

NEWS

Few surgeons know cost of devices they implant, survey finds

Michael McCarthy

Seattle

Orthopedic attending surgeons correctly estimated the cost of commonly used orthopedic devices only 21% of the time in a survey reported in the current issue of *Health Affairs*.¹ Residents were right only 17% of the time.

The survey was conducted among attending surgeons and residents in the orthopedic departments of seven US academic medical centers: Duke University, Harvard University, the University of Maryland, the Mayo Clinic, the University of Pennsylvania, Stanford University, and Washington University in St Louis.

A total of 503 of the 522 physicians invited to participate completed the survey, giving a response rate of 96%. Of those responding 217 were attending physicians and 286 were residents.

Participants were asked to estimate the cost of 13 commonly used devices, such as devices for total hip arthroplasty, tibial intramedullary nails, and spine pedicle screw devices.

Estimates were considered correct if they fell within plus or minus 20% of the actual cost.

“Attending physicians correctly estimated the cost of the device 21 percent of the time [95% confidence interval 19% to 23%],” the researchers reported. “Of the responses, 42 percent were underestimates, and 38 percent were overestimates.

“For all devices, attending physicians’ estimates ranged from 1.8 percent of the actual price to 24.6 times the actual price.”

Residents correctly estimated the cost of a device 17% of the time (95% confidence interval 16% to 18%; P for difference from the attending physicians <0.001). They underestimated the cost 50% of the time and overestimated it 33% of the time. The residents’ estimates ranged from 1.8% to 54.1% of the actual price.

The costs of the devices were determined institution by institution, because prices are negotiated between individual institutions and vendors. Vendors consider pricing information confidential and include restrictions on cost disclosure in their contracts with hospitals.

In the study, prices paid by individual institutions were kept confidential, but the price of some devices varied almost threefold between different institutions, the researchers reported.

In general, attending and resident surgeons tended to overestimate the price of low cost devices and underestimate the price of high cost devices.

The researchers wrote, “When asked about the importance of cost in the selection of orthopedic devices, 8 percent of all of the respondents said that it should be ‘extremely important,’ and 30 percent said ‘very important.’ Forty-eight percent and 13 percent said that it should be ‘moderately important’ or ‘slightly important,’ respectively. Fewer than one percent of respondents believed that cost should be ‘not at all important’ in the selection of devices.”

The device was often the single biggest contributor to the cost of an orthopedic procedure, the researchers noted, in some cases accounting for 87% of the total.

Because there was little evidence that devices from different vendors yielded different clinical outcomes, they said, encouraging surgeons to choose lower cost devices should result in considerable cost savings.

“Surgeons must be educated about the prices of the devices—or at least the relative prices of various devices—and should be incentivized to learn the prices and to participate in cost containment efforts,” they concluded.

bmj.com Research: primary hip replacement prostheses and their evidence base (BMJ 2013;347:f6956, doi:10.1136/bmj.f6956); Editorial: New and unproved medical devices (BMJ 2013;347:f7413, doi:10.1136/bmj.f7413)

1 Okike K, O’Toole RV, Pollak AN, Bishop JA, McAndrew CM, Mehta S, et al. Survey finds few orthopedic surgeons know the costs of the devices they implant. *Health Aff* 2014;33:103-9.

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