

Statewide Statistics and Key Findings

38.5% increase

53,769 adults underwent total knee or hip replacement in 2013 compared to 38,815 in 2004, a 38.5% increase.

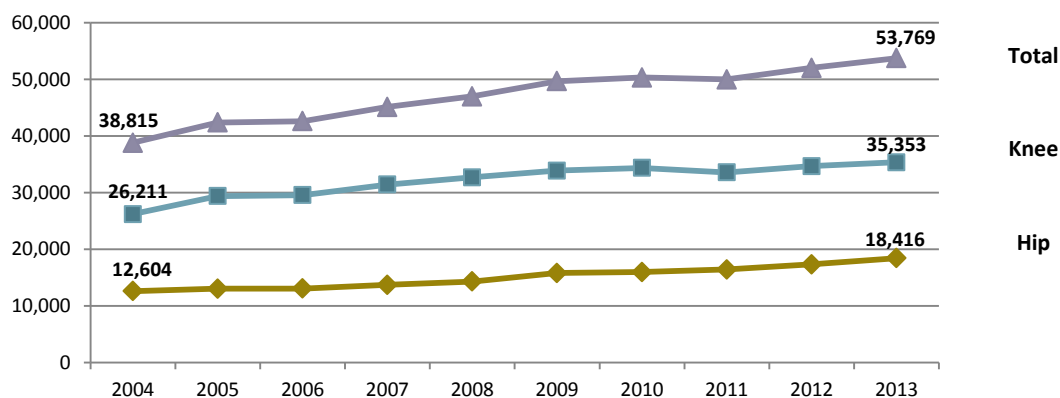
- 34.9% increase for knee replacement, from 26,211 patients in 2004 to 35,353 patients in 2013.
- 46.1% increase for hip replacement, from 12,604 patients in 2004 to 18,416 patients in 2013.

1 in 200

In 2013, about 1 in 200 Pennsylvania residents age 20 and older underwent total knee or hip replacement. The rate for patients age 65 and older was approximately 1 in 75 residents.

Pennsylvania residents age 45 to 64 had the largest *increase* in the rate of knee and hip replacement between 2004 and 2013, 40.4% increase for knee replacement (from 28.5 to 40.0 per 10,000) and 67.2% increase for hip replacement (from 12.5 to 20.9 per 10,000).

Number Knee and Hip Replacements, 2004-2013



3.9% readmitted

3.9% of patients who underwent knee replacement were readmitted to an acute care hospital within 30 days of discharge from the hospital in which their replacement was performed.

4.3% readmitted

4.3% of patients who underwent hip replacement were readmitted to an acute care hospital within 30 days of discharge from the hospital in which their replacement was performed.

Reasons for readmissions

Common reasons for readmission after knee and hip replacement include:

- Hematoma and post-operative wound infection.
- Dislocation and infection of the prosthetic joint.
- Blood clot in lung and lower extremity.
- Bloodstream infection and pneumonia.
- Bleeding and obstruction of the stomach and intestines.

Statewide Statistics and Key Findings

\$147 million

In 2012, Medicare fee-for-service payments totaled \$146,957,753 for knee and hip replacements, over \$104 million for knee replacements and more than \$42 million for hip replacements.

\$23 million

In 2012, Medicaid managed care payments totaled \$23,260,902 for knee and hip replacements, over \$15 million for knee replacements and more than \$8 million for hip replacements.

\$5 million

In 2012, Medicaid fee-for-service payments totaled \$5,091,497 for knee and hip replacements, over \$3 million for knee replacements and nearly \$2 million for hip replacements.

Note: 2012 is the most recent Medicare and Medicaid payment data available to PHC4.

Rates vary across 3 PA regions*

Western Pennsylvania had the highest hospitalization rate per 10,000 residents for both knee and hip replacements in 2013.

Knee replacement per 10,000 residents

- 37.5 Western Pennsylvania
- 36.0 Central and Northeastern Pennsylvania
- 30.6 Southeastern Pennsylvania

Hip replacement per 10,000 residents

- 18.5 Western Pennsylvania
- 17.1 Central and Northeastern Pennsylvania
- 16.8 Southeastern Pennsylvania

Rates vary by gender and race/ethnicity

Hospitalization Rates for Knee and Hip Replacements, 2013 (per 10,000 residents)		
	Knee	Hip
Female	41.6	18.4
Male	26.5	16.5
Black (non-Hispanic)	22.7	11.2
Hispanic	5.6	1.8
White (non-Hispanic)	37.9	19.4

Internal PHC4 analysis suggests that Hispanic ethnicity may be underreported. Not shown are data for other low-volume categories of race/ethnicity such as Asian, American Indian, Alaskan Native, Native Hawaiian, etc.

Post-Operative Length of Stay

In 2013, the average number of days patients stayed in the hospital after their replacement was:

- 3.0 days – Knee replacement
- 2.7 days – Hip replacement

**Western Pennsylvania* – Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Clarion, Clearfield, Crawford, Elk, Erie, Fayette, Forest, Greene, Indiana, Jefferson, Lawrence, McKean, Mercer, Potter, Somerset, Venango, Warren, Washington, Westmoreland. *Central and Northeastern Pennsylvania* – Adams, Bradford, Centre, Clinton, Columbia, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lackawanna, Lancaster, Lebanon, Luzerne, Lycoming, Mifflin, Monroe, Montour, Northumberland, Perry, Pike, Snyder, Sullivan, Susquehanna, Tioga, Union, Wayne, Wyoming, York. *Southeastern Pennsylvania* – Berks, Bucks, Carbon, Chester, Delaware, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill.

Statewide Statistics and Key Findings

157 hospitals

In 2013, 157 Pennsylvania hospitals performed knee and hip replacements.

- 228 was the average number of knee replacements performed per hospital; 119 was the average for hip replacements.
- 13.5% of hospitals performed fewer than 30 knee replacements; 33.5% of hospitals performed fewer than 30 hip replacements.

619 surgeons

In 2013, 619 surgeons performed knee and hip replacements in Pennsylvania hospitals.

- 61 was the average number of knee replacements performed per surgeon; 35 was the average for hip replacements.
- 43.6% of surgeons performed fewer than 30 knee replacements; 63.7% of surgeons performed fewer than 30 hip replacements.

Volume and readmissions

While not applicable to an individual surgeon, *in general*, higher surgeon volume was associated with a patient's decreased risk of being readmitted within 30 days after knee or hip replacement (after accounting for patient risk). Higher hospital volume was not associated with the risk of being readmitted.

Length of stay and readmissions

While not applicable to an individual case, *in general*, longer post-operative lengths of stay were associated with increased readmissions for both knee and hip replacements (after accounting for patient risk).

Healthcare-Associated Surgical Site Infection Rates

Reported by Pennsylvania Department of Health

8.3 per 1,000 procedures – Knee replacement

14.8 per 1,000 procedures – Hip replacement

The Pennsylvania Department of Health (DOH) publicly reports hospital-specific healthcare-associated infection rates including surgical site infection rates for knee and hip replacement. The most recent report, *Healthcare-Associated Infections in Pennsylvania, 2012 Report*, can be found on DOH's website at www.health.state.pa.us.