Bundled Surgical Care (Sorta) Shows Small Savings, Without Poorer Outcomes

By Chuck Dinerstein — January 4, 2019

Bundled care, where Medicare pays one fee for the entire “episode” of care continues to grow. Some quick caveats, bundled care includes the index hospitalization and the next 90 days of care related to that hospital admission. It does not cover care as either an in or outpatient for other problems unrelated to the episode, and it is only being used for certain medical problems. I think that it is safe to say that surgical care, especially joint replacement has shown the most promise in maintaining quality and lowering costs. The New England Journal of Medicine reports this week on “moderate” savings with one of these programs. Here is what they report:

- The researchers looked at 266,000 hip and knee replacements performed between 2015 to 2017 comparing those patients in bundled care programs to those receiving standard fee-for-service care. The groups were well matched for the socio-demographic and chronic conditions.
- There were no differences in complications or readmissions – the outcomes were identical [1]
- Spending decreased in both groups, but the savings in the bundled group was greater by $812.

There are three inter-related sources of cost for these surgical episodes. The hospitalization itself is paid, as with all admissions, at a flat rate based on the admitting diagnosis. The most significant source of variation in this phase of care is the number of consultants involved. Each consultant can add one hundred to several hundreds of dollars to physician costs. The use of consultants is driven by admitting physician preference and unexpected medical problems. Bundled care impacts both of these factors, usually be making sure that the patient is appropriately prepared for surgery before admission and by providing a standard clinical pathway that most often will include a
hospitalist to help the surgeon with medical rather than surgical problems. We can say roughly speaking, the better the patient is prepared, the less need there is for consultation during the hospitalization. And one of the hidden costs, economically speaking an externality, is that pre-hospitalization care that gets the patient ready for surgery is very infrequently counted in the cost of the episode. [2] The study demonstrated negligible savings for professional services in both groups and differed by $15.

Post-discharge that patient may return to home with home services, or go to post-acute care facilities – rehabilitation centers, skilled nursing facility for less aggressive rehabilitation, or return to long-term “nursing” home settings. That “placement” decision is based on the patient’s need for rehabilitation (and after joint surgery they all do), their ability to get around independently both at home and to the physicians and physical therapy, and their other medical problems that impact their independence. As it turns out, where a patient goes post-discharge is the source of greatest cost variability. Here are the findings:

- Patients in bundled care programs were discharged less frequently (-10%) to those more expensive post-acute care facilities and more often provided home health services (4% increase). Those patients in post-acute care facilities stayed for about 1.7 days less.
- The control group only reduced their post-acute care facility use by 8% and did not increase their use of home health services.

Simply put, care at home is less expensive, than those post-acute care facilities, which are, in turn, less costly than a nursing home. The more patients can be cared for, with good outcomes, at home, the more significant savings the program will show.

The third source of cost variability is readmissions, and they are very costly indeed, usually doubling the cost for the entire episode. When the patient’s post-discharge placement is inadequate, they tend to be seen in emergency rooms which often will admit the patient and then ask questions. Now some readmissions are unavoidable, most frequently because of a new or exacerbated chronic problem. The researchers found a small, not statistically significant decrease in readmissions, less than 1% between the bundled and “regular” care.

Careful placement can often provide additional eyes on those felt to be at risk and intervention can occur before the need for the emergency department. For example, having a physician assistant or nurse practitioner make rounds at SNFs allows the care team to identify problems earlier than merely waiting for them to be recognized by the SNF staff who may be less experienced in surgical or medical conditions. But placing the patient in a setting with too much care raises costs, and that provides the second horn of the post-discharge dilemma. Too little attention and you risk unnecessary readmissions, too much care and you risk unnecessary costs.

The study did not consider professional fees but more importantly, did not account for the rewards to hospitals for improving outcomes. When that was taken into account that $812 savings was further reduced to $212. Bundled care can reduce costs without increasing apparent complications and deaths, but not as much as we would like. The real savings are hard to pin down, because we did not account for how the majority of patients, admitted electively, were prepared. What we can continue to say is that just like real estate, post-discharge care and savings are about location,
Outcome information was limited to recognized complications, readmission and deaths, so we actually have little information on whether patients ability to ambulate returned to their baseline for either group. Ambulatory ability is arguably something we should take into account.

Medicare calculates costs from 3 days before 90 days after admission. Most preoperative testing and physician visits occur several weeks before entry and are not calculated. While I advocate for preoperative preparation because it is essential to outcomes, not considering those costs makes it not quite an apple to apple comparison.

Source: Two-year Evaluation of Mandatory Bundled Payments for Joint Replacement NEJM DOI: 10.1056/NEJMsa1809010