An Overlooked Health Care Cost - The Medical Device Market

By Chuck Dinerstein, MD, MBA — October 3, 2018

The use of stents to repair an aneurysmal aorta [1] has revolutionized vascular surgery, taking a 3-hour operation with a 5-7 day stay in the hospital and creating a 2-hour procedure with hospitalization overnight. Hospitals are paid approximately $25,000 for the 24 hours of care and before you get completely crazy, let me point out that about half of those costs are for the stent itself. Several articles in the vascular surgery literature [2] show that while using these devices in both effective and efficient, hospitals are losing money on these admissions – the cost of the device captures the economic gains.

Medical Devices

It turns out that medical devices, like pharmaceuticals, can be very expensive and their pricing and actual costs are likewise shrouded in mystery. The medical device market is an awful lot like the pharmaceutical market. A paper in Health Affairs looks at the expense of cardiac stents and pacemakers, big-ticket medical devices that absorb a large part of costs for medical devices in the US and the EU. Consider the similarities between devices and drugs.

- The US is the most significant device market as it is with pharmaceuticals
- While regulations differ, devices like drugs are not required to be of an economic health value – that evidence only appears after marketing begins, if at all.
- Wholesale prices are available, but purchasing discounts and contracts make knowing the actual cost an unproductive exercise.

The study considered hospital’s list price and use volumes in the US and several EU countries, specifically for cardiac stents, used to open or widen the coronary arteries and pacemakers –
devices used to regulate the rhythm of the heart. The study was limited because it treated all devices within a category as interchangeable, because they looked at actual rather than imputed costs, and because some of the EU data represented a small sample of hospitals. But with those grains of salt in mind, the researchers found

- Prices decline for all devices over time
- The US paid the most for these medical devices. EU countries paid less, in some cases a lot less — like a six-fold difference in the cost of stents between the US and Germany alluded to in the study’s title. Just like drugs, prices are highest in the US and lower in the EU.
- Not only did costs vary between countries, but they also varied by hospitals within those countries. Just like pharmaceuticals.

**Devices are inherently different than drugs.**

Unlike drugs, there is infrequently a generic alternative, especially for high-end devices like pacemakers. There is more competition for less sophisticated technological devices, like stents. But technologically complex pacemakers or even those aortic stents I mention initially are concentrated into a few companies. [3] More importantly, each of the devices differ in how they are implanted and their safety profiles, so unlike generic drugs, physicians have their “favorities,” devices that they are more comfortable in placing and maintaining. Hospitals call these “physician preference items,” and try to limit their costs and drive volume discounts, by pushing for one or just a few “standard” devices in any category. I have sat in of those meetings when you try and restrict the surgeon’s choice of equipment; they can be very, very ugly.

When we talk of pricing transparency we need to think local and global; and for that matter we need to also include medical devices in the discussion, along with pharmaceutical. Global corporations may categorize their operations by region and country, but their pricing always considers the comprehensive bottom line. The United States and its free market system subsidizes the pharmaceutical and medical device needs of the world through government aid packages and by the everyday prices we pay. Maybe we would feel better about our expenditures if we framed them differently.

“For every pacemaker purchased, we provide two to less fortunate countries.”

Does that make you feel better? Thought so.

[1] An aneurysmal aorta has a weakness in the wall that makes it susceptible to rupture and the patient bleeding to death. An aortic stent is like an internal pipe covering over the wall weakness and preventing a catastrophic event.

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