example, where does the sensory information encoding location in place cells, spatial geometry in grid cells, or head direction in head direction cells come from, and how is it combined?”

Researchers are actively investigating how grid cell activity influences place cell activity and vice versa and how these interactions may go wrong in Alzheimer disease and other brain conditions. In a mouse model of Alzheimer disease, O’Keefe and his colleagues have shown that place cell degradation correlates with deterioration of animals’ spatial memory (Cacucci F et al. Proc Natl Acad Sci U S A. 2008;105[22]:7863-7868).

Edvard Moser is excited to be an active part of the effort to find clinical applications for the field. “We wish to understand how grid cells interact with other cell types to produce a sense of location. This will lead to knowledge that can hopefully be used by others to work out strategies to detect dysfunctions in the positioning system early on and to prevent further progression of disease.”

The JAMA Forum
The Challenges of Reforming Graduate Medical Education Payments

Gail Wilensky, PhD

A recent report by an Institute of Medicine (IOM) committee on the financing and governance of graduate medical education (GME) considered an important question for health care in the United States: to what extent does the current GME system, which provides the training of interns and residents after medical school, help produce a physician workforce that can deliver efficient, high-quality, patient-centered health care?

As the report points out, Medicare has been the most important federal funder of GME programs, and the financial support it contributes (nearly $10 billion in fiscal year 2012) has played a significant role in the helping US teaching hospitals function. But as our committee and other groups have pointed out over the years, the GME system has shortcomings that need to be addressed.

Key Findings

Some of the key findings of the IOM committee, which I cochaired with the immediate former administrator of the Centers for Medicare & Medicaid Services (CMS), Donald Berwick, MD, are that Medicare GME payments are inflexible in their current construction, with minimal funding available for new programs or nonhospital sites; are unfair because of the tie to historical costs; and are opaque with regard to the flow and use of funds and the outcomes produced.

The committee struggled over whether to support continued government funding for GME. The US government spends $15 billion (two-thirds coming from Medicare) on GME, which is received primarily by teaching hospitals. Because of the magnitude of its financial commitment and the focus on teaching hospitals, the federal government’s role in funding GME is substantially different from its role in funding undergraduate medical education, training for other health care professionals, or supporting other professions that potentially face workforce shortages.

The committee ultimately decided in favor of supporting continued Medicare funding of GME for the next decade (assuming the types of reforms that it recommended are adopted), after which the question of continued funding should be reassessed. We reasoned that given the considerable changes that the US health care delivery system is experiencing, continued GME funding could serve as potential leverage for training a physician workforce better suited to meet the needs of a reformed delivery system.

5 Recommendations

The committee made 5 recommendations:

1. Continue Medicare funding of GME education (adjusted for inflation), but phase out the current payment system and gradually replace it with a performance-based system.
2. Create an adequately financed GME policy infrastructure, including establishing a GME Policy Council in the Office of the Secretary of the US Department of Health and Human Services and a GME center within CMS.
3. Develop a single Medicare GME fund with 2 subsidiary funds. An operational fund would distribute support for training positions that are currently approved and funded. A transformation fund would be used to pilot alternative payment mechanisms for GME, establish and evaluate relevant performance measures for GME, and finance initiatives to develop and evaluate innovative GME programs.
4. Change the Medicare GME payment system to one that offers a single payment to the organization sponsoring GME (based on a per-resident amount) and features performance-based payments.
5. Continue to give states the discretion to use Medicaid funding for GME, but mandate accountability and transparency requirements comparable with those proposed for Medicare GME.

The committee was mindful of the challenging politics surrounding changes to a program like GME, where substantial
government funds have been distributed
to teaching hospitals using similar formulas for more than the last 30 years. Several
previous groups have recommended signif-
cant changes to GME, including some that have proposed reducing currently leg-
islated amounts. For example, the National
Commission on Fiscal Responsibility and
Reform recommended a 60% reduction in
indirect medical education (IME) payments
(a payment adjustment reflecting that
teaching hospitals spend more per patient
than nonteaching for hospitals), as well as
limiting direct GME payments to 120% of
the national average resident’s salary in
2010. Like other provisions of this commis-
sion, these changes were never enacted.

In its June 2010 report to Congress,
Medicare Payment Advisory Commission
(MedPAC) called for an increased account-
ability for GME payments and for making
more information available about Medi-
care’s payments and the teaching costs as-
associated with GME, both of which are im-
portant themes raised in the IOM report. The
MedPAC recommendation was to reduce
IME payments by approximately $3.5 bil-
lion (the “excess amount” of IME pay-
mements, defined as the amount above the
higher costs MedPAC has estimated are as-
associated with teaching hospitals) and to use
that amount to establish a performance-
based incentive program with GME pay-
ments contingent on the recipients achiev-
ing specified educational outcomes. This
amount is comparable with the funding the
IOM recommended be available to the trans-
formation fund to establish pilot programs
and do needed research to measure educa-
tional outcomes and the performance re-
results of GME training.

MedPAC also recommended that Medi-
care conduct an analysis of current health
care workforce needs and its implications
for GME; the IOM report recommends that
the proposed GME Policy Council perform a
similar function. However, the IOM called
for combining IME and direct medical edu-
cation (funding that provides teaching hos-
pitals with the funds to pay salaries and
benefits of residents) into a single payment
and moving to a national single per-
resident amount; MedPAC’s proposal did
not, which would result in substantially less
redistribution of GME funds than the IOM re-
port implied.

Harsh Response From Some Critics
The response by critics to the IOM’s report
was much harsher than critical reception to
the MedPAC report. For example, following
the release of the MedPAC report, the
Association of American Medical Colleges
(AAMC) said they were “very disap-
pointed” that MedPAC chose to ignore the
need for an increase to the current Medi-
care resident caps, said they “oppose” the
recommended 50% reduction of IME, and
said the report’s recommendations put the
AAMC “at risk” in a performance-based in-
centive program. In contrast, the AAMC’s
response to the IOM report said the IOM’s
recommendations would “radically over-
haul graduate medical education (GME) and
make major cuts to patient care” and “slash
funding for vital care and services.” The
American Hospital Association also ob-
jected strongly to opening up the funds to
all GME-sponsoring organizations rather
than primarily to teaching hospitals, who are
the current recipients. The American Medi-
cal Association reacted somewhat nega-
tively because the IOM report did not agree
that there is a clear future physician short-
age and didn’t propose increasing the num-
ber of GME slots.

However, not all groups opposed the
report. The American Association of Family
Physicians released its own proposal, which
has many components consistent with the
IOM’s recommendations, and has been gen-
erally supportive. Other groups are still as-
sessing it or are somewhere between these
extremes.

Staff members of the relevant congres-
sional committees (Finance, Ways and
Means, Energy and Commerce) were briefed
before the report’s release and asked inter-
esting questions, but were noncommittal in
their responses to it. Some individual mem-
bers of Congress have expressed interest in
further pursuing these issues in the next
Congress.

The history of past attempts to change
the GME program indicates the challenge will
be daunting. But GME funds currently are
concentrated disproportionately in New
York, New Jersey, and Massachusetts—a
geographic disparity that has raised a lot of
frustration in other parts of the country and
the concern that the benefits of GME fund-
ing is unclear and unknown. That may reso-
nate with enough sectors in the country to
spark additional discussion about what the
country is getting in return for the US gov-
ernment’s substantial investment in the end-
stage training of physicians. That in itself
would be progress.

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Published online October 6, 2014, at http:
/newsatjama.jama.com/category/the-jama-forum/.

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