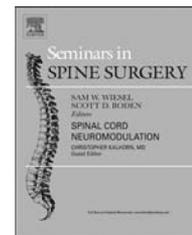


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Spine surgery in the era of healthcare reform: An age of Aquarius or an age of Mars?

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The poet Hesiod postulated five ages of the development of humankind through which all creation must pass. In this paradigm, a Golden Age of intellectual foment and development gives way to a Heroic Age where great achievements become possible through the creative energies unleashed in the earlier epoch. This invariably is followed by an Iron Age, an Age of Mars, where the accomplishments rendered in the Heroic Age are in turn beset by strife and conflict. The challenges of the Age of Mars ultimately give way to the Age of Aquarius, which potentiates some kind of utopia.

Certainly, the last three decades in the field of spine surgery can be seen to mirror this pattern. Since the late 1980s, an exponential increase in scientific enquiry, surgical technology and medical expertise has culminated in a confident and dynamic spine surgical discipline capable of achieving impressive clinical outcomes in patients who only a few decades before would not have been candidates for any type of intervention, surgical or otherwise. From the application of minimally invasive interventions to the treatment of degenerative disorders and stenosis, to surgical stabilization in those with spinal cord injury or instability due to neoplastic compromise, spinal procedures are presently being performed to an extent previously unimagined. Over a relatively similar period of time, the means through which American healthcare is procured, delivered and paid for has also undergone a rapid transformation,^{1–4} with the percentage of the gross domestic product (GDP) devoted to medical care in the US more than doubling over the course of 30 years and reaching 17% of GDP in 2010.^{1,2}

A number of political and sociodemographic realities, along with the recognition that such inordinate growth in healthcare consumption was unsustainable, culminated

in a variety of initiatives intended to militate burgeoning costs and ostensibly improve the efficiency of healthcare delivery as well as the quality of care provided.^{3–6} The resultant efforts generated a veritable alphabet soup of ever-changing health reform projects including The Patient Protection and Affordable Care Act (ACA), the Medicare Access and CHIP Reauthorization Act (MACRA), Merit based Incentive Payment System (MIPS), Accountable Care Organizations (ACOs), Bundled-Care Patient Initiative (BCPI), Medicare Shared Savings Program (MSSP) and Alternative Payment Models (APMs). In addition to Federally mandated or payer initiated reform measures,^{3–5} providers have also endeavored to become more efficient in the delivery of spine surgical care including the innovative use of surgery centers and means of incentivizing high quality care.

The landscape of current health reform efforts seem to alter with every 24 hour news cycle, resulting in some programs rapidly phasing out, new generations being introduced and other provisions simply being sunset or going unenforced. This makes it difficult for pundits to maintain a confident handle on the current state of healthcare reform, let alone clinicians who must devote their time to caring for patients while ensuring they remain on the cutting edge of medical and surgical innovation. Some fear that many, if not all, health reform endeavors will adversely impact the delivery of spine surgical care leading to restrictive use of the most promising technologies and the disenfranchisement of complex patients.^{3,4} Others maintain that such reforms are necessary in order to ensure adequate, equitable and effective healthcare for all Americans.⁶ In many cases, the relatively short time-period since health reform efforts were instituted obviates

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the capacity to comprehend in full any impact they may ultimately have on spine surgical practice.³

With these issues in mind, we have endeavored to provide an accessible review for spine surgical practitioners on many of the most prominent health reform efforts and their anticipated impact on the delivery of spine care. These include review articles from some of the foremost thought leaders and researchers in the area of health care reform and surgical practice covering ACOs, single system payer, bundled payment programs, Medicaid expansion, value-based purchasing and the innovative use of ambulatory care centers for the provision of spine surgery, among others.

The song *Age of Aquarius*, popularized in the musical *Hair*, clamors that such an epoch will result in “Harmony and understanding, sympathy and trust abounding...and the mind’s true liberation.” There are probably few who would agree that the experience of spine surgeons in the era of health reform is likely to be so glowing. But, at the same time, our field does not have to devolve into a Martial Age of Iron, either. Our hope is that this special edition of *Seminars in Spine Surgery* will provide the interested reader with a firm foundation on current health reform initiatives such that they can effectively advocate for their patients and situate themselves for continued clinical success in this turbulent period of rapid change and transformation in the healthcare field.

Disclosure

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