Outcomes of NC Medical School Graduates: How Many Stay in Practice in NC, in Primary Care, and in High Need Areas?

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How Many Stay in Practice in NC, in Primary Care, and in High Needs Areas?

EXECUTIVE SUMMARY

In 1993, the General Assembly mandated an annual report on the progress of medical school graduates going into primary care. Since 1994, the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill ("Sheps Center") and the NC Area Health Education Centers program (AHEC) have collaborated to produce this report which tracks the workforce outcomes of NC medical schools five years after graduation. As a result of the legislative mandate, NC is a national model for tracking medical student outcomes. While not required by the original legislation, the Sheps Center and NC AHEC have enhanced the annual report to address the state's workforce needs and high-urgency workforce issues. As in prior years, this report tracks NC medical school graduate outcomes for physicians who practice in NC and in rural NC counties. This report also includes an analysis of the number of medical school graduates that practice in NC safety net settings[1] that deliver care to uninsured, Medicaid, and other vulnerable populations.

Historically, this report has examined NC medical school graduates at five years following graduation per the legislative mandate. However, this period is not ideal given the time required to complete residency (3-6 years). At five-years post-graduation from medical school, physicians in psychiatry, obstetrics & gynecology (ob/gyn), surgery, and medicine/pediatrics are just completing residency, or may be in fellowship/specialty training, and may not have settled in a permanent practice location. Thus, although not required by the legislature, this report also includes ten-year outcomes for the 2012 cohort. Also not required are Appendices describing actions taken by NC medical schools and others to increase the numbers of physicians and other providers providing primary care in rural areas of our state.

Analyses of the five-year outcomes of NC class of 2017 graduates and ten-year outcomes of NC class of 2012 graduates show:

- Of the 615 NC medical school graduates from the class of 2017, 86 (14%) were in practice or training in primary care in NC in 2022, and 8 (1.3%) are in primary care in a rural NC county.
- As in prior years, ECU retained the largest proportion of graduates in practice or training in NC after five years (42%), followed by UNC (35%), Wake Forest (30%), Campbell (28%), and Duke (23%).
- For the class of 2016, a greater percentage of public medical school graduates were practicing in primary care in-state five years after graduating (ECU: 24%, n=18; UNC: 19%, n=32), compared to private medical school graduates (Campbell: 14%, n=20; Wake Forest: 14%, n=16; Duke: 4.6%, n=5).
- Four graduates from the class of 2017 were in practice in safety net settings in NC in 2022, including three UNC graduates and one Wake Forest graduate.
- Two graduates from the class of 2012 were in practice in safety net settings in 2022, including one ECU graduate and one UNC graduate.
- Of the 442 NC medical school graduates from the class of 2012, 73 (17%) were practicing primary care in NC in 2022, 10 years post-graduation; 3 graduates (0.7%) were in rural primary care in NC.
- Eight 2012 graduates were in practice in general surgery in NC ten years after graduating.

[1] NC DHHS Office of Rural Health. Safety Net Sites website. Accessed February 20, 2023. https://www.ncdhhs.gov/divisions/office-rural-health/safety-net-resources/safety-net-sites

BACKGROUND

In 1993, the North Carolina General Assembly expressed interest in expanding the pool of generalist physicians for the state. In N.C.S.L.1993-321, the General Assembly required each of the state's four medical schools to develop a plan to expand the percent of medical school graduates choosing residency positions in primary care. Primary care was defined as family practice, general internal medicine, general pediatric medicine, internal medicine-pediatrics, and obstetrics-gynecology. It set the goal for the East Carolina University (ECU) and UNC Schools of Medicine at 60% of graduates entering primary care. For the Wake Forest University and Duke University Schools of Medicine, it set the goal at 50%. Campbell University School of Osteopathic Medicine graduated its first class in 2017 and was therefore not included in these goals.

Since 1994, the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill ("Sheps Center") and the NC Area Health Education Centers program (AHEC) have collaborated to produce this report tracks the workforce outcomes for NC medical schools. As a result of the legislative mandate, NC is a national model for tracking medical student outcomes. Data from this report were featured in the New England Journal of Medicine as an example of how to track workforce outcomes in John Iglehart's 2018 article on "The challenging quest to improve rural ."[2]

While not required by the original legislation, the Sheps Center and NC AHEC have enhanced the annual report to address the state's workforce needs and high-urgency workforce issues. As in prior years, this report tracks NC medical school graduate outcomes for physicians who practice in NC and in rural NC counties. This report also includes an analysis of the number of medical school graduates that practice in NC safety net settings[3] that deliver care to uninsured, Medicaid, and other vulnerable populations.

Historically, this report has examined NC medical school graduates at five years following graduation per the legislative mandate. However, this period is not ideal given the time required to complete residency (3-6 years). At five years post-graduation from medical school, physicians in psychiatry, obstetrics & gynecology (ob/gyn), surgery, and medicine/pediatrics are just completing residency, or may be in fellowship/specialty training, and may not have settled in a permanent practice location. This is typically the case for general surgeons, whose training period is five years, and for ob/gyns, psychiatrists and medicine/pediatrics residents who often do a fellowship after a four-year residency. Ten years following graduation from medical school is a more reasonable timeframe to track outcomes, as it allows for fellowship training following residency. Thus, although not required by the legislature, this report also includes ten-year outcomes for the 2012 cohort.

[2] Iglehart J. The challenging quest to improve rural health care. NEJM, 2018. 378(5):473-479. https://www.nejm.org/doi/full/10.1056/NEJMhpr1707176

[3] NC DHHS Office of Rural Health. Safety Net Sites website. Accessed February 20, 2023. https://www.ncdhhs.gov/divisions/office-rural-health/safety-net-resources/safety-net-sites

DATA SOURCES AND METHODS

Data Sources

Data included in this report come from several sources:

- The North Carolina Medical Board's annual licensure files (NCMB), maintained by the NC Health Professions Data System
- GMETrack, the graduate medical education tracking file of the Association of American Medical Colleges (AAMC)
- Data from the alumni and student affairs offices at the Campbell University School of Osteopathic Medicine, the Duke University School of Medicine, the Brody School of Medicine at East Carolina University, the University of North Carolina at Chapel Hill School of Medicine, and the Wake Forest University School of Medicine
- The Federal Office of Management and Budget for population and core based statistical area data, which are used to determine which counties in NC are classified as metropolitan (urban) or non-metropolitan (rural). For this report, we used the March 2020 file in which 50 counties in North Carolina are rural (non-metropolitan).
- The NC Department of Health and Human Services (DHHS) list of safety net sites, updated December 1, 2020
- The 2019 vintage of the Area Deprivation Index produced by the University of Wisconsin Center for Health Disparities Research.

Campbell University School of Osteopathic Medicine (Campbell) is not mandated to provide data for this report, as the school did not exist when the 1993 legislation was passed. However, Campbell has provided initial match data for the last several years and now has its first five-year cohort reported in this report.

As in prior years, this report does not emphasize initial residency match data, as many physicians change residency specialties or locations over the course of their GME training. Outcomes are better measured after graduation from residency.

Methods

This report differs from previous reports in using the NCMB's licensure data as the primary data source, and only using GMETrack data to verify the NCMB data. The reasons for this change in methodology are twofold. One is that the AAMC were unable to provide data on 2017 Campbell graduates under the current data use agreement. The other reason is that 2022 GMETrack data are not available until later this year, meaning that we cannot use the GME Track data to determine the status and location of graduates who are still in training in 2022.

As a result, this report relies on the NCMB's licensure file to determine primary practice location and area of practice, as in previous reports, as well as medical school and graduation year, data which previously came from the GMETrack file. Where possible, data from GMETrack were still matched with the NCMB annual licensure file on variables like name, date of birth, and birth city to confirm and check the NCMB data. In only two instances across both cohorts, did the GMETrack data contain graduates who were not in the NCMB data for the cohort. Further analyses clarified that these individuals were present in the licensure file, but had entered an incorrect graduate year. Conversely, several graduates in each cohort were found in the NCMB data who did not initially match to graduates in the GMETrack data, usually because of

combinations of data entry errors (e.g., transposed birth dates) and name changes. These data validation analyses suggest that the change in methodology should not affect the outcomes reported.

This report uses the reports received directly from each medical school for the number of graduates in each cohort. Previous reports relied on the GMETrack data for these values, but as Campbell is not yet included in the data use agreement, we used the data we already have for each institution. Small variations exist between the data sources, as can be seen in **Table 1**.

Table 1: Comparison of the Number of Medical School Graduates Reported for 2017 By Each School and in the AAMC/GMETrack Data

School	2017 Grads from School	2017 Grads from AAMC
Campbell	147	N/A
Duke	108	105
ECU	74	78
UNC-CH	171	175
Wake Forest	115	113

Once the matching and checking were complete, we produced descriptive statistics to determine where physicians were practicing and in which specialties.

For safety net provider information, we geocoded both the North Carolina Department of Health and Human Services safety net site list and the practice addresses in the NCMB file for each cohort. We then intersected the geocoded datasets to find potential matches between providers and sites. Potential matches were manually checked for accuracy with many false positives being discarded. Safety net providers are defined as facilities that provide a significant level of and other health-related services to uninsured, Medicaid, and other vulnerable populations.

Data Limitations Starting in 2020

In prior iterations of this report, before 2020, we have reported the number and percent of NC medical school graduates in training or practice in primary care anywhere in the United States. These findings were possible because the AAMC was able to match their data on medical school graduates to the AMA physician Masterfile data on physician practice locations and specialties across the U.S. However, in 2020, the AAMC and AMA legal teams renegotiated their data use agreement for the AMA Masterfile. Per the terms of the new agreement, AAMC is no longer able to match and share AMA Masterfile data with the Sheps Center. In the past, we have used AMA data to identify physicians who had died or were no longer in practice. In addition, we compared names of physicians who practiced in NC per AMA data with the NCMB physician roster, to determine whether we were missing NC physicians due to name changes. In both cases, the corrections were small—but we were unable to make similar corrections for the graduating cohorts in this report. Our match rates for the cohorts in this report were in line with prior years' match rates, but it is possible that we are missing a few physicians that we would have been able to identify historically.

FINDINGS

Class of 2017 Outcomes: *Retention in Primary Care*

Figure 1 shows the aggregate outcomes of the 2017 North Carolina medical graduates regarding primary care. Per the 1993 legislation mandating this analysis, these primary care specialties include family medicine, general internal medicine, general pediatrics, obstetrics & gynecology, and internal medicine-pediatrics. However, internal medicine-pediatrics is not reported as an area of practice by the NCMB. However, physicians trained in internal medicine-pediatrics typically report either pediatrics or general internal medicine as an area of practice and are therefore still captured as primary care physicians.

Figure 1: Retention of 2017 NC Medical Graduates in NC Rural Primary Care Five Years After Graduating

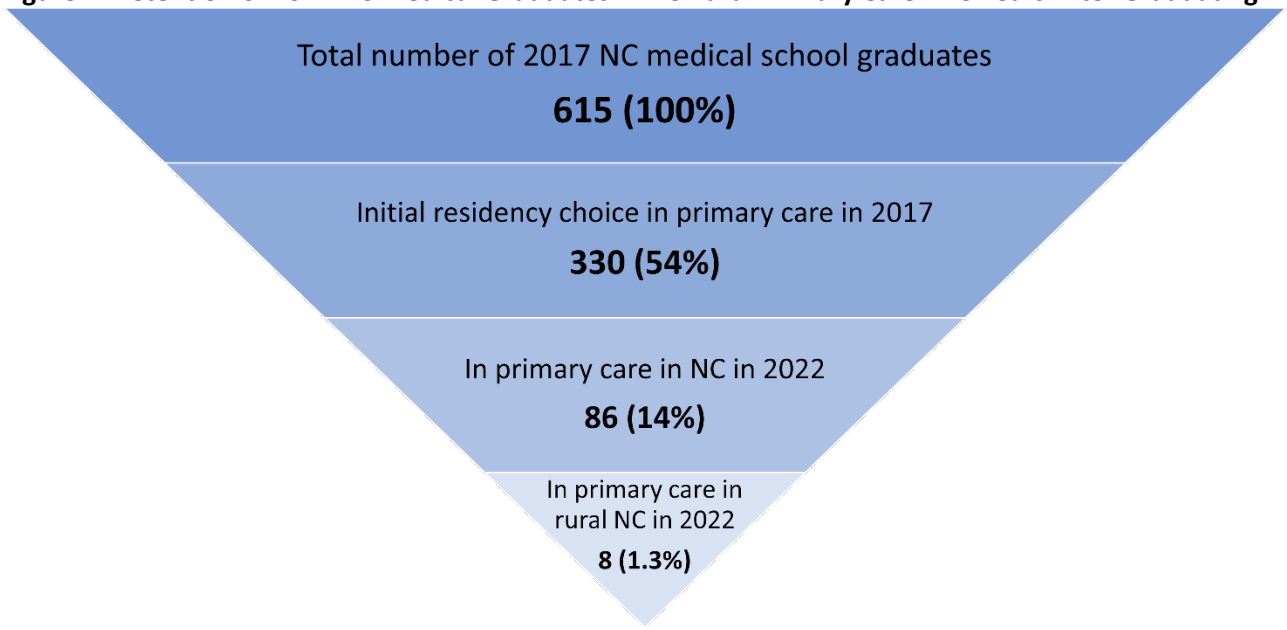


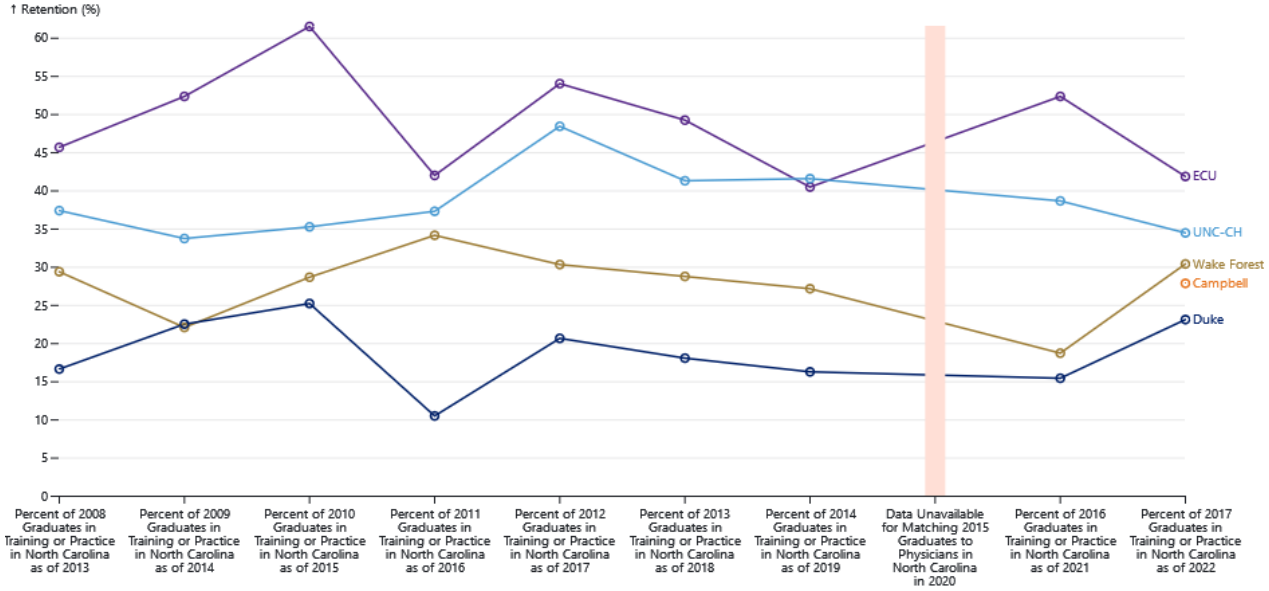
Figure 1: Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges, the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Out of the 615 medical school graduates in 2017, 86 (14%) were in training or practice in primary care in NC in 2022 (**Figure 1**). For purposes of comparison, between 12% and 17% of the most recent graduating cohorts (the classes of 2010-2016), were in training or practice in primary care in NC five years after graduating. A little over one percent (n=8) of the 2017 cohort was in primary care in a rural NC county. Typically, between 1% and 3% of NC medical school graduates tend to practice in primary care in rural NC five years after graduating.

Retention of Graduates in North Carolina and in Rural Counties

A greater percentage of graduates from the state's public medical schools are retained in NC five years after graduating, compared to the state's private medical schools (**Figure 2**). ECU tends to retain the greatest percentage of its graduates in state five years post-graduation, followed by UNC, Campbell, Wake Forest, and Duke.

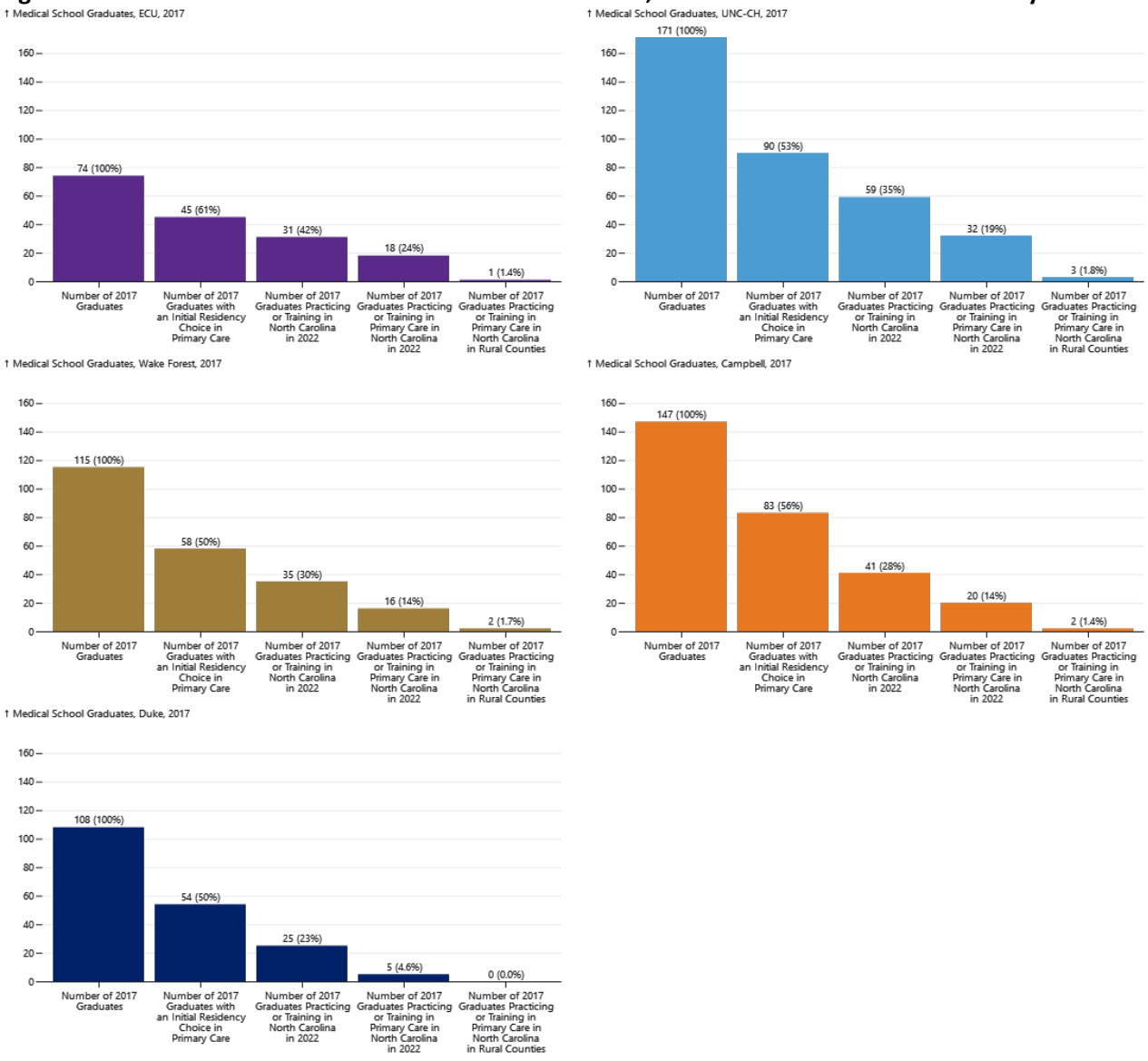
Figure 2: Percent of NC Medical School Graduates in Training or Practice in North Carolina Five Years After Graduating



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools.

Figure 3 shows the primary care practice or training outcomes for each school's 2017 graduates. Each individual figure is a version of **Figure 1** for each school's graduates. Very few graduates from any school are practicing primary care in a rural area. However, ECU retained 24% of its 2017 graduating class in North Carolina practicing or training in primary care. UNC retained 19% of its graduates in primary care, representing 32 physicians, making UNC the medical school contributing the largest number of medical school graduates retained in the state's primary care workforce.

Figure 3: Workforce Outcomes Five Years after Graduation, 2017 Medical School Graduates by School



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Practice in Safety Net Settings and Most Economically Distressed Neighborhoods

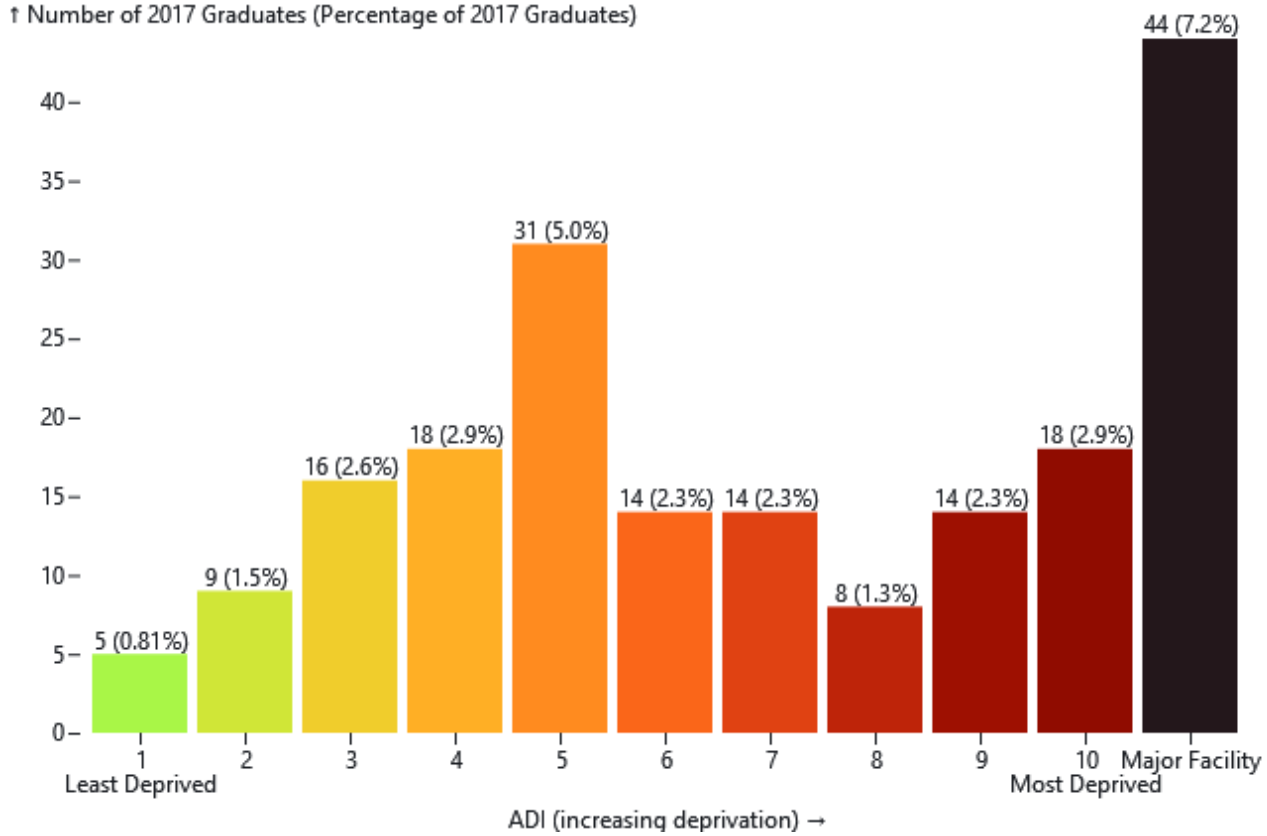
Safety net providers are defined as facilities that provide a significant level of and other health-related services to uninsured, Medicaid, and other vulnerable populations. Four graduates from the class of 2017 were in practice in safety net settings in NC in 2022, including three UNC graduates and one Wake Forest graduate. All four sites were Federally Qualified Health Centers (FQHCs).

Figure 4 compares the Area Deprivation Index (ADI) of the neighborhoods where physicians who were retained in North Carolina five years after graduation report their primary practice location. The ADI is based on factors related to income, education, employment, and housing quality in a census block group, which is the geographic equivalent of a neighborhood. Low scores indicate low levels of economic distress, and high scores indicate high levels of economic distress. Five percent (32/615) of the class of 2017 worked in a practice location in the top quintile (ADI 9 and 10) of economically distressed neighborhoods five years after graduation.

ADI scores are not assigned for census block groups dominated by large facilities, such as hospitals. ADI scores were not available for almost a quarter (23%, n=44/191) of the graduating class of 2017 who were still in North Carolina because their primary practice location was a large facility, most likely a hospital, which makes sense as many of these physicians are likely still in training.

Figures 4, 5, and 6 include only individuals who were active and licensed in North Carolina in 2022, as this report relies on the NCMB data for practice outcomes. The 424 (69%) graduates who were practicing or training in another state, or who were not active in 2022 are omitted. The values are calculated as a percentage of the total graduating class.

Figure 4: Neighborhood Disadvantage Status in 2022 of Physicians Retained in North Carolina Who Graduated from a NC Medical School in 2017

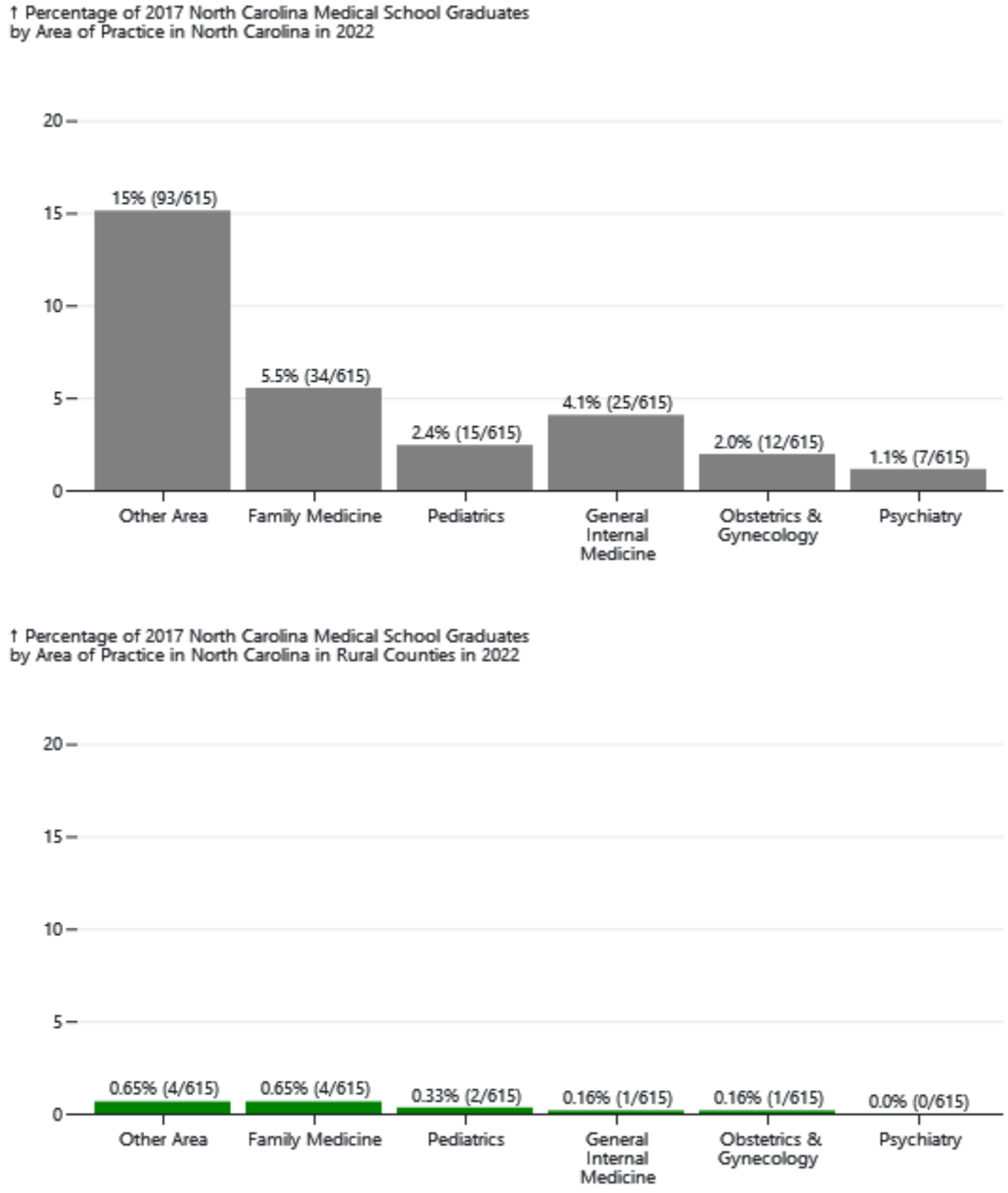


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. ADI Score obtained from the University of

Retention in Primary Care and Psychiatry Areas of Practice

Figure 5 displays the outcomes for 2017 graduates by area of practice. Physicians report a primary area of practice to the NCMB each year of licensure. A physician's primary area of practice can differ from their training specialty.

Figure 5: Percentage of 2017 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Area of Practice in 2022, North Carolina Overall and Rural



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Figure 6 shows the same set of practice outcomes but for each school individually.

Figure 6: Percentage of 2017 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Medical School and Area of Practice in 2022.

Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022.

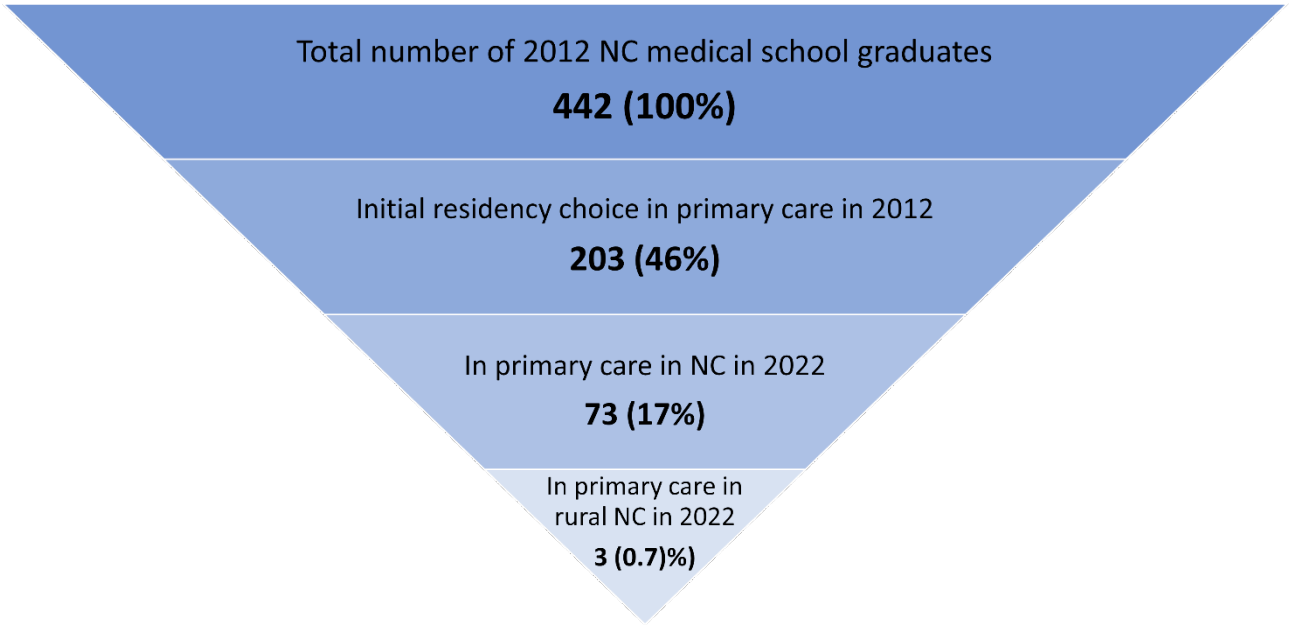
Psychiatry includes physicians who report practicing in the following specialties: Psychiatry, Child and Adolescent Psychiatry, Psychoanalysis, Forensic Psychiatry, Psychosomatic Medicine, Psychiatry/Geriatric, Family Medicine-Psychiatry, Internal Medicine-Psychiatry, and Pediatrics-Psychiatry.

Class of 2012 Outcomes

We also tracked 2012 graduates of NC medical schools to determine where graduates were ten years following graduation from medical school. As noted previously, ten years post-graduation from medical school allows time for physicians to complete residency and fellowship training.

Figure 7 illustrates the aggregate outcome of North Carolina's medical school graduates ten years after graduation in 2012.

Figure 7: Retention of 2012 NC Medical Graduates in NC Rural Primary Care Ten Years After Graduating

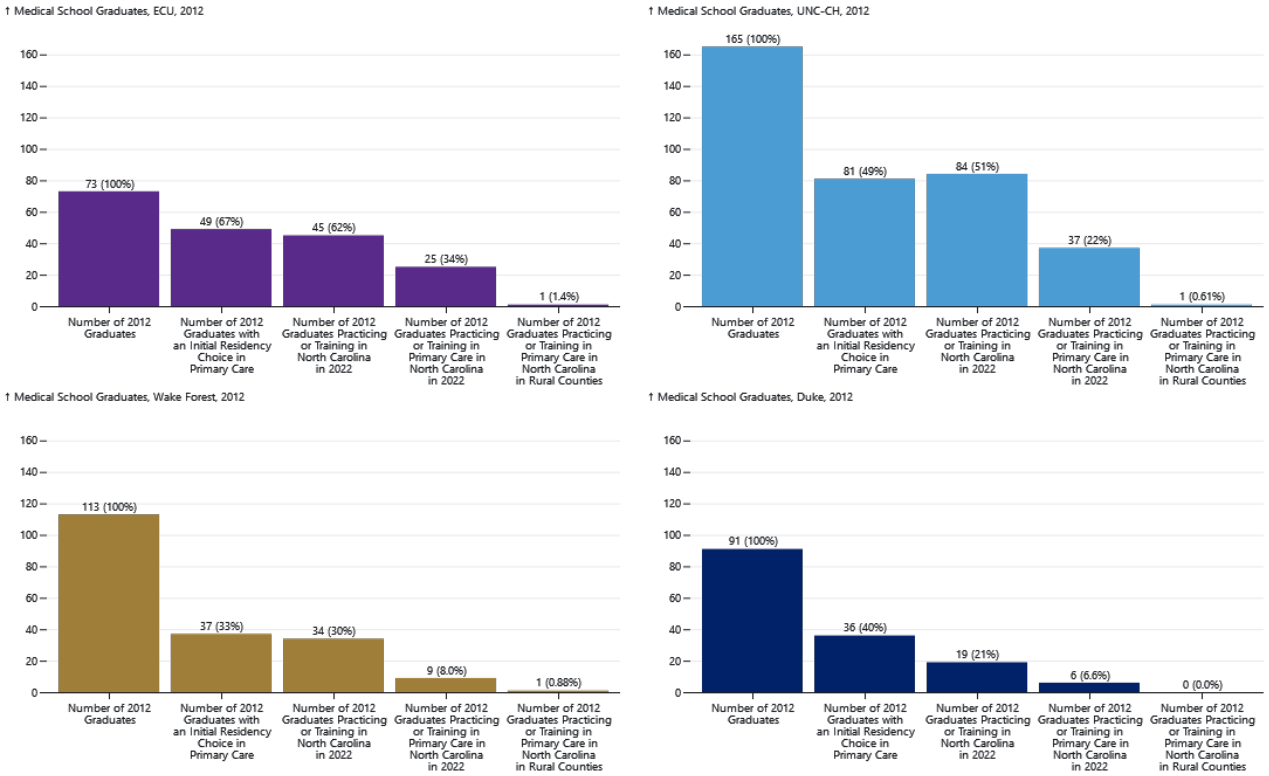


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges, and the NC Medical Board, and the respective medical schools, 2022. Rural source: US Census Bureau and Office of Management and Budget, March 2020. "Core Based Statistical Area" (CBSA) is the OMB's collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.

Retention of Graduates in North Carolina and in Rural Counties

The retention of primary care providers for each school's 2012 graduates is illustrated in **Figure 8.**

Figure 8: Workforce Outcomes Ten Years after Graduation, 2012 Medical School Graduates by School



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Practice in Safety Net Settings and Most Economically Distressed Neighborhoods

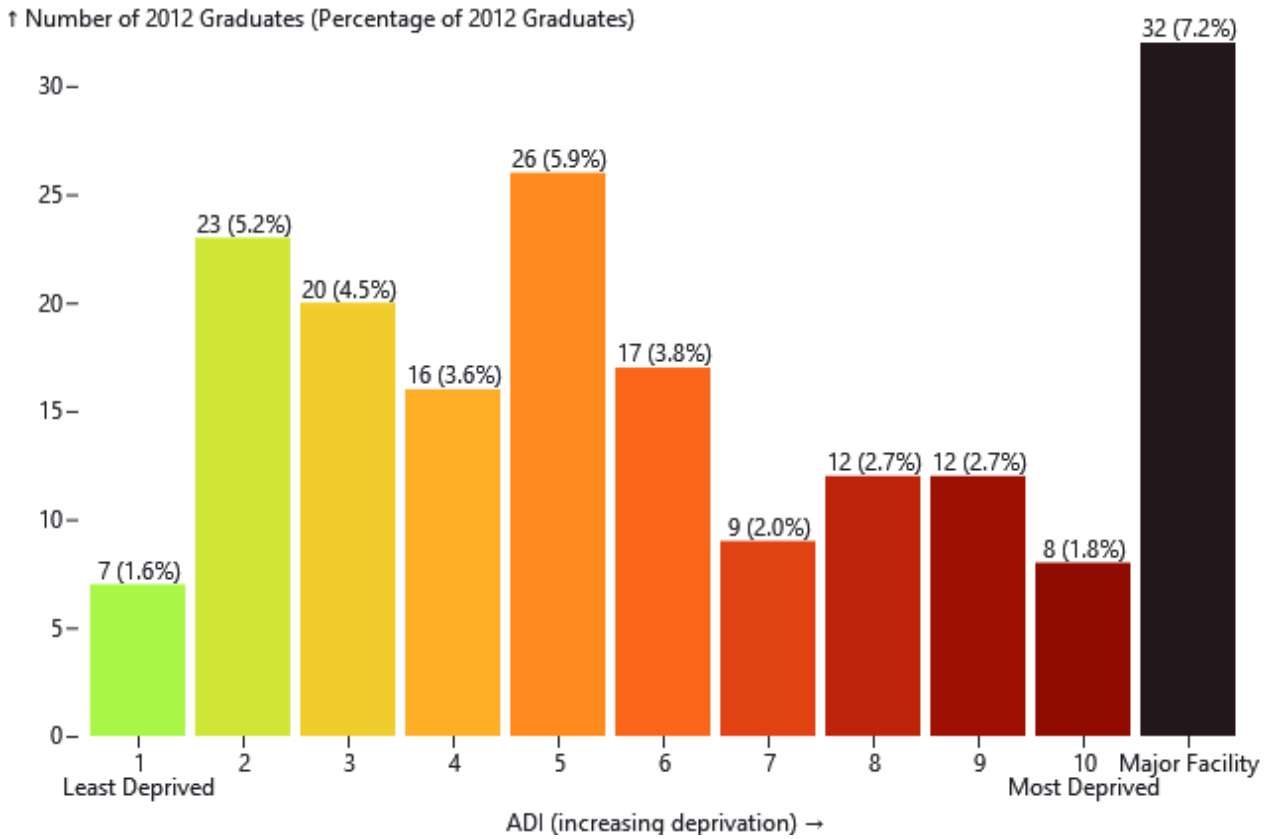
Two graduates from the class of 2012 were in practice in safety net settings in 2022, including one ECU graduate and one UNC graduate. One site was an FQHC and the other was a small rural hospital.

Figure 9 compares the Area Deprivation Index (ADI) of the neighborhoods in North Carolina where physicians from the class of 2012 report their primary practice location in 2022. Nearly five percent (n=20/442) of the class of 2011 worked in a practice location in the top quintile of economically distressed neighborhoods ten years after graduation. As with the 2017 cohort, note the large proportion of graduates for whom an ADI score is not available because their practice location is a major facility. Of course, depending on the location and type of facility, many of these graduates will also be serving many economically distressed patients.

Figures 9, 10, and 11 include only individuals who were active and licensed in North Carolina in 2022, as this report relies on the NCMB data for practice outcomes. The 260 (59%) graduates who were practicing or

training in another state, or who were not active in 2022 are omitted. The values are calculated as a percentage of the total graduating class.

Figure 9: Neighborhood Disadvantage Status in 2022 of Physicians Retained in North Carolina Who Graduated from a NC Medical School in 2012

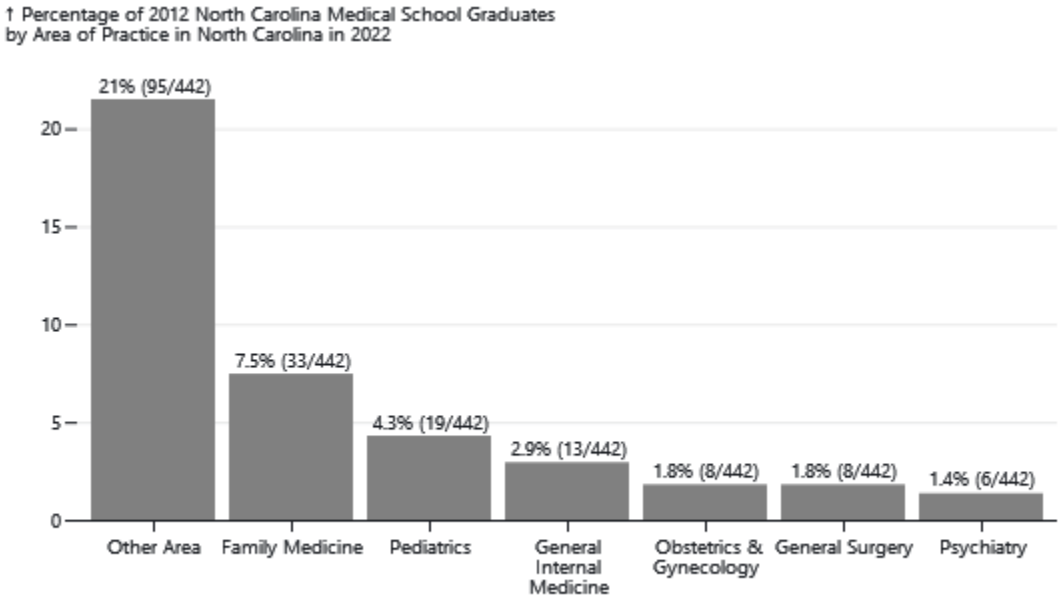


Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022. ADI Score obtained from the University of Wisconsin School of Medicine Public Health. 2019 Area Deprivation Index v3.1 Downloaded from https://www.neighborhoodatlas.medicine.wisc.edu/ January 11, 2022.

Retention in Primary Care, General Surgery, and Psychiatry Areas of Practice

Figure 10 shows outcomes for 2012 graduates who are in North Carolina and have a primary care area of practice, or who are practicing psychiatry or general surgery. The outcomes for general surgery are reported here for the 2012 cohort, but not for the 2017 cohort, because general surgery residencies typically last five years, and many general surgeons complete a sub-specialty fellowship afterwards. For this reason, reporting on general surgery practice outcomes at five-years post-graduation may be misleading.

Figure 10: Percentage of 2012 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Area of Practice in 2022, North Carolina Overall and Rural



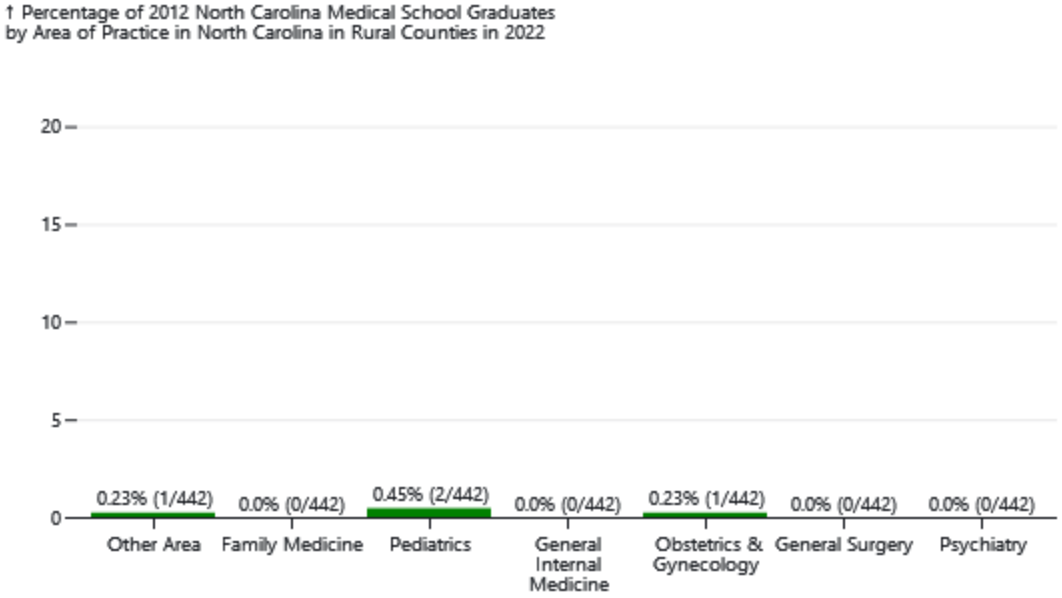


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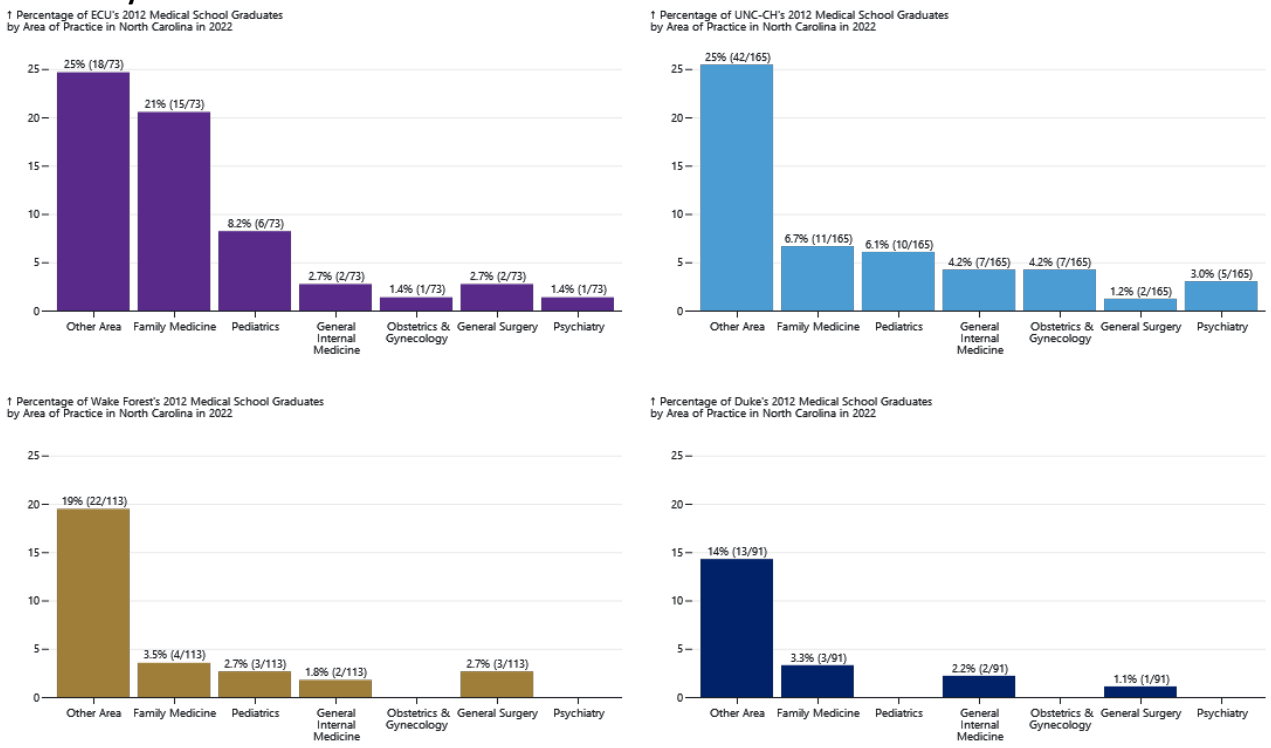
Figure 11 shows the same set of area of practice outcomes but for each school individually.

Figure 11: Percentage of 2012 Medical School Graduates Practicing or Training in Primary Care in North Carolina by Medical School and Area of Practice in 2022.



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: North Carolina Health Professions Data System with data derived from the Association of American Medical Colleges and the NC Medical Board, and the respective medical schools, 2022.

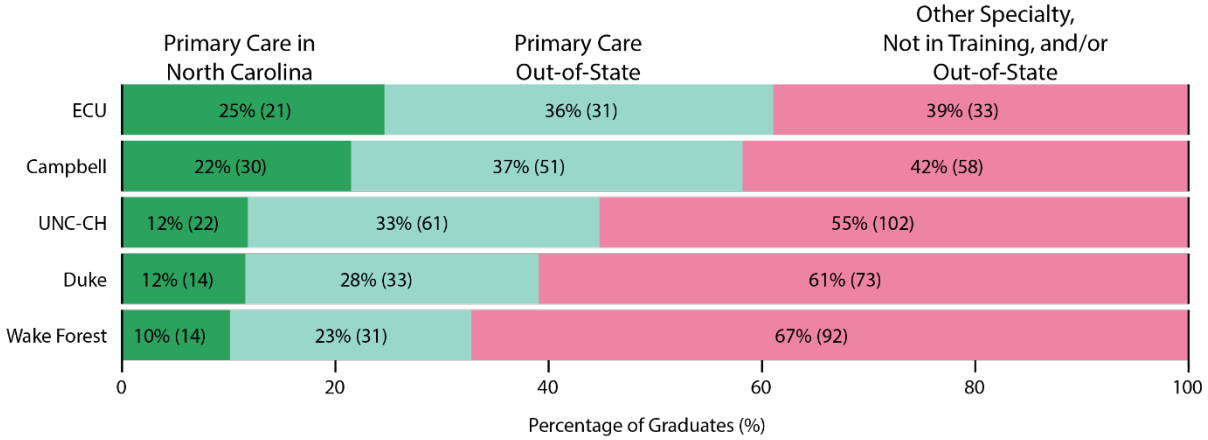
General surgery includes physicians report practicing in the following specialties: General Surgery, Abdominal Surgery, Colon & Rectal Surgery, Critical Care Surgery, Head and Neck Surgery, Oncology Surgery, Pediatric Surgery, Transplant Surgery, Trauma Surgery, or Vascular Surgery.

Initial Match Data: 2022 Graduating Cohort

As mentioned earlier, this report does not emphasize initial match data from the NC medical schools. Residents sometimes switch specialties or residency programs throughout the course of their training, and many subspecialize. Matches to "primary care" specialties (Family Medicine, Internal Medicine, Pediatrics, Internal Medicine-Pediatrics, and Obstetrics & Gynecology) are inflated compared to the number of graduates eventually expected to practice in those fields. We also track two other needed specialties in NC: psychiatry and general surgery. Prior trends indicate that many NC graduates, including most of those who match to Internal Medicine and General Surgery, will go on to complete fellowship training and eventually practice in a sub-specialty field. Family Medicine is an exception to this trend.

Figure 12 shows the proportion of each school's 2022 graduates who had an initial match to a primary care residency in North Carolina or in another state. ECU matched the greatest proportion to primary care residencies in North Carolina (25%, n = 21) and overall (61%, n= 52), but Campbell matched a greater number of graduates to primary care residencies both in North Carolina (30) and overall (81).

Figure 12: Initial Matches of 2022 Graduates for Primary Care by School



Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: the respective medical schools, 2022.

Figure 13 displays the number of 2022 graduates who matched to primary care specialties, general surgery, or psychiatry. (Note that the axes are scaled to each school's number of graduates.)

Figure 13: Number of 2022 Graduates by School and Initial Match Specialty, Selected Specialties

Produced by the Program on Health Workforce Research and Policy, Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Source: the respective medical schools, 2022.

DISCUSSION

While most people interact with the health system at some point in their lives and have a general understanding of the work physicians do, the majority are unaware of the specifics related to physician training—for example, the difference between a medical student and a resident. Legislators[4] and other influential stakeholders, many of whom may be able to directly influence the health system, often come from career paths outside of health care. When concerns about the availability of physicians to meet the demand for health care arise, expanding medical education is a logical first impulse for those unfamiliar with physician training pathways. Medical school is one of multiple points along a physician's career trajectory where stakeholders can intervene to encourage practice in needed specialties and geographies.

[4] Spero JC, Fraher EP, Ricketts TC, Rockey PH. GME in the United States: A Review of State Initiatives. Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill. September 2013.

The newer analyses tell an important and previously untold story about the contribution of NC medical schools to the NC physician workforce. Overall, again we see a small percentage of the 2012 and 2017 graduating cohorts working in safety net settings. To address state workforce needs, we need to think broadly about both where those populations are geographically located—not all of them are in rural areas—and we also need to think broadly about which types of physicians serve those populations, as many work in specialties other than primary care.

While this report tracks outcomes from NC medical schools, it still does not track outcomes of NC residency programs, and there is no legislative mandate to track NC residency program outcomes. While some NC medical school graduates also complete an NC residency, many residents in NC residency programs completed medical school outside of North Carolina. We continue to think it would be valuable to track the outcomes of NC residency programs.

Tracking NC residency program outcomes would provide information to make decisions about how to target state funds most effectively. The Sheps Center, in collaboration with AHEC, is a national leader in tracking the workforce outcomes for medical schools and GME programs at the program level. In short, there are resources within the state that can accomplish this work if legislation is passed that requires a study of NC residency outcomes.

A key driver of retention of primary care physicians in North Carolina is the availability of community based primary care residencies in the state. Medical students must go through at least three years of training before being able to practice independently, and many physicians practice close to their residencies for the remainder of their careers.[5][6][7] AHEC primary care residencies have a solid track record of keeping physicians in the state. Data from the American Medical Association physician master file demonstrate that 53% of active physicians who completed an NC AHEC residency between 1997-2017 remained in practice in NC, compared to 41% who completed a non-AHEC residency.[8]]

In addition to residencies, other intervention points exist in the training of physicians that could further support the selection of primary care practice in a distressed community. Attachment B of this Report describes a Pathway to help admit students from those communities, deploy a focused curriculum with community health service tracks, provide rotations in Select Teaching Practices focused on and supported to provide high-quality primary care experiences, facilitate matching into a primary care residency training program, and provide Fellowships to support new graduates when the practices in those communities. Attachment C shows North Carolina counties with less than the 1,500:1 primary care to population ratio recommended by Healthy North Carolina 2030. This Pathway could target those communities. This pathway is more likely to succeed if accompanied by targeted scholarships with the goal of these students have no debt upon graduation and it must be observed that increased reimbursement rates for primary care would eliminate a substantial financial barrier to medical students choosing to practice primary care.

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[5] Dorner FH, Burr RM, Tucker SL. The geographic relationships between physicians' residency sites and the locations of their first practices. Acad Med. 1991;66(9):540–4

[6] Seifer SD, Vranizan K, Grumbach K. Graduate medical education and physician practice location. JAMA. 1995;274(9):685–91.

[7] Fagan EB, et. al. Family medicine graduate proximity to their site of training: policy options for improving the distribution of primary care access. Fam Med. 2015;47(2):124-30.

[8] Spero J. Compared to Non-AHEC Residents, a Higher Percentage of NC AHEC Residents are Practicing in NC. Sheps Health Workforce NC Blog, 18 March 2019. Accessed 10/8/19 at: https://nchealthworkforce.unc.edu/ahec_resident_outcomes_2017/

Notes

Limitations: The information used in this analysis to determine a medical graduate's initial specialty choice for residency and to determine retention in primary care comes from different sources. When calculating retention in primary care five years after graduation, data directly from each medical school are used to determine initial choice of residency. When collecting this data, we do not differentiate between internal medicine and medicine-preliminary, so the data may appear to be inflated for initial residency choice of primary care.

Beginning with the class of 2014, Sheps no longer received AMA Masterfile data matched to AAMC GMETrack data as in prior years. This change was the result of a renegotiated data use agreement between AMA and AAMC that took effect in 2020. Without the AMA Masterfile data, it is not possible to track workforce outcomes for NC medical school graduates in practice or training outside of NC. In addition, Sheps no longer has access to variables from the AMA Masterfile indicating whether a physician is dead or has left active practice.

Beginning with the class of 2006, all MDs graduating in a year, regardless of month, are counted with that year's graduates.

Primary Care Coding: Primary care coding was revised in 2014 to reflect more accurate aggregation of AMA minor codes to AMA major codes. Primary care residency specialties are defined by legislation passed by the NC General Assembly in 1993 (Senate Bill 27/ House Bill 729) and include family medicine, general internal medicine, general pediatric medicine, internal medicine-pediatrics, and obstetrics and gynecology. Specialties included under the definitions of current practice specialties for primary care, psychiatry, and general surgery were revised in 2014 and reviewed by practicing clinicians for accuracy.

"Primary Care" is defined for both initial specialty of residency training (identified using match data provided by each medical school) and for current practice or training area (identified using NCMB data for physicians in NC).

More specialties are included under the definition of "primary care" for current practice or training area than for specialty of residency training because physicians may specialize within their primary care area of practice following training.

Appendix A

Self-reported responses to requests for information about what each medical school is doing to try to increase the number of students who will practice primary care in rural North Carolina.

Campbell University School of Osteopathic Medicine

The mission of the Campbell University School of Osteopathic Medicine (CUSOM) is to educate and prepare community–based osteopathic physicians in a Christian environment to care for the rural and underserved populations in North Carolina, the Southeastern United States, and the nation. The focus on community-based care is significant as it recognizes the unique health care needs of rural and underserved populations. The preparation to enter those environments is unique and has been a core focus for our school. The Christian environment that we foster has played a significant role in shaping the values and beliefs of our graduates and shaping the way they approach their work as physicians. By instilling a strong sense of compassion, empathy, and ethical principles in its graduates, CUSOM is helping to ensure that they are well-prepared to provide high-quality, patient-centered care that is consistent with institutional values.

Campbell University School of Medicine opened its doors to its inaugural class of 162 students in 2013. Campbell University also became the first College of Osteopathic Medicine to serve as an ACGME sponsoring institution for Graduate Medical Education. As a sponsoring institution, Campbell University has provided support and resources to its affiliated residency programs ensuring that they meet the standards and requirements set forth by the ACGME. 15 osteopathic programs successfully transitioned to ACGME accreditation under Campbell University's Sponsoring Institution. Campbell University now serves as the Sponsor for 24 ACGME accredited programs with 2 additional pending applications in partnership with 6 hospitals and systems.

Medical Student Impacts

The graduating class of 2017 (our inaugural class) would have completed 3 year residencies in 2020, 4 year residencies in 2021, and 5 year residency programs in 2022.

The graduating class of 2018 would have completed 3 year residencies in 2021, 4 year residencies in 2022, and 5 year residency programs in 2023.

Neither class is, likely, fully represented in the data collected by AAMC or UNC Sheps Center for Health Services Research until the 2023 and 2024 information is released.

Of the data that we have on the first two classes (2017 and 2018), 216 of our graduates are currently in practice with 65 of those graduates (30%) being located in the state of North Carolina. 41 are still in fellowship and 42 are still in a primary training program. The first two classes show 48% of our graduates being in the fields of Family Medicine or Internal Medicine and an additional 22% being in NC specific areas of need defined as General Surgery, Obstetrics, Psychiatry, and Pediatrics.

Overall, these trends suggest that CUSOM is making a positive contribution to the development of the physician workforce in North Carolina and that its graduates are well-prepared to enter the workforce and provide high-quality care to patients. It's great to see that a significant number of the CUSOM graduates from the classes of 2017 and 2018 have entered practice or fellowship programs, with a substantial number remaining in North Carolina. The strong commitment to primary care fields and

specific areas of need is critical to positively impacting our state's ability to provide comprehensive, patient-centered care.

Graduate Medical Education Impacts

Campbell University had a goal of having a net neutral impact on the number of graduate medical education positions by creating enough positions that we would not graduate more medical students than the graduate medical education positions we created. To date, Campbell University has started 24 residency and fellowship programs in North and South Carolina with 2 pending applications. Those programs contain 427 GME positions with 157 of those being PGY-1 positions. We have residency programs in Family Medicine (x4), Internal Medicine (x3), Emergency Medicine (x2), General Surgery, Psychiatry, OBGYN, Dermatology, Transitional Year (x5) and ONMM. We have fellowship programs in Sports Medicine (x2), Child and Adolescent Psychiatry, Cardiology, and Moh's Micrographic Surgery.

Our first resident started in 2014. Since that time, Campbell University Graduate Medical Education programs have placed 84 providers into active clinical practice with 32 of those remaining in North Carolina (38%) and 19/32 (59%) being in the fields of Family Medicine or Internal Medicine. Primary care is a critical component of health care, as it provides the foundation for patient care and helps to manage the overall health and well-being of individuals and populations. A solid primary care workforce is essential to ensuring that patients have access to comprehensive, high-quality care and that health care systems can effectively address the health needs of their communities.

Summary

Campbell University Graduates are now currently active in 32 of North Carolina's 100 counties. The full impact of Campbell University graduates to the physician workforce is still emerging. 2020 saw the inaugural class graduate from 3-year primary care programs. 2022 saw the first graduates in Surgery and Psychiatry from Campbell University GME programs. Combining the efforts of our medical school and our graduate medical education programs, Campbell University has placed 99 new providers in 32 North Carolina counties as of February 2023.

Duke University School of Medicine

Duke provides medical student clinical rotations. The goals of this program are for students to learn clinical skills in the context of a local community and to appreciate the effects of culture and context on health and health behaviors. 20 Duke students each year rotate through clinics in Roxboro, Henderson, Oxford, Mebane, Fremont, evaluating and following patients in these rural communities.

Duke also offers the Primary Care Leadership Track (PCLT), the goal of which is to create change agents for the system through primary care. The 4-year program offers leadership training, a longitudinal-integrated 2nd year clerkship, which includes following pregnant mothers and delivering their babies, time for service with a community agency, and 3rd year research in community-engaged population health.

PCLT graduates have chosen primary care residencies: family medicine (outpatient adults, children, and prenatal care), general internal medicine (adults only), primary care pediatrics (children only), pediatrics/psychiatry, medicine/psychiatry, and Obstetrics/gynecology

ECU Brody School of Medicine

- Our Mission
  - Increase the supply of primary care physicians serving North Carolina
    - In most recent Match, 43% matched in North Carolina and 51% in primary care[1]
    - Brody ranks in the 91st percentile nationally in medical schools on the percent of graduates practicing in-state after completing residency training[2]
    - 52% of ECU (Brody) graduates are retained in-state five years after graduating – the highest among medical schools in North Carolina[3]
    - ECU (Brody) has 33% of graduates practicing primary care in-state five years after graduating - the highest among medical schools in North Carolina[3]
    - 69% of Brody graduates from 1980 to 2017 practice in underserved areas[4]
      - Percent of graduates statewide in[4]
        - Socioeconomically disadvantaged communities – 20%
        - Hispanic communities – 22%
        - Black communities – 21%
        - High-poverty communities – 24%
    - Ranked 22nd in Most Graduates Practicing Primary Care by US News and World Report[5]
    - #7 in the top 20 medical school programs in Family Medicine[5]
  - Improve the health status of eastern North Carolina's residents
    - We partner with practice environments in rural Eastern North Carolina in order to provide our students the opportunity to get to know these communities better and enhance their desire to move to these areas after they complete their training.
      - 82% of graduates participated in a free clinic for the underserved[6]
      - 31% of our graduates have experiences in community health before graduating[2]
    - We have developed our curriculum to assure that our students are introduced to the social determinants of health and made aware of existing health care disparities in order to better prepare them to make an impact in addressing them during the course of their careers.
      - 85% of our students have experiences in health disparities and 78% in cultural awareness before graduating[2]
      - 98% of our students are prepared to care for patients from different backgrounds (Brody ranks nationally in the 92nd percentile) [2]
    - Ranked 16th by US News and World Report for Most Graduates Practicing in Health Professional Shortage Areas[5]
  - Enhance access of minority and disadvantaged students to a medical education
    - Current enrollment is 344[1]
      - 26% of our medical students are from rural counties
      - 46% came from Tier 1 (24%) and Tier 2 (22%) counties in North Carolina
      - 18% are first generation
      - 30% are from underrepresented minority groups
      - 27% from EO1 and EO2 socioeconomic status (whose parent(s) completed highest level of education less than a Bachelor's degree with service, clerical, skilled and unskilled occupation)
    - Ranked in Top 10% of Most Diverse Best Medical Schools by US News and World Report[5]

Sources:

[1] Internal records (Student information system; admission records, and NRMP Match data file (2022))
[2] AAMC Missions Management Tool (2023)
[3] Outcomes of NC Medical School Graduates: How Many Stay in Practice in NC, in Primary Care and in High Needs Areas. March 30, 2022. Sheps Health Workforce NC. Cecil G. Sheps Center for Health Service Research.
[4] AMA ChangeMedEd Graduate Profile (2023).
[5] US News & World Report (2023)
[6] AAMC Graduate Questionnaire (2022)

University of North Carolina at Chapel Hill School of Medicine

Kenan Rural Primary Care Scholars Program – With support of the Sarah Graham Kenan Endowment and the William R. Kenan, Jr. Charitable Trust, the Kenan Primary Care Scholars Program offers medical students rural experiences in Central, Eastern, and Western North Carolina. These longitudinal exposures during medical school prepare students for careers in rural primary care while also providing financial support and enrichment experiences to sustain their commitment to rural primary care in North Carolina.

FIRST (Fully Integrated Readiness for Service Training) Program – The FIRST program began in 2015 and aims to increase primary care physicians in rural and underserved areas in North Carolina. Students complete medical school at an accelerated pace – in three years instead of four. The students have conditional acceptance at affiliated residency programs in Family Medicine and Psychiatry Pediatrics, and Surgery. They then serve in a rural or underserved area of North Carolina for at least three years. Students are recruited to the FIRST Program prior to entering medical school and during the fall of their first year of medical school. The FIRST Program promotes close faculty mentorship and familiarity with the system, includes a longitudinal quality improvement project with an assigned patient panel, includes early integration into the clinic, and fosters a close cohort of fellow students.

NC Rural Promise Scholarship - The NC Promise Scholarship is a scholarship program which allows students additional "on-ramps" for pursuit of rural primary care. Students who determine after their first year of medical school a commitment to primary care in rural North Carolina are eligible to apply in their second or third year of medical school. Students are supported with rural placements for rotations, connections to rural educational opportunities through the Office of Rural Initiatives ORI), and support for practice placement after residency through the Office of Rural Health and others. If a student determines commitment in 4th year, they can apply for a one-time scholarship NC Rural Promise Scholars plan to enter the fields of family medicine, pediatrics, internal medicine, OB/Gyn, psychiatry, or general surgery and commit to serving in one of North Carolina's rural counties. The scholarship funding was allocated by the North Carolina General Assembly in recognition of the mission of the School of Medicine and the potential impact graduates can make caring for the people of the state. Scholarship support is paid toward debt reduction before graduation. Upon the completion of residency training, the honorees have made a commitment to serve in one of the state's rural counties that is underserved.

Important Pathway Programs before medical school – UNC SOM has a wide array of other programs that seeks to connect high school and college students to rural primary care programs and interests. Examples include the Rural Medicine Summer Academy that offers rising high school seniors a week-long immersive experience on UNC's SOM campus; The Rural Medicine Pathway Program, a partnership with the Carolina

Covenant Scholars Program provides mentorship, guidance, and community engagement experiences to students from rural areas of North Carolina and helps prepare students to apply to UNC SOM. The new S.E.R.V.E. initiative out of ORI connects programs from middle school through college programming for students from rural SE NC counties, including er exploration events hosted in their local communities; Heal Day with the Heels, bringing students to campus, and an On Call Speaker Series connecting providers who graduated from those high schools back to share their journeys with students. The SEEDS Scholarship Program enters year two offering support specifically to students from five counties in SE NC, and those who plan to pursue needed specialties in the region. In partnership with OSEEE and AHEC partners, ORI also provides outreach and program support to high schools, community college, and undergraduate institutions across the state and works with collaboratives such as Rockingham Primary Care Initiative on community-based programs to develop workforce for in North Carolina.

Wake Forest University School of Medicine

Family Medicine Interest Group: The mission of the Wake Forest School of Medicine Family Medicine Interest Group is to encourage interest in the specialty of Family Medicine; furthering the ideal of longitudinal, patient-centered care. Inspired by the AAFP Family Physicians' Creed and the Mission Statements of the AAFP and NCAFP, we strive to holistically improve the health of our community while exemplifying professionalism and creativity. Our overarching goal is to support and recruit interest by capturing students in training to become exceptional, humanistic physicians. Exposing students to Family Medicine as a career path early at interest fairs and via lunch talks supports this goal. Having upper-level students (formally and informally) mentor new students continues this pipeline through the residency match process. Further, our events consider health care policy and affordability, striving to advance high quality clinical evidence and advocate for health equity. By hosting events and combining efforts with other student groups, we hope that topics (e.g. LGBTQ health) that do not receive extensive attention elsewhere in the curriculum are illuminated. While we hope that our efforts lead to more students entering the primary care Family Medicine workforce, those who choose other specialties will also benefit from our diverse programming. 134 students signed-up on Canvas; 52 members in the groupme; suture workshop with 20 students on February 28

Share the Health Fair: According to the 2021 Forsyth County Measures Report, the top five intervenable leading causes of death for the county are cancer, heart diseases, chronic lower respiratory disease, cerebrovascular disease, and diabetes. Share the Health Fair exists to help meet these health discrepancies by minimizing barriers to care, improving social determinants of health, increasing awareness of preventative measures to avoid common chronic diseases, connecting fair participants to options for year-round health care, and empowering fair participants with the tools necessary to take their health into their own hands. Since its inception in 2000, the mission of the Share the Health Fair has been to provide basic medical screenings and information on health care and healthy living for all members of the Winston-Salem community, especially those who may not otherwise have adequate access to these services. It is an entirely student-organized effort, providing a unique opportunity for Wake Forest University School of Medicine (WFSUOM) students to learn about community health and promote wellbeing within the community that has welcomed us as we pursue medical education. The fair in 2022 was staffed by over two-hundred volunteers, including 201 students from WFUSOM, 30 students from WSSU PT, 13 NW AHEC Scholars, 21 physician volunteers, and other outreach program volunteers.

DEAC Clinic: DEAC provides an opportunity for to deliver high quality patient care adapted to our unique student-run clinical model. Students and attending physicians love our new clinical space with areas for exam rooms, lab space, triage, front desk, and teaching from our wonderful physician volunteers. Our new clinic also allows us to deliver new initiatives like providing hot meals in partnership with Campus Kitchen. As our clinic grows, we look forward to further developing the wonderful roles that DEAC plays in our community over the many years in this new space. The Vision Clinic is a new student-run clinic run in partnership with City with Dwellings and currently funded via the Schweitzer Fellowship and will see primarily homeless population for vision related issues. We are currently purchasing equipment, establishing educational material for student volunteers, and setting up the new space which should be completed in early 2023. As of October 24th, DEAC is excited to announce that we have successfully implemented our Food Insecurity pilot program in partnership with Campus Kitchen. Campus Kitchen is an organization at Wake Forest University that aims to reduce food waste by distributing excess produce to the community. As part of our partnership, Campus Kitchen prepares fresh, nutritious meals with the surplus they acquire for distribution at DEAC clinic. All patients being seen at the clinic are offered a meal to take home with them at the end of their visit. We have received positive feedback and gratitude from patients who otherwise would not have had time to cook dinner that night. As a cross-disciplinary team, we recently added 2 new PA directors to our board, both 1st year PA students. They will help us connect more with our PA colleagues in the PA school in addition to serving as managers in our clinic and special initiatives like our efforts to address food insecurity. In addition, we have had PA alumni reach out to our clinic to seek opportunities to donate and help which we graciously appreciate. There are 74 fourth year pharmacy students rotating at Atrium Health Wake Forest Baptist (AHWFB) during the 2022-2023 academic year. We have had 3 pharmacy volunteers each week of clinic from July to September. We have extended the uncontrolled hypertension project and enrolled two patients during Q3. We are currently out of blood pressure cuffs, but recently ordered more and are waiting for the shipment. We encourage Med Teams to continue to utilize this resource as we have found it beneficial to our patients. Regarding medication assistance, we have utilized both Crisis Control and MedHelp (previously known as Charity Care) through AHWFB to provide support to our patients. We utilize Crisis Control as a first-line resource if the patient lives locally and MedHelp as a secondary resource. We have printed applications for this in English and Spanish and have them available when needed.

Clinic Information

1. In this most recent quarter, there were 57 total visits in the DEAC Clinic (10 telehealth, 47 In-person). Of those visits, 18 were for patients new to DEAC and 39 visits were for patients returning to DEAC.
2. The clinic continues to see patients within one week of the patient requesting an appointment.
3. Show rate: 68% (39/57) of patients showed up for their scheduled appointment between Oct- Dec 2022.
4. During Oct- Dec 2022, 11 patient encounters required use of a translator during the visit.
5. Total cost of operation for the DEAC Clinic October - December 2022: $3,178
6. Number of student volunteers Oct - Dec 2022: 65 Students volunteered 114 times
7. Number of preceptor volunteers Oct - Dec 2022: 9 preceptors volunteered 19 times

Clerkships: As part of the Wake Ready Curriculum, students complete a variety of community rotations/experiences between our two campuses (Winston-Salem and Charlotte) during the clerkship, with the opportunity to participate in electives in the post-clerkship curriculum. During the clerkship curriculum, all students complete an Ambulatory IM clerkship and Family Medicine clerkship. Students

also complete ambulatory components during their Pediatrics, Psychiatry and Obstetrics/Gynecology clerkships. A description of the dedicated community/ambulatory clerkships of Ambulatory IM and Family Medicine are included below.

Clerkship: Ambulatory Internal Medicine

Duration: 2 weeks

Description of Clerkship: The core clerkship in Ambulatory Internal Medicine focuses on the basic competencies of ambulatory internal medicine. Students spend time in various ambulatory settings which include continuity care clinics, complex care teams and urgent care clinics. Students are expected to participate in the care of patients presenting to these clinics, including but not limited to conditions such as COPD, Diabetes, Hyperlipidemia, Hypertension, Obesity, Tobacco Use, Depression and Joint Pain. Also, as part of the clerkship, students complete a Population Health QI activity in which students address patient's health maintenance by addressing vaccine gaps in patients they are participating in their care.

Participants in clerkship: All third year medical students on the Winston-Salem and Charlotte campuses (approx. 145 total)

Outcomes: Participation in care of patients with the above listed diagnoses/conditions and completion of the Population Health project.

Clerkship: Family Medicine

Description of Clerkship: The core clerkship in Family Medicine is a 4 week clerkship on the Winston-Salem campus and a longitudinal clerkship on our Charlotte campus during the 2022-2023 academic year. The clerkship consists of students participating in patient care in the outpatient family medicine clinics in both Winston-Salem and Charlotte. Students are expected to participate in the care of patients presenting with back/neck pain, dysuria, headache, joint pain, rashes, asthma/COPD, depression, diabetes mellitus, hyperlipidemia, hypertension, obesity, respiratory illness, tobacco use, adult and pediatric maintenance health exams, and counseling on smoking cessation.

Participants in clerkship: All third year medical students on the Winston-Salem and Charlotte campuses (approx. 145 total)

Outcomes: Participation in care of patients with above noted presentations, along with final exam in course (NBME exam).

Also during the clerkship phase of the curriculum, students also complete the Health Equity thread/curriculum. The curriculum encompasses a series of activities that focuses on health equity and the social determinants of health, such as housing, transportation, access to care, maternal-fetal health disparities as examples. When possible, the experiences are partnered with a community organization in Winston-Salem and Charlotte that are working to address these disparities.

Health Equity

Goals of Program:

1. Understand the scope of health disparities in the United States
2. Identify was to contribute to the reduction of health disparities as a practicing clinician
3. Demonstrate the knowledge and skills needed to improve the health of underserved populations
4. Explore activities with community partners that will foster an interest in careers working with underserved populations.

Number of participants: All third year medical students at both campuses (approximately 145 students)

Outcomes: Completion of multiple exercises during curriculum addressing health equity and the social determinants of health

During the post-clerkship curriculum, students have the opportunity to participate in electives that are community based and related to primary care. The following electives can be enrolled in by students, with various enrollment each year.

Attachment B

Strengthening the Training of the Physician Workforce Needed to Create a Healthy North Carolina
A Roadmap for a Statewide (and Nationwide) Approach

An AHEC Proposal to develop a Collaboration between NC Medical Schools

Objectives:

1. Facilitate a path into medicine for students from rural and other underserved communities who might otherwise not have been able to envision themselves as future physicians.
2. Improve the supply and distribution of physicians in needed specialties in rural communities and other communities with less access to resources to create a healthy North Carolina.
3. Develop and extend learning opportunities across the state of North Carolina through community-based learning and relationships.

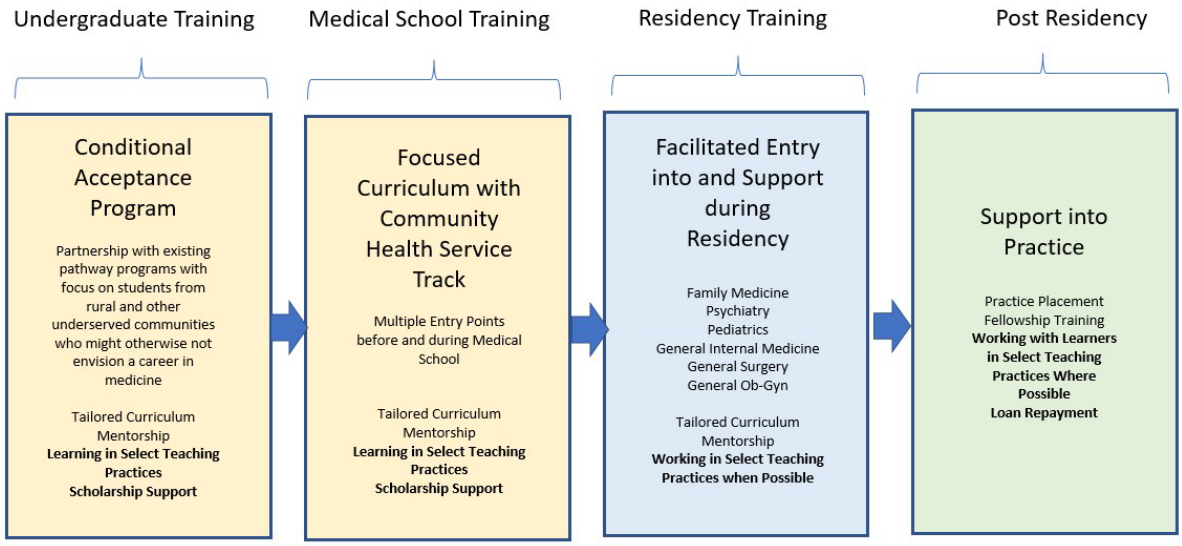
Summary:

A multi-pronged approach is needed to address this set of complex and important issues. The different components of the approach are described in more detail below. AHEC seeks to convene educational leaders of the two state medical schools to focus on 1) how to recruit more students who are likely to pursue careers in needed specialties, 2) how to train students in high quality primary care while in medical school and 3) how to create and support high functioning practices in which to teach students. The other components are also critically important and need to be addressed in a different manner.

Critically Important Areas of Focus to Achieve Objectives:

To reach these objectives, the program will:

1) Recruit students into medical school who are more likely to pursue careers in needed specialties in rural and other underserved communities **(Conditional Acceptance Programs into Medical School)**
2) Train these students in high quality primary care while in medical school **(Focused Curriculum with Community Health Service Tracks)**
3) Creation and Support of high functioning primary care practices able to effectively teach **(Select Teaching Practices)**
4) Help students match into appropriate residencies and support them during residency training **(Facilitated Primary Care Residency Training)**
5) Provide further support and training after residency to optimize their successful entry into practice in rural and other underserved areas **(Fellowship Training Programs)**
6) Provide financial support during training to allow learners to focus on their training and not be burdened by debt load that dissuade them from pursuing careers in primary care with a goal of entering practice without debt **(Scholarships and Loan Forgiveness Programs with Goal of Zero Debt)**
7) Continue to work at a national and state level to increase financial investments in primary care to allow for long term sustainability of primary care practices **(Increase Primary Care Reimbursement)**



Area of Focus #1: Conditional Acceptance Program

The program will recruit students with strong intentions to practice medicine in rural and other underserved communities in North Carolina at the end of their first year of undergraduate school and notify them of acceptance into program prior to their second year of undergraduate school. The students will have conditional acceptance into the participating NC medical schools if students meet defined milestones. Medical Schools participating in the collaboration will either have such a program already in existent or will develop such a program. The draft program components are further described below. **The educational collaborative convened by AHEC will further refine these components.**

Undergraduate students during their first year are nominated by their undergraduate programs. Partner HBCUs, Community Colleges, and Universities in the UNC System will be selected based on their interest in participating and their ability to recruit students who will likely pursue careers in rural and other underserved areas.

Criteria for Consideration:

1) Intends to practice in rural and other underserved communities in North Carolina
2) Strong connection to rural or other underserved communities in North Carolina
3) Completed one college level math and college level science course
4) In state residency

Nominated students are reviewed by participating medical schools for conditional acceptance into the program at the end of their first year of college.

Program Components that supplement Undergraduate Education:

1) Mentorship
2) Curriculum focusing on professional formation, clinical skills, and foundational sciences
3) Training in Select Teaching Practices for the majority of outpatient clinical experiences – Students will learn clinical medicine in teaching practices that are chosen based on the location of the

practice in a rural or otherwise underserved setting, the quality of care delivered in the practice, and the high commitment to education. These practices will receive additional support and training to allow them to effectively train Track students. This teaching model is described further below.

Proposed Milestones to Matriculate into Medical School:

1) Students enrolled in the program must meet the following milestones to be considered for admission into medical school.
2) Complete course work required for graduation with a BS or BA from undergraduate program at one of the partner institutions identified through the program and maintain a science GPA 3.5 or higher
3) Achieve MCAT score of 500 or higher prior to matriculation
4) Complete required clinical and community service experiences

Admission is not automatic. Their performance in the program will be reviewed be and voted upon by the respective SOM admission's committee.

Program participants who matriculate into medical school are guaranteed a place in the Community Health Service Track described below and will be encouraged to pursue programs for workforce development in needed specialties across North Carolina. Participation, however, is not required as a condition of matriculation.

Area of Focus #2: Focused Curriculum with Community Health Service Track:

This track is intended to expand the total number of students engaged in rotations and experiences across rural and less resourced communities. In addition, having a specific and named rural track for students committed to rural practice will provide students additional leverage for residency placement through an LCME accredited track. Medical Schools participating in the collaboration will either have such a track already in existent or will develop such a track. Schools may choose to name their track differently. The components below are draft components of what such a track should include. **The educational collaborative convened by AHEC will further refine these components.**

Participating medical schools will work together to offer students an augmented rural and underserved curriculum. This will allow team formation among students who have shared commitment to education and engagement in rural and underserved communities across the state. Where possible this curriculum will be offered virtually to allow didactic learning without returning to the home campuses.

This track will also serve as a recruitment and gateway program for students identified through the conditional early assurance program. Program participants will be offered a guaranteed spot in the Community Health Service Track, but do not have to pursue the track to be considered for the conditional assurance program.

The track focuses on training MD students to become physicians who will serve rural and other underserved communities.

Sample Program Components:

1) Mentorship – Entering into Community Health Track, every student will be assigned a rural health preceptor. They will help students develop a statewide network of support that will provide important academic, professional, and social development.
2) Curricular Enhancements – Students in the track will complete all core requirements of the respective medical school curricula, but in addition will learn skills essential to being a rural physician in NC such as enhanced procedural skills including advanced point of care ultrasound skills.
3) Training in rural hospitals for a portion of required and elective inpatient experiences.
4) Training in Select Teaching Practices for the majority of outpatient clinical experiences – Select Teaching Practices are essential to the success of this program and are currently underdeveloped at most medical schools. For this reason, Creation and Support of Select Teaching Practices is discussed as a separate area of focus.

Area of Focus #3: Creation and Support of Select Teaching Practices

Students will learn clinical medicine in teaching practices that are chosen based on the location of the practice in a rural or otherwise underserved setting, the quality of care delivered in the practice, and the high commitment to education. These practices will receive additional support and training to allow them to effectively train Track students.

The creation of high functioning primary care practices in which to teach learners (Elite Teaching Practices) deserves further discussion. Developing these Select Teaching Practices is fundamental to ensuring a well-prepared primary care workforce for our future.

1) Select Teaching Practices will provide learners with the skills needed to succeed in primary care.
2) Select Teaching Practices inspire learners to pursue careers in primary care by role modeling the creativity and innovation that is possible in primary care.

Draft components of Select Teaching Practices are further described below. **The educational collaborative convened by AHEC will further refine these components.**

Sample Components that make Select Teaching Practices different from currently existing community preceptors:

1) Engaged Practices that provide high quality care. Select Teaching Practices will be high functioning primary care offices that provide a broad range of services to patients and have an enthusiasm for passing on their knowledge to the next generation of physicians. Select Teaching Practices will teach regularly so they can hone teaching skills and so that students integrate effectively into practice and directly contribute to the care of patients. Teachers in Select Teaching Practices will participate in occasional events to help improve their teaching skills and help us improve the curriculum. Select Teaching Practices will be important members of the teaching team will have an important voice in how students are trained.
2) Student assigned to Select Teaching Practices intend to pursue careers in primary care. These students have been carefully selected for their interest in primary care and are receiving focused training in high quality primary care. Select Teaching Practices are thus able to teach a highly motivated group of students that share the practices enthusiasm for primary care.

3) Students assigned to Select Teaching Practices make useful contributions to care. The same group of students are assigned to Select Teaching Practices over time so that they get to know the practice. This allows students to contribute to patient care in meaningful ways. The students are able to assist in value based care, patient education, and documentation. Other ideas have been put forth by national organizations; https://www.stfm.org/media/1348/studentsasaddedvalue2018.pdf. These students may also return to your communities as colleagues and even partners.
4) Enhanced support to make it easier for Select Teaching Practices to teach. Draft ideas are listed below.
    - Payment that is more than a token of thanks. Select Teaching Practices will be reimbursed at a substantially increased rate. This support may come from participating medical schools or participating clinical organizations.
    - More clear expectations for students. Define clearly what a practice can offer the student and then clearly communicate those expectations to the student. Better two-way communication between the school and the Select Teaching Practice and more flexibility on the part of the school.
    - Reduced administrative burden of teaching. Standardization of course assignments, requirements, and grading forms between schools. Greater flexibility in assignments. Engage preceptors when creating course assignments and course requirements. Collaborate with curricular leaders to allow students to participate in ongoing projects of the practice and still get course credit.

Additional Areas of Focus that are important but are not part of this collaborative:

Additional Area of Focus: Facilitated Primary Care Residency Training

Participating residencies will ensure that Track students continue to receive mentorship and support during residency.

The goal of this longitudinal approach is to train students in needed specialties to work in rural and underserved communities. Formal training often ends with residency. A minority of medical students from NC medical schools will practice primary care or psychiatry, and far fewer still will practice in rural and underserved areas.

Graduate Medical Education (GME) in NC has grown from 4 communities 50 years ago to 26 communities now. Most GME outside of academic health centers is in primary care psychiatry. NC is home to three new psychiatry programs in the last five years and at least one new program is well into planning. Training residents in the communities in rural and urban communities where people live and work is a proven strategy to increasing provider supply and improving access to care.

Students from the track will be encouraged to schedule guest rotations with AHEC supported primary care and psychiatry residency programs and other community-based residency programs. These students will be encouraged to consider these programs as ideal opportunities to train in the types of communities they want to live and work and develop professional connections to those communities.

Additional Area of Focus: Fellowship Training Programs

Upon completion of residency, the program will support entry into practice with additional fellowship training. Fellowship training will provide enhanced clinical and business skills to succeed in rural practice. The fellowship will also provide teaching skills to grow the next generation of elite teaching practices.

MAHEC and UNC Office of Rural Initiatives have developed a rural fellowship program. Recently trained providers with employment in a rural community can have a portion of their professional time covered by the fellowship (10-20%) to allow the physician time to develop specific skills for rural practice as well as networking and rural leadership development. This fellowship has demonstrated early success and efforts will be made to expand it statewide.

Additional Area of Focus: Financial Support and Reduction of Loan Burden

Loan burden on student graduating from medical school has increased dramatically over the past decade. The current average debt of graduating medical students nationally is now about $200,000. With continued wide disparities in salaries between specialties, large debt burden can influence student choice of specialties.

Even for students trained in needed specialties, large health systems in wealthier communities often provide larger recruiting incentives and salaries, making it more difficult to recruit physicians into rural and underserved areas.

Programs to minimize financial pressures during training and reducing eventual total debt burden are an important part of ensuring an appropriate physician workforce in rural and other underserved communities. The goal of this program is to have participants enter practice with zero debt.

Additional Area of Focus: Increase Primary Care Reimbursement

Work at a national and statewide level to implement the recommendations of the National Academies of Science Engineering and Medicine to pay for primary care teams to care for people not doctors to deliver services. The report recommends that:

- Payers should evaluate and disseminate payment models based on the ability of those models to promote the delivery of high-quality primary care, not on achieving short-term cost savings.
- Payers using a fee-for-service (FFS) model should shift primary care payment toward hybrid (part FFS, part capitated) models, and make them the default over time.
- The Centers for Medicare & Medicaid Services (CMS) should increase the overall portion of spending going to primary care.
- States should implement primary care payment reform by facilitating multi-payer collaboration and by increasing the overall portion of spending in their state going to primary care. Implementing high-quality primary care begins by committing to pay primary care more and differently because of its capacity to improve population health and health equity for all of society, not because it generates short term returns on investment for payers. High-quality primary care is a common good promoted by responsible public policy and supported by private-sector action.

Selected References:

Implementing High Quality Primary Care: Rebuilding the Foundation of . The National Academies of Science, Engineering and Medicine 2021. https://www.nationalacademies.org/our-work/implementing-high-quality-primary-care

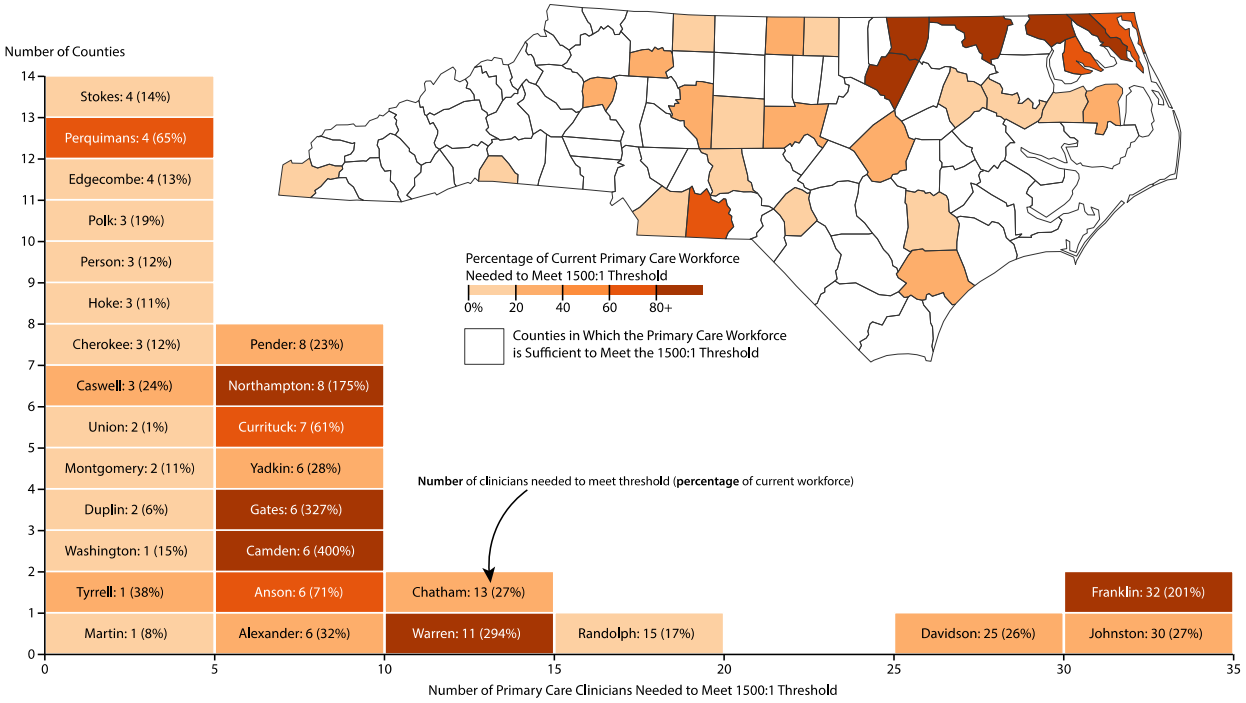
Multiple Models exist on which this proposal is built. Links to some of these programs are provided below:

Alabama College of Community Health Sciences: https://cchs.ua.edu/rural-programs/rmsp/#:~:text=The%20Rural%20Medical%20Scholars%20Program,where%20they%20are%20most%20needed
Michigan State: https://msururalhealth.chm.msu.edu/programs/rural-physician-program.html
U of Minnesota https://med.umn.edu/md-students/individualized-pathways/rural-physician-associate-program-rpap
NE Ohio Medical School: https://www.neomed.edu/medicine/admissions/paths/early-assurance/
Eight Year Continuum. Brown Rhode Island. https://plme.med.brown.edu/
JAMP with support from Texas Legislature: https://www.uta.edu/academics/schools-colleges/science/degree-programs/health-professions/special-programs-volunteering-research-opportunities/jamp
WWAMI; Recruit students from rural communities and enroll them in Rural Track (TRUST). https://www.uwmedicine.org/school-of-medicine/md-program/wwami

Attachment C

Healthy North Carolina 2030 includes a goal for each North Carolina county to have a 1,500:1 population to primary care clinician ratio. Although this is not specific to primary care physicians graduating from North Carolina medical schools, it provides some insight into where additional primary care clinicians are most needed. Recruiting students from these communities and providing robust primary care experiences in these counties should enhance the likelihood of those students providing primary care there.

Percentage of Current Primary Care Workforce Needed to Meet 1500:1 Population to Clinician Threshold, 2017 - 2021 Average, North Carolina



Notes: Primary care physicians, physician assistants, and nurse practitioners are defined as in Spero, J. C., & Galloway, E. M. (2019). Running the Numbers. North Carolina Medical Journal, 80(3), 186-190. Physicians with a primary area of practice of obstetrics/gynecology were weighted as 0.25 of a full-time equivalent (FTE) primary care practitioner. All other primary care physicians were weighted as 1 FTE. Primary care physician assistants, nurse practitioners, and certified nurse midwives were weighted as 0.75 FTE. Physician and physician assistant data are derived from licensure data provided by the North Carolina Medical Board. This analysis only includes physicians who are not residents-in-training and are not employed by the Federal government. Nurse practitioner and certified nurse midwife data is derived from licensure data provided by the North Carolina Board of Nursing. Data include active, licensed practitioners in practice in North Carolina as of October 31 of each year. Practitioners are assigned to counties based on primary practice location. County populations were adjusted for age and gender according to primary care use rates described in data from the Medical Expenditure Panel Survey. The raw (unadjusted) population data was from the NC Office of State Budget and Management (https://www.osbm.nc.gov/demog/county-projections).

Attachment D

NC Center on the Workforce for Health

What is the issue and why is it important? North Carolina's historic, persistent, and worsening health workforce shortages can best be addressed through intentional, transparent, and collaborative engagement by the communities interested in solving those problems. Although many organizations focus on health workforce development, that work typically is focused on a specific profession, geography, or institution. We propose a more comprehensive and strategic approach to the evolving workforce needs of North Carolina's health ecosystem.

What do we propose to do about it? The NC Center on the Workforce for Health will provide a forum for health employers, workers, educators, regulators, policymakers, and others throughout North Carolina to convene, discuss challenges and opportunities, share best practices and lessons learned, identify potential solutions and metrics for success, and monitor progress toward addressing these challenges. Feedback from extensive interviews indicates the desire for immediate solutions to these urgent problems, and support for a forum to share emerging best practices and assistance in identifying practical solutions. There is broad consensus that sustained collaborative work will be necessary to create a renewed statewide system of workforce development that meets the needs of the employers and prioritizes whole-person care, including the social drivers of health.

How will we do it? The Center's work will evolve to respond to progress and new challenges.

It will assess data, policy and best practices research, and inputs from participants, and provide actionable syntheses and forum for stakeholders to develop consensus strategies for collective or individual pursuit. All initiatives and recommendations will include desired outcomes and metrics to monitor progress. Participation in the Center is voluntary and inclusive; its agenda and outcomes will be participant driven. Information flows will be bi-directional: statewide data, analysis and information will be distributed to local communities for their consideration and local responses and needs will inform statewide priorities, analysis, and work. For example, great local work that is responsive to health workforce challenges and opportunities will inform the Center's work, and the Center will provide data and information for those communities to consider, technical assistance when requested, and an opportunity for participants to learn from each other. The Center will serve as a voice for the recommendations, and participants will operationalize and advocate for them as appropriate.

The Center is currently staffed by volunteer time provided by NC AHEC, NCIOM, and the Sheps Center for Health Services Research. Work to secure ongoing financial support for the center is underway. We envision a model of staff support at the Center to develop meeting agendas, synthesize participant feedback to inform recommendations and strategies, conduct data analysis and policy research and identify improvements to recommendations as appropriate. We also envision a team of local leaders to convene community stakeholders to facilitate local discussions and coordinate communications between those communities and the Center's statewide work.

The Center meets quarterly to conduct and advance its work. Committees can be leveraged within available resources and as needed for more in-depth or focused work.

The Center meets quarterly to conduct and advance its work. Committees can be leveraged within available resources and as needed for more in-depth or focused work.

NC Center on the Workforce for Health

The Center will

- Provide a mechanism to ensure that efforts to address health workforce issues persist over time which will ultimately better align the supply of health workers with the demand for those workers.
- Convene employers, educators, workers, regulators, and others to develop, deploy, monitor, and assess efforts to address health workforce issues. Convenings will be at the state and local levels with bi-direction information flow.
- Gather and make available relevant data and policy, analyze, and synthesize that information to make it actionable, and provide technical assistance and guidance to interested parties when acting to address health workforce issues.
- Provide a forum for interested parties to share best practices and lessons learned.

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THE UNIVERSITY OF NORTH CAROLINA SYSTEM

HEALTHY MINDS, STRONG UNIVERSITIES: CHARTING A COURSE TO MORE SUSTAINABLE STUDENT MENTAL HEALTH CARE

May 26, 2021

University of North Carolina System
Chapel Hill, North Carolina

Contents

Acknowledgements

First and foremost, the University of North Carolina System Office ("System") wants to thank and acknowledge the mental health caregivers and professionals across all 17 institutions for supporting its students during the COVID-19 pandemic. We are grateful for the care and continued support of our students.

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The University of North Carolina System would like to acknowledge the following workgroup members for their contribution to this effort:

Measurements and Outcomes Workgroup

- Dr. Monica Osburn, Executive Director of Counseling Center and Prevention Services, NCSU (chair)
- Dr. Melinda Anderson, Interim Associate Vice Chancellor of Academic Affairs, ECSU
- Ronette Gerber, Director, Title IX and Clery Compliance Officer, UNCP
- Dr. Dionne Hall, Director of the Counseling and Personal Development Center, FSU
- Dr. Paula Keeton, Director, Center for Counseling at Psychological Services, UNCC
- Dr. Terry Lynch, Vice Chancellor for Students Affairs, NCSSM

Promising Practices and Innovation ("Promising Practices") Workgroup

- Dr. Vivian Barnette, Executive Director of Counseling Services, NC A&T (chair)
- Dr. Brett Carter, Dean of Students, UNCG
- Dr. Kim Gorman, Director of Counseling and Psychological Services, WCU
- Dr. Christopher J. Hogan, Director and Chief Psychologist, ASU
- Dr. Valerie Kisler-van Reede, Director of Counseling Services, ECU
- Dr. Carolyn Moore, Director of Counseling Center, NCCU
- Dr. Mark Perez-Lopez, Director of Counseling Center, UNCW
- Kelly White, Deputy Chief of Police and Public Safety, WSSU

Finance Workgroup

- Beth A. Hardin, Executive in Residence, UNCG; former Vice Chancellor for Business Affairs, UNCC (chair)
- Dr. Lee Brown, Interim Provost and Vice Chancellor for Academic Affairs, FSU
- Paul Forte, Vice Chancellor for Business Affairs, ASU
- Nikkia Sheppard Lynch, Business Officer, Academic Finance Office, UNC-CH
- Akua Matherson, Vice Chancellor for Administration and Finance, NCCU
- Michael Smith, Vice Chancellor for Finance and Administration, UNCSA
- Virginia Teachey, Vice Chancellor for Finance & Administration, UNCP

Finally, the Committee on Strategic Initiatives heard several presentations in 2019 and 2020 from the following experts that provided critical data and context and set the stage for this work:

Dr. Benjamin Locke
Executive Director
Center for Collegiate Mental Health

Dr. Daniel Eisenberg
Director
Healthy Minds Network

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NCSU

Dr. Jane Cooley Fruehwirth
Associate Professor, Department of Economics
UNC-CH

Executive Summary

Context

- **Escalating demand for student mental health services**. Like most university systems across the country, the University of North Carolina System has seen a significant increase in the incidence of mental health challenges among our students, a trend that has only accelerated during the COVID-19 pandemic. While university administrators – and the UNC Mental Health Workgroups – are awash in data on mental health incidences, three data points saliently captured and identified the changing nature and magnitude of student mental health challenges. They are as follows:
    - *Increasing rates of entering college students with previous mental health diagnosis.* Nationwide reports indicate that 20-30 percent of incoming college students are arriving with a previous mental health diagnosis.
    - *Increasing rates of students with suicidal ideation.* Collegiate mental health surveys indicate that 10-15 percent of college students have had serious thoughts of suicide within the past 12 months.
    - *Rise in traumatic incidences.* Whereas previous stereotypes around student mental health may have suggested that college students simply lack "grit" and "resilience" for everyday challenges, an alarming finding for the Mental Health Workgroups was the rise in traumatic life events that students find themselves coping with. Examples of traumatic life events include: recent loss of a parent or loved one, interpersonal emotional or physical abuse, and/or forms of sexual assault.

- **Strained capacity.** While demand for collegiate mental health services has significantly grown in the past few years (and outpaced enrollment growth), college counseling centers have struggled to keep pace. The Workgroups concluded that revenue and staff increases in college counseling centers have not kept up with the rise in utilization of mental health services.

- **More at stake than student health and wellbeing.** In addition to promoting and ensuring student health and wellbeing, addressing student mental health challenges has far-reaching implications for student success and educational attainment. For example, international organizations such as the World Health Organization now undertake an annual collegiate mental health survey to understand the rising prevalence of mental health disorders and human capital implications for a country (e.g., impacts on educational attainment rates, entry-level workforce productivity, and effects on economic growth). The increasing incidence of student mental health conditions has clear implications for UNC's student success objectives as student mental illness is one of the most cited reasons that students drop out of college.

Key Service Provision Findings

Recognizing the scope and nature of student mental health challenges, the UNC Mental Health Workgroups set out to understand the nature of mental health service provision across the UNC System. Below are key findings:

- **Institutions provide a wide swath of mental health services**. UNC institutions provide several types of mental health services, including but not limited to clinical services, outreach and educational services, crisis intervention and emergency services, as well as other types of support.

- **Growth in the breadth and depth of student mental health needs are increasingly beyond the scope of what current mental health staff, funding streams, and operational structures can provide.** While mental health clinicians are often generalists and able to serve a wide variety of student needs, the increase in the number of students seeking help, the number of conditions that students are presenting with, *and* the number of students needing more intensive mental health care has stretched the capacity of mental health staff to serve all of the students in need. Students seek out and require help for a wide variety of reasons, and mental health centers are largely expected (and endeavor to) assist them. But this comes at a cost, as a relatively small proportion of students can require a disproportionate amount of mental health services and are often in need of urgent care. At many institutions where growth of resources for mental health services (i.e., staff and revenue) has not kept pace with demand, finite resources in mental health centers are consumed with addressing urgent student needs in crisis care and more complex conditions, leaving fewer resources for more routine clinical care and outreach/educational services.

- **Smaller institutions struggle to address the full range of complex mental health issues.** Some mental health conditions require a mental health professional with experience and/or training in a particular area. Unfortunately, it is logistically and financially difficult for smaller UNC System institutions to employ a full suite of specialized mental health professionals to serve all student needs that may arise.

- **Sharing and coordination of services and resources across institutions is limited, but institutional willingness to share is high.** While the UNC System has made strides in sharing mental health resources across institutions in the past few years (e.g., UNC System Behavioral Health Convening which provided institutions an opportunity to share best practices; the 2020 System-wide adoption of ProtoCall to provide 24/7 crisis support to students), there are ample opportunities for further collaboration and sharing of services and resources between institutions.

<u>Key Finance Findings</u>

Recognizing the scope and nature of student mental health challenges, the UNC Mental Health Workgroups set out to understand the funding models for mental health services across the UNC System. Below are key findings:

- **Mental health services are primarily funded through student fees and General Fund revenues**. Across the UNC System, mental health services are primarily funded through Student Fees (60 percent) and General Funds (31 percent). The average expenditures per student full-time equivalent (FTE) across the UNC System was $125. The range of spending across institutions varied from $77 to $316.

- **The health fee does not fully fund mental (and physical) health services on campuses.** The Health Fee (which represents a majority of all Student Fee revenues that go towards mental health services) does not fully fund the cost of mental health services. The rising cost and consumption of mental health services has put UNC System institutions in a position of increasing reliance on General Fund revenues to fully fund mental health services.

- **Reliance on General Funds increases financial fragility for mental health centers.** All but three UNC System institutions rely on General Funds to support mental health services. The reliance on General Funds is concerning due to the multitude of demands placed on this revenue source. If General Fund

revenue does not meet expenses for a particular UNC System institution (due to enrollment declines, declining net tuition revenue, or a mix of both), mental health service units could be in a precarious financial situation and lack dedicated financial resources. This may leave universities with insufficient capacity to cover increases in costs and utilization.

- **Approved health fee increases will not materially increase incremental revenue for mental health service units.** In February 2021, the UNC Board of Governors undertook a review of Health Fees and, subsequently, approved rate increases across the UNC System. The Finance Workgroup's analysis indicates the incremental annual revenue will be unlikely to have a material effect on mental health service units, especially in light of the fact that the Health Fee is used for both mental *and* physical health services. Physical health service expenditures are generally two to three times higher than mental health expenditures.

Recommendations

Recommendation #1: Increase investment in quality and coordination of student mental health care within and between institutions

a. Provide sufficient staff (including clinicians, practitioners, caseworkers or social workers) and space to meet target levels of service, including but not limited to providing weekly therapy to students who seek help. Determine the sufficient number of staff by benchmarking against the Clinical Load Index, the International Accreditation of Counseling Services (IACS) staffing ratio, and Healthy Minds data (where available).

b. Consider using a stepped care model to distribute counseling needs across a continuum of service options and develop a scope of practice to clearly communicate when referral out of the center is warranted.

c. Increase the diversity of staff and expand access to counseling professionals with diverse backgrounds and/or training in trauma-informed and culturally responsive methods.

d. Ensure there is adequate staff to comply with federal regulations (i.e., under the Clery Act and Title IX, universities must make counseling services available to both the complainants and respondents of sexual misconduct violations).[1]

e. Offer student support and mental health programming targeted at underrepresented populations (e.g., black males). Provide a variety of different structures and culturally relevant program types (e.g., mentor networks, discussion groups, workshops, and transition programs) focused on supporting the mental health and well-being of students of color, international students, graduate/professional students, male students, LGBTQ, and other populations with special needs.

f. Make mental health and wellbeing part of institutional strategic planning and goal setting for student success outcomes. Offer student support and mental health programming at critical student transition points (e.g., first-year student experience, transfer student experience, graduation).

[1] Each institution must make counseling services available to both the complainants and respondents of sexual misconduct violations.

g. Develop a System-wide standing memorandum of understanding (MOU) to allow counseling centers to assist other institutions in the event of a large-scale emergency mental health need.
h. Create a System-wide referral network for students seeking off-campus care (e.g. Shrink Space or Thriving Campus).
i. Create a System-wide pool of psychiatric providers and other specialized staff that operate as a shared service and can be deployed to institutions in need of assistance, either via regional hubs or from a centralized home.
j. Explore System-wide solutions to providing or continuing after-hours care (in-person and/or virtual) to students to accommodate student needs (e.g. through ProtoCall Services).

Recommendation #2: Invest in tools that enable better measurement of service delivery and outcomes so that campuses can make informed care decisions

a. Ensure that every mental health center has an electronic medical record (EMR) system designed for student mental health services (e.g., Titanium) and determine how technology can best be used to manage service provision and measure outcomes.

b. Implement tools and surveys to measure service-level effectiveness (e.g., Counseling Center Assessment of Psychological Symptoms) and awareness of available mental health services if not already in place.

c. Dedicate IT support (either at the campus-level or the System-level) to facilitate the adoption of new data technologies.

d. Implement a health and well-being institutional task force charged with making data-informed decisions regarding mental health services and programming, monitoring best practices, contributing to institutional strategic planning for student success, and identifying trends in student mental health.

e. Establish a System-wide committee on student mental health that advocates for institutions and the System as a whole, tracks data and progress towards goals, shares information and resources between institutions, and defines and promotes a System-wide standard of care that falls within the reasonable bounds of each institution.

f. Create an internal peer review team of counseling staff to assist other centers in implementing standards aligned with accreditation by IACS (International Accreditation of Counseling Services).

g. Subscribe to membership in national mental health data sets in coordination with System (e.g. Healthy Minds, Center for Collegiate Mental Health, etc.).

Recommendation #3: Increase crisis intervention support and mental health education among various campus stakeholders

a. Implement “gatekeeper” training (such as Question, Persuade, and Refer (QPR) or Mental Health First Aid and offer tools for faculty and staff to help identify students who are showing warning signs of mental health distress and help students get the services they need.

b. Integrate mental health awareness into existing training programs (such as Green Zone or Safe Zone training) and develop new and/or take to scale campus-wide initiatives that promote positive mental health and wellness practices (i.e., health and wellbeing coaching, integrated health initiatives, stress management strategies/mindfulness workshops).

c. Invest in and educate student ambassadors, student leaders, peer academic leaders, student mentors and paraprofessionals across the campus community to help build and advocate for mental health awareness.

d. Invest in app-based and other technology-enhanced supplemental service programs that provide guided self-help (e.g., TAO, WellTrack, Sanvello, etc.).

e. Promote and advertise student mental health resources through multiple channels (including social media). Additionally, consolidate fragmented institutional mental health resources into a "one-stop, concierge" application that can be embedded in existing student applications (e.g. student success app or other websites/apps that have high student traffic).

f. Create a System-wide network of certified trainers to work across universities to provide training to staff, faculty, and students, allowing campuses without such trainers to host programs such as Mental Health First Aid; Question, Persuade, and Refer (QPR) training; and Trauma Informed Care and Inclusion Training.

g. Create a System-wide mental health resource website to share news and updates on services and key initiatives.

Recommendation #4: Invest in professional development and retention efforts of mental health professionals

a. Encourage membership in professional organizations (such as the Association for University and College Counseling Center Directors) so that staff can have access to resources such as the professional listserv, results of salary surveys, programming references, and support (pursuant to institutional policy).

b. Sponsor continuing ed programs for mental health professionals (e.g., American Psychological Association, National Association of Social Work, etc.).

c. Consider various staffing options outside of full-time, permanent staff to increase capacity, maximize client service time (e.g., part-time, temporary, trainees, etc.), and/or to provide crisis or same-day counseling services.

d. Conduct a System-wide salary review and benchmark against national data sets in both the public and private sectors to ensure adequate recruitment and retention of mental health professionals.[2]

e. Create a System-wide mentor program for new counseling center staff in both administrative roles (e.g., Director or Associate Directors) and dedicated roles (e.g., Diversity and Inclusion, Outreach, Trauma Services).

[2] See the Association for University and College Counseling Center Directors Annual Survey for benchmark data example.

f. Create new pipelines and pathways of talent from and through the UNC System, including expanding masters- and doctoral-level internships and other training programs. Pair existing masters- and doctoral-level programs with institutions that do not have graduate training programs to expand clinical opportunities and increase capacity across the System.

g. Provide centralized System support to mental health centers that need assistance in building capacity to host internships and trainings.

Recommendation #5: Pending System analysis of insurance recovery, expand insurance recovery in ways and for purposes with demonstrated return on investment

a. If an insurance feasibility analysis reveals that insurance recovery is a financially and operationally viable endeavor, institutions should consider developing a methodology to allocate a portion of insurance recovery monies to student mental health services.

b. The UNC System Office should work to secure one-time funding to conduct an insurance feasibility analysis before proceeding with a System-wide rollout.

c. The UNC System Office should work alongside one to three institutions that have previously committed to rolling out a full insurance recovery program to help them complete the rollout of their insurance recovery program, as well as to collect data and lessons from these efforts so that other institutions can use that information as they decide what to do about insurance recovery.

Recommendation #6: Utilize Federal Coronavirus Relief funds for non-recurring mental health service expenses

a. The UNC System should encourage institutions to utilize a portion of the Higher Education Emergency Relief Fund (HEERF) for non-recurring student mental health services. Examples of such fund uses (subject to review of HEERF funding restrictions) may include: temporary and/or contracted clinician staff, student micro-grants for off-campus mental health services, licensures and certifications for clinical staff to provide telemental health services, and furniture and equipment for offices and waiting rooms.

b. UNC System institutions should actively increase awareness among students to utilize the student aid portion of HEERF to seek off-campus mental health support (especially for those students that remain in a distance learning environment or student subpopulations that may be better served by specialized clinicians in the surrounding community.)

c. The UNC System should work to secure one-time federal funds from the Governor's Emergency Education Relief (GEER) Fund or American Rescue Plan (ARP) Funds to implement strategies that will help universities attain a sustainable service and financial delivery model for student mental health services. Examples of potential uses of funds include: investment in electronic medical record system at counseling centers (e.g., Titanium), investment in a shared pool of psychiatric providers across the UNC System, and implementation of a system-wide off-campus referral tracking system (e.g., Shrink Space or Thriving Campus, etc.).

Recommendation #7: Pursue additional philanthropic funds to support student mental health services

a. Institutions should collaborate with Advancement Offices to determine the feasibility of establishing mental-health giving funds and/or student-union micro grants.
b. The UNC System Office should identify additional student success grants to assist UNC System institutions. An experienced individual should be dedicated to grant writing and grant administration on behalf of smaller UNC System institutions that either do not have the personnel capacity or expertise to do so on their own. Additionally, the System should apply for one-time federal or state Coronavirus Relief funds to fund these costs.

Recommendation #8: Develop alternative service delivery models for specialized mental health services

a. The System Office should identify and prioritize those specialized mental health services that need to be scaled up across the UNC System. Additionally, the System Office should work to secure one-time federal funds provided to the state for Coronavirus relief to identify the most appropriate service delivery model (in conjunction with UNC System institutions) for each specialized mental health service and develop a pilot model in key service areas.

Background on the UNC System Student Mental Health Initiative

Over the course of 2019 and 2020, the Board of Governors' Committee on Strategic Initiatives hosted a series of discussions about student mental health and the implications for academic performance, retention and graduation, and the quality of student life on campus. Experts on mental health presented compelling data on mental health challenges on college campuses. Those discussions highlighted increases in the incidence of student mental health conditions among college-age students and the associated increase in demand for mental health services. These trends have strained student health budgets and the capacity of counseling and psychological centers to respond.

In response, in September 2020 the Board of Governors passed a resolution that tasked the president, in consultation with experts from across the UNC System, with examining the following questions:

- What is the appropriate level of mental health service that UNC System institutions should strive to provide, and how should the System measure whether that level of service delivery has been achieved?
- Are existing funding sources sufficient to meet that standard across the System? What alternative revenue models should the UNC System consider?
- What best practices and innovations should the UNC System and its constituent institutions consider to improve the delivery of student mental health services?

To analyze these questions and develop associated recommendations to the Board of Governors, the UNC System convened three workgroups made up of experts from across the System. Each group was chaired by a senior leader in the area of focus. The workgroups were as follows:

The **Measurement & Outcomes** workgroup was tasked with examining existing measures of student demand for services, utilization, and capacity to serve demand; exploring the appropriate level of mental health service that UNC System institutions should strive to provide; and determining how the System should measure whether that level of service delivery has been achieved. The group considered widely used measures of mental health need and service provision as well as the data collection and analysis tools needed to produce such data, including their current and potential applications within and across the System.

The **Promising Practices & Innovations** workgroup was tasked with reviewing the literature and identifying models of excellence across the field of mental health. The group reviewed the most recent literature and innovative practices in the field, and considered which models had the most potential for application to the UNC System.

The **Finance** workgroup was charged with examining the existing funding and operational models across the System, assessing gaps and needs in existing practices and funding sources, and identifying alternative revenue sources and models for funding student mental health services. The group analyzed financial and operational data from across the System, identified primary cost drivers and major areas of investment, explored the current role of general fund revenues, student fees, and student health insurance in financing student health, and identified alternative sources of revenue and models of delivery.

After assembling during the fall 2020 semester, the groups met frequently between January and April 2021 to collect and analyze data from across the System, consider efforts made at peer institutions, and formulate their recommendations.

UNC System Responds to Student Mental Health Needs During COVID-19

While the workgroups responded to the Board of Governors resolution, President Hans and System Office staff prioritized addressing student mental health needs that emerged during the pandemic:

- In December 2020, the UNC System launched a System-wide contract with ProtoCall Services, which provides students with access to telephonic crisis assessment and intervention support 24 hours a day, seven days a week, 365 days a year. This shared service—the first of its kind in a public university system—enhances the face-to-face support students can find on every UNC System campus by providing every student access to a safety net of support whenever they need it.
- In March 2021, President Hans sent a guidance to chancellors on how to prioritize HEERF III monies in support of system-wide goals. One of the primary recommendations was for institutions to use HEERF funds to support the mental health needs of their campus communities, in particular to improve the delivery of mental health services for students and employees of color, as recommended by the Racial Equity Task Force.
- In May 2021, President Hans secured $5 million from the Governor's Emergency Education Relief (GEER) Fund, a part of the federal government's Coronavirus relief efforts, to immediately begin implementing the recommendations outlined in this report related to acute student mental health needs.

Context on Student Mental Health

In recent decades, student mental health has become a major challenge on college campuses. Based on a 2018 survey, the World Health Organization found that 29 percent of first-year college students in the U.S. screened positive for at least one mental disorder during their lifetime and the average age of onset was 13.5 years of age.[3] And in 2019, the Healthy Minds Network identified that 14% of college students had thoughts of suicide in the past year and six percent of college students had a suicide plan (up from 10 percent and three percent, respectively, since 2014).[4] Finally in 2020, the Center for Collegiate Mental Health found a 12 percent increase between 2012 and 2020 among students seeking mental health care that had experienced a traumatic life event.[5]

The University of North Carolina System is not immune to the nationwide trends in student mental health. A recent Healthy Minds survey conducted at five UNC institutions from 2016-2017 to 2019-2020 reveal that mental health incidences closely follow national trends. For example, the Healthy Minds data identified that 14 percent of U.S. college students have had thoughts of suicide and, similarly, the data for UNC System institutions identify a suicide ideation range between 10 percent and 23 percent of UNC System students. Additionally, the Healthy Minds data identified that 37 percent of U.S. college students have had a mental health diagnosis within their lifetime, while the data for UNC System institutions reflects a similar range of 31 percent to 47 percent of UNC System students. Finally, whereas 24 percent of U.S. college students have taken psychiatric medication within the past year, 23 percent to 28 percent of UNC System students have taken psychiatric medication within the past year.[6]

Pre-existing mental health challenges have only been exacerbated by the pandemic. A recent survey of approximately 45,000 undergraduate, graduate, and professional students conducted in May-July 2020 at nine public research universities found that 35 percent of undergraduates and 32 percent of graduate and professional students screened positive for major depressive disorders.[7] The Healthy Minds Survey, which surveyed 33,000 students at 36 colleges in fall 2020, has also found increases in reported rates of depression among students during the pandemic, with 47 percent of students screening positive for clinically significant symptoms of depression or anxiety.[8] Finally, a mental health study conducted at the University of North Carolina at Chapel Hill between June and July 2020 identified that over half of students experienced academic stressors

[3] Auerbach RP, Mortier P, Bruffaerts R, Alonso J, Benjet C, Cuijpers P, et al. WHO World Mental Health Surveys International College Student Project: prevalence and distribution of mental disorders. J Abnorm Psychol 2018; 127: 623–38.

[4] Eisenberg, D., Lipson, S. K., & Heinze, J. (2019). The Healthy Minds Study, Fall 2019 Data Report (pp. 1– 26). Healthy Minds Network.

[5] Center for Collegiate Mental Health. (2021, January). *2020 Annual Report* (Publication No. STA 21-045).

[6] Eisenberg, D., Lipson, S. K., & Heinze, J. (2019). The Healthy Minds Study, Fall 2019 Data Report (pp. 1– 26). Healthy Minds Network.

[7] Chirikov, I., Soria, K.M., Horgos, B., Jones-White, D. (2020). SERU COVID-19 Survey: Undergraduate and Graduate Students Mental Health During the COVID-29 Pandemic. Student Experience in the Research University (SERU) Consortium. Retrieved from https://escholarship.org/content/qt80k5d5hw/qt80k5d5hw_noSplash_8aa48acc02df1194e79008d5043474eb.pdf?t=qf0aui

[8] Part 4 of 5: Impact of COVID-19 on Students Served at College Counseling Centers. CCMH. Retrieved on March 3, 2021 from https://ccmh.psu.edu/assets/BlogPDFs/Part%204%20of%205%20COVID%20Blog_Utilization.pdf.

stemming from the pandemic including: difficulty finding a space to work, difficulty performing work up to standards, and difficulty adapting to distance learning.[9]

Mental health issues impede academic progress and can lead to lower GPAs, leaves of absence, and stop outs.[10] According to one study, simply identifying students who have a low GPA *and* are experiencing a mental health issue could help administrators identify 30 percent of students who are at risk of dropping out.[11] Given that increasing retention rates is a key part of the UNC System's student success goals for the UNC System, it is vital that mental health and academic supports be integrated going forward.

In short, the incidence of mental health challenges has increased across student populations over the past decade while enrollment and expectations for student success have increased. However, in many cases, student mental health staff and funding have not increased proportionately but have either remained stagnant or declined on a per-student basis. As a result, many centers are strained beyond capacity, and are not able to provide students with the care they need, retain valuable mental health practitioners on staff, or support other units on campus in providing educational and outreach mental health services to students.

[9] Fruehwirth, J. C., Biswas, S., & Perreira, K. M. (2021). The Covid-19 pandemic and mental health of first-year college students: Examining the effect of Covid-19 stressors using longitudinal data. *PloS one*, *16*(3), e0247999. https://doi.org/10.1371/journal.pone.0247999

[10] https://www.acenet.edu/Documents/Investing-in-Student-Mental-Health.pdf

[11] Eisenberg, Daniel, Ezra Golberstein, and Justin B. Hunt. 2009. "Mental Health and Academic Success in College." The B.E. Journal of Economic Analysis & Policy 9 (1): Article 40.

Overview of Mental Health Service Provision in the UNC System

Student mental health service provision varies across the UNC System, which creates challenges in describing System-wide themes and trends. In this section, the report aims to provide an overview on three dimensions: organizational structure, services offered, and staffing. The following section examines funding of student mental health. The information for both the service and funding provision sections was gathered via institutional interviews and a System-wide survey administered to UNC institutions in spring 2021.

Organizational Structure

Within the UNC System, student mental health services are typically delivered via three complementary units on campus:[12]

- **Counseling and Psychological Services ("CAPS").** This unit primarily provides clinical services for students seeking mental health care (e.g., individual counseling services, group counseling services, etc.).
- **Center for Wellness and Prevention.** This unit primarily provides outreach and educational programs via classroom and campus programs to help students establish and maintain overall mental health (e.g., sexual assault awareness, alcohol and drug use awareness, interpersonal violence education, etc.).
- **Student Health Center.** While Student Health Centers primarily provide physical health services, it also provides psychiatric services for students (including routinized medication management). Additionally, institutional interviews and survey responses revealed that approximately 15 percent of primary care provider visits are primarily related to mental and emotional concerns. For instance, Appalachian State University conducted a noteworthy analysis identifying that of eight primary care providers in the Student Health Center, the equivalent of 0.9 FTEs provided mental health services based on a review of medical diagnosis codes.

Service Offerings

Each institution provides a wide array of mental health services. Below is an overview of on-campus mental health service offerings by institution, which have been divided into three categories: clinical services, outreach and educational services, crisis care and specialized services.

Clinical Services:

	Individual Counseling Services	Group Counseling Services	Community-Provider Referral Coordination
Doctoral Universities - Very High Research Activity			
NCSU	✓	✓	✓
UNC-CH	✓	✓	✓

[12] Please note that the organizational name and organizational structure may vary by institution. For example, some UNC institutions have the "CAPS" unit located within the Student Health Center instead of as a standalone unit.

Clinical Services (continued):

Doctoral Universities - High Research Activity			
ECU	✓	✓	✓
NC A&T	✓	✓	✓
UNCC	✓	✓	✓
UNCG	✓	✓	✓
UNCW	✓	✓	✓
Master's Colleges and Universities – Larger programs			
ASU	✓	✓	✓
NCCU	✓	✓	
UNCP	✓	✓	✓
WCU	✓	✓	✓
Master's Colleges and Universities – Medium programs			
FSU	✓	✓	✓
WSSU	✓	✓	
Baccalaureate Colleges - Arts & Science Focus			
UNCA	✓	✓	✓
Baccalaureate Colleges - Diverse Fields			
ECSU	✓	✓	✓
Special Focus Four-Year			
UNCSA	✓	✓	✓
Other			
NCSSM[13]	✓	✓	

Outreach and Educational Services:

	Mental Health Classroom/Campus Outreach and Education	Interpersonal Violence Education (i.e., Sexual Assault, Domestic Violence)
Doctoral Universities - Very High Research Activity		
NCSU	✓	✓
UNC-CH	✓	✓
Doctoral Universities - High Research Activity		
ECU	✓	✓
NC A&T	✓	✓
UNCC	✓	✓
UNCG	✓	✓
UNCW	✓	✓

[13] The Mental Health Workgroups are grateful to the North Carolina School of Science and Math (NCSSM) for their participation and completion of the UNC mental health survey in light of the fact that the majority of the survey inquiries were not applicable to the nature of their institution (i.e., a public, two-year high school). As such, only applicable service offerings are noted for NCSSM.

Outreach and Educational Services (continued):

Master's Colleges and Universities – Larger programs		
ASU	✓	✓
NCCU	✓	✓
UNCP	✓	✓
WCU	✓	✓
Master's Colleges and Universities – Medium programs		
FSU	✓	✓
WSSU	✓	✓
Baccalaureate Colleges - Arts & Science Focus		
UNCA	✓	✓
Baccalaureate Colleges - Diverse Fields		
ECSU	✓	✓
Special Focus Four-Year		
UNCSA	✓	✓
Other		
NCSSM	✓	

Crisis Care & Specialized Services:

	Crisis Services	Psychiatric Services	Psychiatric Medication Mgmt	Collegiate Recovery or Addictive Services	Smoking Cessation Programs	Interpersonal Violence Counseling (i.e., Sexual Assault, Domestic Violence)	Multi-cultural Specific Programs
Doctoral Universities - Very High Research Activity							
NCSU	✓	✓	✓	✓	✓	✓	✓
UNC-CH	✓	✓	✓	✓	✓	✓	✓
Doctoral Universities - High Research Activity							
ECU	✓	✓	✓	✓		✓	✓
NC A&T	✓	✓	✓	✓		✓	✓
UNCC	✓	✓	✓	✓	✓	✓	✓
UNCG	✓	✓	✓	✓		✓	✓
UNCW	✓	✓	✓	✓	✓	✓	✓
Master's Colleges & Universities - Larger Programs							
ASU	✓	✓	✓	✓		✓	✓
NCCU	✓	✓	✓	✓		✓	
UNCP	✓	✓	✓	✓		✓	
WCU	✓		✓	✓	✓	✓	✓
Master's Colleges & Universities - Medium Programs							
FSU	✓			✓		✓	
WSSU	✓	✓	✓	✓	✓	✓	✓

Crisis Care & Specialized Services (continued):

Baccalaureate Colleges							
UNCA	✓	✓	✓	✓	✓	✓	✓
ECSU	✓			✓		✓	✓
Special Focus Four-Year							
UNCSA	✓	✓	✓	✓	✓	✓	✓
Other							
NCSSM[14]							✓

The provision of crisis care and specialized services emerged as a key insight in institutional interviews and survey analysis conducted by the Finance Workgroup. Many centers provide care for a long list of issues for which students may seek help. Additionally, some students have acute and/or long-term mental health needs, and serving these students can require health professionals with experience and/or training in a particular area (i.e., psychiatric services). Meeting these needs can be particularly challenging for small institutions as these institutions cannot employ a full suite of mental health specialists, due to cost and/or the availability of specialists within its region.

From the discussions of the workgroups, it appears that a small proportion of students utilize a high proportion of mental health services. In an environment of finite budgets and capacity, this dynamic may "crowd out" others who are also in need of care. While it is important that UNC System institutions continue to promote the health and wellbeing of students requiring acute and/or long-term mental health care, it is also necessary to serve the larger population of students that are primarily in need of more routine clinical services and/or outreach and educational services.

To ensure the mental health and wellbeing of *all* students, the UNC System will need to develop an approach that serves students who need clinical services and outreach/education services and those in need of crisis and more intensive and/or long-term mental health care. To do so, both institutions and the System must work to increase capacity on individual campuses and through System-wide shared services. Specifically, while individual institutions can increase staffing and funding resources for clinical and outreach services, a shared System-wide model should be developed to address critical items on the list of specialized mental health services.

Below is a list of crisis and specialized mental health services that were identified in the course of data collection, in addition to the list of services identified at the onset of survey development:

- Eating Disorder Support
- Alcohol and Drug Use Counseling
- Interpersonal Violence Counseling
- Autism Spectrum Disorder Support
- Sexual Assault Grief Counseling
- Sexual Offender Counseling
- Racial Trauma Support
- Undocumented Student Support

<u>Staffing</u>

In order to understand capacity in mental health service provision, it is necessary to take a detailed look at staffing in each center. The Measurement & Outcomes and Promising Practices workgroups examined several established measures that focus on staff size and

[14] Please see previous note.

clinical capacity. Two measures in particular are commonly used in the field:

- **Staff to student ratios.** The International Accreditation of Counseling Services ("IACS") staff-to-student ratios have been a widely used measured for evaluating adequate levels of staffing. At the most basic level, meeting student demand for services requires having qualified staff who can provide them. IACS recommends that minimum staffing ratios should be in the range of one full-time equivalent ("FTE") professional clinical provider (i.e., excluding trainees) to every 1,000 to 1,500 students. The clinical staff to student ratios in the UNC System range from 1:350 to 1:1,910, with an average of 1:1,330 across the System. (For a full list of staffing ratios across the System, please see the table below.)

- **Clinical Load Index.** The IACS staff-to-student ratio (while very helpful) has two limitations: (1) it assumes a constant level of demand and (2) it assumes each staff FTE provides a constant level of clinical supply/capacity. Due to these limitations, a more recent measurement was introduced by the Center for Collegiate Mental Health ("CCMH") at Penn State University: The Clinical Load Index ("CLI"). The CLI describes the relationship between the demand for, and supply of mental health services in college and university counseling centers by calculating an index based on an institution's enrollment, counseling center utilization, counseling center clinical capacity, and percent utilization. The CLI score can be thought of as "clients per standardized counselor (per year)" or the "standardized caseload" for the counseling center. CLI scores can fall into one of three zones:
    - Low CLI Centers (scores between 30 and 72): These centers are more likely to be at smaller institutions, provide full-length assessments and intake forms, and provide ongoing weekly counseling. One note of caution is that while some institutions may have a low CLI score, this may be due to the fact that the institution provides a very limited band of services and students are generally dissuaded from seeking help from the center. As such, a low CLI can mask a greater mental health need than is evident from the score.
    - Mid CLI Centers (scores between 73 and 167): This includes the vast majority of centers. Institutions in this range are often in "demand management" model and are more likely to shift from full-length assessment and intake forms to brief assessments, invest in more rapid access and self-help resources as compared to routine clinical care; and place limits on the number of sessions or treatments students can access.
    - High CLI Centers (scores 168 to 310): These centers are often in "crisis and referral" mode and are more likely to introduce fees to stem demand, shorten the amount of time or number of individual clinical sessions, and put quite a bit of oversight on each clinician's case load (i.e., "productivity rate").

  Across the UNC System, CLIs for the academic year 2018-2019 range from a low of 70 to a high of 272, with an average of 151, showcasing the diversity of clinical capacity across institutions. (For a full list of CLIs across the System, please see the table below.) While acknowledging that raising or lowering CLIs can be a challenge (the measure moves in response to increasing enrollment and/or adding staff), the Measurement & Outcomes Workgroup agreed that narrowing the wide range of CLIs across the System would be favorable.

With these measures in mind, below is an overview of staffing size and composition at each UNC institution. Each institution was asked to respond with full-time equivalents (FTEs) of in-house *and* contracted providers. Note that staffing ratios should *not* be interpreted as measures of quality or effectiveness of care.

Staffing Ratios and Clinical Load Index:

	Clinical Load Index (2018-2019)[15]	Clinical Provider Staffing Ratio (2020-2021)	Psychiatric Provider Staffing Ratio (2020-2021)[16]
Doctoral Universities - Very High Research Activity			
NCSU	186	1:1,260	1:9,010
UNC-CH	241	1:1,160	1:5,560
Doctoral Universities - Very Research Activity			
ECU	128	1:1,470	1:49,850[17]
NC A&T	116	1:1,170	1:5,840
UNCC	159	1:1,510	1:13,600
UNCG	221	1:1,910	1:87,320[18]
UNCW	99	1:1,570	1:7,480
Master's Colleges & Universities: Larger Programs			
ASU	144	1:1,280	1:19,160
NCCU	133	1:1,390	1:5,570
UNCP	134	1:1,190	1:17,900[19]
WCU	191	1:1,470	0
Master's Colleges & Universities: Medium Programs			
FSU	96	1:1,750	0
WSSU	272	1:1,530	1:9,470
Baccalaureate Colleges			
UNCA	135	1:600	1:10,070
ECSU	70	1:710	0
Special Focus Four-Year			
UNCSA	91	1:350	1:1,060
Other			
NCSSM	N/A	N/A	N/A
ALL			
UNC System	151	1:1,330	1:10,960

[15] The Clinical Load Index ("CLI") for 2018-2019 was provided in lieu of 2019-2020 as the workgroups believe that the pre-pandemic CLI more accurately represents the true CLI for institutions. For 2020-2021, most UNC institutions reported a lower CLI. Based on institutional interviews, many institutions experienced a reduction in students served in 2020-2021 which corroborates with national data as presented in the Center for Collegiate Mental Health COVID-19 Blog Series. It should be noted that although many UNC institutions experienced a reduction of students served in 2020-2021, overall workload increased due to the following factors: (1) mental health professionals investing, learning, and/or obtaining appropriate licensures to provide telemental health; (2) additional regulatory compliance tasks to identify the physical location of each student served to ensure state/federal compliance with service delivery; and (3) follow-up calls and interactions to identify potential students of self-harm. (It should be noted that these follow-up interactions are not "counted" in an institution's CLI.)

[16] In the event that an institutional survey noted use of a part-time psychiatric provider but did not indicate the full-time equivalent, the Finance Workgroup applied a 50% rate to part-time providers. This rate was only applied to one part-time psychiatric provider.

[17] ECU has 0.5 FTE psychiatric providers for ~24.9K FTE students. Therefore, to retain the staffing ratio of "1 FTE per X students," it is noted that ECU has "1 FTE per 49.9K FTE students."

[18] UNCG has 0.2 FTE psychiatric providers for 17.5K FTE students. Therefore, to retain the staffing ratio of "1 FTE per X students," it is noted that UNCG has "1 FTE per 87.3K FTE students."

[19] UNCP has ~0.4 FTE psychiatric providers for ~7.2K FTE students. Therefore, to retain the staffing ratio of "1 FTE per X students," it is noted that UNCP has "1 FTE per 17.9 FTE students."

Overview of Mental Health Funding Sources in the UNC System

Based on institutional interviews and a survey conducted by the Finance Workgroup, the following funding sources were identified at UNC institutions:

1. **Student fee revenue.** This includes the Health Fee, Campus Security Fee (to the extent such fee is used for suicide intervention services and/or interpersonal violence services), and the Athletics Fee (to cover mental health services specific to student athletes).
2. **General Fund.** This includes tuition and state appropriations to support mental health services. (Physical and mental health services for students are permissible uses of General Funds.)
3. **Insurance recovery**. This includes Student Blue reimbursements and third-party insurance reimbursements.
4. **Grants.** Grant funding from external organizations—especially in the area of alcohol and drug counseling and suicide prevention—is used by institutions to support mental health services.
5. **Other.** This includes fees-for-services and investment income.

Based on the survey findings collected by the Finance Workgroup, below is an overview of funding by institution:[20]

	Student Fee	General Fund	Insurance Recovery	Grants	Other
Doctoral Universities - Very High Research Activity					
NCSU	78%	16%	1%	1%	4%
UNC-CH	75%	0%	24%	0%	1%
Doctoral Universities - High Research Activity					
ECU	46%	50%	0%	4%	0%
NCA&T	10%	69%	4%	17%	0%
UNCC	96%	4%	0%	0%	0%
UNCG	37%	50%	0%	11%	2%
UNCW	0%	100%	0%	0%	0%
Master's Colleges & Universities: Larger Programs					
ASU	45%	55%	0%	0%	0%
NCCU	43%	13%	0%	44%	0%
UNCP	13%	74%	0%	13%	0%
WCU	100%	0%	0%	0%	0%
Master's Colleges & Universities: Medium Programs					
FSU	14%	86%	0%	0%	0%
WSSU	63%	37%	0%	0%	0%
Baccalaureate Colleges					
UNCA	73%	14%	0%	0%	13%
ECSU	98%	2%	0%	0%	0%
Special Focus Four-Year					
UNCSA	100%	0%	0%	0%	0%
All					
UNC System	60%	31%	4%	3%	2%

[20] For the purpose of this analysis, North Carolina School of Science and Math was excluded as many of the finance survey questions were not applicable considering NCSSM is a public high school that generally refers students to off-campus mental health services when a student need arises.

The survey findings suggest that, on average, UNC institutions spend $125 per student FTE for mental health service provision. Spending varied between institutions with cost ranging between $77 and $316 per student FTE. As previously noted in the review of staffing ratios, the institutional expenditures listed below should *not* be interpreted as measures of quality or effectiveness of care. Below is an overview of mental health expenditures by student FTE by institution:

	Mental Health Labor Expenditures per Student FTE (FY19)	Mental Health Non-Labor Expenditures per Student FTE (FY19)	Total Mental Health Expenditures per Student FTE (FY19)
Doctoral Universities - Very High Research Activity			
NCSU	$177	$27	$204
UNC-CH	$109	$13	$122
Doctoral Universities - High Research Activity			
ECU	$66	$11	$77
NCA&T	$98	$17	$115
UNCC	$119	$8	$127
UNCG	$118	$18	$136
UNCW	$80	$12	$92
Master's Colleges & Universities – Larger Programs			
ASU	$88	$8	$96
NCCU	$102	$12	$114
UNCP	$123	$6	$129
WCU	$70	$7	$77
Master's Colleges & Universities – Medium Programs			
FSU	$63	$21	$84
WSSU	$81	$4	$85
Baccalaureate Colleges			
UNCA	$181	$58	$239
ECSU	$120	$10	$130
Special Focus Four-Year			
UNCSA	$238	$78	$316
All			
UNC System	$110	$15	$125

The high reliance on student fees and general fund income create two forward-looking concerns:

1. **The rise in cost and consumption of physical and mental health services puts some institutions on the verge of no longer being able to rely solely on the health fee to fund mental health services.** The ability to cover costs through student fee revenue has diminished. Given sustained or increased levels of demand, this fragile financial balance may become unsustainable.

2. **Reliance on General Fund increases financial fragility for mental health centers**. As noted in the table above, all but three UNC System institutions utilize General Funds to fund mental health services. As financial pressures on the General Fund continue to mount in the coming years (i.e., due to fragile finances, a shifting enrollment landscape, etc.), this leaves mental health service units in a

precarious financial situation to maintain year-over-year funding levels. Mental health service units could find themselves in the situation of having to petition for funding increases (to cover cost and utilization increases) against a broad swath of other General Fund requests.

In addition to the concerns about student fee and General Fund revenues, the Finance Workgroup identified additional insights through survey analysis and institutional interviews:

- **Insurance recovery is underway at many campuses.** A noteworthy finding of the Finance Workgroup was that 14 of 17 UNC System institutions have implemented at least partial insurance recovery programs – many within the last two to three years. The Finance Workgroup's interviews identified that to cope with the rising cost and consumption of physical and mental health services, many UNC System institutions have either independently (or with the System Office's assistance) implemented a partial insurance recovery program. These programs typically recover only for physical health services and in some cases for psychiatric medication management and often recover only from Student Blue or from a subset of third-party insurance providers.
- **Insurance recovery dollars do not support mental health services.** The Finance Workgroup's working assumption at the onset of the survey was that institutions would use a portion of insurance recoveries to fund the expansion of mental health services – especially as this is one of the few recurring revenue sources that can be used to fund new positions and/or salary increases. However, the survey responses indicate that though insurance recovery is underway at many campuses, such recoveries are being allocated to fund physical health services.
- **Smaller and/or Minority-Serving Institutions fund mental health services through a "piecemeal" approach.** Another key finding among the Finance Workgroup was the use of grant funding by smaller and/or minority-serving institutions. While the use of grants funds is commendable, especially in the areas of suicide prevention services, alcohol and drug use counseling, and interpersonal violence counseling and education, it does appear that grant funding was primarily used as a mechanism to "find enough money" to fund mental health services. While we appreciate the entrepreneurial effort put forth by university administrators to raise the funds needed to provide services, our concern is the use of non-recurring grants funds creates a fragile financial foundation for mental health service units.

Approved FY22 Health Fee Revenue Increases

Recognizing the limitations on the various funding streams, the Finance Workgroup reviewed approved Health Fees for 2021-22 to determine if the increases would materially increase funding for mental health service units. The Finance Workgroup reviewed the estimated incremental revenue for each institution to understand if such revenue would provide a material source of new revenue for each institution. Below is an overview of the analysis:

Institution	2020-21 Health Fee	2021-22 Health Fee	Health Fee % Increase	Estimated Incremental Revenue
Doctoral Universities - Very High Research Activity				
NCSU	$407.00	$445.00	9.3%	$1.1M
UNC-CH	$400.15	$410.15	2.5%	$280K
Doctoral Universities - High Research Activity				
ECU	$263.00	$319.00	21.3%	$1.1M
NC A&T	$338.50	$370.00	9.3%	$340K
UNCC	$247.00	$335.00	35.6%	$2.4M
UNCG	$310.00	$372.00	20.0%	$770K
UNCW	$219.00	$246.07	12.4%	$335K
Master's Colleges & Universities: Larger Programs				
ASU	$325.00	$335.00	3.1%	$180K
NCCU	$312.66	$312.66	0.0%	-
UNCP	$205.49	$215.49	4.9%	$50K
WCU	$314.00	$350.00	11.5%	$330K
Master's Colleges & Universities: Medium Programs				
FSU	$247.00	$287.00	16.2%	$100K
WSSU	$267.00	$340.00	27.3%	$310K
Baccalaureate Colleges				
UNCA	$368.00	$403.00	9.5%	$100K
ECSU	$265.23	$333.00	25.6%	$110K
Special Focus Four-Year				
UNCSA	$882.00	$882.00	0.0%	-

As indicated in the table above, the majority of institutions (with the exception of ECU, NCSU, UNCC, and UNCG) will not see a material increase in health fee revenue in the years to come. It should also be noted that the estimated incremental health fee revenue indicated in the table above is used to cover mental and physical services. The Finance Workgroup's survey findings indicate that physical health expenses at UNC System institutions are 2.0-3.0x of mental health services. Therefore, it is reasonable to expect that of the health fee revenue increases listed above, a sizable portion of these will be used for physical health services.

Therefore, it does not appear that the estimated incremental revenue generated from the approved health fee will create material change to the financial picture for mental health services for the majority of UNC System institutions.

Recommendations to Improve Service Provision

Each workgroup conducted its own analysis and developed an initial set of recommendations, which were then consolidated into a single set of recommendations across two primary areas: Improving Service Provision and Improving Financial Sustainability. Recommendations are categorized according to whether they apply to individual institutions or the System as a whole (as represented by the System Office).

Recommendation #1: Increase investment in quality and coordination of student mental health care within and between institutions

Both the Promising Practices and Measurement & Outcomes workgroups discussed at length how to determine the appropriate level of service that institutions should provide. While the diversity of institutions within the System—ranging from large research universities to small liberal arts colleges, urban and rural-serving institutions, HBCUs and MSIs—is an asset, it also creates a challenge in trying to identify a standard level of service. Nearly all institutions face capacity challenges in meeting the growing needs of their students, such as having sufficient staff to see students in a timely manner, being able to serve students from diverse backgrounds and with diverse needs, or generally providing care when and where students need it. But identifying a one-size-fits-all solution is difficult given the diversity of students served, institutional missions, levels of funding, and institutional cultures across the System.

Another challenge to identifying a universal level of service is the varying ecosystems that each institution operates in. The ability to serve students is not only contingent on the resources available at each institution but also within the neighboring area. For example, institutions in the resource-rich Research Triangle or Charlotte area are fortunate to have a pool of health professionals in the community—professionals who can serve as referrals for students that may need additional care. However, for institutions in more rural or remote areas, accessing and referring a student to a community provider can be more difficult, if not impossible. Institutions in rural or remote areas are, therefore, in a position whereby they not only have to be able to provide all of the care a student might need, but sometimes are also called upon to provide services to the community as they may be the only provider in town.

Within institutions themselves, counseling centers must meet a wide variety of student needs. To address these needs, the Promising Practices group recommends that institutions consider using a stepped-care model, also referred to as “continuum of services.” In this model, counseling centers offer students various treatment options with the understanding that students will receive the least intensive level of treatment appropriate for their treatment needs thereby conserving resources for those requiring a higher level of care.

NC State's Stepped Care Model:

Source: NC State Counseling Center (https://counseling.dasa.ncsu.edu/services/)

In a stepped care model services range from helping students learn effective strategies to manage their stress and hopefully prevent their condition from worsening, to those that require more involved and resource-intensive interventions from counseling center staff. In this continuum, students may enter the system at any point and counseling centers will have appropriate resources to assist.

Recognizing that there are distinct student needs on each campus and no two centers are exactly alike, both Promising Practices and Measurement & Outcomes agreed that it is imperative that all campuses provide a more robust approach to ensure that students are thriving, and not merely surviving. The recommendations below are designed to address some of these challenges.

Institutional Recommendations:

a. Provide sufficient staff (including clinicians, practitioners, caseworkers or social workers) and space to meet target levels of service, including but not limited to providing weekly therapy to students who seek help. Determine the sufficient number of staff by benchmarking against the Clinical Load Index, the IACS staffing ratio, and Healthy Minds data (where available).

b. Consider using a stepped care model to distribute counseling needs across a continuum of service options and develop a scope of practice to clearly communicate when referral out of the center is warranted.

c. Increase the diversity of staff and expand access to counseling professionals with diverse backgrounds and/or training in trauma-informed and culturally responsive methods.

d. Ensure there is adequate staff to comply with federal regulations (i.e., under the Clery Act and Title IX, universities must make counseling services available to both the complainants and respondents of sexual misconduct violations).[21]

e. Offer student support and mental health programming targeted at underrepresented populations (e.g., black males). Provide a variety of different structures and culturally relevant program types (e.g., mentor networks, discussion groups, workshops, and transition programs) focused on supporting the mental health and well-being of students of color, international students, graduate/professional students, male students, LGBTQ, and other populations with special needs.

f. Make mental health and wellbeing part of institutional strategic planning and goal setting for student success outcomes. Offer student support and mental health programming at critical student transition points (e.g., first-year student experience, transfer student experience, graduation).

System-Led Recommendations:

g. Develop a System-wide standing MOU to allow counseling centers to assist other institutions in the event of a large-scale emergency mental health need.

h. Create a System-wide network of referral resources for students seeking off-campus care (e.g. Shrink Space or Thriving Campus), such that centers can refer students out to appropriate providers across the State, regardless of where the institution is located.

i. Create a System-wide pool of psychiatric providers and other specialized staff that operate as a shared service and can be deployed to institutions in need of assistance, either via regional hubs or from a centralized home.

j. Explore System-wide solutions to providing or continuing after-hours care (in-person and/or virtual) to students to accommodate student needs (e.g. through ProtoCall Services).

Recommendation #2: Invest in tools that enable better measurement of service delivery and outcomes so that campuses can make informed care decisions

In its efforts to examine how mental health service provision and delivery can best be measured, the Measurement & Outcomes workgroup found that while some UNC institutions collect and use data to inform their service provision and delivery, not all campuses are able to do so because they do not have the same data and measurement capacity as other institutions. For example, electronic medical record systems (EMRs) that are

[21] Each institution must make counseling services available to both the complainants and respondents of sexual misconduct violations.

specifically designed for university and college counseling centers not only allow practitioners to efficiently schedule appointments and send reminders to students, but also enable them to administer various assessments, evaluations, and client satisfaction surveys to conduct repeated measurements.

These measurements allow institutions to ensure that students are getting better, and track whether centers are achieving their desired outcomes. (Examples of commonly used assessments and surveys include the Counseling Center Assessment of Psychological Symptoms and the Outcome Questionnaire). Data from these specially designed EMRs can also feed into both institutional and national surveys such as the Healthy Minds Survey, which is administered by the Healthy Minds Network annually to examine mental health, service utilization, and related issues among undergraduate and graduate students.[22]

The Promising Practices Workgroup found that technology can be particularly useful in making scheduling and record-keeping more accurate and efficient, and is especially beneficial in gathering, analyzing, and sharing data. Reporting data is critical for documenting utilization on campus and measuring student outcomes, but also for contributing to national databases such as the Association for University and College Counseling Center Directors and Center for Collegiate Mental Health, which publish analyses of mental health trends. Indeed, technology can fulfill a host of needs, including note-keeping, electronic form completion, automatic appointment reminders, navigating local and national comparison data, and electronic satisfaction or outcome data surveys.

Both the Promising Practices and the Measurement & Outcomes Workgroups agreed that having proper data collection tools and measurement systems (such as EMRs designed for college mental health centers) is necessary for understanding service delivery efficacy and efficiency at each institution. Additionally, having appropriate IT staff to extract information from such systems so that the data can be consistently reviewed is important. (It should be noted that even to extract data to conduct the institutional CLI analysis for this report, smaller institutions without dedicated IT staff sometimes had to rely on the assistance of larger institutions in learning how to extract the required data. This highlights the importance of not only investing in the data and tools to capture data, but also providing IT staff to ensure each institution is optimizing use of data collection efforts.)

In the absence of an ability to collect and review data, institutions cannot know the true demand for mental health services, the efficacy of the services they deliver, and the areas in need of improvement. Developing and implementing data collection tools and strategies is vital to improving the provision of student mental health.

Institutional Recommendations:

a. Ensure that every mental health center has an electronic medical record (EMR) system designed for student mental health services (e.g., Titanium) and determine how technology can best be used to manage service provision and measure outcomes.

[22] The Healthy Minds Survey captures information related to the major mental health challenges facing students as well as their likelihood to participate in various help-seeking activities. Linking survey data to participation rate data, Healthy Minds can estimate the percentage of students with unmet need on a given campus. Six UNC System institutions have participated in Healthy Minds within the last five years: ASU, NCSU, UNCG, UNCSA, WCU, and UNCW. The survey also collects data on the percentage of students on a given campus who have knowledge of campus mental health resources, and know where to go on campus to receive services.

b. Implement tools and surveys to measure service-level effectiveness (e.g., Counseling Center Assessment of Psychological Symptoms) and awareness of available mental health services if not already in place.

c. Dedicate IT support (either at the campus-level or the System-level) to facilitate the adoption of new data technologies.

d. Implement a health and well-being institutional task force charged with making data-informed decisions regarding mental health services and programming, monitoring best practices, contributing to institutional strategic planning for student success, and identifying trends in student mental health.

System-Led Recommendations:

e. Establish a System-wide committee on student mental health that advocates for institutions and the System as a whole, tracks data and progress towards goals, shares information and resources between institutions, and defines and promotes a System-wide standard of care that falls within the reasonable bounds of each institution.

f. Create an internal peer review team of counseling staff to assist other centers in implementing standards aligned with accreditation by IACS (International Accreditation of Counseling Services).

g. Subscribe to membership in national mental health data sets in coordination with the System (e.g. Healthy Minds, Center for Collegiate Mental Health, etc.).

Recommendation #3: Increase crisis intervention support and mental health education among various campus stakeholders

The Promising Practices and Measurement & Outcomes Workgroups agreed that caring for students is a campus-wide responsibility, and suggested that colleges and universities adopt a shared institutional approach to supporting students' mental and physical wellbeing. Given the numbers of students who report struggling with mental health challenges and the limited capacity of counseling centers to see all students for all issues, it is critical to collaborate with campus partners such as faculty, campus recreation, student engagement, campus ministries, academic advising, and housing and residence life, all of whom can provide non-clinical support to students. Additionally, fellow students often serve as key intermediaries in student mental health. Data has shown that students are more likely to go to roommates or peers for help first before seeking professional care. And while still relatively new in higher education, peer coaching practices can be an effective tool to improve student wellbeing and academic achievement.

Recognizing the interconnected nature of students' mental wellbeing, all efforts should be made to cultivate a community of care across campus and connect efforts across siloes. By taking an integrated, holistic approach to mental health and wellbeing, campus-wide partnerships will not only increase the amount of resources available to students, but these partnerships can also serve as great indicators and early-warning systems for when a student is in need. Furthermore, given the importance of mental health to academic success, mental health education and wellness should be integrated with more traditional models of academic support and advising, such that students receive seamless support to help them succeed in their academic careers.

The recommendations in this section seek to promote a more comprehensive approach to mental health care for students.

Institutional Recommendations:

a. Implement "gatekeeper" training (such as Question, Persuade, and Refer (QPR) or Mental Health First Aid) and offer tools for faculty and staff to help identify students who are showing warning signs of mental health distress and help those students get the services they need.

b. Integrate mental health awareness into existing training programs (such as Green Zone or Safe Zone training) and develop new and/or take to scale campus-wide initiatives that promote positive mental health and wellness practices (i.e., health and wellbeing coaching, integrated health initiatives, stress management strategies/mindfulness workshops).

c. Invest in and educate student ambassadors, student leaders, peer academic leaders, student mentors and paraprofessionals across the campus community to help build and advocate for mental health awareness.

d. Invest in app-based and other technology-enhanced supplemental service programs that provide guided self-help (e.g., TAO, WellTrack, Sanvello, etc.).

e. Promote and advertise student mental health resources through multiple channels (including social media). Additionally, consolidate fragmented institutional mental health resources into a "one-stop, concierge" application that can be embedded in existing student applications (e.g. student success app or other websites/apps that have high student traffic).

System-Led Recommendations:

f. Create a System-wide network of certified trainers to work across universities to provide training to staff, faculty, and students, allowing campuses without such trainers to host programs such as Mental Health First Aid; Question, Persuade, and Refer (QPR) training; and Trauma Informed Care and Inclusion Training.

g. Create a System-wide mental health resource website to share news and updates on services and key initiatives.

Recommendation #4: Invest in professional development and retention efforts of mental health professionals

From a review of both popular and scholarly literature, it is clear that there has been a paradigm shift in the way many students, faculty, staff, and other constituencies think about mental health and wellness on campuses. Many now recognize that mental health and wellness is an integral component of student success. And yet at many campuses, the infrastructure (such as staffing, technology, facilities, and operational structures) has not yet caught up to the change in culture.

The resourcing of counseling centers will affect service models, delivery and emphasis. In particular, the staffing of a center will have a direct impact on the types of services counseling centers are able to offer. The Measurement & Outcomes Workgroup noted the high turnover rate for mental health staff, particularly in

lower-resourced institutions. This decreased capacity not only prevents practitioners from providing direct care to more students in the form of weekly therapy, but also prevents them from holding trainings and providing educational opportunities to promote mental health across campus. It can even preclude them from hosting graduate interns who might be able to add capacity to the center.

Building capacity in current staff, deepening the bench for potential leadership, and building new pipelines of talent into mental health staff positions are necessary for success. The recommendations below seek to bolster the current workforce such that they can provide the best possible care to all UNC System students, all while recognizing the resource constraints under which the System is operating.

Institutional Recommendations:

a. Encourage membership in professional organizations (such as the Association for University and College Counseling Center Directors) so that staff can have access to resources such as the professional listserv, results of salary surveys, programming references, and support (pursuant to institutional policy).

b. Sponsor continuing education programs for mental health professionals (e.g., American Psychological Association, National Association of Social Work, etc.).

c. Consider various staffing options outside of full-time, permanent staff to increase capacity, maximize client service time (e.g., part-time, temporary, trainees, etc.), and/or to provide crisis or same-day counseling services

System-Led Recommendations:

d. Conduct a System-wide salary review and benchmark against national data sets in both the public and private sectors to ensure adequate recruitment and retention of mental health professionals.[23]

e. Create a System-wide mentor program for new counseling center staff in both administrative roles (e.g., Director or Associate Directors) and dedicated roles (e.g., Diversity and Inclusion, Outreach, Trauma Services).

f. Create new pipelines and pathways of talent from and through the UNC System, including expanding masters- and doctoral-level internships and other training programs. Pair existing masters- and doctoral-level programs with institutions that do not have graduate training programs to expand clinical opportunities and increase capacity across the System.

g. Provide centralized System support to mental health centers that need assistance in building capacity to host internships and trainings.

[23] See the Association for University and College Counseling Center Directors Annual Survey for benchmark data example.

Recommendations to Improve Financial Sustainability

Based on the Finance Workgroup's observations and findings, the following funding service provisions are presented for consideration.

Recommendation #5: Pending System analysis of insurance recovery, expand insurance recovery in ways and for purposes with demonstrated return on investment

Recognizing that many UNC System institutions have begun partial insurance recovery programs in the last two to three years, the Finance Workgroup recommends that institutions (under the leadership of the UNC System Office) consider expansion of insurance recovery programs, and more specifically, physical and mental health insurance recovery for Student Blue and third-party insurance providers.

However, because this is the only recommendation likely to generate recurring revenues, special attention must be given to the viability of insurance billing as a revenue enhancement strategy. As such, the Finance Workgroup is not recommending an "automatic go" for institutions to proceed with insurance recovery. Instead, the System Office should conduct a feasibility analysis to determine the financial, operational, and labor market consequences before proceeding with a System-wide rollout of expanded insurance billing. While the Finance Workgroup has had multiple conversations with individual institutions to understand the various consequences and benefits of insurance recovery, it is the Finance Workgroup's overall conclusion that institutions have had varying results with the implementation of their insurance recovery programs. Because institutions are typically only a few years into their partial insurance recovery programs, it has been difficult to ascertain the true impact of insurance recovery programs on student health finances.

Additionally, the Finance Workgroup recommends that insurance recovery for mental health services be limited to medication management for psychiatric services. Interviews with mental health professionals across the UNC System highlighted the concern that insurance recovery for mental health services could create access barriers. However, interviews also highlighted that such access barriers generally do not exist when limited to insurance recovery for medication management for psychiatric services. Additionally, some institutions provide initial consultations with psychiatric providers at no cost and, should the student decide to move forth with routine, medication management appointments, subsequent appointments are billed under insurance recovery. The Finance Workgroup believes that this is a noteworthy practice that other institutions should consider to reduce access barriers.

Finally, recognizing that most of the insurance recovery revenues will come from physical health services, the Finance Workgroup recommends that institutions consider adopting a methodology for a portion of the insurance recoveries to be allocated to mental health services.

To recap, below is an overview of recommendations delineated by institutional versus System responsibility:

Institutional Recommendation:

a. If an insurance feasibility analysis reveals that insurance recovery is a financially and operationally viable endeavor, institutions should consider developing a methodology to allocate a portion of insurance recovery monies to student mental health services.

System-Led Recommendations:

b. The UNC System Office should work to secure one-time funding to conduct an insurance feasibility analysis before proceeding with a System-wide rollout. (See text box for specific questions.)

c. The UNC System Office should work alongside one to three institutions that have previously committed to rolling out a full insurance recovery program to help them complete the rollout and collect data and lessons from these efforts so that other institutions can use that information as they decide what to do about insurance recovery.

Questions to Answer in an Insurance Recovery Feasibility Analysis

1. What is the estimated net financial contribution (i.e., insurance recovery revenue less recurring and/or one-time costs) for institutions to implement an insurance recovery program on Student Blue and third-party providers (for physical health and medication management on psychiatric services?)

2. How does the net financial contribution vary under the following three insurance billing models: (1) a System-wide shared billing model; (2) an in-house, institution-led billing model, and (3) an outsourced, institution-led billing model?

3. What would be the labor market consequences to Student Health Centers and/or Counseling Centers for implementing an insurance recovery program (i.e., is there any impact on personnel turnover and/or salary premiums)?

4. Is a coordinated, System-wide approach to insurance recovery an operationally and financially feasible solution? Said differently, how much standardization would have to take place across institutions to health service charges and insurance reimbursement rates to bring institutions under a common, System-wide contract?

5. If a System-wide contract is neither operationally nor financially feasible, can the System still negotiate a contract to cover student subpopulations for which institutions cannot do on their own?

Recommendation #6: Utilize Federal Coronavirus Relief funds for non-recurring mental health service expenses

The Finance Workgroup recommends that institutions consider utilizing federal funds from the Higher Education Emergency Relief Funds (HEERF), the Governors Education Emergency Relief (GEER), and/or the American Rescue Plan (ARP) for non-recurring expenses related to student mental health services. Specifically, the Finance Workgroup recommends that UNC System institutions and the UNC System consider the following HEERF sources and uses:

Institutional Recommendations:

a. The UNC System should encourage institutions to utilize a portion of the Higher Education Emergency Relief Fund for non-recurring student mental health services. Examples of such fund uses (subject to review of HEERF funding restrictions) may include: temporary and/or contracted clinician staff; student micro-grants for off-campus mental health services; licensures and certifications for clinical staff to provide telemental health services, and furniture and equipment for offices and waiting rooms.

b. UNC System institutions should actively increase awareness among students to utilize the student aid portion of HEERF to seek off-campus mental health support (especially for those students that remain in a distance learning environment or student subpopulations that may be better served by specialized clinicians in the surrounding community.)

System-Led Recommendations:

c. The UNC System should work to secure one-time federal funds (from GEER or ARP) to implement strategies that will help universities attain a sustainable service and financial delivery model for student mental health services. Examples of potential uses of funds include: investment in a shared pool of psychiatric providers across the UNC System, investment in electronic medical record system at counseling centers (e.g., Titanium), and implementation of a systemwide off-campus referral tracking system (e.g., Shrink Space or Thriving Campus, etc.).

While the Finance Workgroup recognizes that the student aid portion of HEERF I and HEERF II (i.e., the student aid made available in March 2020 and December 2020, respectively) was primarily used by students to cover basic living expenses (e.g., rent, food, etc.), the Finance Workgroup is hopeful that the increase in student aid available under HEERF III can and will be used by students to cover more than basic living expenses. A concerted effort to raise awareness among students to use these student aid funds for mental health should be made by each UNC institution.

Recommendation #7: Pursue additional philanthropic funds to support student mental health services

Philanthropic support for college mental health has grown in recent years as mental health status has become better understood as a potential impediment to persistence and graduation. The Finance Workgroup has identified the following philanthropic funding sources for consideration:

- **Mental Health Giving Funds.** The Finance Workgroup has identified an increasing number of institutions - across the Carnegie Classification spectrum - have established fundraising campaigns for student mental health services in the recent past. This area of philanthropy appears to have high affinity and empathy among donors along with an easy "return on investment (ROI)" proposition to correlate student mental health and student success. Although mental health-giving funds have grown in prevalence in recent years, only two UNC System institutions (UNC-CH and NCSU) have established such funds.
- **Student Union Micro Grants.** Similar to the mental health-giving funds, student-union micro grants are also based on philanthropic giving. The primary difference is that instead of relying on large-donation grants to fund mental health services for the general student population, these micro-grants are aimed

at addressing the most at-risk student populations. These micro-grants can be used by students to cover co-pays, session fees, transportation costs, etc.

- **Student Success Grants.** As there has been increasing awareness of the correlation between student mental health and student success, the Finance Workgroup has noted that a growing number of student success grants have allowed grants to be used for mental health initiatives.

Below are specific recommendations for UNC System institutions and the System Office:

Institutional Recommendations:

a. Institutions should collaborate with Advancement Offices to determine the feasibility of establishing mental-health giving funds and/or student-union micro grants.

System-Led Recommendations:

b. The UNC System Office should identify additional student success grants to assist UNC System institutions. An experienced individual should be dedicated to grant writing and grant administration on behalf of smaller UNC System institutions that either do not have the personnel capacity or expertise to do so on their own. Additionally, the System should apply for one-time federal or state Coronavirus Relief funds to fund these costs.

Recommendation #8: Develop alternative service delivery models for specialized mental health services

As noted in the section on "Overview of Mental Health Service Provision in the UNC System," the Finance Workgroup found it particularly noteworthy to see the growing list of specialized mental health issues that students are struggling with across UNC institutions. Considering that providing targeted care for all of these issues is generally more costly than core services and recognizing that it is difficult for smaller institutions to provide the full-suite of specialized mental health services, the Finance Workgroup recommends that alternative service delivery models be developed across the System for such services. In addition to ensuring student equity to access such services – irrespective of the student's "home" campus – the Finance Workgroup believes that developing alternative service delivery models for specialized mental health services is needed to safeguard against the expected growing costs (and utilization) of such services in the years to come.

The Finance Workgroup has identified six alternative delivery models for specialized mental health services that are identified below. The delivery models are delineated between intra-institutional models (i.e., sharing services between institutions in the UNC System) and inter-institutional models (i.e., sharing services between a UNC System institution and a non-UNC System institution).

Intra-Institutional Models*:*

1. Hub and Spoke Shared Service Model - A "larger" UNC System institution (or an institution with additional capacity/resources) provides specialized mental health care services to students of a "smaller" (or more constrained) UNC System institution. An illustrative example would be a larger UNC System institution providing eating disorder support to students of a smaller UNC System institution.

2. System-wide Shared Service Model - The UNC System Office employs or contracts a pool of specialized mental health service professionals to be shared across UNC System institutions. An illustrative example would be the development of a system-wide pool of shared psychiatric providers.

3. Regional/Networked Shared Service Model - Similar-sized or regionally-located UNC System institutions pool together financial and/or human resources to provide specialized mental health services. An illustrative example would be sharing interpersonal violence counselors.

Inter-Institutional Models:

4. Health Clinic and Medical Center Partnerships – A UNC System institution contracts with a nearby health clinic or academic medical center to provide specialized mental health services for its students. An illustrative example would be eating disorder support, where students may be best served in an in-patient care environment.

5. Third-Party Service Provider – A UNC System institution would contract with a behavioral health and wellness company (e.g., Christie Campus) to provide a suite of specialized mental health services. The Finance Workgroup has noticed that in the prior two to three years there appears to be a growing cottage industry of behavioral health and wellness companies aimed at serving universities to meet escalating demand of mental health services.

6. Limited-Service, Contracted Provider – A UNC System institution contracts with a known mental health clinician (generally in the nearby community) to provide a specialized mental health service. Unlike a third-party service provider, this model generally allows UNC System institutions more autonomy over service contract provisions and allows the UNC System institution to engage with a provider with an existing service quality history. An illustrative example would be a UNC System institution contracting with an alcohol and drug use specialist.

Below is a specific recommendation for the System Office:

System-Led Recommendations:

a. The System Office should identify and prioritize the specialized mental health services that need to be scaled up across the UNC System. Additionally, the System Office should work to secure one-time federal funds provided to the state for Coronavirus relief to identify the most appropriate service delivery model (in conjunction with UNC System institutions) for each specialized mental health service and develop a pilot model in key service areas.

Next Steps

While much work lays ahead, the UNC System is thankful to have a strong foundation to build upon, and for the progress made even while this initiative has been under way. With the allocation of one-time federal resources to the System—through both HEERF and GEER—we have an opportunity to move from recommendations to actions on our most pressing priorities. The President and UNC System Office staff will work with the Board of Governors, institutional leadership, mental health professionals and their service units, and faculty, staff, and students to make progress on these issues in the months and years to come.

Appendix

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Copy of UNC Mental Health Survey

Mental Health Services Finance Survey

Instructions: Please fill out the **attached Excel file** to capture the mental health revenue sources and expenses for 2018-2019. Additionally, please answer the questions below:

1. **Please fill out the below table regarding mental health services provided on a regular, systematic basis to your student body (i.e., not simply on a one-off, emergency basis).**

Service	Provided in-house through CAPS/ Counseling Ctr?	Referred off-campus?	Provided by another unit on campus (please name)?	% of help-seeking students referred out for this service	Covered by health fee?	Session limits per year (if any)?
Individual Counseling Services						
Group Counseling Services and Workshops (including Support and Drop-in Groups)						
Psychiatric Services						
Collegiate Recovery and Addictive Services						
Crisis Services (clinical and outreach)						
Smoking Cessation Program						
Mental Health Classroom/Campus Outreach and Education						
Interpersonal Violence Education						
Interpersonal Violence Counseling Services						

Service	Provided in-house through CAPS/ Counseling Ctr?	Referred off-campus?	Provided by another unit on campus (please name)?	% of help-seeking students referred out for this service	Covered by health fee?	Session limits per year (if any)?
Psychiatric Medication Management						
Community-Provider Referral Coordination		N/A				
Multicultural-Specific Mental Health Programs (i.e. individual/group therapy for Black, Indigenous, or Students of Color)						

2. **Does your Health Services Fee cover expenses for the Student Health Center <u>and</u> Counseling/CAPS Center?**
   ___Yes ___No

3. **Does your CAPS/Counseling Center provide clinical mental health services to the faculty and/or staff at your institution?**
   ___Yes ___No

4. **Please list the top 5 most common student health insurance providers at your institution. Please indicate the percent of students covered under each insurance provider:**

Insurance Provider	% of Students Covered
Student Blue	Y%
XXX	Y%
XXX	Y%
XXX	Y%
XXX	Y%

5. **Does your institution bill Student Blue for physical and/or mental health services?**
   ___Yes ___No

6. **Does your institution bill third-party insurance providers (other than Student Blue) for <u>physical</u> health services?**
___Yes ___No

6a. If no, please indicate why:

7. **Does your institution bill third-party insurance providers (other than Student Blue) for <u>mental</u> health services?**
___Yes ___No

7a. If no, please indicate why:

8. **Please provide an overview of your mental health services staff:**

	# of FTEs: In-house Providers	# of FTEs: Contracted Providers
Clinical Providers:		
Psychologist		
Counselor		
Social Worker		
Marriage & Family Therapist		
Other (pls specify)		
Clinical Provider Trainees:		
Post-Doc Fellow		
Doctoral Intern		
Practicum Student		
Post-Masters Trainee		
Graduate Assistant		
Other (pls specify)		
Psychiatric Providers:		
Psychiatrist		
Psychiatric Nurse Practitioner		
Psychiatric Physician Assistant		
Other (pls specify)		
Psychiatric Provider Trainees:		
Post-Doc Resident		
Other (pls specify)		
Case Managers		
Wellness Coaches		
Admin Support Staff		
Other (pls specify)		

	FY18-19		
A. SOURCES	**Mental Health Sources**	**Physical Health Sources**	**Total**
Health Services Fee Revenue			$-
Campus Security Fee Revenue			$-
Athletics Fee Revenue			$-
General Fund: Budgeted[1]			$-
General Fund: Transfer[1]			$-
Third-Party Insurance Recovery			$-
Student Blue Reimbursements			$-
Fee-for-Services Revenue			$-
[Insert Additional Revenue Source]			$-
[Insert Additional Revenue Source]			$-
[Insert Additional Revenue Source]			$-
[Insert Additional Revenue Source]			$-
[Insert Additional Revenue Source]			$-
Total Sources (Recurring & Non-Recurring)	$-	$-	$-

USES	CAPS/ Counseling Ctr	Wellness & Prevention Ctr	Student Health Ctr (Mental Health)	Student Health Ctr (Physical Health)	Total
B. Salaries & Benefits					
Health Professional Salaries					$-
Administrative Salaries					$-
Other Salaries					$-
Benefits					$-
Total Salaries & Benefits	$-	$-	$-	$-	$-
C. Non-Labor					
Contracted Services					$-
Supplies & Materials					$-
Facilities Costs					$-
Other Operating Costs (List Significant Uses)					$-
[Insert Additional Expense]					$-
Total Non-Labor	$-	$-	$-	$-	$-
Total Uses	$-	$-	$-	$-	$-

Footnotes:

<1> As we recognize many campuses use General Funds (i.e., Tuition & Appropriations) to fund mental health services, please breakout "Budgeted General Funds" and "Transfer General Funds." "Budgeted General Funds" refer to General Fund allotments that are pre-determined at the beginning of the fiscal year (usually recurring funds) whereas "Transfer General Funds" refers to one-time General Funds that are generally injected in the middle or the end of a fiscal year to address a deficit that has arisen.

UNC Staff Size and Details (FY21)

Clinical Providers:

	Psychologist	Counselor	Social Worker	Marriage & Family Therapist	Other
Doctoral Universities - Very High Research Activity					
NCSU	4 In-house	16 In-house	5 In-house	-	-
UNC-CH	9 In-house	-	15 In-house	-	-
Doctoral Universities - High Research Activity					
ECU	4 In-house	6.8 In-house	3 In-house; 0.15 Contracted	1 In-house	LCAS - 2
NC A&T	2 In-house	6 In-house	2 In-house	-	-
UNCC	14 In-house	1 In-house	3 In-house	-	-
UNCG	2.83 In-house	2.5 In-house	3.83 In-house; 0.5 In-house (only for student athletes)	-	-
UNCW	5 In-house	2 In-house; 1 Contracted	1 In-house: 1 Contracted	-	-
Master's Colleges & Universities: Larger Programs					
ASU	9 In-house	2 In-house; 5 PT Contracted	1 In-house; 1 PT Contracted	-	-
NCCU	1 In-house	4 In-house	1 Contracted (only for student athletes)	-	1 Contracted (only for student athletes)
UNCP	-	4 In-house	2 In-house	-	-
WCU	3.92 In-house	1.77 In-house	1.83 In-house	-	-
Master's Colleges & Universities: Medium Programs					
FSU	-	2 In-house	-	-	Director -1
WSSU	-	2.1 In-house	1 In-house	-	-
Baccalaureate Colleges					
UNCA	1 In-house	3 In-house; 1 Contracted	-	-	-
ECSU		1 In-house	1 In-house	-	LCAS - 1
Special Focus Four-Year					
UNCSA	-	2 In-house	1 In-house	-	2 outside therapists contracted for weekly sessions
Other					
NCSSM	1 Contracted	2 In-house; 1 Contracted	-	-	-

Clinical Provider Trainees:

	Post-Doc Fellow	Doctoral Intern	Practicum Student	Post-Masters Trainee	Graduate Asst	Other
Doctoral Universities - Very High Research Activity						
NCSU	-	3 In-house	0.77 In-house	6 In-house	2.5 In-house	-
UNC-CH	-	4 In-house	4 In-house	4 In-house	-	2 In-house (Prescribing Pharmacy Trainee)
Doctoral Universities - High Research Activity						
ECU	-	-	0.25 In-house	0.5 In-house	1.8 In-house	-
NC A&T	-	-	-	2 In-house	-	-
UNCC	1 In-house	3 In-house	8 In-house	-	2 In-house	-
UNCG	-	-	0.25 In-house (only for student athletes)	-	1.5 In-house	-
UNCW	2 In-house	-	-	-	-	-
Master's Colleges & Universities: Larger Programs						
ASU	1 In-house	3 In-house	5 In-house	1 In-house	1 In-house	-
NCCU	-	-	2 In-house	0	2 In-house	-
UNCP	-	-	-	-	-	3-6 per semester (Master's Level Interns)
WCU	-	3 In-house	4 In-house	1 In-house	-	-
Master's Colleges & Universities: Larger Programs						
FSU	-	-	-	-	-	-
WSSU	-	-	1 PT (varies by semester)	-	-	-
Baccalaureate Colleges						
UNCA	-	-	1 Contracted	-	-	-
ECSU	-	-	.5 In-house	-	-	-
Special Focus: Four-Year						
UNCSA	-	-	-	-	-	1 Grad Intern for each full academic yr
Other						
NCSSM	-	-	-	-	-	-

Psychiatric Providers:

	Psychiatrist	Psychiatric Nurse Practitioner	Psychiatric Physician Asst	Other
Doctoral Universities - Very High Research Activity				
NCSU	3.5 In-house	-	-	-
UNC-CH	2 In-house	2 In-house	-	1 In-house (Prescribing Pharmacist)
Doctoral Universities - High Research Activity				
ECU	0.45 Contracted	0.05 Contracted	-	-
NC A&T	1 Contracted	1 In-house	-	-
UNCC	2 In-house	-	-	-
UNCG	0.2 Contracted	-	-	-
UNCW	0.1 Contracted	-	2 In-house	-
Master's Colleges & Universities – Larger Programs				
ASU	1 In-house	-	-	-
NCCU	0.25 In-house	1 In-house	-	1 Contracted (Sports Psychiatrist only for student athletes)
UNCP	-	-	1 Contracted Provider for 16 hrs per week	-
WCU	-	-	-	-
Master's Colleges & Universities – Medium Programs				
FSU	-	-	-	-
WSSU	1 Contracted (PT)	-	-	-
Baccalaureate Colleges				
UNCA	0.2 Contracted	-	0.1 Contracted	-
ECSU	-	-	-	-
Special Focus Four-Year				
UNCSA	1 In-house	-	-	-
Other				
NCSSM	-	-	-	-

Psychiatric Provider Trainees:

	Post-Doc Resident	Other
Doctoral Universities - Very High Research Activity		
NCSU	1 In-house	-
UNC-CH	-	1 In-house (Prescribing Pharmacist Intern)
Doctoral Universities - High Research Activity		
ECU	0.29 Contractor	-
NC A&T	-	-
UNCC	-	-
UNCG	-	-
UNCW	-	-
Master's Colleges & Universities: Larger Programs		
ASU	-	-
NCCU	-	-
UNCP	-	-
WCU	-	-
Master's Colleges & Universities: Medium Programs		
FSU	-	-
WSSU	1 Contracted (PT)	-
Baccalaureate Colleges		
UNCA	0.2 Contractor	-
ECSU	-	-
Special Focus Four-Year		
UNCSA	1 In-house	-
Other		
NCSSM	-	-

General and Administrative Staff:

	Case Managers	Wellness Coaches	Admin Support Staff	Other
Doctoral Universities - Very High Research Activity				
NCSU	2 In-house	-	4 In-house	-
UNC-CH	1 In-house	4 In-house; 5 Contractors	4 In-house	1 In-house (Clinical Addictions Specialist)
Doctoral Universities - High Research Activity				
ECU	1.75 In-house	-	2.75 In-house	-
NC A&T	1 In-house	-	1.5 In-house	-
UNCC	1 In-house	-	4 In-house	1 In-house (Mental Health Educator)
UNCG	1 In-house	-	2.5 In-house	-
UNCW	-	-	1 In-house	-
Master's Colleges & Universities: Larger Programs				
ASU	(The referral coordinator is included in the clinical provider count)		3 In-house	8 PCPs in Student Health providing approximately 0.9 FTE in services based on medical diagnosis codes
NCCU	1 in-house	-	1 In-house	-
UNCP	-	-	1 In-house; 2 Grad Assts	-
WCU	-	-	2 In-house	-
Master's Colleges & Universities: Medium Programs				
FSU	-	1 In-house	1 In-house	-
WSSU	(The case manager's workload is included in the clinical provider count)	YANA Champion Program	University Specialist	-
Baccalaureate Colleges				
UNCA	-	-	1 In-house	-
ECSU	-	-	-	-
Special Focus Four-Year				
UNCSA	2 In-house	-	1 In-house	-
Other				
NCSSM	-	-	1 In-house	1 In-house (School Counseling Intern)