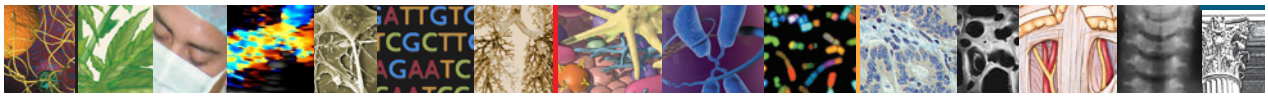

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Perspective

The Cost of Residency Training in Teaching Health Centers

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Policymakers have long been concerned about the adequacy of the U.S. primary care workforce, especially in rural and low-income areas. In an effort to respond to increased demand for primary care services from new private health insurance markets and Medicaid coverage expansions under the Affordable Care Act (ACA), Congress authorized the creation of the Teaching Health Center (THC) Graduate Medical Education (GME) program, a $230-million, 5-year initiative that began in 2011.[1] The program was designed to increase the number of primary care physicians and dentists trained in community-based settings, on the basis of the well-documented principle that doing so will build long-term clinical capacity in those communities.[2]

THCs establish GME programs near places where people live and work, following a model that emphasizes community-based training as part of the educational process. THC residents begin participating in clinical care at a modest intensity of service delivery, which increases over the course of the residency. Their clinical engagement is not only educational: it augments the delivery capacity of the clinic and its community. Medicaid populations, which face chronic clinician shortages, particularly benefit from THC programs.

Funding limitations are the principal barrier for many community-based clinics that would like to start or expand GME programs. The principal support for U.S. GME comes from Medicare, in the form of payments to hospitals based on the numbers of residents, beds, and Medicare bed-days. Despite modifications in Medicare regulations, GME funding remains a hospital entitlement, and transferring funds to community-based organizations for residency training has proved difficult. THCs, whose characteristics differ from those of hospitals, require a costing rationale different from that of Medicare GME, which is based on direct and indirect payments to hospitals. The Health Resources and Services Administration (HRSA), which administers and funds the THC program, established an interim annual rate of $150,000 per resident — a figure that reflected expert opinion at the time — until actual costs could be determined. In 2015, Congress reauthorized the THC program at $60 million per year for 2 years, reducing the effective rate that THCs receive to $95,000 per resident per year. This lower payment level has caused some THCs to recruit fewer residents.

Today, 59 THC programs are training 690 residents in six primary care specialties in 27 states

Expenses and Revenues per THC Resident.*		
Variable	**No. of THCs**	**Median ($)**
Expenses for academic year 2013–2014		
All programs	26	244,730
New programs	18	244,730
Expansion programs	8	246,358
Revenues for academic year 2013–2014		
All programs	26	46,535
New programs	18	31,503
Expansion programs	8	111,267
Estimated resident cost in fiscal year 2017		
All programs	26	157,602
New programs	18	169,339
Expansion programs	8	144,999

* Expense and revenue estimates reflect academic year 2013–2014 data unadjusted for cost of living. Estimated resident cost was adjusted by a cost-of-living factor to reflect fiscal year 2017 expenses of gross costs less revenues. Other adjustments were made for the complement of residents and program size.

and the District of Columbia. The programs are located in community-based organizations including Federally Qualified Health Centers, rural health clinics, mental health clinics, and other not-for-profit primary care delivery sites with accredited primary care residency programs.[3] Of these programs, 42 are new, having been started with THC funds, and 17 are "expansion programs" that are now training THC-supported as well as Medicare-supported residents.

In response to the ACA's requirement of establishing the actual expense of THC residencies in order to set payment levels, our George Washington University research team (with funding from HRSA) studied the cost of training residents in the THC setting. To build our estimate, we collected detailed data on expense and revenue items identified during site visits to 12 THCs, including visit volume and payer mix, precepted resident visits according to year of training, and revenues from ambulatory and inpatient visits.[4] Researchers also collected data on resident salaries and benefits, faculty and other staff compensation, educational expenses (including administration and overhead), and clinical expenses incurred to operate a residency in an ambulatory clinic setting. These include common expenses associated with operating the teaching clinic, such as personnel, supplies, information technology infrastructure, malpractice insurance, licensing fees, and occupancy costs. Because THC residents are required to complete inpatient specialty rotations, expenses and revenues associated with the actual flow of funds between the THC and the hospital were also included in the calculations.

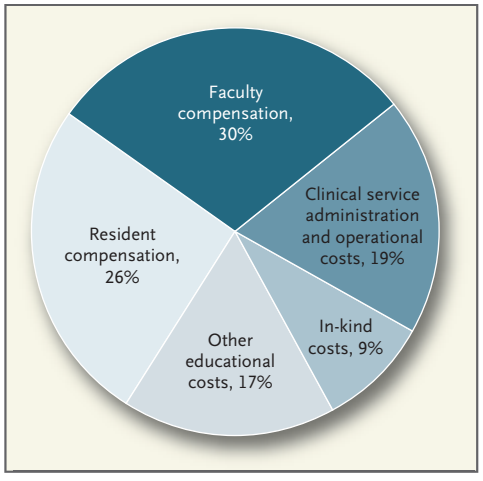
THCs with residents during the 2013–2014 academic year were asked to provide a full year's worth of data. Of the 43 programs meeting this criterion, 36 responded to the request, and 10 of these were excluded because of incomplete data or other data concerns. The final cost estimates are based on data from 26 programs that are generally representative of the full group of THCs in terms of size and maturity of their programs.

Designing the data-collection system required several conceptual decisions about matters not addressed by the Medicare GME payment formulas. The first concerned revenues generated by residents engaging in precepted patient care. The Centers for Medicare and Medicaid Services (CMS) does not factor in resident revenues when determining Medicare GME payments. To find the true cost of residency training in THCs, the decision was made to include the revenues and expenses associated with residents' clinical services.

Second, clinic visits were selected as the most efficient unit for allocating these expenses and revenues, analogous to Medicare's use of the bed-day for GME payment purposes. Third, THCs receive substantial donated teaching time, space, supplies, staff time, and other operational support. In-kind contributions were treated as expenses because they represented necessary goods and services that would otherwise have been purchased by THCs.

The data collection and analysis followed generally accepted accounting standards and disregarded certain expenses (such as recruitment costs and meals) that are unallowable under CMS- and HRSA-funded GME. Because THCs pool HRSA and Medicare resources to train residents in expansion programs, costs were considered on a consolidated basis and not as the incremental cost of training an additional THC resident in an already-established program.

The residents at the 26 THCs



Distribution of Expenses Associated with THC Residency Training, Academic Year 2013–2014.

Faculty compensation includes salary plus benefits associated with a full-time-equivalent position dedicated to residency administration, precepting outpatient and inpatient service, allocation of clinic-administration time on the basis of volume of residents' patient service, and precepting contracts paid by the residency. Resident compensation includes salary and benefits for residents. Clinical service administration and operational costs include inpatient administration and outpatient operational and administration costs allocated to residents' patient visits. Other educational costs include residency personnel, educational supplies, information technology, occupancy and other residency administration items, and residency overhead. In-kind costs include all items in other educational costs supported by hospital precepting contracts and community partners. Numbers do not add to 100 because of rounding.

provided a total of 203,924 ambulatory and 65,849 inpatient visits over a 1-year period. As they advanced in their training, residents provided increasing numbers of ambulatory care visits, from an average of 302 in the first year to 589 in the second and 945 in the third. Median revenue generation across all programs was $46,535 per resident, ranging from $31,503 for new programs to $111,267 for expansion programs (see table). About two thirds of patient revenues were from Medicaid. The resident-generated revenue offset an appreciable share of the program's expenses. Not surprisingly, productivity and revenues were higher in expansion programs that already had second- and third-year residents in place when the THC program began; startup programs have lower revenues until they are fully staffed.

Residency expenses, by contrast, did not vary greatly. Resident and faculty reimbursements account for 56% of residency expenses, and educational and administrative costs make up the balance (see pie chart). The median expense for all programs was $244,730 per resident in academic year 2013–2014. After factoring in both revenues and expenses, and adjusting for factors related to program maturity and cost of living, we estimate the median net cost of training a resident in a THC in fiscal year 2017 to be $157,602.

We detailed the full expense of GME in an ambulatory setting, documenting costs directly attributable to the resident (salary and supervisory costs) as well as administrative and in-kind costs required for running the program. This holistic and transparent approach results in more accurate costing than the method used for Medicare GME payments, in which the direct costs are calculated and then indirect costs, computed by formula and not based on actual accounting of expenses incurred, are added. The costing data make it clear that residents contribute to THCs' finances, as well as to the care of patients — a reality that needs to be taken into account in establishing the true cost of residency training to a sponsoring institution.

As community-based practices that rely largely on ambulatory care reimbursement for financial viability, most THC-sponsoring organizations cannot support residency programs without specific, adequate, and stable funding. Whereas teaching hospitals need residents to assist with clinical coverage for acute and inpatient care, community-based ambulatory care practices don't have analogous coverage demands. For THCs, initiating residency programs is an elective decision that can't be considered if it jeopardizes the practice. The decision by the secretary of health and human services to provide $150,000 per resident per year recognized this reality and established a funding level that, absent hard data, met the best estimates available at the time. Our findings suggest that $150,000 per resident per year is reasonably reflective of the true current cost of a resident to a community-based sponsor.

The views expressed in this article are those of the authors and do not necessarily reflect those of the Health Resources and Services Administration, Department of Health and Human Services, or the U.S. government.

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