a dental program. So, they kind of accompany each other. We also partner with Remote Area Medical, they also operate a dental clinic here periodically that is separate from our clinic in operation.

3. Do you think getting dental care is important to these patients? Why or why not?

- -Yes. For many, they care. And for many, they just care when it hurts.

-I think it's just, many times, it's the way they were raised. They think, their parents lost their teeth in their twenties and got dentures and that's just the way it's going to be for them. I think it's a lot of the way they were raised and a lot of, maybe, a traumatic experience as a child... that sort of thing. But there's just a fear of coming and getting regular care.

- On the whole, yes. I would say if they resist getting care, it's lack of funds, or lack of timely access. I think that keeps some people from wanting to fool with it.
- I believe so. I've had several clients over the years that say they don't care, that their teeth are too far gone. But I've had other clients that say it's important to them, and they got dentures. And once they got dentures they wanted to show them off. I think for the most part people care.
- Yes. I think a lot of folks are embarrassed about the state of their teeth. I think that prevents folks from possibly, they don't have the confidence to go out and get jobs, because they are embarrassed. I think that people are in pain, they are hurting, so they want that to stop. I think it's important. I think that if there is more access we would see more. Nobody is thinking about I want to go for routine care, because that isn't in the realm of possibility.

- I do think that it is an underrated component of general health. We try and take a holistic approach here. Here the dental piece as equal to the mental health piece which is equal to the entire body piece. Yes, I do.

4. Are you aware of facilities they can go to for dental care?

- There's another free clinic, The Lost Sheep Ministry, they have the dental trailer two days a month. Interfaith Clinic does, on a sliding scale, but you have to be enrolled in their medical clinic before you can be in their dental clinic. They do more extensive dentistry, like they do crowns and bridges and things like that.
- I seriously doubt it.
- Daily Dental in east Knoxville. People tend to congregate here (Knoxville) because there aren't resources where they live.
- A lot of our clients in the resource center would not qualify for interfaith because they aren't working, even if they are on disability they still can't go there. They do know about The Lost Sheep under the bridge, but the issue there is access for people staying in a shelter they have to be in by a certain time, so they have to choose do I go to The Lost Sheep Ministry and get my teeth worked on or do I sleep inside. [This mobile clinic comes late in the day to a place under a bridge.

The people who really need this service also have to get themselves to the shelter early in order to get a place to sleep so they can get dental services and get to the shelter in time.]

- Most are aware of the health department.

5. Do you have an idea of a solution for this problem?

- I think utilizing the clinics that we have. In our case, we're only here two days a week, but the clinic sits empty for three days. So, if we had volunteer dentists or grants to hire dentists on a pay basis, we would better be able to handle the population that is in need. I think [it's the same] at Interfaith. They have a great clinic, it's just finding volunteers to come and do it.
- It's out of my realm, but I would think, I wonder if you could get Remote Area Medical involved, go to city council requesting funds, but that's always a fight.
- Honestly, I think the biggest thing is money, funding. It's hard to find funding for it.
- I think there has to be more providers, it also seems like there has to be some way, we are super fortunate to have the volunteers we have here, I don't think you can base a decision on gee would you give up income to fix this need. I don't think the solution can be based on hoping volunteers will come and donate their time to do this. I do wonder about providing, could Tenn Care provide some basic dental coverage for adults, it does become a medical issue. You have infection in your mouth, you get heart issues. I think that has to be in play because people have to get paid for what they do for there to be a workable solution one way or another whether that be grants that could hire dentists, or insurance, or some secondary subsidized policy that is affordable that the patient has some sort of buy in. I don't have a great solution.
- I think a clinic that is partnered with a school to provide a more fluid and continuous flow of people to come through. Even a provisional license, people that are in their last year before their license so that there would be an influx of

people able to go out in the community. Even a mobile unit to provide dental care to neighborhoods that are in a desert, if you will. As a policy side, to expand TN Care and Medicare services to dental care.

6. Do you think we need more facilities like this? Would it be beneficial to have a clinic in Blount County?

- Absolutely. There would be no way for Trinity to be able to see all those people.
- Absolutely, yes for sure.
- Absolutely.
- Yes. I know the needs here in Knox County are not unique to this county, it's all over the state and probably the whole country. The fact that we are getting calls from out of the county tells me that there aren't services for them to get locally. If we had the providers, we could run all day all week and not run out of need.

The following four questions do not have five responses because there was extra time in some of their interviews.

7. Are you seeing a lot of people come in here who need emergency care, or preventative?

- Both. I think they initially come here in emergency care, but certainly they need to get into regular cleaning. Most of them come for the major need of an abscess, but they have many, many other needs of fillings and just regular hygiene as well. So, I think they're initial visit many times is emergency, but after that there is certainly a need to keep [their dental health] going.

8. Do you think transportation is a problem with getting care?

- With our clientele, it's almost always a problem. I would estimate of all the people I know of have dealt with, maybe 3% of them have their own transportation.
 - If you are coming from other counties, definitely. Around here, you don't find people trying to go places outside the bus routes.
9. Do you think that they would be willing to pay a small fee (if someone has an income, a sliding fee scale or a base fee)?
- I think the simpler you make it, it's something that is easy to remember, I think most people would be okay if the fee is reasonable. I think for routine care, anything over \$10 would turn them off. They are crafty, if they want something bad enough, they can come up with the few bucks. So, if it's important to them, I don't think a small fee would hold them back, if dental care is important to them.
 - I think it depends on the person and their situation. Folks with limited income and substance abuse, they wouldn't do that. Some that are interested may be discouraged because of the price.
10. What about education, do you think there is a lack?
- Sure. They would probably like someone to educate them. I don't think many clients would be aware that their lack of dental care affects their overall health.
 - Yeah, I think that most people know that they need to brush their teeth, but I think with a lot of folks, once they tend to have problems, they wait too long to reach out for help. At that point, I think a lot of folks are ignorant as to where to go for their problems.

Common themes among the participating case managers:

As is expected, the answers are all very repetitive at this point. This is not a negative thing, it shows that everyone is on the same page with the way dental care is going in Blount County. The case managers work specifically with patients in a Knox County facility; they know their clients and their needs, so these answers are reliable. All five case managers said that they had clients experiencing dental needs. These needs ranged from a simple cleaning to an abscess. Some of the patients, because they do not have access to affordable care, have let their teeth go for so long that they now need extractions. When the case managers were asked why we have these dental needs, the majority of them said cost. They all knew that there aren't enough clinics where someone without insurance, or someone who is homeless, or someone who just can't afford it, can go. Dental care cannot be a priority when it is not accessible or nonexistent and not affordable. All five case managers once again agreed and said that patients do care about their teeth. Some of them only care when it hurts, some care when they go on job interviews, some care when they have dentures made, and some just care in general. It's not a lack of caring by the patients, it's a lack of funding by the state. If there were clinics available, they would be filled every day with patients. In the Knoxville area, there are four other clinics that these case managers were aware of. The problem with The Lost Sheep Ministry is that they come in the evenings, and people have to decide am I going to get my teeth cleaned tonight, because if I do, I have to sleep inside. Interfaith Clinic is based on a sliding fee scale, but patients have to be a part of their medical clinic to be involved with their dental clinic. The problem with Daily Dental is that it is in east Knoxville, across town from where this study took place. Knox County is much larger (and more wealthy) than Blount County and if they are struggling with getting people care, it is obvious that a much smaller town is struggling. All the case managers gave great ideas for a solution, but an idea is only an idea unless action is taken. Also, every case manager said that

another clinic would be beneficial. One case manager put it perfectly with her statement, “The fact that we are getting calls from out of the county tells me that there aren’t services for them to get locally. If we had the providers, we could run all day all week and not run out of need.” This statement only confirms the purpose of this study, to see what the dental needs are and to see if there is a big enough safety net.

Common themes among the participating patients, dentists, and case managers:

After analyzing all the interviews, there are common themes among all the participants. There is an obvious need for accessible, affordable dental care. There are local clinics, but there are difficulties patients face with transportation, financial or work obligations, homelessness, lack of insurance, and etcetera. Some clinics have very strict rules and will only treat people if they fall within their list of guidelines. Some clinics are only open certain days of the week or the month and only at certain times. This may not work for all the people trying to get dental care. Blount County can use another clinic. According to at least one of the dentists, volunteers will come within a moment’s notice to give their services. One clinic is not doing the job. The safety net is not strong enough for the people of Blount County. The dentists and case managers gave examples of ways to solve this problem, most focusing on increasing accessible, affordable care.

Conclusions

At the beginning of this thesis, the purpose of the research was stated and now it will be reiterated. What are the dental disparities in Blount County, and are there enough dental clinics within the dental safety net? Throughout the research process, many questions have been answered. The interviews have shed light about dental disparities. They gave the researcher the material needed to come to conclusions, however not definitive ones because more research would need to be conducted. One conclusion is that the safety net in Blount County is not strong

enough to care for its residents. Another conclusion is what the major dental needs are: regular cleanings, extractions, fillings, and dentures. Sometimes dental care is viewed as a want and not a need, but the oral cavity affects the entire body, so dental care is a need, not a want. The definitions of need and want need to be re-defined when it comes to dental care. When a patient cannot receive regular cleanings, he or she will develop periodontal disease, which would cost much more than preventative care. Or, a patient that cannot get an abscessed tooth extracted and is unable to eat. This is when hospitals see patients seeking help because they are in so much pain. Accessible, affordable dental care is without a doubt a necessity for this county.

The Tennessee Department of Health releases an update each year on oral health services provided in the previous Fiscal Year. Such statistics provide validation for the qualitative findings of this study. On April 15, 2016, a letter by John Dreyzehner, the Commissioner, was written to Governor Haslam in reference to the annual report for oral services for the state of Tennessee. The letter read, “The Department’s commitment to protecting, promoting, and improving the oral health of people in Tennessee was actualized by the provision of more than 298,300 preventive sealants to more than 49,100 at risk children in school settings; over 17,000 fluoride varnish applications to at risk children in health department settings; more than 199,600 clinical dental services to over 27,600 individuals. Almost 19,000 adult extractions and over 1,100 dental cleanings were provided by grant recipients of funding for emergency dental services at a cost for Fiscal Year 2015 of \$15,370,659 of which \$6,550,622 were state dollars. During Fiscal Year 2015, a total of 102,531 unique individuals received 535,109 dental services through Tennessee Department of Health programs and grants” (Dreyzehner, 2016, paragraph 5).

Tennessee has made great strides in providing much needed services, primarily to low income children. Unfortunately, the numbers show that the preventative focus was almost exclusively on children for the Fiscal Year 2015, as is typically the case. Grants and TennCare provide much of the funding for children's dental services, however the state's budget needs to be expanded to cover dental for low income adults, since they have no other resources. In this letter, it states that 19,000 extractions were completed for adults. If preventative care was available, numbers of extractions would not be so high. Only 1,100 cleanings were provided. Over 17,000 people in Blount County alone are living in poverty, and 1,100 cleanings across the state were performed. This is a problem. The statistics provided in the annual report only show what services were conducted; that does not include the number of people still suffering from dental diseases that didn't have a clinic they could go to. "The Tennessee Department of Health dental program expenditures for Fiscal Year 2015 were \$15,370,659 and are broken down by each program. Adult dental funding program: an expenditure of \$536,880 provided 8,709 individuals with 18,938 dental extractions and 1,189 dental cleanings, at a cost of \$30 each. The grants were awarded by the Department for emergency dental services for adults" (Dreyzehner, 2016, p.3). Thirty dollars for a cleaning is 1/3 the typical cost of a cleaning at a dentist's office. Consider the small portion that was spent on cleanings, \$35,670 out of \$536,880. The funding needs to be distributed differently so that the focus is proactively on preventative care more than reactively on emergency care. If clinics were set up in all remote areas for preventative care such as cleanings, x-rays, and fluoride treatments, the state might find that the expenditure for extractions and emergency care would decrease tremendously. If patients have the opportunity for regular six-month cleanings, their overall oral health and systemic health could increase greatly and could ultimately prove to be an investment that saves money in the long run.

The state of Tennessee does not have enough published specific statistics on oral health. Originally, I wanted to analyze statistical data for Blount County, but unfortunately those numbers could not be accessed. However, an article published in 2014 by “The Tennessean” gave some very interesting and informative facts. Dr. Michele Blackledge, D.D.S. states, “The sad fact is Tennessee is experiencing a serious dental health crisis. Over one-third of the population in our state did not visit a dentist in the past year, nearly one-third (31.5 percent) of Tennesseans over the age of 65 have lost all their teeth, and more than half (53 percent) have lost six or more teeth, according to the Centers for Disease Control and Prevention. A key cause of this problem is a shortage of dentists. The U.S. Department of Health and Human Services categorizes 94 percent of Tennessee counties (89 of 95) as having dental health professional shortage areas” (Blackledge in “The Tennessean,” 2014, “Dental Care: Tennessee’s forgotten health crisis,” paragraph 4). The author states it perfectly when she said that these are sad facts. Tennessee is lacking in oral health. Tennesseans should not have to look at oral health as a luxury, they should be able to access affordable care.

Discussion

This research project had a few limitations that need to be discussed. All the patient interviews were male participants. The females at the particular facility were all unavailable the day the interviews were conducted. Another limitation might have been the personal interviews. Sometimes, participants may not feel comfortable telling the full truth if someone is sitting in front of them and they might be inclined to tell the researcher what they think the researcher wants to hear. Another limitation is the lack of oral health statistics specific to Blount County. Unfortunately, the statistics that I was looking for did not exist to answer the specific questions I

have about oral health needs for Blount County adults. Some of the data that was found was dated and could not be included in this project.

One thing I would suggest for future studies like this one would be to use a survey instead of personal interviews. By using surveys, more people could have participated and that would have given a lot more evidence to help confirm the needs of Blount County. However, that is assuming that the people surveyed can read. The limitations do not negate the information that was gathered. The results that were obtained are relevant to the state of Tennessee and to Blount County. Although limited in its size and scope, this study provided valid and reliable information from the perspective of patients, providers, and caseworkers as to the oral health needs of the underserved living in Blount County.

The research needs to be continued. Other studies would likely strengthen and further validate this one. Future research could include a survey, including questions regarding the oral health status and oral health history, at random to the population of Blount County. This would show on a large scale the needs of Blount County. Another option would be a longitudinal study set up to follow different groups of people, based on age, race, or financial status, over a course of a set number of years and look at how many teeth are lost, how many fillings are placed, how many do not see a dentist, and so forth. Another possibility would be to replicate this study using interviews to obtain qualitative data with more participants from differing agencies and communities within Blount County.

The expectations for this study were great. The researcher wanted to better understand the dental needs of the underserved and determine if there is a need for more dental clinics for the underserved population. The results of this study indicate that Blount County suffers from dental disparities and the safety net is not strong enough for the people in Blount County. The

interviews gave great insight into the participants' perspectives of their oral health and the disparities they face. The statistical research confirmed that Tennessee is suffering from a lack of oral health services, particularly for adults.

Why does this matter? Why should dentists, hygienists, government officials, and community members care about the oral needs of Blount County? Research shows that oral health is crucial to overall health. "Untreated dental conditions contribute to poor health, dysfunctional speech, compromised growth, and poor educational performance" (Biordi et al., 2015, p. e23). "Oral health means much more than healthy teeth. In adults and children, a lack of dental care often results in severe or persistent pain, inability to eat, swollen faces, and increased susceptibility to other medical conditions" (Ebersole et al, 2012, p. 997). Improvements to the oral health system are crucial to helping Blount County's low-income population become healthy. "National surveys have shown little improvement in the use of dental care services among low-income populations over the past two decades, which suggests that barriers other than access to insurance coverage contribute to the problems faced by low-income populations. Oral health disparities are unacceptable, although, national, state, and regional data are limited or non-existent for many oral and craniofacial diseases/conditions within specific population groups, including rural, agrarian areas" (Ebersole et al., 2012, p. 997). If the research is not available, then changes cannot be made. This is the first step in helping Blount County. "Access to oral health care across the life cycle is critical to overall health, and it will take flexibility and ingenuity among multiple stakeholders-including government leaders, oral health professionals, and others-to make this access available" (Ebersole et al., 2012, p. 998). The literature may not be addressing Blount County specifically, but the statements made pertain to Blount County on every level. This statement made by Ebersole et al. is critical, it may take years to build Blount

County's oral health care system, but with compassion and loyalty from the community, it can be done. By building a strong oral health foundation for the people of Blount County, the community will find that their overall health will increase and the emergency expenditures will decrease. A small portion of Blount County's oral health problems could be addressed with the help of the local and the state funding and by volunteers for a new dental clinic. One more clinic can make a difference. If Blount County leaders could be swayed to adopt a new more preventative program for oral health and it is successful, perhaps it could be replicated in other towns in Tennessee.

Now, it is time to put the facts into play. "Three key areas needed for successfully maintaining oral health as a priority issue: strong leadership, sustained interest, and the involvement of multiple stakeholders" (Ebersole et al., 2012, p. 999). It is time to make a difference. And it only takes one idea to make a difference. One person, one idea, one community, one life changed. It only takes one to affect many.

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