Milken Institute School of Public Health
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Geiger Gibson Program in Community Health Policy

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Geiger Gibson /
RCHN Community Health Foundation Research Collaborative

Policy Research Brief # 40

Teaching Health Centers: A Promising Approach for Building Primary Care Workforce for the 21st Century

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About the Geiger Gibson / RCHN Community Health Foundation Research Collaborative

The Geiger Gibson Program in Community Health Policy, established in 2003 and named after human rights and health center pioneers Drs. H. Jack Geiger and Count Gibson, is part of the Milken Institute School of Public Health at The George Washington University. It focuses on the history and contributions of health centers and the major policy issues that affect health centers, their communities, and the patients that they serve.

The RCHN Community Health Foundation is a not-for-profit operating foundation established to support community health centers through strategic investment, outreach, education, and cutting-edge health policy research. The only foundation in the U.S. dedicated solely to community health centers, RCHN CHF builds on a long-standing commitment to providing accessible, high-quality, community-based healthcare services for underserved and medically vulnerable populations. The Foundation's gift to the Geiger Gibson program supports health center research and scholarship.

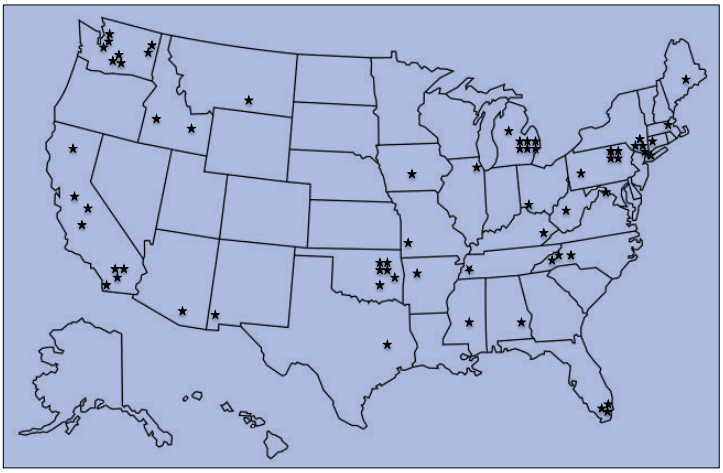
Additional information about the Research Collaborative can be found online at http://publichealth.gwu.edu/projects/geiger-gibson-program-community-health-policy or at rchnfoundation.org.

About 50 million Americans have difficulty accessing timely medical care – even if they have health insurance – because they live in rural, urban or suburban areas without enough primary care physicians.[1] The shortage in the number of primary care physicians, such as family physicians or internists, is expected to deepen.[2] As a result, there is renewed interest in innovative approaches to training primary care physicians that encourage them to practice in underserved communities with the greatest needs. The Institute of Medicine, an arm of the National Academy of Sciences, recently called for major reforms in the way that the United States provides graduate medical education, the training of medical residents after they graduate from medical school before they go into independent practice.[3]

One of the most innovative alternatives – the Teaching Health Centers (THC) model – began development and testing in 2011[4], but is now jeopardized by the loss of federal funding.

By 2014, more than 550 residents were being trained in 60 THC programs across 27 states and the District of Columbia (see Figure 1 and Appendix at the end).[5] After completion of their training, they are expected to provide care for almost one million patients per year. Three-quarters of the THC residency programs are sponsored by nonprofit community health centers and the rest are at similar community-based settings.

Figure 1. Location of Teaching Health Center Programs



Source: Health Resources and Services Administration. Teaching Health Center GME 2014 Grant Awards

Most residency training today is hospital-based. Most residents spend little time in ambulatory care clinics and even less in community-based primary care settings. Yet, it is in the community -- and not in the hospital -- where the vast majority of patient care takes place. A principal cause of this mismatch is Medicare graduate medical education (GME) policy, which was designed 30 years ago. Medicare GME funds flow to hospitals based on complex formulas, provided that the residents work in those institutions. In fact, funding is reduced when residents spend time in community settings away from the hospital. Moreover, there is a hospital bias in favor of specialty training because most specialty residencies are more lucrative for hospitals than are primary care residencies. Specialty diagnostics and procedures are much more remunerative to hospitals than are the charges for generalist care.

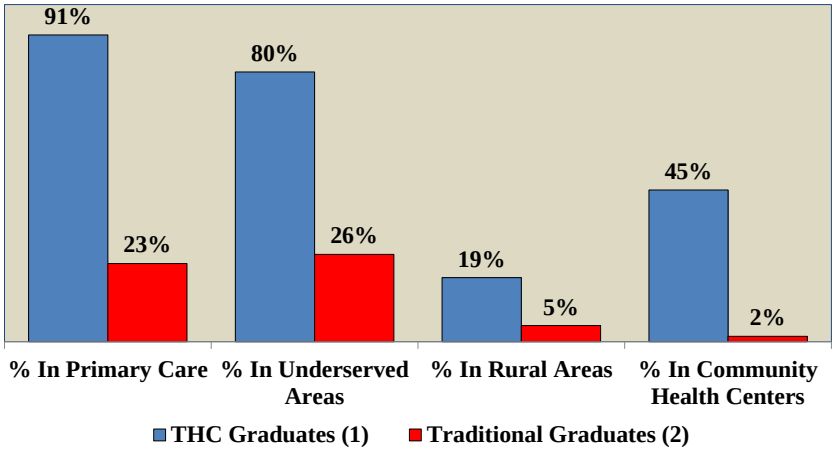
The Institute of Medicine found that current GME policies are not well-attuned to America's current and future health or social needs. For example, too few residents enter primary care and relatively few go on to practice in rural or underserved communities where the needs are highest.[6] In contrast, the THC model offers clinical training at centers of excellence in community-based ambulatory care, such as nonprofit community health centers (CHCs) or community-based training consortia. These are settings in which residents can learn to practice efficient and effective primary care for patients in underserved communities both during, and for many years after, their residencies.

It is too early for a full assessment of the THC program. Because the program began in 2011 and three years are usually needed to complete a residency, only a small share of the total number of residents have had the time to complete their training (two classes that completed in 2013 and 11 classes that completed in 2014). A more comprehensive evaluation is in progress.[7] However, preliminary results demonstrate positive and promising results and signal why this innovative model of graduate medical education should continue to be developed and tested.

Do THC Graduates Practice in Primary Care and in Underserved Communities? During their residency periods, THC residents practice in primary care settings in underserved communities. A fundamental question in assessing the value of the THC-GME investment is what happens to the graduates after they complete their residencies: do they continue to work in similar clinical settings or underserved communities? To find out, the American Association of Teaching Health Centers (AATHC) surveyed the original THC sites (those funded in 2011, the first year of the program) to understand what happened to the graduates of that group; 10 of the 11 programs submitted data. (Nine of the sites trained primary care physicians, one trained dentists, another discipline for which workforce shortages are common. In subsequent years, some THC programs also trained psychiatrists, another common workforce shortage discipline, but most of the programs train primary care physicians (family medicine, internal medicine, pediatrics, obstetrics/gynecology and geriatrics.)

Figure 2 compares the post-residency choices of THC graduates with residency graduates in general. The comparisons signal the extent to which – on a longer term basis – these newly minted physicians remain true to their training and practice ambulatory primary care in underserved areas.

Figure 2. What Types of Practices Do THC and Traditional Residents Have After Graduating?



Sources: 1. AATHC survey (2015) 2. Chen, et al. (2013)

- Almost all (91%) of THC graduates remain in primary care practice, compared to less than one-quarter (23%) of traditional GME graduates.[8]
- About three times as many THC graduates (76%) choose to practice in underserved communities, compared to 26% of traditional graduates.
- Almost four times (21%) as many THC graduates enter practice in rural areas, versus 5% of traditional graduates.
- Forty percent of THC graduates go on to practice at CHCs, compared to 2% of traditional graduates.
- Most (66%) of the initial THC graduates continue to practice in the states where they were residents. Thus, they usually remain in the areas that mustered resources for the residency programs, building workforce capacity in those local areas. For example, in Texas, a state with a

relatively serious primary care physician shortage, 87% of the residents stayed in Texas. (Comparable information is not available for the traditional GME graduates.)

Although these data represent only the first classes of the initial THCs, they highlight the promise of these fledgling programs to train the precise types of physicians needed to meet the well-established needs of America's communities.

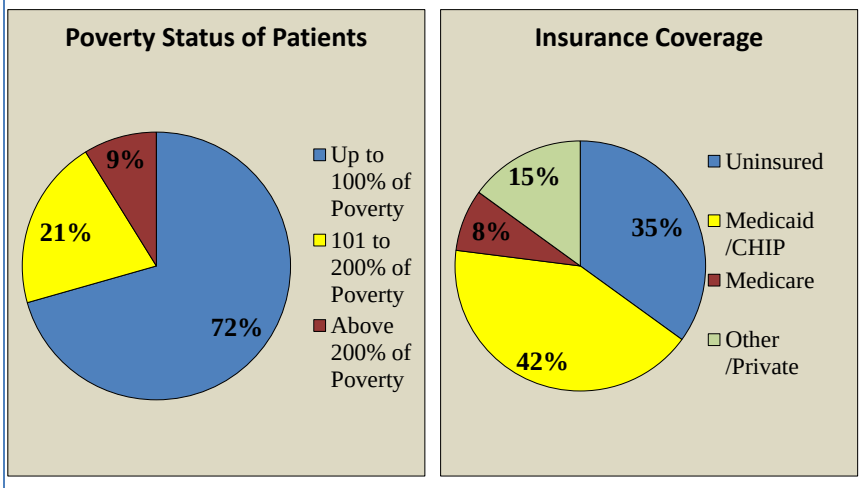
How Many Patients Are Served by THC Residents? A key element of resident training is learning the craft of patient care by caring for patients under the supervision of experienced faculty physicians. THC residents generally focus on rendering primary care in a team-based setting using current patient-centered medical home standards. Over his or her training a typical resident provides care for up to 1,000 patients, gradually increasing patient caseloads as they gain experience. After graduation, physicians' productivity increases because less time is spent on education and more in practice and because they have become more efficient and effective after years of training. Data from CHCs indicates that an average full-time physician cares for about 1,700 patients per year.

- The current 550 THC residents are estimated to provide care to ***more than half a million patients*** in the 28 states.
- With the completion of their residencies, these THC graduates will provide care for ***almost one million patients*** per year.
- THC programs have already expanded primary care capacity in needy communities – a benefit that will only grow with the maturation and stabilization of the program.
- If THC programs close due to unstable funding, American communities will lose primary care capacity now – and in the future.
- Maintaining or expanding THC programs will expand care for patients in underserved areas across the U.S.

What Types of Patients Are Served by THCs? Specific data about the profile of patients served by THC residents are being developed by the Health Resources and Services Administration (HRSA), but insight can be gained from the profile of patients served by CHCs nationwide.

About 92% of CHC patients have incomes below twice the poverty line. Most CHC patients are uninsured (35%) or on Medicaid or CHIP (42%). Given that the great majority of THC graduates practice in underserved and rural communities and two-fifths continue to work in CHCs, most are likely to continue to care for low-income, uninsured and Medicaid patients after they complete their residencies.

Figure 3. Characteristics of Patients Receiving Care at Community Health Centers



Source: Uniform Data System for 2013. Health Resources and Services Administration.

THC Residents Are Trained for 21st Century Care. THC residents receive training at centers skilled in providing community-based ambulatory care. A substantial body of research indicates that CHCs – which sponsor most of the THC programs -- provide high quality, efficient care.[9] [10] Research indicates that, on average, patients who receive care at CHCs have annual medical expenditures that are about 24% lower than similar patients receiving care in other settings. THC graduates are learning how to provide efficient, high quality primary care that may reduce the need for later costly emergency or inpatient care.[11]

CHCs are at the forefront of adopting modern quality improvement initiatives. As of 2013, 80% of health centers had adopted electronic health record systems and 54% were recognized as patient-centered medical homes, rates well ahead of the norm for overall American physician practices.[12] Health centers are also ahead of the curve in using team-based care including nurse practitioners, physician assistants, nurses and other medical staff to provide care efficiently.[13] THC graduates are being trained for primary care practices that can address the Triple Aim goals of improving health, increasing quality, and containing health care costs.

The Demand for THC Training Is Strong. About 11,000 applications from medical school students were received for 93 residency slots for the 2014/2015 year in the initial THC programs.[14] **More than 100 medical students applied for every position.** While students typically submit multiple applications, the very high ratio of applicants to slots shows there is robust interest in programs like these. Moreover, among the initial programs, application numbers grew about 30% between the first and most recent academic year. The demand for innovative primary care training programs has been strong.

Conclusions. Edward Salsberg, a noted expert who previously established the Center for Workforce Studies at the American Association of Medical Colleges and directed the National Center for Workforce Data and Analysis in HHS has observed that "Assuring an adequate supply of physicians in underserved geographic areas or certain specialties would be best addressed by policies and programs targeted to eliminate these shortages."[15] The THC program is the type of leading edge policy initiative that addresses these needs – seemingly successfully – in an efficient and accountable fashion.

The federal appropriations law for 2015 did not include funding for the THC program for fiscal year 2015. As a result, the existing programs have faced problems determining whether they would be able to continue their operations in the coming 2015/2016 academic year. HRSA has announced they can use the remaining funds to partially support current residents through June 2016. A recent survey by Elizabeth Brown and Kathleen Klink found that two-thirds of the THC program directors said they were unlikely to be able to support current residency programs without continued federal funding. As of February 2015, we have received reports that numerous programs are not accepting new residents for the coming year because of the lack of funding and uncertainty regarding future resources, although many are trying to continue to maintain their previously admitted trainees, albeit with reduced funding. A detailed picture of the extent to which THC programs can maintain their current residents or admit new ones is not yet available, but the current situation, if not remedied, augurs badly for this fledgling and promising movement.

However, there is substantial interest on both sides of the political aisle and in both chambers of Congress in supporting this innovative approach to graduate medical education. While several

legislative proposals were introduced in 2014 and remain under consideration in 2015, uncertainty about continued funding remains a major barrier to the long-term success of the THC model.

At a time when the nation is searching for ways to improve graduate medical education, it is premature to cut off one of the most promising alternatives seen in decades. The lack of federal funding in 2015 is already making it difficult to sustain the current THC programs and, if funding is not restored in the immediate future, there will be serious longer-term consequences. Further support and testing of the Teaching Health Center model can inform the debate about methods of resident training and facilitate the development of national policies for graduate medical education. It will also contribute to the training of the types of physicians who can help address the need for efficient, quality primary care in underserved communities across the country.

Note: This version of the paper, dated March 10, 2015 is revised from the version originally dated March 3, 2015. It was modified to change the percentage of traditional GMS graduates who go on to practice at community health centers or in rural areas, based on discussions with some of the authors of Chen, et al. (2013).

APPENDIX: CURRENT TEACHING HEALTH CENTER PROGRAMS/SITES	
Cahaba Medical Care Foundation	Centreville AL
University of Arkansas for Medical Sciences/AHEC West	Little Rock AR
El Rio Community Health Center (with Wright Center, PA)	Tucson AZ
Clinica Sierra Vista	Bakersfield CA
Family Health Centers of San Diego	San Diego CA
Fresno Healthy Communities Access Partners	Fresno CA
Shasta Community Health Center	Redding CA
Social Action Community Health System (3 programs)	San Bernardino CA
Valley Consortium for Medical Education	Modesto CA
Connecticut Institute for Communities, Inc.	Danbury CT
Unity Health Care (with Wright Center, PA)	Washington DC
Community Health of South Florida (3 programs)	Miami FL
Primary Health Care, Inc.	Des Moines IA
Family Medicine Residency of Idaho	Boise ID
Idaho Physicians Clinic	Blackfoot ID
Northwestern University/McGaw/Erie Family Health Center	Chicago IL
Appalachian Osteopathic Postgraduate Training Institute Consortium	Pikeville KY
Greater Lawrence Family Health Center	Lawrence MA
Penobscot Community Health Center program site	Bangor ME
Detroit Wayne County Health Authority (6 programs)	Detroit MI
Hamilton Community Health Network	Flint MI
Ozark Center	Joplin MO
East Central Mississippi Health Network	Decatur MS
Montana Family Medicine Residency	Billings MT
Mountain Area Health Education Center (3 programs, Asheville & Hendersonville)	Asheville NC
Hidalgo Medical Services, Inc.	Lordsburg NM
Lutheran Health Services (with Wright Center, PA)	Brooklyn NY
Institute for Family Health (2 programs, Harlem & Mid-Hudson)	New York NY
Long Island Federally Qualified Health Center	East Meadow NY
Sunset Park Health Council, Inc.	Brooklyn NY
HealthSource Ohio (with Wright Center, PA)	New Richmond OH
Choctaw Nation Health Services Authority	Talihina OK
Morton Comprehensive Health Services	Tulsa OK
Osteopathic Medical Education Consortium of Oklahoma (3 programs)	Tulsa OK
Tahlequah Medical Group	Tahlequah OK
Virginia Garcia Memorial Medical Center (with Wright Center, PA)	Portland OR
Cornerstone Care, Inc.	Greensboro PA
Wright Center for Graduate Medical Education (4 programs)	Scranton PA
Christ Community Health Services	Memphis TN
Lone Star Community Health Center	Conroe TX
HealthPoint (with Wright Center, PA)	Auburn WA
Community Health Care/Hilltop	Tacoma WA
Community Health of Central Washington	Yakima WA
Puyallup Tribal Health Authority	Tacoma WA
Spokane Teaching Health Center (2 programs)	Spokane WA
Yakima Valley Farm Workers Clinic (2 programs, Toppenish & Yakima)	Toppenish WA
Community Health Systems	Beckley WV

Endnotes

[1] Robert Wood Johnson Foundation. Fifty Million Americans Could Live in Primary Care Shortage Areas in 2014. March 2013.

[2] National Center for Health Workforce Analysis, Health Resources and Services Administration. Projecting the Supply and Demand for Primary Care Practitioners Through 2020. Nov. 2013.

[3] Institute of Medicine, Graduate Medical Education That Meets the Nation's Health Needs, Washington, DC: National Academy Press, July 2014.

[4] Chen C, Chen F, Mullan F. Teaching Health Centers: A New Paradigm in Graduate Medical Education. *Academic Medicine* 87(12):1752-56., December 2012.

[5] Brown E, Klink K. Teaching Health Center GME Funding Instability Threatens Program Viability. *American Family Physician* 91(3): 168-9, Feb. 1, 2015. The Brown/Klink article and the Health Resources and Services Administration report that THC programs are in 24 states, but omits training sites that are located in three more states and the District of Columbia, which are affiliated with sites headquartered in other states. Thus, we say the programs are located in 27 states and the District of Columbia.

[6] Chen C, Petterson S, Phillips R, Mullan F, Bazemore A, O'Donnel S. Toward Graduate Medical Education (GME) Accountability: Measuring the Outcomes of GME Institutions. *Academic Medicine* 88(9): 1267-80, Sept. 2013.

[7] Professor Marsha Regenstein of George Washington University is currently leading an evaluation of the Teaching Health Center program, under contract with HRSA; the evaluation is still in progress. This policy brief is supported by the Geiger Gibson/RCHN Community Health Foundation Research Collaborative and is independent of the HRSA-funded evaluation. Any opinions expressed in this report should not be considered as being reflective of the findings or positions of the program evaluators or HRSA. No data or resources from the evaluation were used in developing this brief.

[8] The data about THC graduates are based on the AATHC survey. Data about traditional GME graduates are based on data reported in Chen, et al. (2013), using weighted average data for the outcomes as reported by sponsoring institutions and primary teaching sites. Also see Phillips R, Petterson S, Bazemore A. Do Residents Who Train in Safety Net Settings Return for Practice? Academic Medicine, 2013; 88(12): 1934-40.

[9] Shin P, Sharac J, Rosenbaum S, Paradise J. Quality of Care in Community Health Centers and Factors Associated With Performance. Washington, DC: Kaiser Commission on Medicaid the Uninsured. July 2013.

[10] Shi L, Lebrun L, Zhu J., et al. Clinical Quality Performance in U.S. Health Centers. *Health Services Research*. 2012; 47(6): 2225-2249

[11] Richard P, Ku L, Dor A, at al. Cost Savings Associated with the Use of Community Health Centers. *Journal of Ambulatory Care Management*, 35(1): 50-59. Jan-Mar. 2012.

[12] Health Resources and Services Administration. 2013 Health Center Data. http://bphc.hrsa.gov/uds/datacenter.aspx?year=2013

[13] Ku L, Frogner B, Steinmetz E, Pittman P. Community Health Centers Use Diverse Staffing and Can Provide Lessons for Other Medical Practices. *Health Affairs.* 34(1):95-103, Jan. 2015.

[14] Some THC programs supplement THC grants with other resources to support even more residents. Because the residencies are developed in an integrated fashion regardless of the funding source, the data show the total number of slots available per year and the total number of applicants including both THC and non-THC funding support.

[15] Quoted by Iglehart J. Institute of Medicine Report on GME: A Call for Reform. *New England Journal of Medicine.* 372(4); 376-81. Jan. 22, 2015.