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Thomas Esposito is a first year osteopathic medical student at A.T. Still University- School of Osteopathic Medicine in Arizona. He is originally from Wheaton, IL and received his Bachelor of Science degree in Neurobiology from the University of Wisconsin-Madison in 2014. Thomas's inspiration for this essay was derived from previous experience in healthcare and the desire to discuss the rapidly evolving health care system. Thomas plans to specialize in family medicine, internal medicine, or pediatrics.

Ambiguous Performance: Patient Safety and Quality Measures in the U.S. Healthcare System

We have seen dramatic changes to the implementation, delivery, and execution of healthcare in the U.S. over the past two decades. The Institute of Medicine published two major reports in 1999 and 2001 that released data on patient safety and the problems and limitations of the U.S. healthcare system, respectively. These reports, among others, greatly increased public awareness of preventable medical errors and the need to restructure the healthcare system to improve clinical outcomes[1]. One solution that emerged was the development and implementation of patient safety and quality measurement programs by the Centers for Medicaid and Medicare Services (CMS) on cost reduction and improved patient outcomes. These programs manifest today as the Physician Quality Reporting System (PQRS), Meaningful Use (MU), resource use, and the recently passed Merit-Based Incentive Payment System (MIPS) to name a few.

With the implementation of all these performance measuring systems, the questions begs, do physicians really know how they are being assessed in terms of patient safety and quality measures? The answer to this question is complex and multi-dimensional; simply put I believe the most accurate, if still frustratingly ambiguous answer might be characterized as "yes, but no." On one side, agencies such as the CMS lay out clear guidelines and objectives for their incentive programs so that physicians will know exactly how their performance is being measured. In fact, the MIPS program will combine all of the current quality measures into one reporting system that can potentially alleviate the problem of abiding by different guidelines from different reporting systems. However, the measures assessed within each program will still exist and what constitutes a

well performing physician is constantly changing through the enactment of new legislation (MIPS) and modification of existing guidelines within each program. For instance, MU stages have undergone numerous modifications since their inception and many providers are struggling to keep up with the rapid revisions. The CMS released the final rules regarding stage 3 with modification to previous MU stages in October 2015. However, one month prior to this announcement, the American Hospital Association stated that over 60% of hospitals and 90% of physicians have yet to attest to Stage 2[2]. Furthermore, CMS released a report in February 2015 that stated 75% of all eligible professionals had yet to attest to any stage of MU by the end of 2014, resulting in 250,000 providers being penalized[3].

Additionally, private insurance companies have followed suit and adopted their own methodologies for evaluating physician performance and adjusting reimbursement for services based off the quality of care delivered[4]. Numerous, independent agencies also evaluate hospitals on a yearly basis, publishing comparison rankings based on measures that they deem most vital in assessing the overall quality of care delivered. In 2013, St. Mary Mercy Hospital in Livonia, Michigan simultaneously received a rating as one of America's top 50 hospitals by Healthgrades and a poor rating from Consumer Reports with associated reductions in reimbursements by CMS[5].

These examples suggest that health systems, along with their providers, may not fully understand how their performance is being assessed. This could be a result of a lack of standardization for which performance measures should be used and which should not, possibly due to the continuous controversy surrounding the use of certain performance measures in assessing the quality of physician care. But undergirding these seemingly contradictory assessments, there's a more fundamental question that must be addressed: do all of these performance measures provide an accurate assessment of the U.S. healthcare system today? Research has shown that some of these measures do lead to better health care outcomes while other studies illuminate potential problems with the utilization of incentivized programs in improving physician performance. A 2014 meta-analysis of 236 studies on the use of health information technology (HIT) and MU revealed that there is strong evidence supporting the use of clinical decision support and computerized provider order entry in order to achieve more successful health outcomes. A limitation of this meta-analysis is that the studies included rarely evaluated other measures of MU and the authors concluded that it is still unclear why some HIT implementations are reported as successful while others are not[6]. There is a growing body of evidence that supports the role of performance based measures in improving clinical outcomes, such as those seen in MU, but this analysis is in direct opposition to the view of many physicians who feel that HIT and MU use has led to worse patient care according to survey results released in 2014 by Medical Economics[7]. One possible cause for this discrepancy is the misalignment between efficacy as defined by the terms of the performance

studies and the translation of those terms in real-world practice. Efficacy studies are evaluated under more ideal circumstances with multiple exclusion criteria and highly experienced providers while effectiveness studies use a normal clinical setting with almost no exclusion criteria and providers representative of the general work pool[8].

One major factor that is out of physician control, and can have implications on their performance ratings and thus CMS reimbursements, is patient determinants of health. A 2010 study published in the JAMA concluded that for primary care providers (PCPs) working within the same academic health system, lower quality rankings were associated with PCPs who served higher proportions of underserved, non-English speaking, and minority patients. Furthermore, when the authors accounted for differences in visit frequency and patient profile factors, 36% of physicians were reclassified into a different quality quartile[9]. PCPs also share the care of a patient with numerous specialists who must each fulfill their role in order to maximize clinical outcomes. Should physicians be penalized for "lower quality of care" when they are taking on the burden of patient populations that tend to be poorer, sicker, and have worse health outcomes than other populations? Identifying uncontrollable factors and patient predispositions will have major implications on selecting performance measures that more accurately assess provider performance. I believe that current research has demonstrated that some measures are an accurate assessment of healthcare while other measures may not be, or have yet to be proven as, an accurate assessment of healthcare in the U.S.

Removing performance measures that have not proven to be effective in improving outcomes is paramount because these measures may result in loss of productivity and increases in unnecessary and unexpected costs due to implementation of such systems[10]. One performance measure that I believe should be removed is the MU Stage 2 requirement to use electronic messaging within a certified electronic health record (CEHR) until all CEHR vendors can optimize this technology. As a former medical assistant (MA) of a urology clinic, I had first-hand experience witnessing the frustration that patients faced in communicating to their physicians within the CEHR because the system was not very user friendly. In turn, the clinic's MAs spent increased time on the phone explaining how to use the system, which resulted in less attention paid to patients in the clinic and a slower workflow with physician backup. However, vendors are not fully to blame for sub-optimal usability. Continuing modifications to the MU program have resulted in CEHR vendors shifting their focus on ensuring that their platforms meet CMS requirements to be considered a CEHR, thus leaving less time to work on modifying these systems based of off physician and patient input.

One quality measure that may be of use to physicians would be a requirement to provide more simplistic discharge or office visit summary information to all patients. Although an objective similar to this idea exists now under MU Stage

1, it only states that a clinical summary be provided to patients after each visit. The CEHR used in my former clinic printed out numerous pages of irrelevant and complex information in shockingly small font to patients, which served as a summary of their office visit. A patient presenting with urinary frequency may receive summary papers on BPH even if their urinary frequency was derived from a UTI because the CEHR printed out all information on urinary frequency etiologies. These patients would often call our clinic back after their visit stating that they felt confused about information received because it did not line up with their physician's verbalized plan of action. Of course this would require collaboration between providers, CEHR vendors, and the CMS as well as research studies aimed at determining if there is sufficient evidence justifying the use of such a quality measure in improving patient outcomes.

The United States health system is moving into an era of evaluating and compensating providers based off the clinical outcomes of their patients. Research to date suggests mixed results on incorporating pay-for-performance models into healthcare and much controversy surrounds the topic as a whole. One widely accepted view is that our health system spends a disproportionate amount of money on health services in return for sub-optimal clinical outcomes. How we fix this problem will continue to be an issue of intense debate and will require open communication and receptiveness by all parties involved in the U.S. healthcare system.

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