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Medicare Graduate Medical Education Payments: An Overview

The federal government makes significant investments in graduate medical education (GME) funding through various programs that support medical residency training; it invested an estimated \$16 billion in 2015. A Government Accountability Office (GAO) analysis released in 2018 found that federal GME programs are the largest source of health workforce spending, and approximately three-quarters of federal GME spending was from Medicare. Medicare GME payments are made primarily to hospitals.

Given the prominence of Medicare in funding medical education, policies that alter Medicare GME can affect the future physician supply and could be used to address identified health care workforce priorities. This In Focus addresses Medicare GME payments to hospitals—specifically, hospital eligibility for these payments, what Medicare GME pays for, how Medicare pays for GME, and how Medicare GME payment amounts to qualifying hospitals are determined.

Eligibility for Medicare GME Payments

To be eligible for Medicare GME payments, a teaching hospital must have an approved residency program in medicine, osteopathy, dentistry, or podiatry. Teaching hospitals often are affiliated with a medical school. Medicare regulations state that an approved medical residency program is one that is accredited by the Accreditation Council for Graduate Medical Education (ACGME), American Osteopathic Association (AoA), Commission on Dental Accreditation of the American Dental Association, or Council on Podiatric Medical Education of the American Podiatric Medical Association. The ACGME and AoA are transitioning to a single accreditation system for medical and osteopathy residency programs. (The remainder of this In Focus addresses medical and osteopathy residency programs.)

What Medicare GME Pays For

Medicare GME payments cover Medicare's share of the costs of a hospital's approved medical residency program. These costs include *direct* costs of operating a residency program, such as resident stipends, supervisory physician salaries, and administrative costs. Medicare GME payments also cover *indirect* costs associated with residency programs that may result in higher patient care costs in teaching hospitals relative to non-teaching hospitals. For example, resident-provided care may be more expensive due to additional testing that residents may order as part of their training.

How Medicare Pays For GME

Medicare pays separately for direct and indirect GME costs. Medicare payments for direct costs of GME are called *Direct Graduate Medical Education* (DGME) payments. DGME payments are sometimes referred to as “pass-

through” payments in that they are not an adjustment to a Medicare payment for an individual hospital discharge. Rather, DGME is an aggregate payment determined by a statutory formula. (See section on “Determining Medicare GME Payment Amounts to Qualifying Hospitals.”)

Medicare payments for indirect GME costs are called *Indirect Medical Education* (IME) payments. IME payments are intended to cover the costs of “inefficient” care that may be provided by medical residents. However, since Medicare typically does not provide separate payment for such activities as additional testing, Medicare IME payments are provided as an adjustment or add-on to each Medicare inpatient prospective payment system (IPPS) per-discharge payment. IME payments are determined through a statutory formula. Both the IME and the DGME payment formulas generally are based on patient volume or the number of beds and number of residents. (Refer to **Figure 1** and **Figure 2** for information about how each formula uniquely accounts for these factors.)

Determining Medicare GME Payment Amounts to Qualifying Hospitals

When Medicare was enacted in 1965, GME payments—like hospital inpatient services—were paid based on a hospital's reported costs, essentially an open-ended commitment by Medicare. Congress later capped Medicare GME payments for residency programs in medicine and osteopathy through limits on the number of resident full-time equivalents (FTEs) and per-resident amounts (referred to as PRAs). FTEs that Medicare GME payments would support were capped at the number of FTE residents that a hospital was training in 1996; the amount Medicare pays for an FTE is based on a hospital's costs for a resident FTE in a base year, usually FY1984 or FY1985, updated by the Consumer Price Index for All Urban Consumers, as compiled by the Bureau of Labor Statistics.

Direct Graduate Medical Education

Medicare DGME does not pay for a teaching hospital's actual costs incurred by the residency program; rather, it pays for only Medicare's share of direct GME costs. DGME payments are the product of a hospital's total approved DGME costs (i.e., a three-year rolling average of FTEs, subject to the FTE cap, multiplied by the PRA) and a hospital's Medicare patient load percentage (i.e., a hospital's Medicare volume). (See **Figure 1**.) In FY2015, Medicare made \$3.68 billion in DGME payments to teaching hospitals, supporting 85,712 FTEs.

Figure 1. Medicare DGME Payment Formula

$$\text{DGME Payment} = \left(\begin{matrix} \text{Adjusted} \\ \text{Rolling} \\ \text{Average} \\ \text{FTE Count} \end{matrix} \right) \times \left(\begin{matrix} \text{Per} \\ \text{Resident} \\ \text{Amount} \end{matrix} \right) \times \left(\frac{\begin{matrix} \text{Medicare} \\ \text{Part A} \\ \text{Inpatient} \\ \text{Days} \end{matrix}}{\begin{matrix} \text{Total} \\ \text{Inpatient} \\ \text{Days} \end{matrix}} \right) \times \left(\frac{\begin{matrix} \text{Medicare} \\ \text{Part C} \\ \text{Inpatient} \\ \text{Days} \end{matrix}}{\begin{matrix} \text{Total} \\ \text{Inpatient} \\ \text{Days} \end{matrix}} \right) \times 86\%$$

DGME = Direct Graduate Medical Education; FTE = Full-time equivalent. The adjusted rolling average FTE count is subject to the GME cap.

Source: CRS analysis of Title XVIII of the Social Security Act and relevant regulations.

Indirect Medical Education

IME payments are intended to cover the higher costs of delivering health care services in teaching hospitals relative to non-teaching hospitals. IME payments are adjustments or add-ons to both the operating and capital portions of the Medicare IPPS per-discharge payment. The IME payment adjustment for each portion—operating and capital IPPS payments—is calculated differently. (IME also is calculated differently from the DGME payment.)

The IME adjustment to the operating portion of the IPPS payment is based on a statutory formula. The IME formula (see **Figure 2**) captures for each teaching hospital the ratio of interns and residents to beds (IRB). The formula applies an exponent to the IRB (0.045), which estimates the effect of teaching activity on hospital costs. In addition, the formula contains a “multiplier” (1.35) that is set by Congress in statute. The Centers for Medicare & Medicaid Services (CMS) states that this multiplier represents a 5.5% increase in the IME payment for every 10% increase in the IRB ratio.

The IME payment adjustment for the capital portion of the IPPS payment is based on the residents-to-average daily census ratio (RADC) and an estimate of the effect of teaching activity on hospital costs (0.2822). (See **Figure 2**.)

In FY2015, Medicare paid \$7.38 billion in IME payments to teaching hospitals, supporting 85,578 FTEs.

Figure 2. Medicare IME Operating and Capital Adjustment Formulas

$$\text{IME Operating Adjustment} = 1.35 \times [(1 + \text{IRB})^{0.045} - 1]$$

$$\text{IME Capital Adjustment} = (e^{0.2822 \times \text{RADC}} - 1)$$

IME = Indirect Medical Education; IRB = intern- and resident-to-bed ratio; RADC = residents-to-average daily census ratio. Both the IRB and the RADC are subject to the graduate medical education cap. Other limits and restrictions to the formulas may apply.

Source: CRS analysis of Title XVIII and relevant regulations.

Estimates of GME Payments and FTEs

CMS does not publish estimates of Medicare GME payments and the FTEs supported by such payments. CRS calculated the estimates in this In Focus using CMS’s publicly available Medicare cost report data. Other sources also publish GME estimates and information using CMS

cost report data, but the results differ. (See examples in table below.)

Table 1. Different Estimates of Medicare GME Payments and FTEs, FY2015

Source	Medicare GME Payments (\$bn)			Medicare GME FTEs	
	DGME	IME	Total	DGME	IME
CRS	\$3.68	\$7.38	\$11.06	85,712	85,578
GAO	\$3.71	\$6.62	\$10.33	87,980	88,416
Graham Center	\$3.72	\$8.74	\$12.46	111,160 (only presented as a GME total)	

Source: CRS analysis of Medicare hospital cost report data; Government Accountability Office (GAO), *Physician Workforce: HHS Needs Better Information to Comprehensively Evaluate Graduate Medical Education Funding* GAO-18-240, 2018; and CRS-calculated estimates using Medicare GME data published by The Robert Graham Center—a policy research center that provides analysis for the American Academy of Family Physicians on workforce, medical education, and other topics, at <https://www.graham-center.org/rgc/maps-data-tools/data-tables/gme.html>.

Notes: See “Different Estimates of Medicare GME Payments and FTEs” in the “Medicare” section of CRS Report R44376, *Federal Support for Graduate Medical Education: An Overview*.

Selected Issues for Congress

Analysis by the National Academies of Science and the Medicare Payment Advisory Commission (MedPAC), among others, has identified some issues that Congress may consider as part of any potential GME legislation:

- Medicare GME payments are intended to cover Medicare’s share of the costs of operating a GME program and the higher costs of teaching hospitals relative to non-teaching hospitals. However, Medicare GME payments do not account for any potential cost savings or revenue generated by the hospitals’ use of medical resident labor.
- Analysis by MedPAC and other federal agencies has determined that the statutory formula for IME results in IME payments that are up to twice the amount that is empirically justified.
- Medicare GME payments begin after a program is established. Therefore, a hospital’s up-front investment to establish a new GME program may not be recovered until sometime after Medicare GME payments begin.
- With few exceptions, Medicare GME payments do not address changing health care workforce needs or trends (e.g., type of practitioners, settings, or geographic distribution). The President’s FY2019 budget, among others, proposed to consolidate and target federal GME spending.

For further information about Medicare and other federal sources of GME, see CRS Report R44376, *Federal Support for Graduate Medical Education: An Overview*.

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