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Not the Last Word

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Not the Last Word: When Physicians Compete, Patients Can Win

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Orthopaedic surgery is the medical specialty that focuses on injuries and diseases of the body's musculoskeletal system [6], but we have no monopoly. Neurosurgeons treat radiculopathy. Plastic surgeons perform carpal tunnel release. Podiatrists correct bunions. Arthritis treatment is shared with rheumatology. And low back pain—well, there's hardly a specialty that is exempt from seeing it.

This variety creates practical problems. To start, having multiple specialties addressing the same conditions can be inefficient. For example, neurosurgeons who ultimately will concentrate on the spine must perform many craniotomies while training, just as plastics-trained hand surgeons spend time learning cosmetic procedures. Further, if medical care for the same disease differs by the type of specialist offering it, some patient somewhere is getting the wrong treatment. That's a simple extension of the argument made by John Wennberg regarding geographic variance in healthcare utilization [3]. As Wennberg noted, the ideal incidence of spinal fusion may be 3 per 1000 people (as found in the Bronx, NY, USA) or 11.5 per 1000 (as found in Casper, WY, USA), but they cannot both be ideal simultaneously. So too with specialty-driven variance: If we disagree, and offer different treatments for the very same condition, we can't all be right.

Despite the inefficiencies and inconsistencies of overlapping expertise, I am glad that no specialty has a monopoly on musculoskeletal care. Although a unified approach might foster efficiency, it also fosters excessive homogenization of care—and the individual specialty boards homogenize care enough as it is. We are simply not ready for one single standard of care for many disorders of the bones and joints.

Consider, for instance, the case of knee arthritis. For this condition, viscosupplementation is not recommended by the American Academy of Orthopaedic Surgeons [1], whereas the American College of Rheumatology is more in favor [2]. Similarly, the debate about the merits of arthroscopy for degenerative changes in the knee reveals a sectarian split along expected lines [4].

The current lack of consensus makes it necessary to embrace a marketplace of ideas, where robust theories thrive and weaker ones fade away. Within this dynamic environment, treatments like viscosupplementation and arthroscopy for degenerative disease may prove themselves and flourish, but they could also face the same fate as bloodletting and homeopathy—once mainstream practices that crumbled under the weight of overwhelming evidence. For the time being, the various specialties exploring different approaches to care can be considered a real-time natural experiment, collecting the empiric evidence that will ultimately shape future practice.

Diversity of ideas also fuels innovation. Specialists bring their unique backgrounds and idioms of training to a given clinical problem, and the broader their backgrounds are, the

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more innovation that is possible. It's no accident orthopaedic surgeons developed many of the spinal fixation techniques in common use today, as their training in biomechanics makes them more attuned to the problem of skeletal instability. (Naturally, this principle applies reciprocally: Neurosurgeons, for instance, are likely to possess deeper insights into matters concerning the spinal cord and dura, among other things.)

Nonetheless, there are limits on the power of competition. The various specialties are competitors in some sense, but all work within the same house of medicine. They have similar assumptions about human physiology and a mutual understanding of acceptable practices in patient care. Paradigm-shifting breakthroughs, like Marshall's demonstration of an infectious cause for gastric ulcers [5], usually emerge outside the confines of mainstream medicine.

Beyond that, the potential power of competition is also constrained by the tendency of specialists to stay within their informational silos. Specialists tend to publish in their own specialty journals, which are read primarily by members of that specialty. Accordingly, true advances might be overlooked. For example, the power of tranexamic acid (TXA) to minimize postsurgical hemorrhage was reported by cardiothoracic surgeons in 1980, decades before the use of TXA became routine in total joint replacement. Relatedly, recently I learned that there are 18 highly cited rheumatology journals. Although I treat many of the bone and joint conditions discussed in these journals, I read none of these journals on a regular basis—and to be honest, I read none of them on an irregular basis either.

Last, even when truths are known, one specialty can push against a rival only so far before the law intervenes. In 1976, the American Medical Association (AMA) was successfully sued by a chiropractor named Chester A. Wilk, who alleged restraint of trade (*Wilk v American Medical Ass'n*, 895 F.2d 352 [7th Cir. 1990]). Although one can argue that the AMA did not so much disparage chiropractic care but simply exposed its flaws, court rulings have limited the extent of public commentary when money is on the line.

In the end, the presence of multiple specialties treating the same condition can lead to inefficiencies, rivalry, and conflicting approaches. Yet, as we have learned from the American experience with federalism—50 unique states and attendant inefficiencies, rivalries, and conflicts—entities with slight differences operating within a larger unified framework can, by dint of their competition, improve things overall. For that reason, Justice Brandeis designated the states as "laboratories of democracy."

Similarly, in medicine, different specialties can serve as "laboratories of healthcare," incubating new treatments, testing them in practice, and presenting them for acceptance or rejection by the larger medical community. In that sense, when physicians compete, patients can win.

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Dr. Bernstein posits that competing specialties drive innovation, exert efficiency by emphasizing evidence-based care, and avoid the stagnation of monopoly. He cites the example of spine surgery, where neurosurgical and orthopaedic competition may lead to a "win" for patients. I suggest that the competing specialties cited will accomplish the same goals with a path of relative convergence.

Competition between providers for patients is real. However, there is no such thing as an open healthcare marketplace. Patients are restricted to treatment by locality, available specialists, referral patterns, insurance and health system participation, urgency of disorder, as well as economic and social supports. In most markets, patients independently seeking opinions across specialties are in the minority.

Regarding neurosurgical or orthopaedic backgrounds in spine, divergence of specialty dominance remains with respect to intradural surgery and major deformity repair. Otherwise, both groups increasingly merge on treatment paradigms in spinal oncology, neural compression syndromes, as well as in degenerative and traumatic spinal reconstruction. Training programs, health systems, and local subgroups collaborate on spine care. Arguably, the main competitive threat to spine surgeons is the plethora of nonsurgical providers, including pain physicians, proceduralists, medical physicians, and allied health providers of various backgrounds, all claiming a pathway to cure without operation.

In spine surgery, clinical recommendations for non-life-threatening conditions may reflect training preference, technical competence, experience, peer expectations, financial pressures, industry relationships, and other factors. Disparate recommendations may be frowned upon and even disparaged, even though neither competing treatment is empirically, definitively superior to the other. It is simultaneously true that regional treatments may differ (both within and

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between specialties) for the same problem, and yet satisfactory patient outcomes result for most.

One might argue that competing opinions regarding medication, therapies, manipulations, pain procedures, spinal decompressions, fusion and fixation, minimally invasive versus conventional open surgery, approach, and implants are a boon for patient care and improved outcome. Sometimes, control of patients resembles a turf war, where providers are mainly informed by a distinct lens, some with active prejudice against others. What's best for the patient maybe lost. It is most patient-centric to view these care decisions in a continuum, with each having a role depending on acuity and circumstance.

Dr. Bernstein is correct to assert that weaker ideas and technologies are typically exposed and relegated to the sidelines by professional and market forces. Nonetheless, some patients are directed into predictably futile or even harmful treatments. Multispecialty spine surgeons have more to gain by asserting a joint, preeminent role in affirming access to care and quality of care. I would argue that neurosurgical and orthopaedic spine surgeons should continue to share leadership to define treatment paradigms and maintain quality standards on the national and local level. Patients benefit when diverse surgeons participate in educational forums and societies, when peer-reviewed journals consolidate across specialties, and evidence-based results are held in highest regard.

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Dr. Bernstein writes an interesting column on how the absence of a monopoly on musculoskeletal care among specialties has its merits. He argues that although a unified approach might enhance efficiency, it could lead to excessive homogenization of care, undermining the diverse perspectives and innovations that different specialties bring to the table. The lack of consensus on treatments, which he highlights in the case of knee arthritis, necessitates a marketplace of ideas where competing theories can be tested, allowing robust approaches to thrive and weaker ones to fade away.

The ongoing lack of agreement serves as a real-time natural experiment, where diverse specialties explore different care approaches, collecting empirical evidence that will shape future practices. This diversity of ideas not only fuels innovation but also provides a dynamic environment for the evolution of medical treatments.

However, he highlights that the tendency of specialists to stay within their informational silos, publishing primarily in their specialty journals, poses a challenge. This can lead to overlooked advances, as exemplified by the delayed recognition of TXA's efficacy in minimizing postsurgical hemorrhage in joint replacement. Additionally he states, "the presence of multiple specialties treating the same condition can lead to inefficiencies, rivalry, and conflicting approaches," which I agree with.

As a budding surgeon in the field of orthoplastic surgery, it occurs to me that orthoplastics, as a subspecialized field that combines elements of both orthopaedic and plastic surgery, adds an intriguing dimension to the discussion on the complexities of multiple specialties addressing musculoskeletal issues. Orthoplastic surgeons are uniquely positioned to address conditions that involve both the bony structures and soft tissues, providing a comprehensive approach to reconstructive procedures.

Orthoplastic surgeons can streamline care for patients with complex injuries or deformities involving both bony structures and soft tissues. This field may help overcome the potential training inefficiencies highlighted in Dr. Bernstein's article, where surgeons might spend substantial time learning procedures outside their primary focus. Moreover, the acquisition of expertise developed in both orthopaedic and plastic surgery training programs might be the catalyst for propelling the field of orthoplastics forward. Consequently, proponents argue in favor of adopting the orthoplastic *team* concept rather than orthoplastic *surgeon*, advocating for a collaborative approach involving surgeons with unique backgrounds in both plastic and orthopaedic surgery.

It's worth noting that in business monopolies, the primary currency of loss is typically monetary and job-related. Although this impact should not be underestimated, the healthcare landscape operates on a different scale, dealing with stakes that are higher—encompassing aspects of health, well-being, and potential risks to life or limb. Although we may progress through competition, likely benefiting patients in the long run, it prompts me to ponder: What is the true cost? In the intricate interplay of competition and collaboration within healthcare, consideration of potential benefits to patients is imperative. This evaluation extends beyond mere considerations of time and efficiency, encompassing the broader implications for patient wellbeing, including the potential risks arising from conflicting approaches among specialties.

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