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NCPHA Emerging Leaders Program aims to provide emerging leaders in public health with skills and knowledge to become even more effective in their work. Skills include successfully leading teams through change and the ability to communicate with a diverse group of stakeholders as these relate to public health and the complex landscape of health care. This program is project-based learning offered through the North Carolina Medical Society Foundation's KANOF Institute for Physician Leadership. Participants worked in groups across counties and positions within one of four specific public health topics: oral health, behavioral health, environment and housing.

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North Carolina Medical Society
Leadership in Medicine

KANOF INSTITUTE FOR PHYSICIAN LEADERSHIP

Exploring barriers and identifying root causes to homelessness among youth aging out of foster care in rural North Carolina

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Introduction

North Carolina, like many other states, has seen a dramatic rise in the number of children in foster care (Iszler, 2017). With the rise of youth in foster care, there is also an increase of more than 70% for youth who are aging out of the foster care system (Iszler, 2017). Youth who age out of the foster care system are at greater risk for homelessness or housing insecurity than their peers who have the support of parents or family. In 2015, 35% of youth aged 21 and who had aged out of foster care, reported having experiences with homelessness in the last two years (Children's Bureau, 2018).

North Carolina started the NC LINKS program to meet the intent of the John Chafee Foster Care Independence Act of 1999 to offer assistance to help current and former foster care youths achieve self-sufficiency. NC LINKS provides services to older youth who are likely t to age out of foster care or that have aged out of foster care. Foster youth are not required to participate in the LINKS program; youth must be a willing and active participant of the program. NC LINKS is comprised of several elements designed to help decrease negative consequences which often come with aging out of the foster care system, such as homelessness, lack of employment, substance use, and physical and mental health issues. The strengths and needs are first discovered through an assessment completed by the LINKS

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program coordinator, and a plan is created for the youth based off of the assessment. The plan includes services which are directed at helping the youth achieve positive outcomes.

While there are programs such as NC LINKS to help youth aging out of foster care achieve positive outcomes, North Western North Carolina still sees a high rate of youth experiencing homelessness. NW Counties of North Carolina include; Alleghany, Ashe, Avery, Watauga, and Wilkes County. These counties sit in the Blue Ridge Mountains of North Carolina. The largest cities within NW NC are Boone, Blowing Rock, and Banner Elk with Banner Elk. These cities are popular retirement and tourist destinations, with Boone hosting the only local university. In the North West Counties of North Carolina, 34% of the homeless populations are children (Tippet, 2013). This project aims to explore what factors are contributing to higher numbers of homeless youth in NW North Carolina.

Methods

Between the months of December 2017 - June 2018, research was conducted with a focus on housing-insecurity in NW, North Carolina. During the initial phases of the project, a literature review of online and peer reviewed sources related to the topic matter was done. Sources such as Children's Home Society, Department of Housing and Urban Development, local - level Community Health Assessments, and the American Journal of Public Health were reviewed. The purpose of the literature review was to obtain knowledge around public health and social issues related to homelessness. As the project further developed, the focus of research narrowed to youth aging out of foster care and their increased risk for housing instability. Next, a stakeholder analysis was completed to identify local and state-level agencies, organizations, and community-based coalitions who contribute to efforts in this area to address homelessness.

During the stakeholder analysis, four key organizations were identified to participate in a stakeholder interview based off of their role to working with the housing and public health sector. The four stakeholder interviews were conducted with the following organizations and agencies: Appalachian Health District, Hospitality House, NC Coalition to End Homelessness, and Northwestern Regional Housing Authority. These stakeholders were selected based off an impact analysis conducted following the stakeholder assessment, which highlighted their key roles in efforts to address homelessness in this area.

The following ten questions were asked of representatives from each of the four organizations chosen for an interview (Table 1):

1. What do you see as the biggest contributors to homelessness in your community?
2. What do you feel are the biggest barriers to accessing public housing?
3. Are there populations that are disproportionately impacted by homelessness in your community? What factors or barriers contribute to this?
4. What is one thing you would change in to improve access to public housing in your community?
5. Do you have programs in your organization that directly work with the homeless?
6. Are there any resources or referral mechanisms to get those that are homeless into shelters or permanent housing in the area?
7. Are there any coalitions or collaborative in NW NC that have made homelessness a priority area?
8. What do you feel are the biggest barriers affecting public housing in NW, NC
9. Can you tell me more about the wrap around services provided by the Hospitality House
10. Thinking of trends over time, how would you describe the affordable housing crisis and homelessness in general in this area as compared to other parts of the state?
11. Do you have any programs that directly address the issue of Foster care children aging out of the system and directly moving to homelessness?
12. Do you see a large amount of young adults leaving foster care and going directly into homelessness?

Table 1: Stakeholder Interview Questions

A follow-up interview was conducted with Hospitality House, which is the only shelter servicing the homeless population in this regional area. A second interview with Hospitality House was coordinated based off pertinent information shared in regards to the youth population that accessed the Hospitality House and nearby encampments. Additionally, as Hospitality House services the vast majority of the homeless population in this region they expressed interest in a follow-up interview. As a result of the secondary interview more specifically focused on the youth population experiencing housing instability, with Hospitality House, an opportunity to survey within the resident population of the shelter was presented to the group.

A five-question qualitative survey tool was designed (Table 2) and disseminated for a two-week duration by student interns managing informational tabling events in the common area of the Hospitality House.

Age: _____
Gender: _____

Are you currently staying at the Hospitality House? _____

Did you spend time in a group home or foster-care at any point in your life? _____

- **If yes,**

  Did you participate in a program geared towards preparing you to exit foster care or the group home?

  Do you feel this program was useful? why/or why not

  During your foster care, or group home experience, what resources do you feel were missing to prepare you to live on your own?

Table 2: Survey Question for Residents

Results

Hospitality House

Hospitality House is a regional nonprofit transitional living facility and crisis assistance resource center. They have been in operation for 34 years, and they cover a seven county region (Figure 1). Hospitality House provides housing, prevention and nutrition to residents experiencing homelessness. Since 1984, the mission of Hospitality House has been to rebuild lives and strengthen communities by providing a safe, nurturing, healthy environment in which individuals and families experiencing homelessness and poverty-related crises are equipped to become self-sufficient and productive.

Figure 1: Map of North West North Carolina

Anyone in this seven county area can utilize the services of Hospitality House. These services include: a winter shelter- six months out of the year, an emergency shelter year round, and social workers which help develop a housing plan. Clients are able to transition from the winter shelter to the emergency shelter if beds are available. Hospitality House also offers substance abuse counseling and has a clinical abuse counselor on staff as there is a high need for mental health support. They coordinate a medical clinic with two providers to see clients.

A two year transitional housing program is available through Hospitality House for vulnerable populations who may need more time. Permanent supportive housing is available in an offsite capacity. These units are used for folks with other gaps, who e.g. may not qualify for Housing and Urban Development (HUD) housing vouchers or those who need more social support services. For example, individuals with PTSD, Asperger's, other disabilities or that do not do well in community living. Hospitality House also operates the only Rapid Re-housing program in this seven county region.

Hospitality House further operates the only full time community kitchen in the area that serves three meals a day and a food pantry available for anyone who has the need. Residents at Hospitality House grow much of their own food. The house garden contains 34 raised beds, 25 hens, several greenhouses and is used as a teaching model for residents of the Hospitality House. The representative from Hospitality House stated that this has been a very helpful tool for the mental health of those living with in Hospitality House.

When asked about the contributing factors of homelessness in the area, the representative from Hospitality House stated that it was a lack of affordable housing and lack of available jobs that were the main factors. HUD vouchers seem to be hard to come by according to Hospitality House and this perpetuates the homelessness issue in the area. The representative from Hospitality House also stated that there is a large population of teens to early 20s that have aged out of foster care but have not successfully moved into stable housing. This issue has been a growing concern for them over the last two years. Findings from this interview revealed that Hospitality House client's age out of foster care without the life skills related to signing a lease or managing a budget, or finding housing.

Another contributor of homelessness according to the Hospitality House staff, is due to untreated mental health issues, which lead to people being unable to sustain a job. They also deal with people in recovery due to lack of recovery housing and still need the accountability that one may receive in a recovery house. Alcoholics Anonymous and Narcotics Anonymous programs have a building on the campus of Hospitality House and hosts meetings for those in recovery.

The representative from Hospitality House referred to two trends driving homelessness over time. One trend is that the majority of units being built are for those with a disability or those over the age of 55. Another is the mental health bed crisis in the NW regions. Specifically, after losing Broughton Hospital and the 200 beds it offered to mental health patients, there was no long term care plan in place for

mental health patients. This has a ripple effect on housing, as all of these patients are shifting into shelters and occupy beds that could be used for those in economic crisis.

tated in the methods section, the representative did offer to allow us to survey residents at Hospitality House (Table 2), but the results of the two week surveying were inconclusive as surveys were not filled out by the target audience of youth aging out of foster care, and there were not enough surveys completed to generate conclusive results. A total of only four surveys were completed by residents at the Hospitality House

Northwestern Regional Housing Authority and NC Coalition to End Homelessness

The Northwestern Regional Housing Authority and NC Coalition to End Homelessness had similar responses to what the contributing factors are to homelessness in the area of Northwest North Carolina, this being the lack of housing. The Northwestern Regional Housing Authority pointed out that it is hard to make living wage in this area. In the seven County regions, many have become tourist destinations. Out of state purchasing of vacation homes drives up the cost of living which hinders the local population from being able to afford housing.

According to the northwestern regional housing authority representative, the elderly and disabled are disproportionately impacted by homelessness in NWNC because of their fixed incomes. There are also many barriers for those seeking shelter, according to the NC Coalition to End Homelessness. Their needs are assessed based on health needs, risk of violence and other factors and are required to have identification and submit to drug testing to seek shelter or permanent housing.

Appalachian District Regional Health Department

The representative from The Appalachian District Health Department mentioned that Mental Health and substance abuse are contributing factors to homelessness in the area of Northwest North Carolina. On top of this, there are long waiting lists for the small amount of HUD housing that is available, and only one homeless shelter for the area, which is the Hospitality House.

In regards to young people aging out of foster care, the representative from Appalachian District Health Department stated that there are no real systems or social supports for the young people that are aging out of foster care. In Watauga, in particular, they do not have many job opportunities for the young people to fall into.

In Watauga County, many residents report experiences with overcrowding, high housing costs, lack of plumbing, and lack of running water at rates higher than the state of NC. With this statistic and the lack of housing available, young people and other people that are homeless are ending up in encampments behind the Hospitality House, according to the representative from App District Health Department.

The area is working on tackling the issue with Foster care through a program called Innovative Approaches Initiative. This is a three-year program and they are in their second funding cycle. This program covers Ashe, Allegany and Watauga Counties. This program works with young people who are

transitioning into adulthood from Foster care, and provides system change technical assistance for Pediatric offices to improve screening tools and family notebooks for foster parents that comprises the foster child's health information and can be passed to each foster parent, if the foster child is moved to a different home. They also provide support through transition fairs in the school systems and coordinates care issues with Department of Social Services, pediatric hospitals and health department staff with monthly meetings.

The representative from the Appalachian District Health Department further stated that the percentage of children in foster care (per 1000 children) is higher than the state percentage in Northwest North Carolina. (Figure 2)

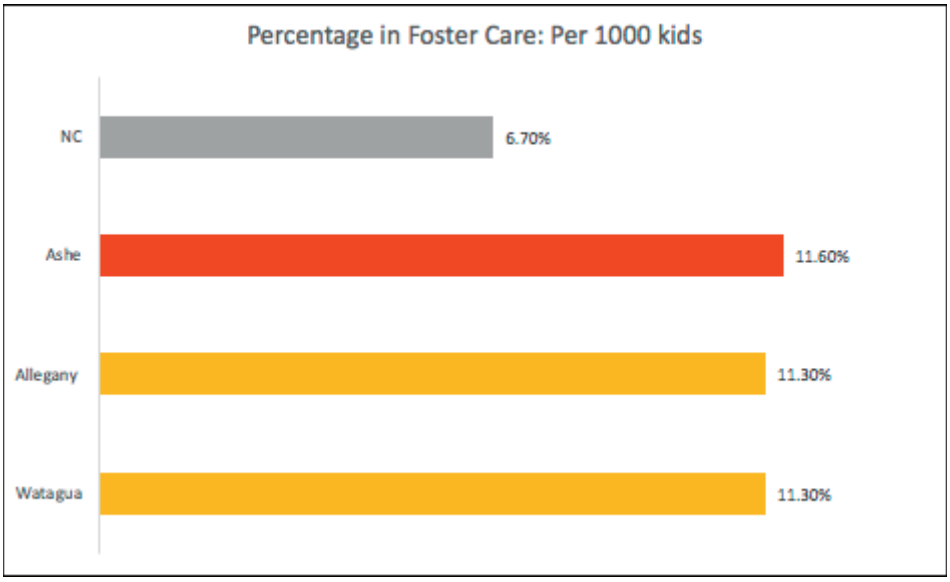

Figure 2: Percentage of children in Foster Care; NW North Carolina

Hospitality House Follow Up

After reviewing the interviews, the research group decided to contact Hospitality House for a follow up conversation to gain more information about the youth aging out of foster care and what the staff of Hospitality House saw as trends over time among this subgroup at their shelter. In this area of North Carolina, there is a high need for foster parents. In particular, Wilkes County has as many as 200 children who are currently waiting on placements. This leads to a lot of youth ending up in group homes instead of actual placements according to the representative from Hospitality House. A lot of these youth, when they age out, are not choosing the option of education and are simply leaving the system when they turn 18 years old. According to the Hospitality House representative, they are choosing freedom over a more institutionalized setting. The staff at the Hospitality House is seeing very young individuals who have been in and out of foster care all of their life and they see the trend of these youth ending up in homelessness. One thing that they are seeing as well is that the women aging out of foster care are disproportionately ending up in the encampments behind the shelter in comparison to the young men.

With substance abuse cases, the Hospitality House has a zero tolerance policy for use. There is an option for persons with substance abuse issues to go somewhere else, where they will be provided the option to detox, or send them to the Emergency Room. For certain substances (such as Meth) found on campus, the staff must involve law enforcement. Hospitality House also has a clinical counselor that is on site. Individuals do not have to be staying in the shelter to have access to this service, food services, showers etc. Therefore, there is a growing amount of transient people who are homeless or "camping" in the encampments behind the physical building of the Hospitality House in order to still be able to access the services offered while continuing to use substances.

Hospitality House offers some programing to youth who end up staying at their facility. They provide a self-sufficiency and basic life skills program called RISE (Relationships Intended for Self-sufficiency and Empowerment) which is an anti-poverty initiative that teaches basic life skills and how to break out of poverty. The staff members of the Hospitality House feel that this program is very effective, when the youth chooses to participate. There is lots of community support around this two year program. Hospitality House also offers service coordination and case management, specific to youth and family. A coordinator is assigned to a client and supports the youth through registering for school and providing stability.

Key Findings

Collectively, the results from the interviews identified the following factors as impacting homelessness in particular with youth aging out of foster care in Northwest North Carolina:

- Lack of Affordable Housing and Behavioral Health issues are the main contributing factors to homelessness in Northwest North Carolina overall.
- Youth aging out of foster care are a particularly alarming subgroup of the homeless population and the trends over time are showing this increase, in particular the number of children in foster care in NW NC as compared to the rest of the state.
- There is a shift from Western North Carolina of transient people who are homeless to this area because of the resources provided by HH and the encampments behind HH.
- Substance abuse is an issue among this homeless population and a lot of those with substance abuse issues live in the encampments.
- Women are disproportionately ending up in the encampments as compared to their male counterparts among the youth aging out of foster care subgroup.

Conclusion

Despite programs to address homelessness of youth aging out of foster care, stakeholders who work within NW North Carolina on reducing homelessness are still seeing high numbers of homeless youth who have aged out of the foster care system. Although this study cannot be representative of the entire region of NW NC, findings indicate the need to understand the root causes of problems such as housing

insecurity, lack of affordable housing and available jobs. It is suggested that a more comprehensive study be conducted in the future to further dissect the issues found in this qualitative study.

Gathering additional information, such as surveys of the population, and data on LINKS programs is necessary to gain more specific information of the underlying causes. In addition to the LINKS program, organizations in NW North Carolina should explore additional programs to prepare youth ageing out of foster care with the skills they need to succeed on their own.

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Mental Health & Behavioral Health Issues amongst the Population of Children Aged 0-5

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It is very unfortunate that many states do not abide by Medicaid law requiring them to screen Medicaid-eligible children for mental health disorders (National Alliance on Mental Illnesses, 2014)). This law falls under the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) mandate which provides comprehensive and preventive health care services for children under age 21 who are enrolled in Medicaid (Medicaid, n.d.). As a federal law, EPSDT is crucial to ensure that children and adolescents receive appropriate preventive, dental, mental health, and developmental, and specialty services. . However, children that are not screened or who are not receiving the before mentioned preventive services are at risk for deficits in their health care.

The National Alliance on Mental (NAMI) has been working diligently to ensure this law is being enforced in every state, but many states still fall short (NAMI, n.d.)). As Medicaid expansion was overruled as a federal mandate to be decided at the state-level, many states including North Carolina have not expanded Medicaid. In terms of behavioral health, if a service is not covered under the NC Medicaid State Plan, it can be covered for recipients under 21 years of age if the service is listed at 1905(a) of the Social Security Act and if all EPSDT criteria are met (North Carolina Department of Health and Human Services (DHHS) n.d.). The Mental Health in Schools Act of 2017 advocates for the mental well-being of school age children. Children being screened within the school systems enables teachers and other staff to recognize mental and behavioral health disorders early. Education professionals are further able to link those children to the appropriate resources for treatment. Ideally, these education professionals

[4] Forsyth County Care Coordination for Children
[5] Catawba County Public Health

are trained to collaborate with the mental systems out in the communities and are able to share their assessments with the families (govtrack.us). However, these measures only sees to school aged children, while there is a need to advocate for younger children before they reach school age.

The need to screen for behavioral health disorders can be seen by the many free of charge screening tools available such as the Strength and Difficulties Questionnaire (SDQ) and the Trauma System Checklist for Children (TSCC) from three years; Early Childhood Screening Assessment and the C-TRF for ages 18-60 months; Ages and Stages Questionnaire (ASQ) for ages 6 to 60 months; Child Behavior Checklist (CBC) for ages 1.5 – 5.5 years; Spence Children Anxiety Scale for ages 2.5 – 6.5 years; Chadis-DSM beginning at birth. Collectively these screenings assess for conduct problems, social/emotional problems, developmental problems, anxiety, depression, and attention problems. However, the question is how and if these tools are being used.

The purpose of this research project is to identify barriers to mental and behavioral health services faced by families with children ages five years old and younger living in Forsyth and Catawba Counties. Given the different career backgrounds of the authors, we were able to identify this issue from different angles. There are families with have children 5 years old and younger who are not enrolled in mental and/or behavioral health services for reasons that include but are not limited to: lack of knowledge about mental health, socioeconomic factors, insufficient screening and access to services. For this study, we are looking to identify what the common barriers are as to why the needs of these families are not being met across the two counties. Based on the findings, we will discuss a possible solution to help overcome some of the barriers.

Methods

Two versions of a survey were created to be completed by two different groups of professionals that come in contact with children with or that may have behavioral health issues (Appendix 1). One survey was to be completed by selected medical providers that service children ages 5 years and under while the second survey was to be completed by Care Coordination for Children (CC4C) Care Managers.

These two groups were identified to complete the survey because of the populations they serve. Health care professionals such as pediatricians as well as other medical providers are in contact daily with children who suffer from some form of mental and/or behavioral health disorders when providing general well and/or sick care.

For the sake of this study, the goal was to identify what measures the providers were taking to ensure that behavioral health disorders were or were not being properly identified, diagnosed and treated.

Care Coordination for Children (CC4C) is a program offered free of charge to children birth to 5 years of age that may have long-term medical conditions, are dealing with various social issues, have recent or frequent emergency room or hospital visits, NICU stay, or who are referred by their doctor. The goal of CC4C is to improve the child's health through services that meet the needs of the child and family. Care

Managers assess the children's physical health, mental health and social status to identify their needs, plan of care and frequency of contacts required, whether in medical homes, hospitals, in the community and in children's homes

The surveys were distributed and collected over the course of two months via email, fax, or delivered directly to the surveyees. The surveyees had the option to return responses by e-mail, fax or to hand deliver them back to the surveyor. Once the responses were received, the results were analyzed into categories of barriers and proposed solutions. A total of 42 surveys were distributed between the 2 counties and 33 surveys were completed for a response rate of 78%. Of the completed surveys, 18 were from pediatricians/nurse practitioners and 15 care managers/community workers.

Results

Forsyth County

For Forsyth County, findings showed that 5 of the 10 surveyed providers were not screening small children under the age of 6 years for mental and behavioral health disorders. The primary care providers that said they do not screen revealed that they do not have specific screening tools that identify these disorders early. Although our results show many providers not screening, it is reasonable to suggest this is not because of a lack of screening tools. There are numerous screening tools available for children 0-5 years. It was beyond the scope of this study to explore why screening tools are or are not being used although we feel this would be helpful to explore further in future studies.

The few providers that disclosed that they conduct screenings only used the ASQ as mentioned earlier. 50% of providers surveyed disclosed that they don't screen the younger age group at all (Figure 1). One percent of the providers made reference to the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0-3), although not used on a regular basis. The DC: 0-3R provides clinical guidelines needed to diagnose and treat mental and developmental disorders in infants and toddlers (zerotothree.org).

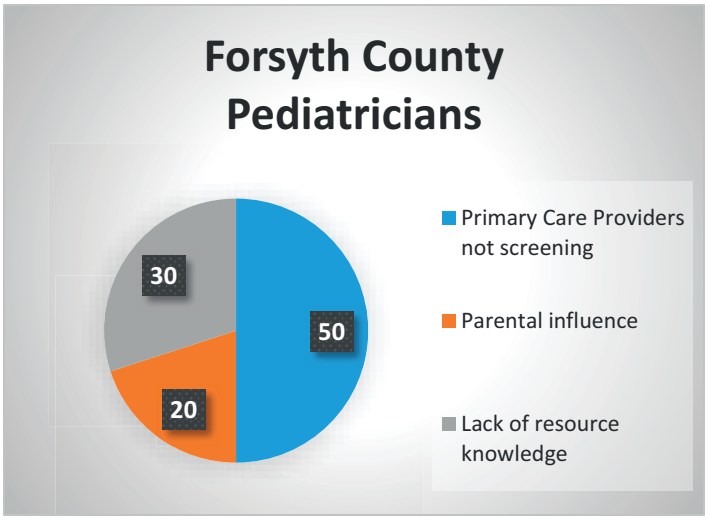

Figure 1.

Primary care providers not having or being aware of the different screening tools available to them adds to the barrier. Results show 20% of the providers believe the parent/family involvement play a big role in the children being linked to the needed resources. 30% of the providers were unaware aware of the resources in the community.

Another challenge faced is access to needed services. Results show 56% of CC4C workers felt that was the main barrier (Figure 2). Mental health resources accept a variety of insurances; some choose to accept or deny Medicaid. Many children in our state are covered by Medicaid but the effect of this depend on what resource they are trying to connect with. Copayments for specialty visits can be expensive for families that are covered by private insurance. Adding the cost of some psychiatric medications to costly copayments can be a challenge.

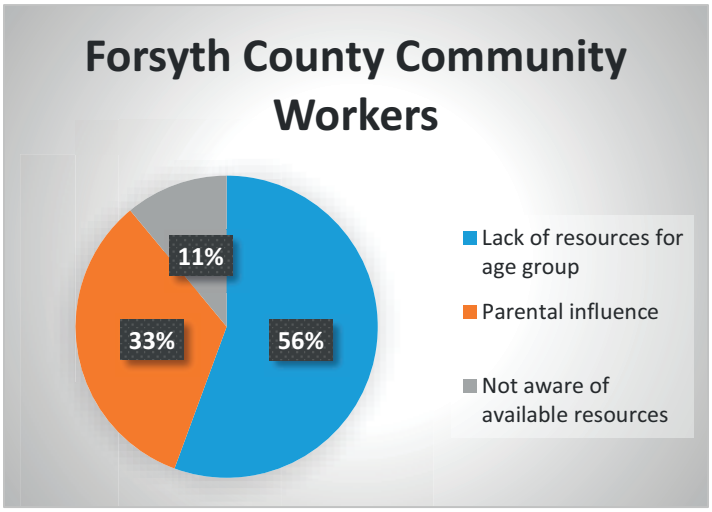

Figure 2.

Knowing what resources are available is another challenge. Our findings show that primary care providers, Care Coordination for Children Care Managers (CC4C), and parents are not always or fully aware of the different mental health resources in their communities. A big challenge is if parents are able to

recognize early warning signs that something may be wrong. If parents are not educated on what things to look for, what is abnormal versus what is typical toddler behavior, they will not know to report certain things to their child's provider.

Caregivers need to make sure they document all of the child's symptoms. Including but not limited to, what the symptoms and concerning behaviors are, onset, triggers, how long the symptoms last, medications, sleep habits and even a food diary may be helpful. If a caregiver is not willing and/or able to assist in the support, education, transportation, understanding of the diagnosis, medication management, etc., then that can become a hindrance to the child's care.

This may be seen by professionals as non-compliance or potentially even neglect. Once a child has been found to have a mental health illness, it is of utmost importance to gather family support along with outside support groups. There is a chance not all family members are going to understand or support what's going on. They too may have a misunderstanding of the diagnosis or they may not want to be 'involved' due to their own prior diagnosis or misbelief that the child truly has a mental illness or behavioral issues. There are many recourses to help with this including free webinars, support groups (in person and online), books, websites, and other resources. You may also check with your local library for resources in the area.

Catawba County

In Catawba County, it was also noted that several Pediatric Physicians' Offices and Family Care Physicians are not following the recommendations when performing mental health and behavioral health screenings at their practices. There was a wide variety of responses regarding the screening tools used and the ages such screenings were completed. As an example of the spread in screening, two practices stated that they completed developmental screening's beginning at 6 months and ending at 60 months while another stated they do not screen patients until the age of 13. The Bright Futures screening tool was used for ages two and a half and older although another practice did not screen until school age (around 5 to 6 years old).

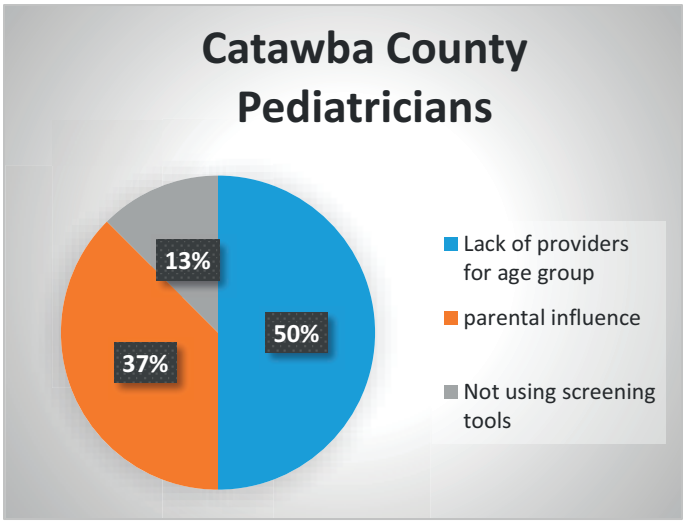

Figure 3.

Several practices stated there were no screening tools available in the current electronic medical records program their office uses. For the practices that do currently screen young children, they used the Ages and Stages Questionnaire (ASQ), the Modified Checklist for Autism in Toddlers (M-CHAT), Bright Futures screening tool, and some stated that they regularly consulted with parents regarding any mental health and/or behavioral health concerns at each well visit (Figure 3).

Other challenges were with regards to insurance coverage and referrals due to various mental health counseling agencies not accepting the patient's/families insurance and Medicaid acceptance being limited. Findings also showed that while certain behavioral problems or ADHD issues were addressed within the practice, more complex behavioral problems were referred to local counselors.

One of the main issues regarding mental health and behavioral health care seemed to be that there is a very limited availability of mental health and behavioral health services in Catawba County. Not only is there a lack of pediatric counselors and psychiatrists in the area, there are also insufficient Medicaid providers in the area (Figure 4).

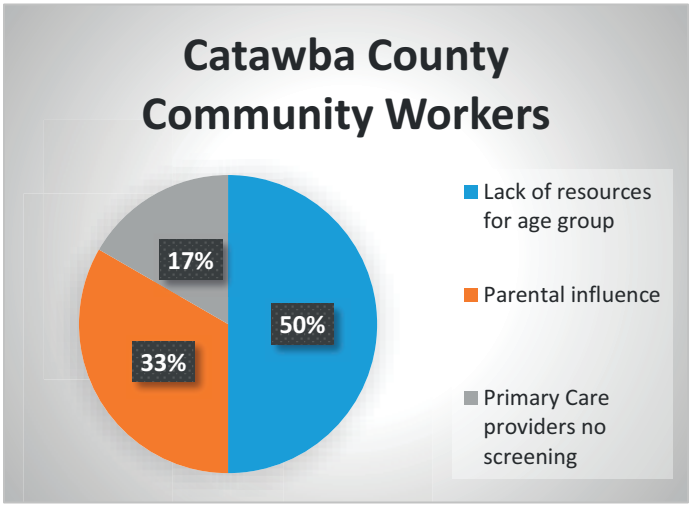

Figure 4.

Finding someone to refer children to and then getting parents involved to help or follow through with a plan of care is also a major barrier to the physician and/or specialist.

Discussion

Across both counties, findings emerged that despite there being mental health resources available to young children, there are still challenges and barriers that exist, one of those challenges being the age of initial diagnosis and treatment. With many providers not starting to screen until the age of 6-8 years there

is a large missed opportunity for a child in need to get services that can help them obtain stability and live a well-functioning life early on.

There is further a wide variety of screening tools used in addition to the variety of ages when the screening begins. This inconsistency fosters confusion when trying to address mental health and behavioral health issues in children. Not only does this create insufficient testing and referrals but it also sends a mixed message to caregivers, schools, advocates, etc. when trying to receive the support and resources needed when such a diagnosis is obtained. If there are concerns of complex developmental problems, children can be referred to a specialty clinic, but they may experience a long wait time for the initial appointment.

From a logistical perspective, if there are concerns of complex developmental problems, those children are then referred to a specialty clinic, usually Olsen-Huff in Asheville, which can take up to a year or longer for the initial appointment. If the child is close to school age, the practice will research what is available in their specific school district and refer the child to those resources and educate the caregiver on how to follow-up.

What's ahead?

As caregivers and parents, it is of extreme importance to advocate for these children. As there continues to be an increase in mental health and behavioral health issues, it is imperative for all parents or caregivers to continue being educated on present-day issues of behavioral health. When it is noticed that a child is having concerning symptoms, a parent or caregiver should immediately schedule an appointment with either a psychiatrist or if that is not possible as a first appointment, then their family physician or pediatrician so the symptoms and behaviors may be discussed. If it is felt that, any doctor or specialist is not making referrals that are believed to be necessary, additional inquiry into what services are available that the child might be in need of.

The future of mental health and behavioral health services will continue to be fast growing and cutting edge with all of the new technology services that are available. Not only can someone send a text message or email to a crisis center, they can also schedule and appointment, look up information regarding symptoms, diagnosis, plan of care, medication recommendations, find referrals and educate themselves and family members without ever leaving their home. There are many mental health applications available for smart phone use and the number grows every year.

Along with new technology, there are also pros and cons of mental health apps. As stated in the online article *Technology and the Future of Mental Health Treatment*, there are some benefits of using a mobile app. Some pros of mobile apps are convenience; anonymity; having an introduction to the first steps of care; the ability to serve more people; 24-hour service; a consistency for mobile care, as the same treatment program can be offered to all users of that mobile app. Technology can complement a person's therapy session, reinforce new skills they have been taught and provide additional support and monitoring. Of course, with pros, there are also cons. One major concern regarding the use and

implementation of mental health apps is to assure the app provides benefits without causing harm along with a guaranteed privacy relating to the app users personal information.

Another issue may be the overselling by developers regarding the app or program. As in the past, it has been proven that not all great sounding programs are beneficial and if the app or program promises something that it cannot deliver or the information provided is skewed, a caregiver may dismiss the diagnosis or turn away from receiving further care for the child.

As has been noted, the field of mental and behavioral health is still evolving and is ever changing. It is significant that resources in our community be readily available for its consumers of all demographics. Younger children will continue to be delayed in receiving the necessary treatments if all disciplines don't come to a consensus or a set standard when it comes to assessing mental and behavioral health issues. The earlier or more timely the intervention will in return enable these children to be more effective in their day-to-day lives. Everyone should have proper access to mental and behavioral health care regardless of their demographics. Educating primary care providers, community partners as well as families is imperative to this success.

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Appendix 1

SURVEY QUESTIONS:

North Carolina Public Health Association (NCPHA)
Emerging Leaders Program – Group Project

Barriers to Mental Health Community Survey – Providers

1. Do you provide pediatric care for patients between the ages of 0-5 years?
   ☐ Yes - Proceed to question #2 ☐ No – Please return form. Thank you for your time!
2. What screening tools/processes are you currently using to screen children (up to 5 years of age) for any mental/behavioral health needs or concerns?
3. At what ages do you screen for mental health needs and/or concerns?
4. Once mental health/behavioral concern(s) are noted by your practice or by the parent/guardian, what are the next steps for referring the child to a mental/behavioral health provider?
5. Are you aware of the mental health resources in Catawba County? ☐ Yes ☐ No
   If yes, please list the resources that are commonly used?
6. Are you familiar with the SWYC screening tool? ☐ Yes ☐ No If yes, do you currently use it? ☐ Yes ☐ No
   If no, why not?
7. What barriers have your experienced in your practice when trying to link children (up to 5 years of age) with mental/behavioral health services?

North Carolina Public Health Association (NCPHA)
Emerging Leaders Program – Group Project

Barriers to Mental Health Community Survey – CC4C Care Managers

1. Do you have children on your caseload that suffer from diagnosed mental/behavioral health disorders?
2. What is the earliest age any of your patients have been diagnosed?
   Easy or difficult getting them diagnosed.
3. Are you aware of any screening tools being used by PCP offices to diagnose children at young ages? If so, what are they (if you know the specific tool name)?
4. What barriers do you face as CM when it comes to linking these children/families with needed mental/behavioral health resources?

North Carolina Medical Society
Leadership in Medicine

KANOF INSTITUTE FOR PHYSICIAN LEADERSHIP

Exploration of access to dental care for beneficiaries of Medicaid for Pregnant Women (MPW) in North Carolina

Nick Cordeiro[6], RN, BSN, Deborah Smith[7], MSW, LCSW, Brittan Williams[8], MPH, CHES, Trey Wright[9] MA, MPH

Introduction

Regular dental checkups are vital for identifying and preventing oral disease. Routine dental care may include x-rays, cleanings, and additional procedures as necessary, e.g. filling dental cavities. While routine dental care is important for all demographics, there are special implications for oral health in pregnant women. The American College of Nurse-Midwives has cited that women are at an increased risk for periodontal disease during pregnancy (2014). This is due to a change in physiology and fluctuation in hormone levels that may promote the growth of harmful bacteria in the oral cavity (Gaffield, Gilbert, Malvitz & Romaguera, 2001). Furthermore, periodontal disease is associated with adverse pregnancy outcomes that can affect the long-term development of the child, such as premature birth and low birth weight (Srinivas & Parry, 2012). Due to the significant importance of accessing dental care during pregnancy, the aim of this project was to identify dental providers that are enrolling new patients and accept Medicaid reimbursement for pregnant women in ten North Carolina counties.

Methods

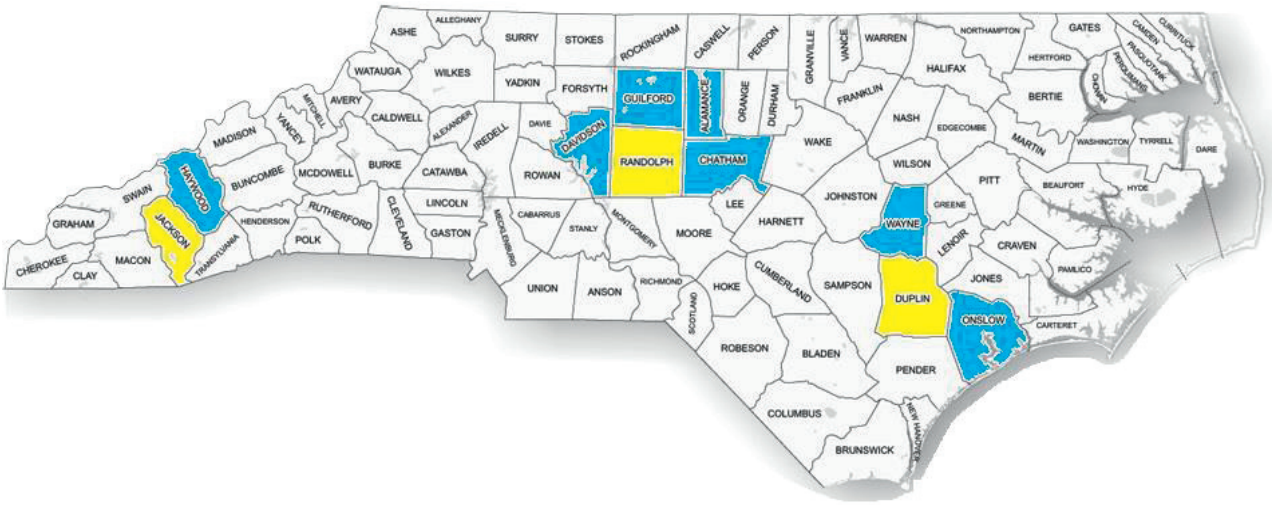
Data on the utilization rates of Medicaid for Pregnant Women (MPW) beneficiaries for fiscal years 2014-2016 was obtained from the North Carolina Department of Medical Assistance. The data reviewed showed low MPW utilization rates across North Carolina.

By defining low utilization as anything lower than the state average, three rural counties were selected to represent the western, central, and eastern regions of North Carolina: Jackson (West), Randolph (Central), and Duplin (East). The commonality of these counties is that they each have low MPW utilization rates and they each border at least one urban county, however, the urban counties also have low utilization rates. It is known and widely accepted for urban counties to have more resources, thus

[6] Orange County Health Department
[7] NCDHHS DPH
[8] Public Health Accreditation Board
[9] Carteret County Health Department

more dental provides in that area versus their rural counterparts. The map below shows the rural counties (yellow) and identifies the bordering urban counties (blue) that were selected, which include:

- Jackson borders Haywood
- Randolph borders Davidson, Guilford, Alamance, and Chatham
- Duplin borders Wayne and Onslow



A current list of all dental providers in each county, as of February 19, 2018, was obtained from the North Carolina State Board of Dental Examiners.

The research team determined that phone interviews with the dental professionals and/or office would ensure a higher response rate and a more detailed analysis of the utilization rates for MPW. Three interview questions were created by the research team to provide yes/no responses while also allowing the interviewee to provide additional details where applicable.

Survey Instrument

1. Does your practice accept Medicaid?
2. Does your practice accept Medicaid for Pregnant Women?

    a). (*If yes*) Is your practice currently accepting new pregnant patients?

Dental provider contact information (n=635) was then divided among the research team to conduct phone interviews. Phone interviews were conducted for a period of 90 days beginning March 1, 2018.

Data was compiled and analyzed to determine:

- Number of licensed dentists in each county;
- Number of dental practices in each county;
- Number of practices currently accepting Medicaid;

- Number of practices currently accepting Medicaid for Pregnant Women; and
- Number of practices currently accepting new patients

The target audience of the survey was licensed dental providers in the urban and rural counties identified with low MPW utilization rates. Target audience for the project is pregnant women covered by MPW.

Results

Based on the North Carolina State Board of Dental Examiners' database query on February 19, 2018, there were 635 total licensed and active dentists across Alamance (n=57), Chatham (n=49), Davidson (n=29), Duplin (n=10), Guilford (n=301), Haywood (n=35), Jackson (n=13), Onslow (n=67), Randolph (n=34), Wayne counties (n=40). The data provided contact information that included dental professional name, address, county, and email address.

Following phone interviews, data was then reviewed in order to provide additional detail of providers accepting Medicaid and MPW in comparison to the percentage of eligible under MPW who were enrolled for at least 90 days for state fiscal years 2014-2016 (Table 2). After review, 620 dental practices were contacted (Alamance n=55; Chatham n=47; Davidson n=26; Duplin n=10; Guilford n=300; Haywood n=34; Jackson n=14; Onslow n=61; Randolph n=33; and Wayne n=40).

Original database information provided by the North Carolina State Board of Dental Examiners did not consider dental providers who may have moved out of the sample area, passed away, or retired. Additionally, a dental learning center operated by the East Carolina University School of Dental Medicine was identified to serve Jackson County. A total of 453 dental practices were also identified in the 10-county sample: Alamance (n=47); Chatham (n=44); Davidson (n=21); Duplin (n=7); Guilford (n=199); Haywood (n=24); Jackson (n=14); Onslow (n=32) Randolph (n=29); and Wayne (n=36).

A total of 102 dental practices were identified as accepting Medicaid: Alamance (n=15); Chatham (n=8); Davidson (n=5); Duplin (n=6); Guilford (n=36); Haywood (n=6); Jackson (n=2); Onslow (n=12) Randolph (n=5); and Wayne (n=7). Furthermore, 58 dental practice interviewees responded they are accepting MPW patients (Alamance n=8; Chatham n=5; Davidson n=5; Duplin n=5; Guilford n=13; Haywood n=4; Jackson n=2; Onslow n=9; Randolph n=2; and Wayne (n=7) (table 1).

County	Licensed Dentists	Practices	Practices Accepting Medicaid	Practices Accepting Medicaid for	Practices Accepting New Patients	% of Women Eligible Under MPW Program Category enrolled for at	% of Women Eligible Under MPW Program Category enrolled for at	% of Women Eligible Under MPW Program Category enrolled for at

				Pregnant Women		least 90 days SFY14	least 90 days SFY15	least 90 days SFY16
Alamance	55	47	15	8	8	9.40%	7.60%	6.20%
Chatham	47	44	8	5	5	6.70%	5.70%	8.90%
Davidson	26	21	5	5	4	11.30%	10.40%	9.00%
Duplin	10	7	6	5	5	7.10%	6.70%	6.40%
Guilford	300	199	36	13	7	9.50%	9.00%	6.50%
Haywood	34	24	6	4	2	13.20%	11.80%	10.90%
Jackson	14	14	2	2	7	4.40%	4.70%	4.50%
Onslow	61	32	12	9	6	13.30%	12.90%	12.30%
Randolph	33	29	5	2	2	5.50%	5.80%	2.80%
Wayne	40	36	7	5	5	11.10%	10.10%	7.40%
Total	620	453	102	58	51			

Table 1 – Overview of dental practices accepting Medicaid

Conclusion

The American College of Obstetricians and Gynecologists (ACOG) has agreed with research that dental care during pregnancy is safe and that pregnant women should have appropriate dental care during their pregnancy to avoid potential infections resulting from untreated cavities and gum disease (*The American College*, 2013). The American Dental Association (ADA) supports ACOG's stance and has associated poor oral health during pregnancy associated with preterm birth, intrauterine growth restriction, gestational diabetes and preeclampsia (n.d.), and these afflictions can result in infant mortality. In 2015, North Carolina was exceeding the United States' national average for infant mortality and ranked 43rd in the nation (North Carolina State Center for Health Statistics, 2016). Proper oral health is not to blame for every poor birth outcome; however, it is likely to play a role in North Carolina's preterm birth and infant mortality rates.

Prior to beginning this research, the team hypothesized that women enrolled Medicaid for Pregnant Women (MPW) would have low utilization rates for dental coverage under MPW. There was a vast array of reasons why the utilization rates could be low within this population; (e.g. lack of understanding of provider coverage, inability to find a provider, lack of knowledge, competing priorities, lack of transportation) however, this research specifically focused on whether dental practices in ten counties across North Carolina would provide necessary dental services to a patient covered by MPW. The results indicated that the hypothesis was correct and one perceived barrier to dental care is the lack of dental providers who will accept MPW and who are currently accepting new patients.

Throughout this research project, there has been little change in oral health for MPW recipients in North Carolina; however, this research may be a building block for change. Based upon knowledge gained through this project, the research team makes the following recommendations to improve oral healthcare access for MPW patients:

- Increase the number of private dental providers who will accept women with Medicaid for Pregnant Women (MPW) coverage. To do this, we must understand ***why*** the private dental providers are not accepting and/or do not want to accept MPW.
- Educate dental practices about the coverage provided by MPW, and ensure the frontline staff are familiar with the coverage when a MPW patient calls for an appointment. During the research, at least five practices reported incorrect information about the dental coverage provided by MPW and ultimately would have turned the patient away from receiving care.
- Raise awareness within the pregnant, Medicaid population about dental services covered by MPW and empower the patients to advocate for themselves when informed of incorrect information about their dental coverage under MPW.

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North Carolina Medical Society
Leadership in Medicine

KANOF INSTITUTE FOR PHYSICIAN LEADERSHIP

Make the RYT Choice: Recycle Your Trash Final Report

Jared Belk[10], Britney Hargett[11], Rachel McIntosh-Kastrinsky[12] and Tammy Rodriguez[13]

Introduction

Recycling reduces waste in landfills, conserves natural resources, reduces pollution and saves energy (U.S. Environmental Protection Agency, 2017). Many people consider the simple act of separating their trash second-nature. Unfortunately, recycling is not a regular habit for all North Carolinians even though many counties provide free services and encourage recycling.

Extensive research has been done on the reasons why people do and do not recycle, but few studies have looked recently nor at North Carolina specifically (Hong et al., 1993; Jakus et al., 1997; Mannetti et al., 2004; Vincete and Reis, 2008). To address this gap it is important to understand why North Carolinians do or do not recycle. This study uses a short anonymous survey across four diverse counties in North Carolina to assess the reasons people do and do not recycle. The results of the survey can be used by county services to spur more residents to recycle.

Methods

Recycling Survey Development

A short multiple choice survey was developed that inquired if an individual recycled; if they did or did not, then why; where the individual recycling bins are located in their community and if they did not recycle, what would encourage them to recycle. The survey also collected optional demographic information including the county and zip code of residence, age range, education level and household income. The survey was reviewed and revised based on feedback from county health department staff.

[10] Wilkes County Health Department

[11] Pitt County Health Department
[12] Clean Air Carolina
[13] Pamlico Health Department

The final version of the survey was created in a digital- (SurveyMonkey) and paper-format to maximize participation. A copy of the survey is located in the Appendix.

Recycling Survey Audience and Distribution

The survey was distributed to Craven, Durham, Pamlico and Wilkes County residents. These counties were chosen because they represent a diverse population of North Carolinians including rural and urban centers, high and low socioeconomic status and racial differences (Carolina Demography, n.d.). These counties were also chosen because the authors reside and work in these counties. To ensure a wide-range of residents from each county completed the surveys, senior centers, schools systems, libraries and government offices were targeted in each county from March 2018 to June 2018.

In Craven County, paper surveys were distributed at the front desk of the Environmental Health, as well at check-in for the Health Department located in the same building. Once checked in, patients were given a survey and asked to put the completed survey in a bin. Surveys were also left at the library and Senior Center located in New Bern. Craven County Schools were contacted by email about participating in the survey, however no response was given. Craven County Government declined to participate in completing the surveys.

In Durham County, paper surveys were placed at each of the five library locations were they were located in a prominent areas with high volume of people with a pen and bin for completed surveys from April 17 to April 30, 2018. The Durham school system and two senior centers were contacted by email and phone, but their process for approval was burdensome and required a fee to distribute, and therefore not pursued. Durham County government buildings were also contacted but did not respond to the survey distribution request though some did complete the digital version.

In Pamlico County, the digital survey was sent to the school system, all Pamlico County employees, and shared with the County Commissioners. Because Pamlico County is dispersed compared to other counties, an electronic copy was also shared on Social Media. Paper copies were distributed to patrons at the local health department, and the Pamlico County Tax Department.

In Wilkes County, paper surveys were distributed at the public library, and members of the Allied Health Section of the Health Department to distribute at various community engagements, such as an employee wellness and health and speaking engagements. The senior center in Wilkes County was contacted, however the senior center declined to distribute the survey. The Wilkes County school system was also contacted but due to their approval process, the survey would have not been approved prior to school letting out for the summer. The Wilkes County Health Department posted the link to take the survey on their Facebook page.

Data Management

All paper survey results were manually entered into SurveyMonkey (the digital survey format). All results were then reviewed as a whole and by county and household income using Excel.

Results

The overall demographics of the survey participants are shown in Table 1. The survey group consisted of individuals across 11 counties in total with a focus on four counties: Craven, Durham, Pamlico and

Wilkes. Ages ranged from 18 to over 86. Education levels were from no high school diploma to graduate or professional degree. Household incomes ranged from less than $10,000 to more than $150,000.

In total, 292 surveys were completed with the breakdown shown in Table 2. Craven County had 105, Durham County had 116, Pamlico County had 43 and Wilkes County had 13. Due to the unexpected small response rate from Wilkes County, the team felt it was not a good representation and decided not to use it to represent the county, but did include it in the overall raw data. Across the counties, people aged 56-65 were the largest age group to complete the survey, and accounted for almost 22 percent of the responses. Overall, the highest level of education completed was graduate or professional degree with 90 participants, approximately 34 percent. The largest income group was $50,000-$74,999 at (for?) 54 participants accounting for nearly 22 percent of respondents.

The results showed approximately 84 percent of respondents recycle and approximately 16 percent do not recycle (Graph 1). Of those who recycle, approximately 19 percent recycle to be environmentally friendly, 16 percent recycle to reduce waste and 14 percent recycle to reduce the need for a landfill (Graph 2). Results were the same in Durham County and at income levels above and below $49,999 (Table 2). In Pamlico and Craven Counties, most participants also chose to “be environmentally friendly” and “reduce waste” as the primary and secondary reasons they recycle, but Pamlico participants chose to “protect forests and wildlife” and Craven chose to “reduce pollution” as their tertiary reason for recycling (Table 2).

Of the respondents who did not recycle, 19 percent stated that recycling facilities were too far away, 18 percent were unwilling to sort their trash and 15 percent did not understand the point of recycling (Graph 3). The Craven (15 percent) and Pamlico (51 percent) Counties had the highest rate of no recycling (Table 2). In Craven County, 26 percent did not understand the point of recycling, 21 percent did not have enough space for the bin and 16 percent said recycling facilities were too far away and that they did not think it was useful (Table 2). In Pamlico County, 22 percent were unwilling to sort their trash, 20 percent said the recycling facilities were too far away and 15 percent said there was no financial benefit for the person recycling (Table 2).

Approximately 22 percent of all respondents and in all counties stated that their communities have recycling bins available at convenience centers, shopping centers, schools, parks, county buildings, city buildings, don’t know where recycling bins are located and farmers markets (Graph 4), in that order. In Craven County, respondents chose “don’t know” (18 percent) as the secondary option and “parks” (14 percent) as the tertiary option (Table 2) for question four. In Pamlico County, respondents chose “county buildings” (24 percent) as the secondary option and “don’t know” (16 percent) as the tertiary option (Table 2) for question four.

Survey Participant Demographics

	All	Craven	Durham	Pamlico	<$49,999	>$50,000	No College	Some college+
Total Participants	292	105	116	43	92	132	89	178
County								
Alamance	1	0	0	0	0	1	0	1
Beaufort	2	0	0	0	0	1	1	1
Carteret	1	0	0	0	0	1	0	1
Craven	103	103	0	0	45	27	51	39
Durham	116	0	116	0	29	69	7	107
Onslow	1	0	0	0	0	1	1	0
Orange	1	0	0	0	0	1	0	1
Pamlico	38	0	0	38	11	21	24	12
Wake	1	0	0	0	0	0	0	1
Warren	1	0	0	0	0	0	0	1
Wilkes	9	0	0	0	2	6	2	7
Age								
18-24	15	10	3	2	9	1	11	4
25-35	41	11	21	7	17	23	12	29
36-45	40	6	20	10	10	25	14	26
46-55	50	13	21	10	14	30	15	35
56-65	64	26	22	11	22	31	22	41
66-75	35	10	21	1	10	16	6	28
76-85	14	9	4	0	5	4	6	8
86+	7	5	2	0	4	1	2	4
Highest Level of Education								
Less than 9th grade	4	1	1	2	1	0	4	0
9th to 12th grade, no diploma	10	8	1	1	5	0	10	0
High school graduate (or GED / equivalent)	37	24	3	6	18	13	37	0
Associate's degree or Vocational training	38	18	2	17	16	18	38	0
Some college (no degree)	33	19	7	3	18	10	0	33
Bachelor's degree	55	14	34	3	15	34	0	55
Graduate or professional degree	90	8	66	8	17	57	0	90

Household Income								
Less than $10,000	14	8	4	1	14	0	9	5
$10,000 to $14,999	9	7	1	1	9	0	8	1
$15,000 to $24,999	21	11	6	3	21	0	14	6
$25,000 to $34,999	19	11	4	6	19	0	7	11
$35,000 to $49,999	29	12	14	2	29	0	2	27
$50,000 to $74,999	57	18	24	10	0	57	19	38
$75,000 to $99,999	30	6	13	7	0	30	8	22
$100,000 to $149,999	35	2	24	5	0	35	4	31
$150,000 or more	10	2	8	0	0	10	0	10

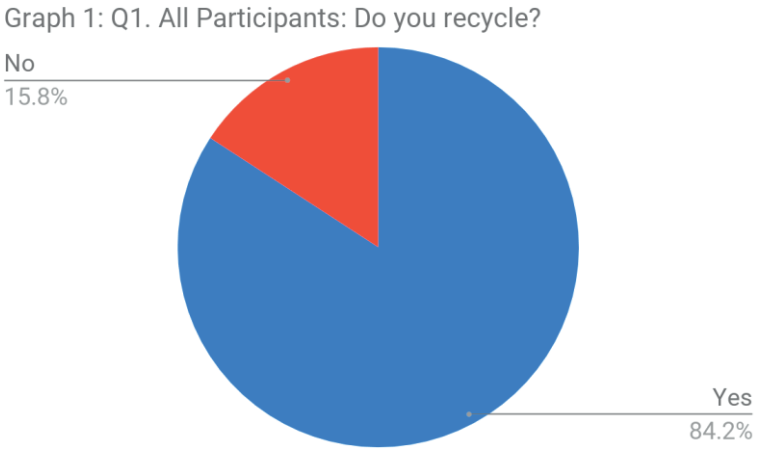
Table 1

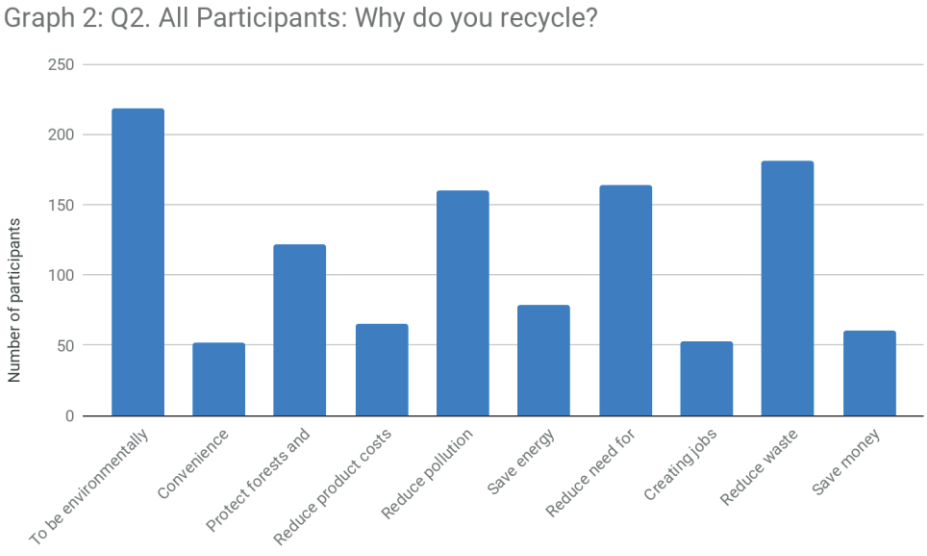
Recycling Survey Results

	All	Craven	Durham	Pamlico	<$49,999	>$50,000	No College	Some college+
Total Participants	292	105	116	43	92	132	89	178
Do you recycle?								
Yes	245	89	114	21	72	120	68	161
No	46	16	2	22	20	12	21	17
Why do people recycle?								
To be environmentally friendly	218	75	109	15	65	111	54	155
Convenience	52	30	17	3	12	27	14	30
Protect forests and wildlife	122	25	77	10	33	68	25	91
Reduce product costs	65	24	34	2	17	31	15	47
Reduce pollution	160	51	88	9	45	83	32	118
Save energy	79	23	49	4	21	38	13	60
Reduce need for landfills	164	39	106	8	44	88	23	132
Creating jobs	53	23	26	3	21	21	12	37
Reduce waste	181	55	101	11	50	95	37	132
Save money	60	33	15	7	19	27	20	33
Why do you not recycle?								
Do not think it is useful	8	3	0	5	3	3	5	3
Do not understand how to recycle properly (which bin or what I can recycle)	8	2	0	5	4	2	2	4
Do not understand the point of recycling	10	5	0	3	5	2	5	3
Do not have enough space for the bin	7	4	1	2	7	0	2	5
Eyesore for different bins	3	0	0	3	0	3	3	0
Recycling facilities to far away	13	3	1	8	5	6	8	4
Unwilling to sort my trash at home	12	2	0	9	4	5	6	4
No financial benefit for person recycling	6	0	0	6	2	3	1	5
Lack of penalty	0	0	0	0	0	0	0	0
Recycling doesn't make a difference	0	0	0	0	0	0	0	0
Select all places in your community where recycling bins are available.								
Parks	92	35	40	4	32	42	31	58

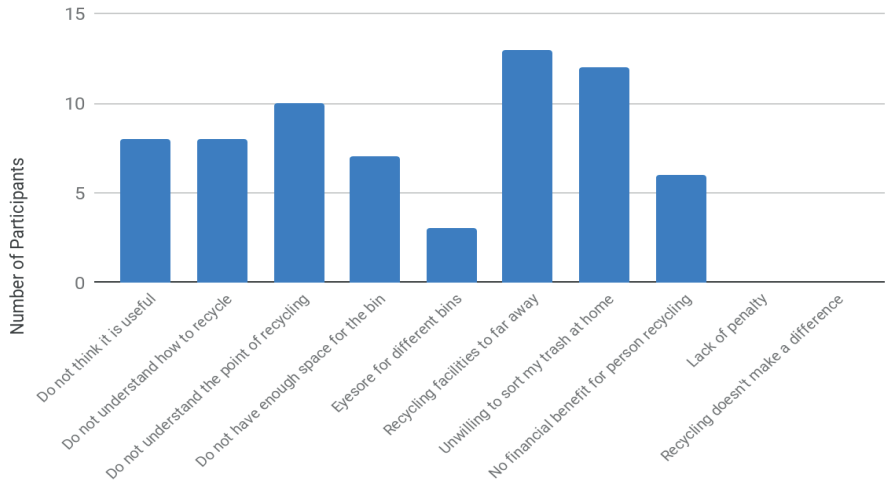
Schools	94	30	49	5	36	40	26	64
Shopping centers	100	31	52	4	34	43	28	65
City buildings	83	26	44	4	31	41	20	59
County buildings	84	26	35	16	30	40	25	56
Farmers markets	54	11	37	0	13	33	9	42
Recycling/Convenience Center	165	49	75	23	50	87	45	111
Don't know	73	46	14	11	29	19	27	36

Table 2.

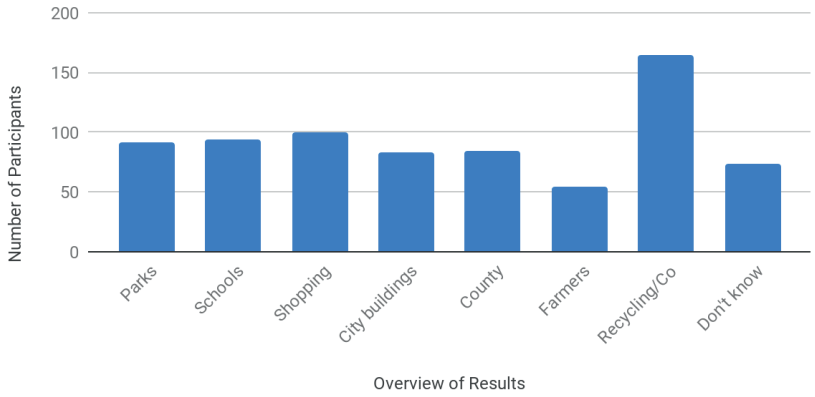




Graph 3: Q3. All Participants: Why do you not recycle?



Graph 4: Q4. Select all places in your community where recycling bins are available.



Conclusion

The results of this study were novel in that they looked at county specific data in North Carolina. Interestingly, the majority of the participants that said they did not recycle were educated beyond high school, yet many did not understand how to recycle, the point of recycling or where they could recycle. A common stereotype is that the less educated and lower income participants do not understand how to properly recycle. However, that was not the case in this study. Respondents that were less educated recycled 13 percent more than respondents that were more educated. Respondents with higher income only recycling 11 percent more than lower income participants. This project indicates that education on how, where and why to recycle across the income levels in all the counties surveyed could improve recycling rates.

After completing this project it is apparent more in depth research is needed to determine why and how North Carolinians do and do not recycle. While this survey reached several communities in North Carolina, the survey distribution was limited to the four counties of the authors residence and a few surrounding counties. The results indicate that statewide recycling habits are not always the same as the county-level recycling habits, as shown in Pamlico and Craven Counties whose recycling habits were different than the state. Future research could look at all 100 counties across North Carolina to gain insights into recycling behaviors and needs at a county specific-level. This would be of particular interest to county government services, since waste management is controlled at the county level.

We hope this information will shed light on the recycling activities within North Carolina. Once stakeholders such as county commissioners understand the importance of educating the citizens and providing the necessary tools for recycling, there is a greater chance individuals will recycle. Natural resources would be used less, energy consumption would be reduced and global warming reduced if more individuals recycled (U.S. EPA, 2017).

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Appendix - Recycling Survey

The North Carolina Public Health Association Emerging Leader Program is collecting information on recycling. All surveys are anonymous. Please complete this brief survey or take it online here: https://www.surveymonkey.com/r/VPT5RPW

*Answer required for this question.

1) Do you recycle?*

- ❑ Yes
- ❑ No

2) If yes, why do you recycle? (Select all that apply)*

- ❑ To be environmentally friendly
- ❑ Convenience
- ❑ Protect forests and wildlife
- ❑ Reduce product costs
- ❑ Reduce pollution
- ❑ Save energy
- ❑ Reduce need for landfills
- ❑ Creating jobs
- ❑ Reduce waste
- ❑ Save money

3) If no, why do you not recycle? (Select all that apply)*

- ❑ Do not think it is useful
- ❑ Do not understand how to recycle properly (which bin or what I can recycle)
- ❑ Do not understand the point of recycling
- ❑ Do not have enough space for the bin
- ❑ Eyesore for different bins
- ❑ Recycling facilities to far away
- ❑ Unwilling to sort my trash at home
- ❑ No financial benefit for person recycling
- ❑ Lack of penalty
- ❑ Recycling doesn't make a difference

4) Select all places in your community where recycling bins are available.*

- ❑ Parks
- ❑ Schools
- ❑ Shopping centers
- ❑ City buildings
- ❑ County buildings
- ❑ Farmers markets
- ❑ Recycling/Convenience Center
- ❑ Don't know

5) If you do not recycle, what would make it easier for you to begin recycling?

6) What county do you live in?* _____

7) What zip code do you live in? _____

8) What is your age range

- ❑ 18-24
- ❑ 25-35
- ❑ 36-45
- ❑ 46-55
- ❑ 56-65
- ❑ 66-75
- ❑ 76-85
- ❑ 86+

9) What is the highest level of school, college, or vocational training that you have finished?

- ❑ Less than 9th grade
- ❑ 9th to 12th grade, no diploma

- ❑ High school graduate (or GED / equivalent)
- ❑ Associate's degree or Vocational training
- ❑ Some college (no degree)
- ❑ Bachelor's degree
- ❑ Graduate or professional degree

10) What was your total household income last year, before taxes? A household is all people in a housing unit sharing living arrangements; they may or may not be related. (Optional)

- ❑ Less than $10,000
- ❑ $10,000 to $14,999
- ❑ $15,000 to $24,999
- ❑ $25,000 to $34,999
- ❑ $35,000 to $49,999
- ❑ $50,000 to $74,999
- ❑ $75,000 to $99,999
- ❑ $100,000 to $149,999
- ❑ $150,000 or more