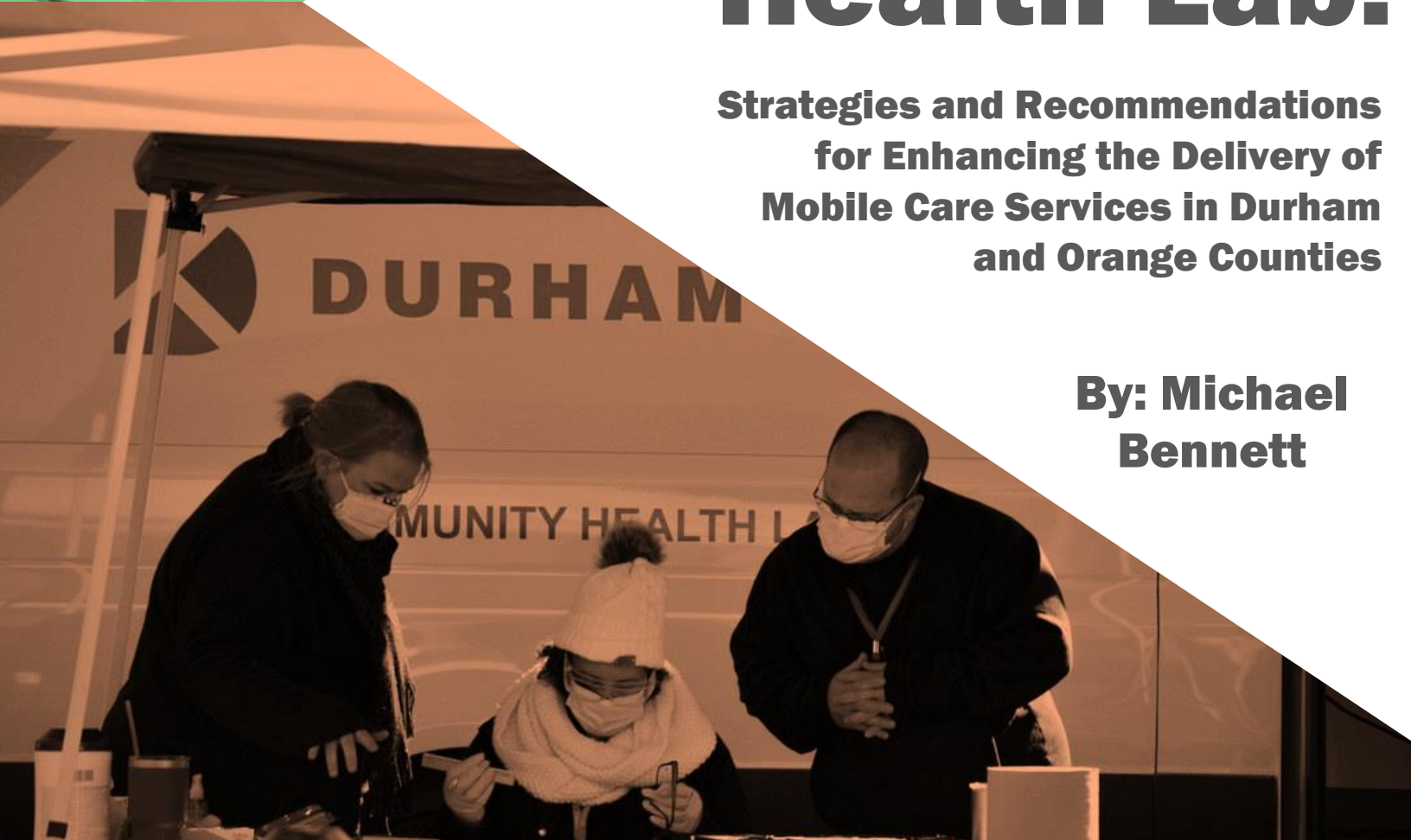


Durham Tech Mobile Health Lab:

**Strategies and Recommendations
for Enhancing the Delivery of
Mobile Care Services in Durham
and Orange Counties**

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Bennett**



Disclaimer: This 2021 student paper was prepared in partial completion of the graduation requirements for the Master of Public Policy Program at the Sanford School of Public Policy at Duke University. The research, analysis, and policy alternatives and recommendations contained in this paper are the work of the student who authored the document, and do not represent the official or unofficial views of the Sanford School of Public Policy or of Duke University. Without the specific permission of its author, this paper may not be used or cited for any purpose other than to inform the client organization about the subject matter. The author relied in many instances on data provided by the client and related organizations and makes no independent representations as to the accuracy of the data.

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Introduction

In 2020, Blue Cross and Blue Shield of North Carolina awarded Durham Technical Community College a \$1 million grant to launch a new mobile health lab. The program will deliver cross-disciplinary health education and outreach to Durham and Orange Counties, provide clinical training to student volunteers, and engage local populations in training and education to eliminate barriers to health access. This report will examine the strategies and best practices that Durham Tech should adopt and adapt for the operation of this new mobile health lab.

The recommendations outlined in this report have been organized to roughly approximate the sequence of services necessary for client operations. It starts by prescribing the tools for setting up the educational component of the van and engaging populations in the community. With these procedures in place, it moves to strategies for delivering care and leveraging resources in identified areas. Finally, supplementary considerations, including laws, regulations and additional best practices are discussed in the appendices. Each of the four recommendation sections correlates with a finding summarized below:

Findings

- A. **A well-organized student application process and curriculum** is a necessary component for mobile health operations affiliated with schools to find the best applicants and give them meaningful educational opportunities.
- B. While using traditional demographic data, including race, ethnicity, and income level, is a useful heuristic for identifying top-down areas of need, a **patient-centric model should be employed** to fully understand the targeted health needs of community members.
- C. The most successful mobile health programs **center cultural humility** in their delivery of care to patients.
- D. Effective mobile health labs **leverage partnerships with hospitals, clinics, and other health providers** in their local communities.

Strategic Recommendations for the Durham Tech Mobile Health Lab

- Develop a multitrack curriculum and application process for bringing in students.
- Ensure that the educational goals of the program reinforce the delivery of medical care and the health and wellbeing of patients remains at the forefront.
- Identify communities of need through preliminary mapping, such as provided by Durham Compass, based on measures of socioeconomic status and position as well as community feedback.
- Develop a health assessment based on specific community needs and values.
- Design and implement interventions centered around patients' lived experiences.
- Follow a "knowledgeable neighbor" model of care as practiced by the Harvard Family Van.
- Make the van a comfortable environment for patients.
- Lay groundwork for robust data collection to be used for patient care and reporting measures.
- If possible, have patients be treated by the same health care workers.
- Identify opportunities to employ retired nurses and doctors from local medical institutions.
- Strengthen referral capacity of the van by implementing routine check-ins with patients and communicating with local providers.
- Build grassroots capacity through community partnerships, especially with local church organizations.

Laws and Regulations (Appendix A):

- Understand full scope of laws and regulations impacting mobile health care to ensure full legal compliance now and in the future.

Background

Overview

Health care in the United States is a complex patchwork of systems that can make the delivery of adequate medical services increasingly difficult. Experts have identified several barriers to health care services for both general and vulnerable populations. These barriers include transportation and geographic impediments, financial costs, hours of operation, linguistic and cultural barriers, and intimidation by healthcare settings.¹ Research on mobile health labs demonstrates their ability to facilitate culturally competent communication between patients and providers, save money through reduced hospitalizations and preventative care, and promote overall wellbeing in underserved communities.²

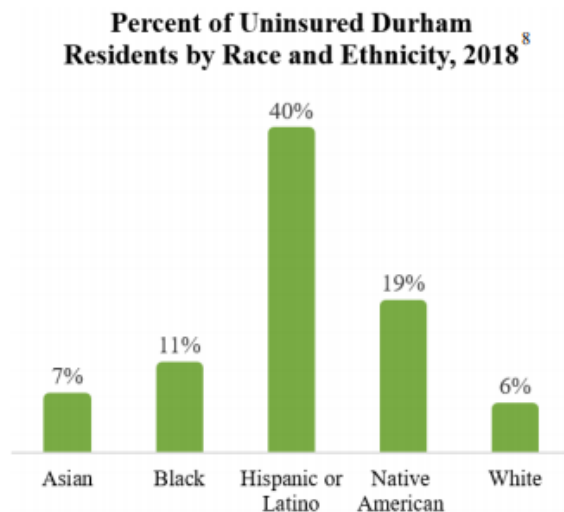
General Health Care

Eliminating Health Disparities

Mobile health tackles the issue of health disparities. Reducing health disparities remains an important component of delivering quality health care to vulnerable populations. And as the Institute of Medicine declared in its seminal 2003 report on the problem of health disparities, “Community health workers offer promise as a community-based resource to increase racial and ethnic minorities’ access to health care and to serve as a liaison between healthcare providers and the communities they serve.”³

The problem of health disparities is evident in North Carolina. In 2018, the North Carolina Department of Health and Human Services Office of Minority Health and Health Disparities released a comprehensive health equity report. The report detailed numerous examples of inequities, including child and adolescent health, communicable diseases, and access to health care. In almost all cases, African American, American Indian, and Hispanic/Latinx groups fared worse than the white population reference group.⁴

Earlier this year, Durham County released its annual State of the County Health Report. The report found many examples of health disparities at the local level. Data on Durham residents by race and ethnicity shows 40% of Hispanic or Latinx residents are uninsured, compared to 11% for Black residents and 6% for white residents.⁵



Engaging Diverse Populations

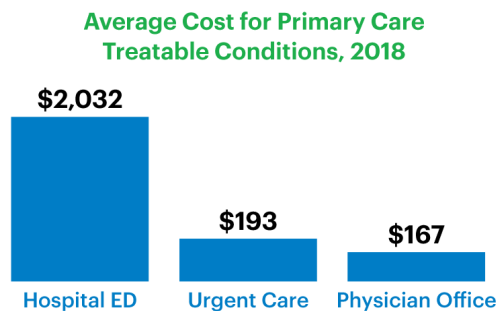
The health field has often faced difficulties accommodating the needs of minoritized communities because of “poor patient-provider communication, mistrust, and sense of disempowerment.”⁶ Mobile health clinics can engage populations directly by offering services within targeted neighborhoods. By making the effort to come into these areas, these clinics can foster a closer relationship with their patients. Qualitative studies have repeatedly demonstrated these attributes of mobile health labs. One study, “Mobilizing a Narrative of Generosity: Patient Experiences on an Urban Mobile Health Clinic” found that “patients believe the mobile health clinic creates a sense of welcome, encourages patients to become active participants in their health, and fosters a “pay it forward” attitude among community members.”⁷

Beyond combatting health disparities in Durham, the mobile health lab will focus on advancing the educational mission of Durham Tech. By allowing students enrolled in the college’s Health and Wellness curriculum to monitor the administration of services, the mobile health lab will provide unique, hands-on learning opportunities. Students will be able to use this experience to satisfy mandatory clinical hours.

Mobile Health Track Record

Reducing Costs

Evidence suggests these kinds of health care delivery models offer many cost-savings benefits by reducing unnecessary emergency department visits. The 2015 Cost Trends Report from the Massachusetts Health Policy Commission found that “more than 40 percent of ED visits were either non-emergency or could have been treated in primary care.”⁸ The Healthcare Financial Management Association estimates the yearly cost of unnecessary ED use in 2019 was over \$8 billion, more than double the amount since 2010.⁹



Source: United Health Group

Mobile health labs save money through effective preventative care aimed at reducing disease burden. To assess the value of medical interventions, Herbert Klarman, Sol Fanshel, and G W Torrance developed the measure of quality-adjusted life year (QALY) to determine the costs associated with needing medical treatment.¹⁰ In “Valuing Health for Policy: An Economic Approach,” Tolley estimated the average QALY as \$70,000 for disease burdened individuals.¹¹ Mobile Health Map, a collaborative research network and data aggregation hub for mobile health clinics, analyzed 16 labs and estimated average annual savings of \$71,714,286 in QALY from individuals not requiring treatment after receiving preventative care.¹²

Success of Mobile Health Operations

For nearly thirty years, the Family Van mobile health lab has been operating in partnership with Harvard Medical School to provide wrap-around health care to impoverished residents. Considered by many to be the gold standard for mobile health vans, the lab performs free health screenings for blood pressure, glucose, cholesterol, glaucoma, pregnancy, and HIV counseling. Caterina Hill, the Research Program Director for the Family Van, estimates the combined cost savings of the van—accounting for the value of avoided emergency department visits and quality life years saved for clients—is over \$11,000,000. Additionally, she says for every dollar that gets invested in the Family Van, the American health care system saves \$23.¹³ Rainelle Walker-White, the Manager of Direct Service, was consulted for the creation of this report.

Durham Tech’s lab would fill an important gap in the community. Mobile Health Map shows only a single mobile clinic operating in Durham. The unit, called Tooth Ferry, only treats children’s dental needs in Durham’s Public Elementary Schools. In the past, North Carolina schools provided eye screenings for students. Schools no longer offer optical services, creating a clear gap in the community. The Durham Tech mobile lab is set up to conduct eye screenings, thereby filling this critical role.

A. Expanding Education Capacity

The Durham Tech mobile health lab is unique because of its commitment to advancing the educational mission of the college through offering opportunities for real world engagement in a medical setting. Students will be able to work with the mobile health lab to earn credit through the college's Health and Wellness program. To ensure that the lab is operating in a mutually reinforcing manner for both groups, it is critical to develop robust educational standards. Along with these requirements, the health of patients should remain the priority and that opportunities for learning supplement—not supplant—this mission.

Recommendation One: Develop a multitrack curriculum and application process for bringing in Durham Tech students. A potential model for tracks would include positions for Outreach, Research Analysis, and Direct Services Provision.

To engage with students in a meaningful way, the Durham Tech mobile health lab should offer opportunities for students to gain practical experience working in the health space along several different paths. Rainelle Walker-White spoke on the success of the Harvard Family Van's three-part educational initiative. Instead of just having volunteers on the van, Walker-White explained that the Harvard model allows students to interact with the program in other ways. First, it offers an Outreach position whose primary function is to secure local partnerships for the van. This position could be open for students outside the Health and Wellness track to engage stakeholders and apply for financial support. Another position focuses on Research and Evaluation. In these roles, students examine emerging trends, conduct data analysis, and offer programmatic support to the van. Finally, the Family Van has a Direct Services role where students gain clinical hours operating on the van itself.

Successful mobile health labs to collect a variety of demographic information on applicants because their backgrounds, skills, and attributes will be used to maximize value in different ways. Accordingly, the Harvard Family Van application process is exceedingly thorough. The volunteer application website asks students to input their age, gender, race, and ethnicity in boxes rather than multiple choice selections. Additionally, the application asks volunteers to identify both languages they speak as well as read and write in from an exhaustive list. See **Appendix B** for the application process. Information collected from the census could provide a blueprint for the languages to include in this section.

The most common non-English language in Durham and Orange Counties is Spanish.

In Durham, 12.2% of the population speaks Spanish, while in Orange County the number is 7.3%

Appendix C includes complete charts on the most widely spoken languages in Durham and Orange Counties.

Over the course of the semester, typically working for three hours a week, students also go through a curated curriculum of skills training. At the Family Van, students are taught how to perform pregnancy tests, conduct blood work, test blood pressure, and a variety of other important diagnostic skills. The Durham Tech Health and Wellness faculty could collaborate on creating their own curriculum based around the mobile health clinic. Students also must complete weekly examinations to test their knowledge. At the end of the program, students write a reflection paper on their experiences.

The purpose of this student reflection paper is twofold: First, it allows the volunteers to look back on their time with the van. Second, it provides valuable feedback for the van itself, letting staff know what changes should be implemented to best serve the educational goals of the students. A post-program survey could also be administered to collect feedback. In Nashville, United Neighborhood Health Services utilizes student volunteers to conduct health screenings. This program's "Student Participant Feedback Form" can be found in **Appendix D** and serve as a template.

Recommendation Two: Ensure that the educational goals of the program reinforce the delivery of medical care and the health and wellbeing of patients remains at the forefront.

Efforts to teach students with on-the-job medical training are an important component of a health-based education. However, opportunities to educate student volunteers must not interfere with the provision of health services or otherwise discomfort patients. The international medical volunteering model of having student trainees interact with populations from different countries is rife with problems concerning the treatment of those individuals. While many of these issues will not apply to a community mobile health lab, the practice of bringing volunteers to conduct medical training may raise concerns for the priorities of the program.

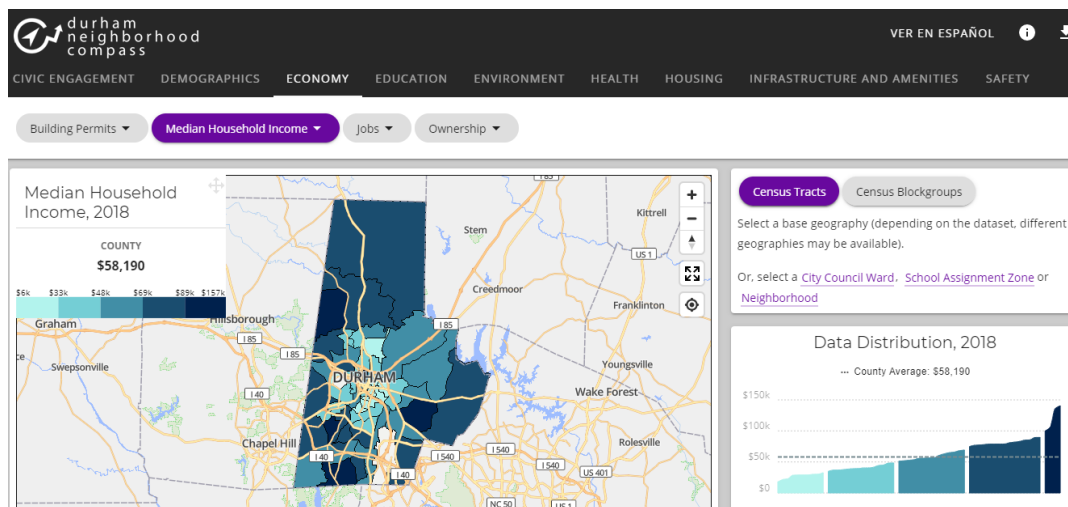
Studies have been critical of interventions that exist only to use "local communities as a practicing ground for students."¹⁴ To counteract this perception, the Durham Tech mobile health lab must promote cultural humility to its student volunteers and actively work to ensure the needs of patients are being met, even if that means forfeiting potential learning opportunities.

B. Engaging Target Populations

The greatest asset of mobile health labs is their ability to reach underserved populations. By engaging directly with these populations, they can administer targeted health interventions to produce positive outcomes. But these outputs are directly contingent on the inputs of the program. To add value to a community, mobile health labs must identify populations of need and work within those communities to tackle health challenges. While traditional public health measures have employed a top-down approach, mobile health labs can harness the lived experiences of the communities they serve to generate actionable solutions. Understanding community needs through meaningful and sustained collaboration as well as rigorous research will inform models of care designed around patient needs.

Recommendation Three: Identify areas of need through preliminary community mapping, such as provided by Durham Neighborhood Compass, based on measures of socioeconomic status and position, as well as community feedback.

When identifying areas of need to deploy the van, common socioeconomic indicators may provide a starting point for community engagement activities. The Durham Neighborhood Compass is a community resource utilized by the County of Durham that tracks demographic information along census designations. The tool compiles relevant indicators for the mobile health van, including median household income, incidence of various health conditions, race and ethnicity, and housing conditions. Demographic information for Orange County has been compiled using census data in **Appendix E**. Below is a snapshot of the Durham Neighborhood Compass interface:



Source: Durham Neighborhood Compass

While socioeconomic measures provide a useful heuristic for gauging broad areas of need, they should not be the only metric. Recent health literature has revealed the limitations of overly relying on aggregate indicators, such as wealth and education. Studies have shown that in some communities, social cohesion and the marginalization of whole communities have a stronger influence over health outcomes than income levels. One paper found that wealthier Black residents in a neighborhood had the same health outcomes as poorer Black residents, while poorer Mexicans fared better than richer Mexicans.¹⁵

These findings should be understood in the context of specific demographic circumstances, but they reinforce the notion that just simply looking at income levels is insufficient for determining community health. It is equally important to engage with members of the community to determine areas of need. For the Durham Tech mobile health lab, this process should be continually monitored to reflect changes in demographics, new research, and on-the-ground realities facing target populations.

Recommendation Four: Develop a disaggregated community health assessment.

Mobile Health Map says vans must “[e]licit input from patients and community members about their needs and the ideal delivery model for meeting them.”¹⁶ To ascertain these needs, the program must actively and constructively engage with a community. Community health assessments are an important tool for gauging community needs and tailoring health services to maximize value.

Durham Tech mobile health lab should build off the work of other projects to develop its own assessment of health needs. The most recent Durham County Community Health Improvement Plan was completed in 2019. One of the primary objectives outlined in the plan is reducing the percentage of nonelderly uninsured individuals. A mobile health lab is perfectly positioned to meet this objective by going into neighborhoods and connecting individuals to the healthcare system. Orange County also completed a Community Health Assessment in 2019. The priority stated in the plan is increasing access to care. Among survey responders, “28% of responders felt that access to care was an issue, with concerns around cost and affordability, insurance coverage and hours of availability of care.”¹⁷

The Orange County Community Health Opinion Survey may be used as a template for the Durham Tech mobile health lab to build its own assessment. A strength of this survey is its inclusivity and dedication to health equity. For example, questions target subsections of the population, such as Hispanic/Latinx, youth, and refugee groups. Furthermore, the survey does not simply present respondents with a series of close-ended boxes and force them to

make choices. Questions such as: “Describe what healthy looks like to you” give individuals responding to the survey the freedom to share their own lived experiences. See **Appendix F** for the complete Orange County Health Opinion Survey.

Once these responses are coded by health lab staff, they can form the blueprint of an action plan for the mobile health lab. This process should be continuous, with an updated community assessment plan every several years.

Recommendation Five: Use specific demographic and community data to design and implement targeted interventions.

Another component of engaging target populations is using the demographic and community assessment information to design models of care around the needs of patients. The types of interventions offered through the mobile health lab will evolve over the course of its operation. In its early stages, van staff will need to judge interventions based on cost and feasibility. Some interventions that would be easier to administer at the beginning of a mobile health lab program are health education and aiding individuals in signing up for health care coverage. These efforts would be relatively simple for student volunteers to facilitate while having significant health returns for patients.

Many medical organizations produce free-to-use health toolkits that include informational printouts. When entering certain communities, it would be beneficial for the van to have copies of these documents available for patients. The printouts could be selected beforehand if there is greater need in a specific area. The Durham Neighborhood Compass, for example, contains information on adult heart attack rates across the county. If working in one of these areas, it would be useful to bring copies of printouts in the most common languages.

“Describe what healthy looks like to you.”

The printout is titled "RESPUESTAS del corazón" and "Enfermedades Cardiovasculares". It features the American Heart Association logo with the slogan "es por la vida". The main heading is "¿Cuáles son las señales de aviso del ataque al corazón?". The text explains that heart disease is a leading cause of death in the US and provides statistics. It lists warning signs such as chest discomfort, pain in other body parts, shortness of breath, and other symptoms. A section titled "¿Qué debo hacer si sospecho que tengo un ataque al corazón?" advises calling 9-1-1 or EMS immediately.

Source: American Heart Association
“What are the Warning Signs of Heart Attack” in Spanish

In addition to educational handouts in different languages, the van could aid community members with signing up for healthcare coverage through the Affordable Care Act. Student volunteers could receive additional training to serve as healthcare navigators and work with populations to fill out forms, explore coverage options, and apply for financial aid programs. Several organizations in the region, including Lincoln Community Health Center, The Community Empowerment Fund, and Legal Aid of NC, are already helping residents apply for coverage and could provide training for student volunteers on the van.¹⁸

C. Delivery of Care

Without the stability and level of resources possessed by hospitals and community clinics, mobile health labs must adapt innovative practices to best meet the needs of patients. Vans can overcome some of the technological and staff limitations by adhering to several best practices early on in their development. Members of staff, including employees, professionals, and student volunteers, should strive to employ cultural humility with their patients where they acknowledge the expertise individuals have on their own lived experiences. Data collection is also a critical function of mobile health lab operations. The types of information collected from individuals and how that data is used can strengthen the efficacy of the lab.

Recommendation Six: Follow a “knowledgeable neighbor” model of care as practiced by the Harvard Family Van.

The success of the Harvard Family Van can be attributed, in part, due to its knowledgeable neighbor model of healthcare delivery. The key components of this model include:

- Community health workers
- Client-centered care focusing on client education and empowerment
- Cultural competence training for staff
- Stability and consistency of service provision within communities
- Staff diversity

Qualitative research has found that “people value the informal, familiar environment in a convenient location, with staff who “are easy to talk to,” and that the staff's “marriage of professional and personal discourses” provides individuals the space to disclose information themselves.”¹⁹ The next page details the steps of the Knowledgeable Neighbor Model.

KNOWLEDGEABLE NEIGHBOR MODEL

Step 1: Reaching Clients Through Creating a Community Hub of Wellness

A. Building trust on the Family Van

1. Service is led by health educators, dietitians, and HIV counselors, many of whom are from the community.
2. Inclusive relationships are created through interpersonal informality in a safe, nonhierarchical, nontraditional health care environment.
3. Clients control the encounter, deciding when to come, what screenings to receive, and when and how to act on the information they receive.
4. Staff receives cultural competence training to ensure that they have the skills to learn each client's unique social and economic context, cultural beliefs, and behaviors.

B. Building trust in the community

1. Long-term weekly presence in neighborhoods (established 1992)
2. Strong collaborations with community health centers, hospitals, churches, and others
3. Continual outreach through participation in community events and street outreach

C. Reducing financial barriers: no charge to clients

D. Reducing logistical barriers: drop-in service in the neighborhood (no appointments, no waiting, no eligibility requirements, no distance to travel)

Step 2: Empowering Clients to Access Care and Improve Their Health

1. Screening for several chronic conditions, including hypertension, diabetes, and hypercholesterolemia, so that clients can learn about their health
 2. Culturally competent health literacy and motivational interviewing: to educate clients about their health and help them develop appropriate wellness strategies
 3. Creating a bridge into care: through referral to community neighborhood health centers and social services, with additional advocacy and navigational support
-

[Open in a separate window](#)

Note. The Family Van Mobile Health Clinic's Knowledgeable Neighbor Model: Boston, MA, 2006–2009

Recommendation Seven: Make van a comfortable environment for patients.

One of the key points stressed by Harvard Family Van representative Rainelle Walker-White was making the van a safe and welcoming place for individuals. One way to do this, she emphasized, was making the interior of the van hospitable. Moving away from a clinical appearance, the Harvard Family van has couches, TVs, and pictures set up to create a warm

atmosphere. The Durham Tech mobile lab, while limited by size, should incorporate these design cues wherever possible to foster an environment of safety and ease.

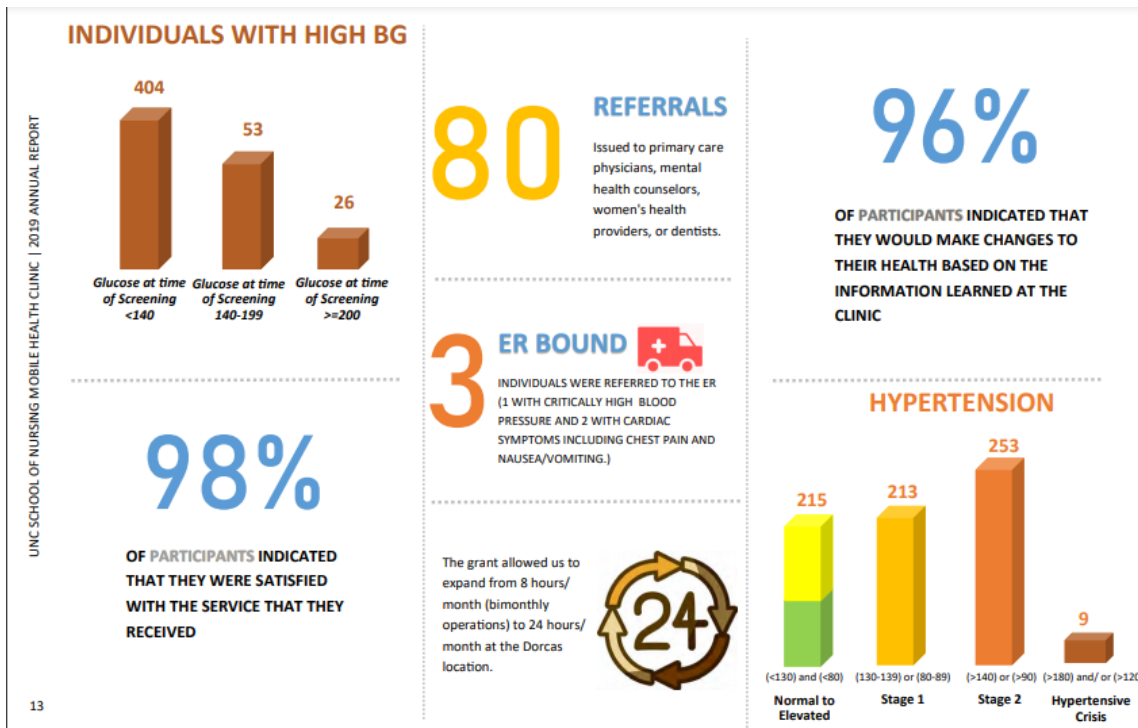


Interior of the Harvard Family Van. Credit: Anna Bloxham

Recommendation Eight: Lay groundwork for robust data collection to be used for patient care and reporting measures.

As the Durham Tech mobile health lab expands its operation to include a wider selection of medical testing, it must gather information from individuals. Across several mobile health vans, the most common services are: Blood glucose testing, blood pressure screening, cholesterol screenings, and HIV testing.²⁰ In addition to these services, vans collect information on patients' ages, sex, insurance, and ethnicity. All this information may be used to increase the level of care given to individuals as well as provide performance measures to be used in annual reporting.

The UNC School of Nursing Mobile Health Clinic is extremely successful at collecting patient information and transforming that raw data into meaningful metrics. In its 2019 Annual Report, the van presents statistical information related to its clientele based on numerous health indicators. By collecting this data, the van can share an evidence-based narrative of its progress. In turn, the report can be used to elicit additional funding as organizations can see for themselves how the van is making a positive impact for the community.²¹



Source: UNC Mobile Health Clinic 2019 Annual Report

While it is important for the van to have records of this data, even more critical is that patients be given access to their own health information. Since mobile health labs will not have the same resources or capacity to store information as standing health facilities, innovate practices must be used to ensure individuals are kept informed. The Family Van hands out personalized health screening cards for every individual. The cards transcribe the patient's medical history, including conditions, medications, and any diagnostics. If patients have a primary provider, they can use the cards to share information between the van and the other health service, creating a constant exchange between networks.

Recommendation Nine: If possible, have patients be treated by the same health care workers.

As a long-term best practice, the Durham Tech mobile health van should explore opportunities to strengthen the provider-patient relationship by adopting a consistency of care model. One report on mobile health labs found "Consistency of care, enabled by an ongoing provider-patient relationship, is a hallmark of the medical home model. In order to provide this stability, MHCs [mobile health clinics] need to adopt a staffing and service model that allows returning patients to be seen by the same personnel."²² For volunteers, this would mean keeping records of contacts between patients and healthcare workers. It would be worthwhile to recruit underclass students who may end up spending more time in

the program to perform direct services and pass down institutional knowledge. However, a volunteer model will always result in turnover compared to a paid staffing model. As the van applies for additional funding in the future, this reasoning could provide justification for increased expenses.

D. Leveraging Local Resources

Between 1995 and 2000, The Duke Endowment provided 16 grants totaling \$2.4 million to hospitals across North and South Carolina for mobile medical units. In a report on the lessons learned through the experience, researchers found: “Mobile units that partnered with community agencies and other health providers reached more people. Other suggestions for ensuring that the units reach their target populations included working with other agencies and health providers to identify populations with the greatest needs, avoiding "park and wait" sites, offering services to established audiences, and publicizing site visits through phone calls and mailings.”²³ The Duke Endowment report is available in **Appendix G**. Building partnerships and increasing the van’s visibility throughout Durham and Orange Counties is key to maximizing its effectiveness.

Recommendation Ten: Identify opportunities to employ retired nurses and doctors from local medical institutions.

The Durham Tech mobile health van will need committed volunteers with extensive professional knowledge. While students will be readily available through the academic program, finding nurses and doctors who are willing to donate their time will be a larger challenge. Rainelle Walker-White from the Harvard Family Van stated the importance of tapping into the local community of retired nurses to staff their operation. Poised as the only broad-based mobile health lab in the Durham community, the Durham Tech van will have access to the Duke University Hospital system, a world-renown medical facility.

By establishing networks and connections now, the Durham Tech van could lay the long-term foundation for a volunteer pipeline of committed professionals. When reaching out to retired nurses and doctors, the van should stress flexibility in finding amenable times. For example, van staff could plan medical services around the doctor’s schedule. Whatever arrangement is agreed upon, consistency would need to be prioritized to maintain community trust.


Recommendation Eleven: Strengthen referral capacity by implementing routine check-ins with patients and communicating with local providers.

Fragmentation of care is a barrier for brand new mobile health clinics. The International Journal for Equity in Health in 2017 wrote: “Continuity of care can be difficult to maintain in MHCs, because many of these clinics are not yet fully incorporated into the healthcare system and require extensive connections with hospitals, specialty clinics, ancillary services, laboratories and pharmacies to ensure that their clients receive the appropriate level of care.”²⁴ One practice to mitigate fragmentation is checking up on patients to make sure they attend referral appointments with outside health services. Successful mobile health van programs will call individuals who have been referred to seek additional medical treatment. It could be the role of a student volunteer to manage a database of contact information and perform check-ins along established intervals.

Recommendation Twelve: Build grassroots capacity through community partnerships, especially with local church organizations.

While successful mobile health operations can mobilize support from schools, community centers, and childcare programs, the most important of these is churches. Leveraging the capacity of churches and developing buy-in from clergy is crucial to reaching members of the community.

La Clinica is an Oregon-based mobile health van that serves the area’s migrant farmworker population. Ravis Gravois-Shah, the medical director of the lab, has leaned on partnerships with religious organizations to instill trust. He said: “For a decade, I’ve met with the leaders of the church and we talk about how we can use the church, their newsletters, and their marquee out front to help get the word out that we exist and what services we provide.”²⁵



“For a decade, I’ve met with the leaders of the church and we talk about how we can use the church, their newsletters, and their marquee out front to help get the word out that we exist and what services we provide.”

Appendix A: Laws and Regulations

Mobile health clinics are governed by a confluence of laws and regulations at the federal and state levels. Unlike a number of states which have passed legislation governing mobile health clinics, North Carolina’s legal landscape is primarily an expansion of existing federal legislation. While some laws are required for every mobile health lab operation, others depend on the type of procedures offered through the van. It is critical that organizations understand the relevant statutes applicable to their suite of services.

The table below provides information on laws and regulations for the federal government as well as North Carolina state statute.

Jurisdiction	Name of Law/Regulation	Description
Federal	Federal Motor Vehicle Safety Standards	Mobile health vans must meet FMVSS. These standards specify design, construction, performance, and durability requirements for motor vehicles. ²⁶
Federal	Title 21 Code of Federal Regulations Part 1020	Sets performance standards for ionizing radiation emitting products, including diagnostic x-ray systems and their major components. ²⁷
Federal	Clinical Laboratory Improvement Amendments	CLIA certification is required for all U.S. facilities or sites that test human specimens for health assessment or to diagnose, prevent, or treat disease. Mobile testing sites may apply for a certificate of waiver based on the following exemption: “Laboratories that are not at a fixed location, that is, laboratories that move from testing site to testing site, such as mobile units providing laboratory testing, health screening fairs, or other temporary testing locations may be covered under the certificate of the designated primary site or home base, using its address.” ²⁸
Federal	The Health Insurance Portability and Accountability Act of 1996 (HIPAA)	Mandates the protection and confidential handling of protected health information. ²⁹

<p style="text-align: center;">State</p>	<p style="text-align: center;">§ 90-21.16. Volunteer health care professionals; liability limitation.</p>	<p>Sets standards for limited liability for volunteer medical or health care providers licensed or certified in North Carolina who provide services within the scope of the provider's license or certification at a free clinic facility. To qualify for these protections, the free clinic must receive the patient's consent through the following notice: "Under North Carolina law, a volunteer medical or health care provider shall not be liable for damages for injuries or death alleged to have occurred by reason of an act or omission in the medical or health care provider's voluntary provision of health care services unless it is established that the injuries or death were caused by gross negligence, wanton conduct, or intentional wrongdoing on the part of the volunteer medical or health care provider."³⁰</p>
<p style="text-align: center;">State</p>	<p style="text-align: center;">§ 90-37.1. Limited volunteer dental license.</p>	<p>Details process for attaining a "Limited Volunteer Dental License" through the state to perform professional dentistry services only in nonprofit health care facilities serving low-income populations.</p> <p>Additional information: "The Board shall maintain a nonexclusive list of nonprofit health care facilities serving the dental health needs of low-income populations in the State. Upon request, the Board shall consider adding other facilities to the list."³¹</p>

Appendix B: Harvard Family Van Student Application

3/13/2021

Volunteer — THE FAMILY VAN

Name

First Name

Last Name

Today's Date

Mar 13 2021

Date of Birth *

Address *

Address Line 1

Address Line 2

City

State

ZIP Code

Phone Number *

What type of number is this? *

APPLICATION DEADLINES

SESSION 1 - September through May

Application Deadline: July 6

SESSION 2 - June through August

Application Deadline: April 1

Please review your application carefully before submitting. Applications will not be reviewed until after the deadline.

“ The welcoming environment of the van lacks the intimidating feel that one gets from the traditional medical establishment. I think it is one of the reasons why community-based health programs like the Van are so important ”
- Volunteer -

Home

Email *

Would you like to be added to our mailing list? *

Yes

Age

Gender *

Race

American Indian/Alaskan Na

If your Race is not listed above, please fill in here.

Ethnicity

African

If your Ethnicity is not listed above, please fill in here.

Are you Hispanic/Latino? *

Yes

No

Please answer regardless of ethnicity.

What languages do you speak?

English

Spanish

Portugese

Cape Verdean Creole

Haitian Creole

Khmer

Vietnamese

Somali

Arabic

Chinese

Albanian

Russian

French

Italian

German

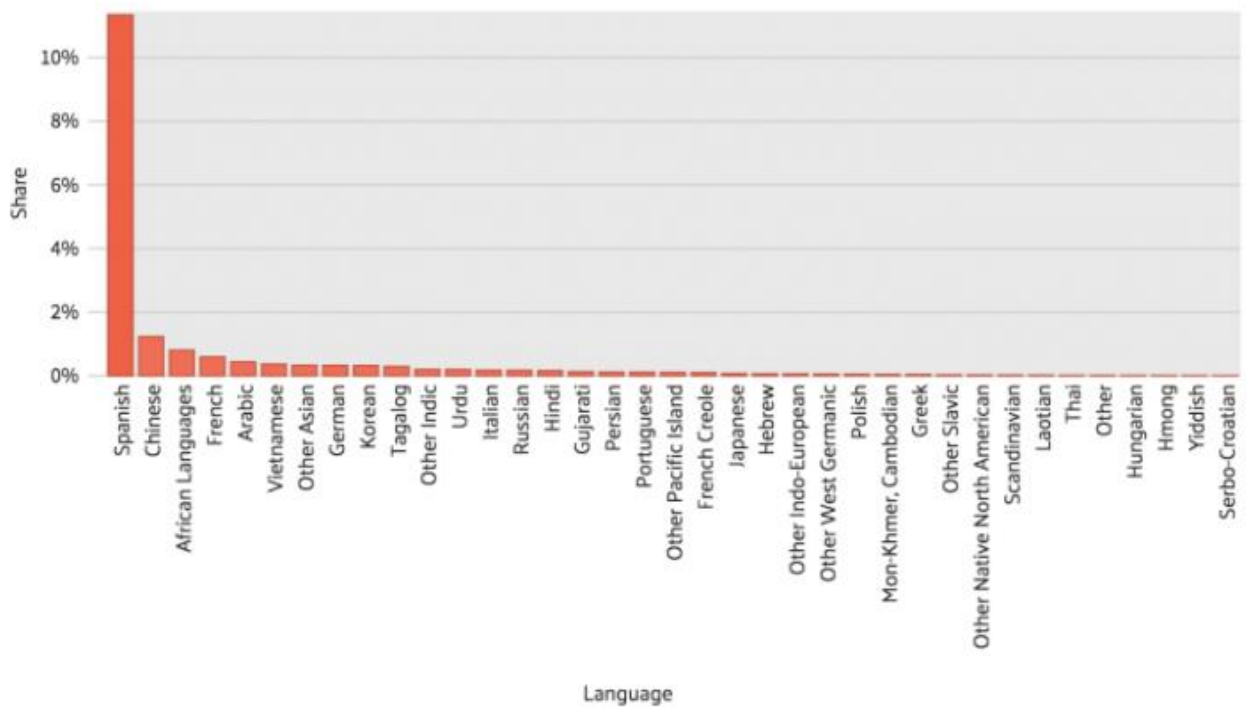
Appendix C: Language Data

Durham County Language Statistics:

Data USA Statistics (2015):

Non-English Speakers in Durham, Nc

The closest comparable data for the census place of Durham, NC is from the state of North Carolina.



Dataset: ACS 5-year Estimate and ACS 1-year Estimate
Source: Census Bureau

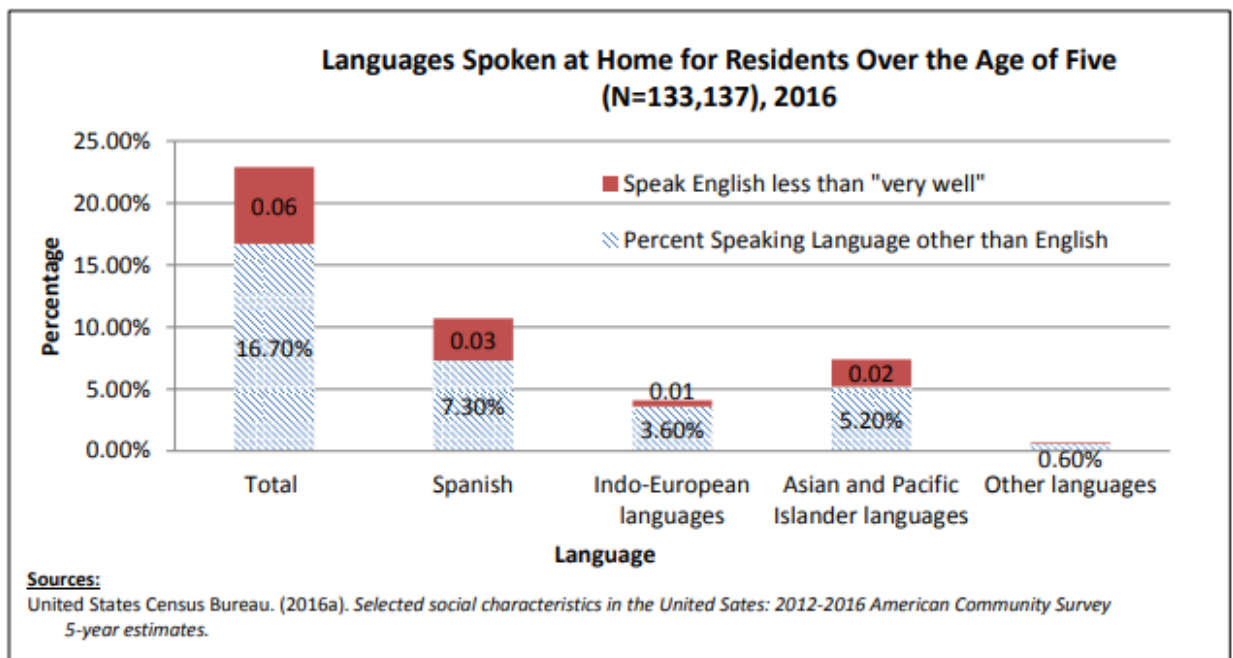
DATAUSA:

Orange County Language Statistics:

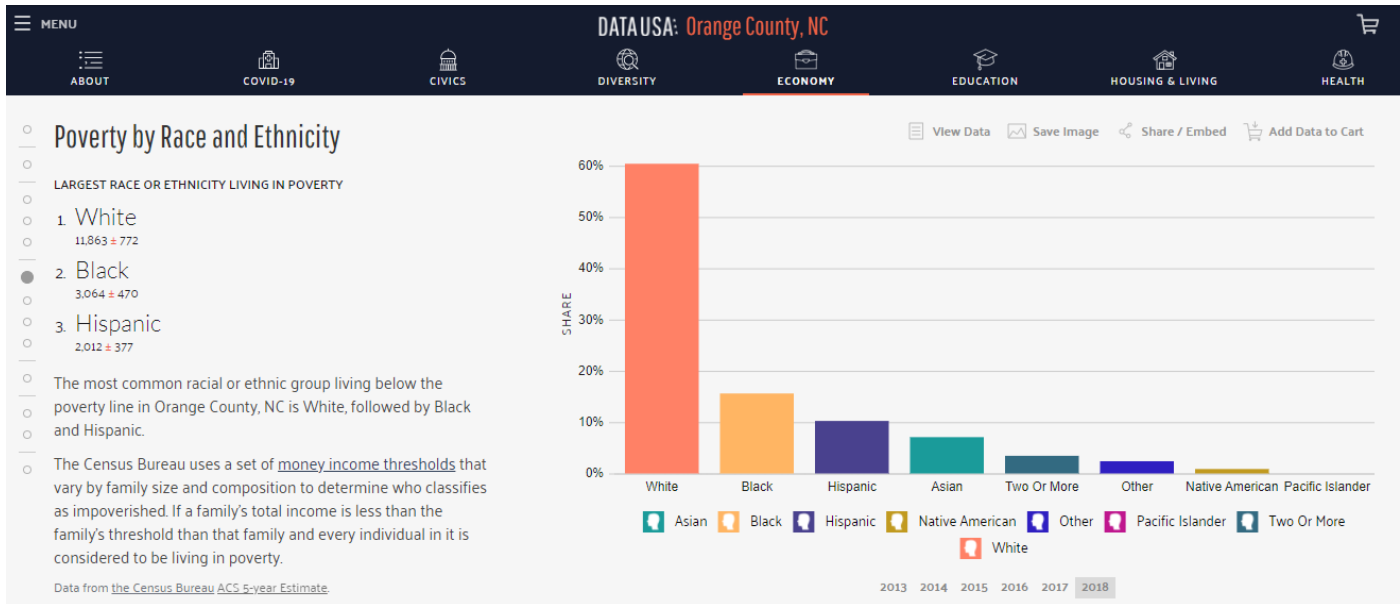
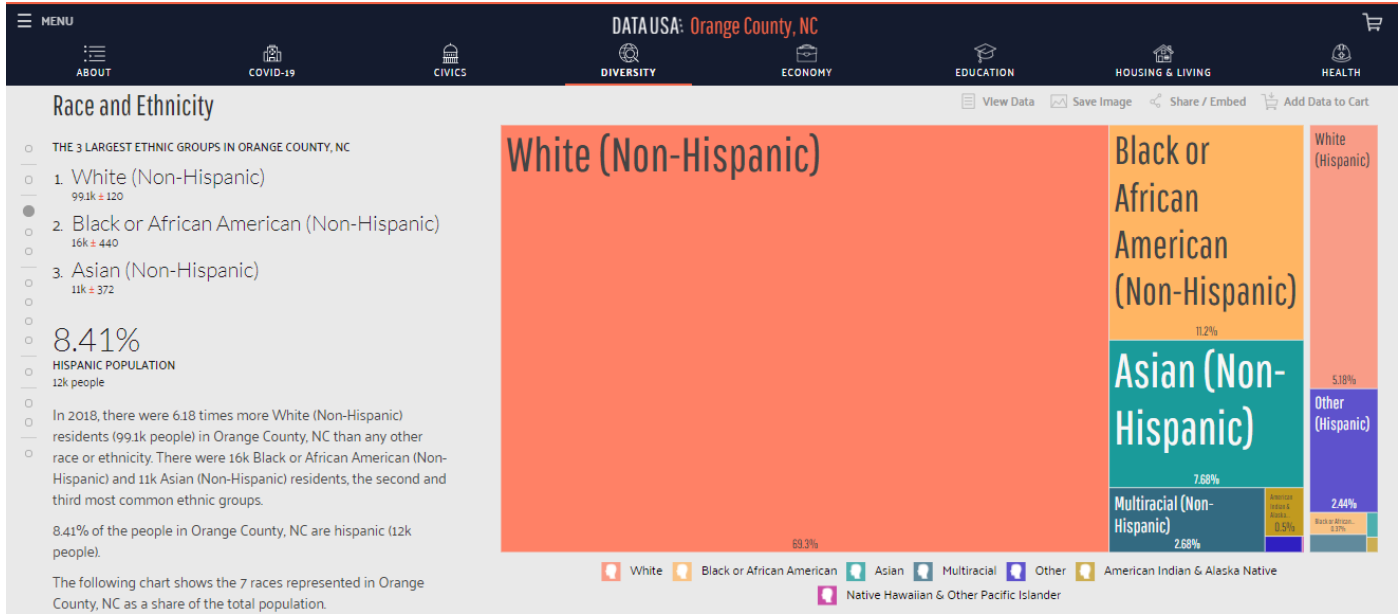
Language Spoken at Home

The national diversity in Orange County leads to differences in language preferences and proficiency.^{5,16} More than 16% of Orange County speak another language at home.^{5,14} The most common alternative language spoken at home in Orange County is Spanish (7.3%) (See Figure AA.11).¹⁴

Figure AA.11




Appendix E: Orange County Demographics



Appendix F: Orange County Health Opinion Survey

Click the picture below to be taken to the complete health opinion survey document.



2019 Orange County Community Health Opinion Survey

READ THE FOLLOWING SECTION TO EACH POTENTIAL PARTICIPANT WITH BADGE/TSHIRT/VEST CLEARLY VISIBLE:

Hello, I am _____ and this is _____ representing Healthy Carolinians of Orange County. The Orange County Health Department is conducting a community survey to learn more about the health and quality of life in Orange County. Your responses will help determine the direction of future programs for the health department and other agencies across the county. Maybe you remember receiving a postcard in the mail recently that described the survey?

[SHOW LAMINATED POSTCARD]

Your address, and/or neighborhood, was randomly selected to answer our community opinion survey. The survey is completely voluntary, and it should only take about 30 minutes to complete. There is no right or wrong answer and you may refuse to answer any question. Your responses will be visible only to our Data Team and will not be linked to you in any way. All reports, presentations and publications of the data will be shared as de-identified, comprehensive data only.

Appendix G: “Expanding Mobile Medical Services”

Click the picture below to be taken to the complete Duke Endowment report.

Expanding Mobile Medical Services



OUR STRATEGY

LESSONS LEARNED

RESOURCES

Insights

We used six key strategies in our mobile medical grants. We invite others to use these as a starting point for their own efforts.

1. Successful outreach through mobile medical units required significant commitment from the hospitals involved. In some cases, the mobile medical units required underwriting by the hospitals.
2. A clear sense of purpose was critical. Before purchasing a mobile medical unit, many hospitals conducted careful market research and cost analysis to establish goals, including determining potential uses for the unit and deciding if the unit's purpose is to generate hospital referrals or simply to provide community service.
3. Having several people trained to operate each unit helped ensure that it would be used more frequently. Because drivers need a commercial license, it was particularly important that several people be trained.
4. Identifying maintenance providers and replacement parts suppliers before service was needed was key to making sure the mobile units were out on the road as much as possible, and not out-of-commission waiting to be serviced.
5. Mobile units that partnered with community agencies and other health providers reached more people. Other suggestions for ensuring that the units reach their target populations included working with other agencies and health providers to identify populations with the greatest needs, avoiding "park and wait" sites, offering services to established audiences, and publicizing site visits through phone calls and mailings.
6. Accessible costs and locations helped make the mobile units successful. Most programs offered services without a fee and were unaware of patients' ability to pay.

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