

NPs disproportionately serve rural and underserved populations, whose needs would otherwise go unmet.

Despite these uncertainties, it is clear that patients will continue to encounter more NPs and PAs when they seek care. The shifting composition of the health care workforce will present both challenges and opportunities for medical practices as they redesign care pathways to accommodate new payment methods, new incentives regarding quality of care,

and the demands of an aging population.

Disclosure forms provided by the authors are available at NEJM.org.

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The Graduate Nurse Education Demonstration — Implications for Medicare Policy

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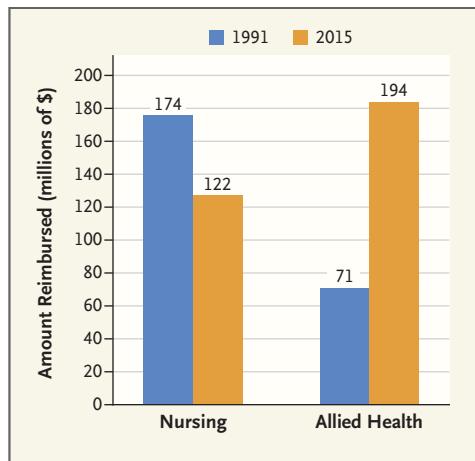
Despite decades of public and private investment, the United States continues to have a shortage of primary care capacity. Only 2699 graduating U.S. medical students — about 17% of graduates from allopathic and osteopathic schools — matched with primary care residencies in 2016.¹ Studies show that nurse practitioners (NPs) provide high-quality primary care that is satisfactory to patients, improves access to care in underserved areas, and may reduce costs of care. But although Medicare spends more than \$15 billion annually on graduate medical education (GME),² including training for primary care physicians, it spends very little on clinical training for NPs.

Medicare has contributed to the cost of training nurses since its inception, but NP programs didn't exist when Medicare was enacted and such funding streams

were established. Modernizing Medicare's payment policies for nurse training is highly relevant, given the recent success of the Graduate Nurse Education (GNE) Demonstration.³ The \$200 million, five-site Centers for Medicare and Medicaid Services (CMS) demonstration authorized under the Affordable Care Act showed that offering payments to Medicare providers enabled more of them to participate in clinical precepting of advanced practice registered nurses (APRNs) and resulted in a substantial increase in the number of new APRN graduates. More than 60% of training took place in community-based settings, and primary care NPs accounted for most of the growth in the number of new graduates.

The GNE Demonstration documented the success of a new model of organizing and paying for graduate nurse education involving consortia of hospitals

and health systems, community partners, and university nursing schools managed by a single Medicare hospital hub. Such consortia were originally proposed in 1997 by the Institute of Medicine (now the National Academy of Medicine) as a strategy for increasing community-based training for physicians, but were not implemented until the GNE Demonstration. Of the five demonstration networks, three were state or regional consortia covering greater Philadelphia, the Texas Gulf Coast, and Arizona. In greater Philadelphia — the largest consortium — the Hospital of the University of Pennsylvania served as the designated hub for a regional network that included all health systems and hospitals in the area, more than 600 community-based providers, and all 9 local university nursing schools involved in training APRNs. This model has many advantages. For



Medicare Payments to Hospitals for Nursing and Allied Health Training, 1991 and 2015.

Nurse anesthesia is included in nursing. Data are from the Healthcare Cost Report Information System.

example, increasing the availability of training opportunities in community-based settings enabled nursing schools to substantially expand enrollment in primary care NP training.

An evaluation commissioned by CMS showed that nursing schools' total costs for administering the GNE demonstration declined as the number of nursing schools in a GNE network increased; only geographic consortia had more than one nursing school. Estimates of the cost to CMS of training each additional APRN in the demonstration ranged from \$28,000 to \$57,000 per graduate, as compared with the median net cost of \$157,602 per year for training a primary care resident physician in the Teaching Health Center program.^{3,4} The demonstration built on existing GNE financing schemes, including tuition paid by nursing students, and didn't include offering stipends to trainees. Its key provision allowed CMS to pay medical practices for providing essential clinical precepting — training that

hadn't been possible to fund using other sources. This strategy is consistent with Medicare's policy of funding the portion of training for which there are no other funding sources.

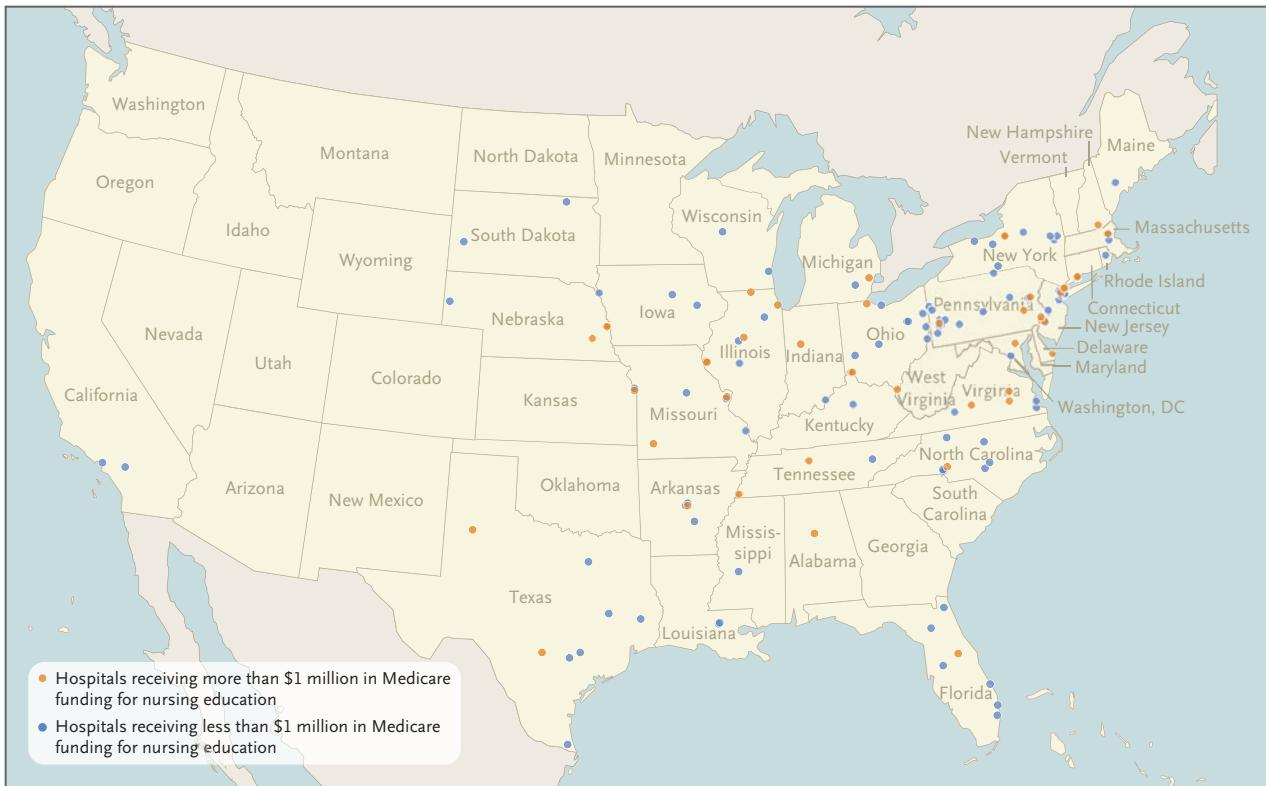
Because clinical-training programs for NPs typically aren't eligible for Medicare reimbursement, we analyzed how Medicare currently allocates funds for nurse training using cost and payment information from the national Healthcare Cost Report Information System. Medicare payments for nurse training totaled \$174 million in 1991, but by 2015 had fallen to \$122 million — a 30% decrease (see graph). A large share of Medicare funding for nurse training goes to a dwindling number of hospital-operated diploma programs that now train less than 5% of registered nurses (RNs). Under CMS policy, hospitals may receive payments to offset the clinical costs associated with non-provider-operated nurse training, such as university degree programs, only if they were reimbursed for nurse-training costs in 1989 — before most APRN programs existed — and their allowable costs don't exceed those of the previous payment period. The same constraints don't apply to Medicare funds for allied health training programs, such as pharmacy and chaplain residencies, which increased by 173% between 1991 and 2015. Although Medicare expenditures on nurse training are small as compared with expenditures on GME, they are meaningful; the other primary source of federal training funds for nursing-workforce development is Title VIII appropriations, which totaled only \$146 million in 2017.

Another consequence of out-

dated Medicare policies is inequitable distribution of Medicare funds for nurse training by state. Hospitals in six states (Pennsylvania, Illinois, Ohio, New York, Virginia, and Missouri) received 53% of nurse-training funds in 2015, largely because they have historically been home to a disproportionate number of diploma nursing schools. Only two hospitals west of the Rocky Mountains received any Medicare funding for nurse training in 2015 (see map).

The demand for nurse practitioners is projected to grow, making this job among the 10 fastest growing, in percentage terms, in the U.S. economy over the next 10 years.⁵ NPs provide care in retail clinics, federally qualified health centers, rural clinics, and primary care and specialty medical practices, as well as in hospitals, nursing homes, and patients' homes. In specialty practices, NPs provide primary care to patients with serious chronic conditions whose principal physician is a specialist. NPs are increasingly helping to improve the quality of long-term care, an area that has suffered from too little physician involvement. Medicare patients benefit from greater access to NPs, which explains why a national coalition of stakeholder organizations led by the American Association of Colleges of Nursing and AARP lobbied for the GNE Demonstration and supports permanent, national funding of APRN training.

Medicare funding for nurse training hasn't historically competed with funding for GME. The persistent problem of attracting physicians to primary care has nothing to do with the availability of residency slots, many of which are left unfilled by U.S.



Geographic Distribution of Hospitals Receiving Medicare Reimbursement for Nurse Training, 2015.

Data are from the Healthcare Cost Report Information System.

medical graduates. What's more, research shows that the market for nurses is self-correcting in that the availability of jobs drives the supply of nurses, so there is little risk of generating an oversupply of unemployed APRNs. Medicare has already made regulatory changes to contain the costs of nurse training and could do so again, should the need for APRNs diminish in the future. Because APRN students pay for most of their own education, Medicare reimbursements for clinical-training costs incurred by providers would be reasonable on a per-graduate basis, as the GNE Demonstration shows. Per-graduate costs would also be substantially lower than what Medicare

has historically paid for diploma nursing programs to produce RNs and what it currently spends on GME. Costs would be even less if low-value investments (such as spending on prelicensure RN programs, in the absence of a national RN shortage) — which now characterize much of Medicare's funding for nurse training — are phased out. Under existing policies, nursing is rapidly losing its share of Medicare non-physician-training funds to allied health, despite the compelling need for clinical training of APRNs.

The GNE Demonstration shows how Medicare could achieve greater value for its investments in nurse training while contribut-

ing to the development of a workforce that can better deliver the care that Medicare beneficiaries want and need. We believe modernizing Medicare funding for nurse training to recognize the costs borne by providers involved in training APRNs is a sensible policy change that has the potential to improve access to primary care nationwide.

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