

The **DEVASTATING** Impact Of

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# Periprosthetic Joint Infection (PJI)



## What is PJI?

PJI is one of the most common complications after total joint replacement, often resulting in prolonged hospitalization and considerable patient morbidity.<sup>1</sup>

The five-year mortality rate for patients with PJI is higher than <sup>6</sup>

## Breast Cancer Melanoma Hodgkin's Lymphoma

## What is PJI Costing Your Facility?

PJI is a significant economic burden to the overall health care system and considered the largest challenge in orthopedics today.<sup>2</sup>

PJI places major financial stress on the patient, the payer and healthcare systems.<sup>1</sup>

**\$60,000 –  
\$100,000**

cost per  
PJI treatment<sup>1</sup>

**\$1.62  
billion**

annual PJI cost  
projected by 2020<sup>2</sup>

## What Causes PJI?

The aging population, pre-existing comorbidities such as diabetes and obesity, and antimicrobial resistance has led to an increase in generalized musculoskeletal infection, including PJI.<sup>1</sup> Changes in antimicrobial resistance has resulted in<sup>1</sup>:

- Higher rates of treatment failure
- Longer hospitalizations
- Worse overall outcomes

## Biofilms Contribute to Antimicrobial Resistance

Biofilms are made up of bacteria that produce an Extracellular Polymeric Substance (EPS) to shield themselves from both mechanical and chemical attack.

- Over 90% of all bacteria exist in biofilms<sup>4</sup>
- EPS shielded bacteria can be 1000x more resistant to antibiotics than planktonic bacteria<sup>7</sup>
- Periodic release of planktonic bacteria from biofilms have been linked to chronic relapsing infections<sup>8</sup>

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