

Out-of-Pocket Costs And Probability Of Gender Affirming Surgery

Megan Lane, MD, MS¹, Yenling Lai, MSPH, MS¹, Hsou-Mei Hu, PhD, MBA, MHS¹, Alex McDowell, PhD, MPH, RN², Molly Moravek, MD, MPH¹, Edwin G. Wilkins, MD, MPH¹, Jeffery H. Kozlow, MD, MPH¹, William M. Kuzon, MD, PhD¹, Shane D. Morrison, MD, MS³, Daphna Stroumsa, MD, MPH¹, Jessica J. Hsu, MD, PhD¹, Jennifer F. Waljee, MD, MPH¹

¹University of Michigan, Ann Arbor, MI, USA, ²Massachusetts General Hospital, Boston, MA, USA, ³Seattle Children's Hospital, Seattle, WA, USA.

Background

- Over 16,000 gender affirming procedures performed in 2020
- Finances are a barrier to care
- As insurance coverage improves, little is known about out-of-pocket (OOP) costs

Methods



Data Source: IBM MarketScan Database employer-based insurance claims from 2010-2019



Cohort: Created using gender dysphoria diagnosis codes and gender affirming surgery CPT codes



Primary Outcomes: Out of pocket costs, odds of undergoing surgery during the study period



Covariates: Year, Health Plan Type, Region, Age



Analysis: Two-Part (Hurdle) Models to estimate OOP costs, Logistic Regression for probability of surgery

Results

	Masculinizing Chest (CI)	Masculinizing Genital (CI)	Feminizing Genital (CI)
Overall Estimate	1565 (1402-1727)	983 (841-1126)	1680 (1407-1954)
HMO (Health Maintenance Organization)	478 (332-625)	271 (142-400)	395 (230-560)
POS (Point of Service)	1430 (1115-1724)	1208 (718-1698)	2543 (1637-3450)
PPO (Preferred Provider Organization)	2301 (1941-2662)	1353 (1108-1598)	2137 (1607-2667)
CDHP (Consumer Directed Health Plan)	2620 (1767-3474)	1603 (934-2271)	3381 (1705-5059)
HDHP (High Deductible Health Plan)	2886 (2210-3563)	1539 (909-2170)	1633 (922-2345)
Other	1089 (592-1586)	1693 (45-3342)	2531 (145-4917)
Unknown	2017 (1372-2662)	1318 (487-2149)	569 (84-1052)

Table 1. Cost Estimates by Procedure Type. Cost estimates were adjusted for age, year of surgery, region, and health plan type.

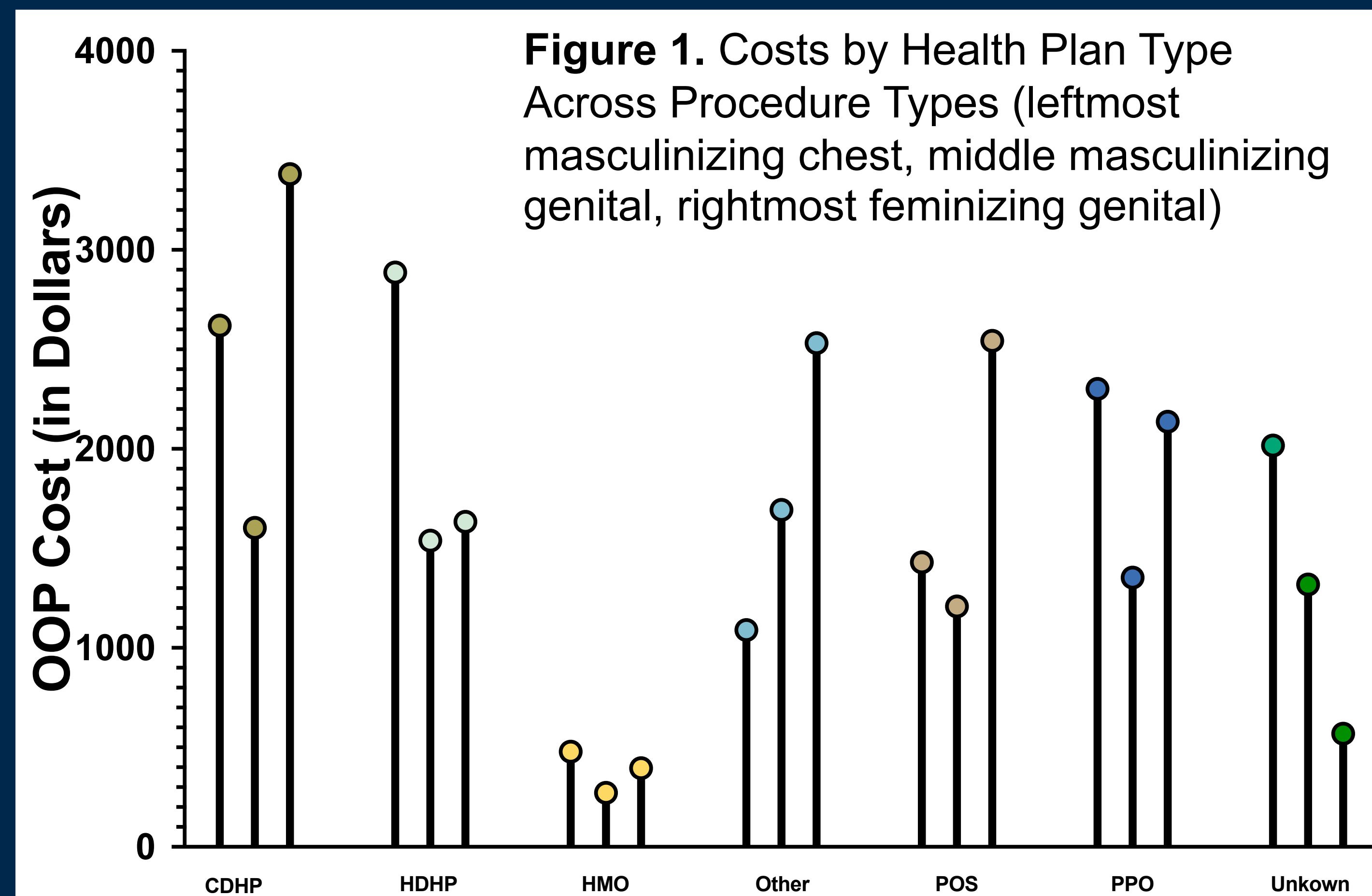


Figure 1. Costs by Health Plan Type Across Procedure Types (leftmost masculinizing chest, middle masculinizing genital, rightmost feminizing genital)

- From 2010-2019, 1421 individuals underwent gender affirming surgery (762 mastectomy, 57 breast augmentation, 321 masculinizing genital surgery, 281 feminizing genital surgery)
- OOP costs ranged from \$0-45,404
- 49.1% of individuals had PPOs and 35% resided in the West. Operations per year increased significantly over study period.
- 14.6%, 21.2%, and 19.6% of individuals undergoing masculinizing chest, masculinizing genital, and feminizing genital procedures had no cost sharing, respectively
- Health plan type was associated with OOP costs across procedure types, with HMO's providing the lowest cost sharing across procedure types (Fig 1, Table 1)
- Individuals with HMO plans had the highest probability of undergoing surgery after adjusting for region, year, age (Fig 2)

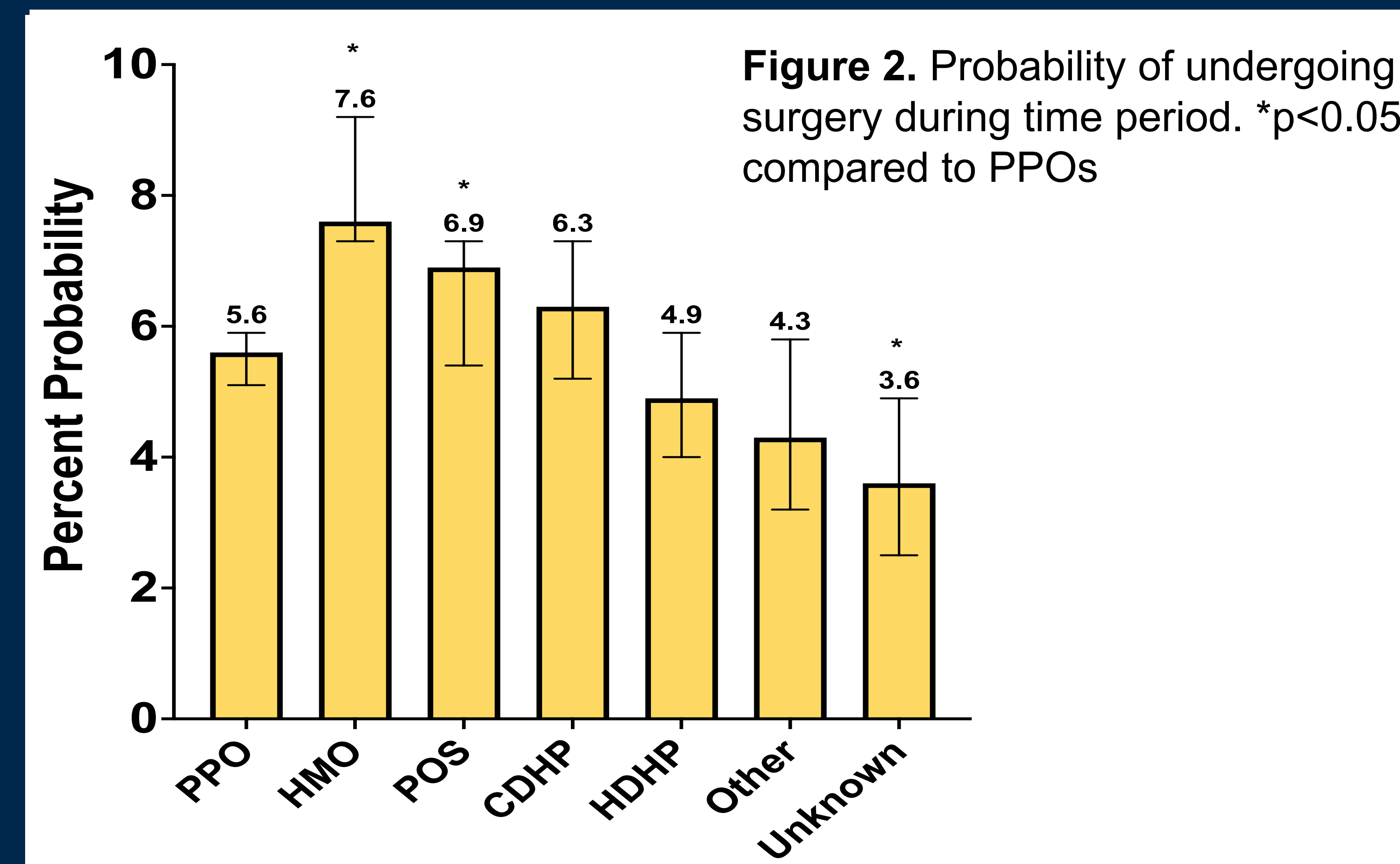


Figure 2. Probability of undergoing surgery during time period. *p<0.05 compared to PPOs

Conclusions

- Wide variation of OOP costs (\$0-45,404)
- HMOs provided the lowest OOP costs
- Individuals with HMOs had highest probability undergoing surgery

Next Steps

- HMOs are usually restrictive plans, how are they providing low costs AND the highest probability of surgery?
- Examining specific plan characteristics associated with favorable coverage