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Analysis of Bundled Payment Post-Acute Pathway for Lower Extremity Total Joint Replacement Surgery

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Background

Total joint arthroplasty (TJA) is the replacement of a joint in the human body with an artificial one to relieve pain and to allow a patient to improve the movement and abilities in their life. Specifically, total knee arthroplasty (TKA) and total hip arthroplasty (THA) (TKA in particular) are the most prevalent causing nearly one million cases per year with an expected growth up to four million annually in twenty years or so. The original billing method was done via fee-for-service, which allowed providers to charge for each service done. Competition and volume increased between providers leading health care down the opposite road from which it was meant.

Total joint arthroplasty (TJA) has historically been one of the most expensive procedures with a lengthy recovery time. TKA has been the most expensive of the TJAs totaling $11 billion for 500,000 procedures done in 2005. Bundled payments were introduced to TJA to lower cost and improve quality of care for the patient. Recently, usage of certain TJA post-acute pathways has been driven down due to Bundled payment options.

Purpose

The overall goal was to improve TJA patient care, health outcomes, and cost of TJA procedure. The eight-week window was not enough to determine health outcomes of TJA patients or patient satisfaction, but overall cost of the procedure was able to be calculated and manipulated.

Methods and Results

Hypothetical dollar amounts and real percent and episode numbers were collected from the Orthopedic Hip/Knee Bundle Analysis from Populytics from 2016 and 2017. Four percentages were calculated in a spreadsheet based on number of episodes per post-acute pathway. Each component of the post-acute pathway was broken down into individual percentage based on episodes for each compared to the total. A weighted average (WA) was calculated from the product of the percent and $/episode, which was given in the data from Populytics.

Doc D showed the lowest total cost of post-acute bundle at $16,632 compared to the average from 2016 and 2017 at $18,439.76. This was from a decrease in HC (or HH) (-6%), SNF (-20%), OPR (-77%), and IPR (-10%). Percent decreases are compared to 2016 data.

Conclusions

Overall, decreasing the number of episodes per HC, SNF, and IPR will decrease overall bundle cost for providers. Providers must lead patients down the most effective post-acute pathway, but when able to skip HC, SNF, or IPR it will benefit all parties.

References