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Maimonides Medical Center

Title:

Market Resilience of Orthopaedic Hip/Knee Arthroplasty Sales During COVID-19

Abstract:

Introduction: The coronavirus 2019 (COVID-19) pandemic led to a significant decrease in elective surgical volume and orthopaedic device sales. The aim of this paper was to quantify this decrease and the related financial impact on the largest hip/knee arthroplasty companies by: 1) tracking individual hip/knee company valuations; 2) calculating aggregate changes in overall hip/knee arthroplasty market valuations; and 3) quantifying quarterly hip/knee revenues relative to prior years.

Materials/Methods: Financial data on the top five hip/knee arthroplasty companies by size between January 1, 2019, and October 1, 2020, was collected from a Wall Street financial database, S&P Capital IQ. Changes in valuation of these companies were compared against benchmark market indices, the S&P500 and Vanguard Healthcare ETF. U.S. hip/knee arthroplasty-specific revenue for Q1 and Q2 of 2019 and 2020 was collected from Securities Exchange Commission 10-Q forms. Quarterly revenue changes were calculated using 1-2Q19 revenues as baselines and aggregate to approximate the overall hip/knee arthroplasty market.

Results: The top five hip/knee companies lost \$179.2 billion (32.7% loss) in market value from pre COVID-19 market highs to COVID-19 market lows (March 2020), while S&P500 and Vanguard Healthcare ETF decreased 36.1 and 33.2%, respectively. From market lows to October 2020, arthroplasty companies rallied 38.6% while the S&P500 and Vanguard Healthcare ETF regained 43.5 and 56.4% respectively. Notably, this occurred while aggregate 1Q/2Q20 revenue lagged 7.1/41.8% relative to 2019, with an overall decrease of \$1.58B (24.8%).

Discussion/Conclusion: Similar to the overall market and healthcare sector, the top five hip/knee arthroplasty companies have recovered from their COVID market lows. Our results reveal the valuations of hip/knee companies remained robust during COVID, even as revenues fell, likely due to strong investor confidence in the industry outlook and greater overall use of the healthcare system.

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