



Will MACRA Improve Physician Reimbursement?

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In the past, I have argued that Medicare needed to move away from its reliance on the Resource-Based Relative Value Scale (RBRVS) and the Sustainable Growth Rate formula (SGR) for physician

reimbursement if it was serious about supporting value-based health care delivery.^{1,2} Indeed, the RBRVS–SGR combination represented the opposite of a value-based system: reimbursement reflecting the average effort and expenses of a physician providing a given service, in a system that assumed the “collective guilt” of physicians, in that all physicians’ Medicare fee-for-service reimbursements were adjusted according to whether aggregate Medicare fee-for-service spending for physicians grew faster or slower than the overall economy.

With a level of bipartisan support that has become rare, Congress passed the Medicare Access and CHIP Reauthorization Act (MACRA) in 2015, eliminating the SGR. The purpose of the leg-

islation was to move Medicare toward reimbursement based more on outcomes and value. The Medicare Payment Advisory Commission (MedPAC) has now questioned whether the current version of MACRA accomplishes these goals or even moves the system in a better direction.

MACRA provided for 0.5% increases in physician payment for the first 4 years. Starting in 2019, physicians’ Medicare payments will be adjusted according to the quality and efficiency of their care. Physicians participating in an advanced alternative payment system (A-APM) requiring that their practice take “upside and downside” financial risk (i.e., be subject to both gains and losses) depending on physician performance will receive a 5% bonus

for each of the years 2019 through 2025. Those who are not part of designated risk-sharing arrangements or otherwise exempted will receive payments for Medicare services based on a Merit-Based Incentive Payment System (MIPS). The latter concept is now the focus of considerable controversy.

The MIPS consolidated three existing quality programs: the Physician Quality Reporting System (PQRS), the Meaningful Use program for electronic health records, and the Value-Based Payment Modifier. Physicians who refuse to report the required quality data are subject to a penalty, and the Centers for Medicare and Medicaid Services (CMS) estimates that 3% of physicians are facing such a penalty for the 2017 reporting year.

MACRA rules to date have exempted a substantial number of “low-volume” clinicians from the MIPS. As of 2017, the low-volume threshold excludes clinicians who have fewer than 200 Medicare

patients or who receive less than \$90,000 in Medicare Part B payments. These rules hold even when low-volume physicians wish to participate in the MIPS. CMS estimates that only 37% of the clinicians who bill Medicare will be subject to the MIPS in the early years.

This is the first year when cost will be considered in physician reimbursement. The costs of physician care — defined as total per-patient cost and total spending related to a hospital admission — will determine 10% of a physician's MIPS score in 2018 and 30% in 2019, although the budget bill passed in early February gives CMS the authority to stick with the 10% contribution until 2021 if it chooses.

In its June 2017 report to Congress MedPAC questioned whether the MIPS is actually useful in detecting high and low performance and whether it will help beneficiaries choose clinicians, help clinicians improve the value of their care, or help Medicare reward the clinicians who do improve value.³ The most serious problems raised were that the MIPS allows clinicians to choose the process measures used in assessing their performance and relies on physicians' self-reports of their engagement in certain activities. MedPAC is also concerned about the reporting burden placed on clinicians and the costs imposed, which CMS estimates to be \$1.3 billion.

MedPAC's recommendation to Congress in its March 2018 report is to eliminate the MIPS and replace it with a "Voluntary Value Program." Under the MedPAC proposal, physicians would have 2% of their fee-for-service payments withheld. To get the withheld money back, physicians would

have to join an A-APM or be part of a (real or virtual) group that is evaluated on population-level performance measures such as mortality and readmission rates, potentially preventable admissions, and patient experience. MedPAC also proposes that the measures be based on claims, which would mean that the burden would be on CMS rather than clinicians to provide the relevant data. Clinicians who do not participate would lose the 2% that was withheld.

Most medical associations and the American Hospital Association agree that the MIPS has problems but want CMS to fix them rather than scrap the MIPS entirely and adopt a not-yet-fully-developed, untried alternative. Some physician organizations, such as the American Medical Association, would like Congress to give CMS the ability to slow down the full phase-in of the MIPS in 2019. MedPAC has taken the position that the MIPS is unfixable and should be replaced.

Although I agree with MedPAC about the problems it has identified, I am also concerned about the commission's proposal. One concern is the lack of support from the various medical associations. In addition, with a closely divided Senate (the Republican majority is now at 51 to 49) and upcoming midterm elections in which Democrats hope to make major gains, only "must-pass" legislation — such as a budget bill and maybe an immigration bill — is likely to pass in 2018. Moreover, no one knows whether the MedPAC proposal will work or what unintended consequences are likely to result.

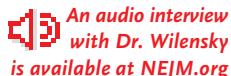
I have several suggestions. The first is that CMS use its Innovation Center (CMMI) to try out the MedPAC proposal as quickly as

possible. A pilot program would provide real-world evidence as to whether this strategy is an improvement over the MIPS in terms of helping clinicians improve their practice and helping beneficiaries identify the health care organizations that offer better outcomes for their needs. It would also test whether CMS can perform the claims-payment and other analyses that would be required under the proposal. CMMI could also quickly start a test of a primary care APM that has been proposed by the American Academy of Family Physicians and recommended by the physician payment technical advisory group established by MACRA.

Physicians could be permitted to remain outside the MIPS or an A-APM without incurring a penalty for 2 more years, but since no MIPS alternative is currently ready for prime time, these physicians would not receive fee increases. Physicians who are ready to join an A-APM should be allowed to do so and receive the bonus. Meanwhile, more types of episodes of care amenable to bundled payment could be identified to serve as A-APMs.

The proliferation of quality measures is imposing substantial burdens on clinicians, and many of these measures are regarded as poor proxies for quality or as not reflecting what is important to patients. CMS could work with representatives of private payer organizations, clinicians, and consumers to develop a small set of metrics that better reflect outcomes and that matter to patients. All payers could then be encouraged to use this reduced set of metrics.

Practicing physicians need make their views about the MIPS and its alternatives known to their



An audio interview with Dr. Wilensky is available at NEJM.org

representative medical groups and, if necessary, to their representatives in Congress as well. In the past, practicing clinicians have been woefully bad at making their voices heard. Now is a good time for that to change.

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

From Project HOPE, Bethesda, MD.

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1. Wilensky GR. Reforming Medicare's physician payment system. *N Engl J Med* 2009;360:653-5.

2. Wilensky GR. Improving value in Medicare with an SGR fix. *N Engl J Med* 2014;370:1-3.

3. Medicare Payment Advisory Commission. Medicare and the health care delivery system. Report to the Congress. June 2017 (http://www.medpac.gov/docs/default-source/reports/jun17_reporttocongress_sec.pdf).

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Bedside Computer Vision — Moving Artificial Intelligence from Driver Assistance to Patient Safety

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The Institute of Medicine's 1999 report on preventable patient harm in hospitals provoked requirements for public reporting of errors and financial penalties for preventable hospital-acquired conditions. Checklists, protocols, root-cause analyses, programs for creating a culture of safety, and early forms of technological assistance followed. Yet the goal of zero patient harm continues to elude hospitals, particularly when it comes to deviations from intended bedside practices ranging from reliable hand hygiene to central line insertions.

We may be approaching the limits of what is achievable through improvements in clinical processes, culture, and narrowly focused technological assistance. Expectations that fatigued clinicians will reliably execute each behavioral step of complex hospital treatments ignore evidence from cognitive science that humans usually operate in error-prone “fast thinking” mode.¹ Even remotely located hospital staff watching intensive care beds by video feed cannot immediately detect and correct bedside behavioral errors such as failing to re-

set bedrails, restraints, or inflatable calf boots.

A source of clinician assistance may lie in a rapidly progressing domain of artificial intelligence (AI) known as computer vision. Broadly defined as the development of intelligent machines, the field of AI focuses on both capabilities, such as understanding spoken language, and development methods, such as machine learning. Computer vision allows machines to see and understand the visual world. Machine learning entails building knowledge from patterns in data rather than being specified by human programmers. When applied to computer-vision tasks such as discernment of people, objects, and their motion, cameras and imaging sensors supply data for learning. For example, exposed to data of thousands of digitized dog photographs labeled according to breed, computers can deploy machine-learning methods to digest the data during a “training” phase and devise an algorithm that accurately distinguishes among dog breeds.

No longer science fiction, computer vision is improving rapidly,

in part thanks to “deep learning,” a type of machine learning that uses multilayered neural networks whose hierarchical computational design is partly inspired by a biologic neuron's structure. A reference point for the speed of improvement in computer vision is Google's computer-vision system for supporting self-driving vehicles. Over a recent 12-month span, its performance advanced from requiring human intervention every 700 miles to fully autonomous driving for more than 5000 miles at a time (see graph). If computer vision can detect when drivers initiate dangerous lane changes and safely control vehicular steering, can it similarly analyze motion to detect unintended deviations in important clinician behaviors or patient activities?

There are reasons to be optimistic that computer-vision applications will prove clinically useful. Computer vision is poised to gain a foothold in screening medical images for clinician analysis. A recent study found that computer vision performed on par with 21 board-certified dermatologists in classifying digital images of benign and malignant