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Trends in Inpatient and Outpatient Hysterectomy and Oophorectomy among Commercially Insured Women in the United States: 2000 – 2014

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To the Editor

Hysterectomy is the second most common surgery among women in the United States, with approximately 600,000 performed annually for benign gynecologic conditions¹. Trends in hysterectomy rates are an important marker for innovation and quality in gynecology as treatment alternatives increase and evidence of underuse of these alternative treatments emerges.² Accurate identification of hysterectomy requires capture of both inpatient and outpatient services, given the shifting setting of care over recent years. Yet, the highest quality national trend estimates have been significantly limited by exclusion of outpatient surgery due to the use of databases restricted to inpatients.^{3,4} Prior studies that included inpatient and outpatient settings have focused on small geographic areas only, limiting their generalizability.⁵ The lack of national outpatient data is a critical gap, as rapid dissemination of robotic surgery has likely shifted the proportion of hysterectomy cases performed in outpatient settings.

The same shifting pattern may also be true for oophorectomy, another common procedure among US women. As with hysterectomy, the ability to analyze trends in oophorectomy is limited by use of data restricted to inpatients.

Methods

Using Truven Health Analytics Commercial Claims and Encounters Database, commercial insurance data representing over 50 million insured adults and containing both inpatient and outpatient procedures, we report long-term trends in hysterectomy and oophorectomy rates between 2000–2014. In particular, we estimate care received in inpatient and outpatient settings separately over this period to provide a comprehensive picture of gynecologic surgery receipt among commercially-insured US women.

We focused our analysis on women ages 18–64 who did not have cancer-related care during the period spanning one day before and thirty days after hysterectomy and/or oophorectomy, as this population is the most amenable to alternative treatment options. To calculate annual rates of use, we divided the number of women receiving each procedure by the total number of women ages 18–64 who were enrolled in the health plans in each month and multiplied this value by 100,000 to represent the rate per 100,000 health plan enrollees. This study was exempt from institutional review board review as it is a secondary analysis of de-identified data.

Results

From 2000–2014 there were 809,905 hysterectomies and 257,573 oophorectomies recorded. Overall annual hysterectomy rates decreased 39% between 2000 and 2014 (631/100,000 to 385/100,000) (Figure 1). The proportion of hysterectomy performed in outpatient settings increased from 14% in 2000 to 70% in 2014. Over the same time period, overall annual oophorectomy rates decreased from 166/100,000 to 134/100,000. The proportion of outpatient oophorectomy cases increased from 57% to 84% (Figure 2).

Discussion

This work demonstrates a current gap in gynecologic surgery research. Analyses limited to inpatient procedures likely underestimate rates of hysterectomy and oophorectomy, providing an incomplete picture of overall trends. Falsely low hysterectomy rates based on inpatient-only data can imply a greater use of alternative therapies (to hysterectomy) than what may actually be occurring. In addition, with a shift in standard of care to outpatient surgery, inpatient populations may represent a biased group of sicker, poorer patients whose outcomes we should not generalize to the greater population.

To accurately assess changing treatment patterns in gynecology, studies should include inpatient and outpatient procedures. Given the often subjective indications⁶ and previously reported geographic, socioeconomic, and racial variation in surgery rates, tracking usage patterns is important. Our work highlights important trends in hysterectomy and oophorectomy use and the extent to which care has shifted largely to outpatient settings. Recognizing gaps in data that provide only a partial view of surgical care patterns may avoid drawing incorrect conclusions regarding access to or quality of care received.

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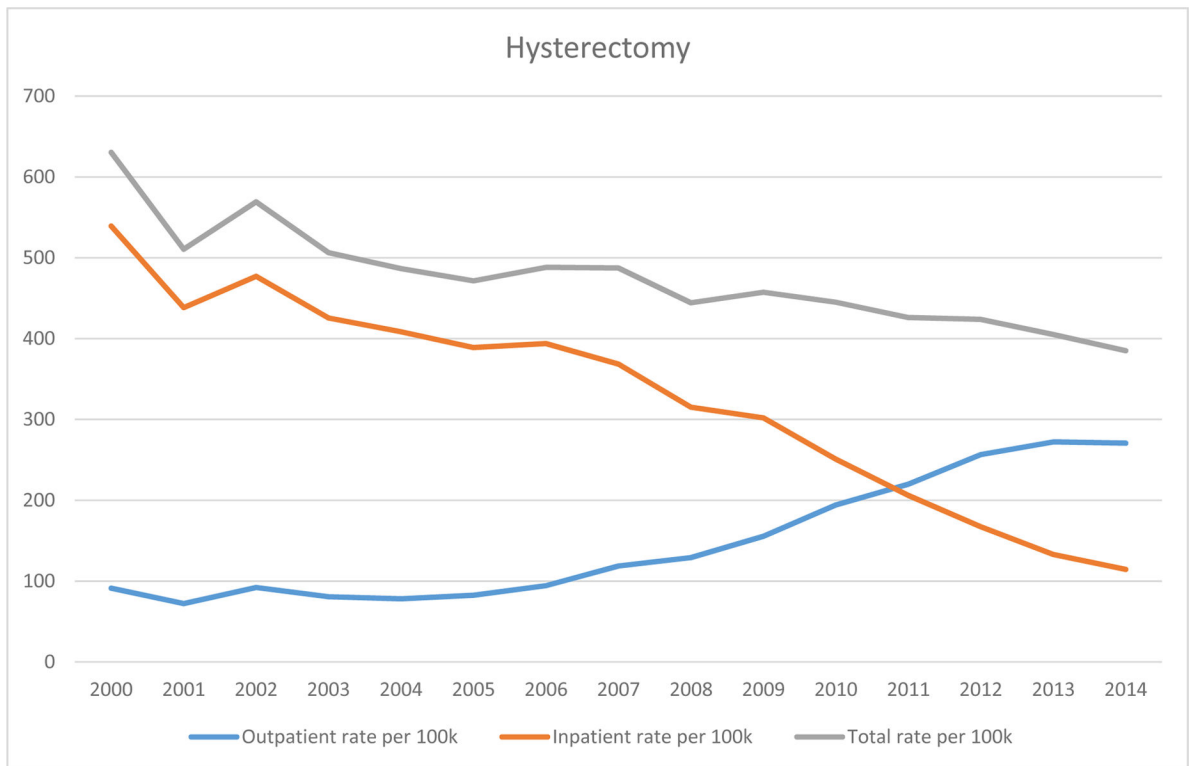


Figure 1.
Rates of hysterectomy per 100,000 women aged 18–64 enrolled in Commercial Health Plans, 2000 – 2014.
Data are from Truven Health Analytics Commercial Claims and Encounters Database, Copyright 2016.

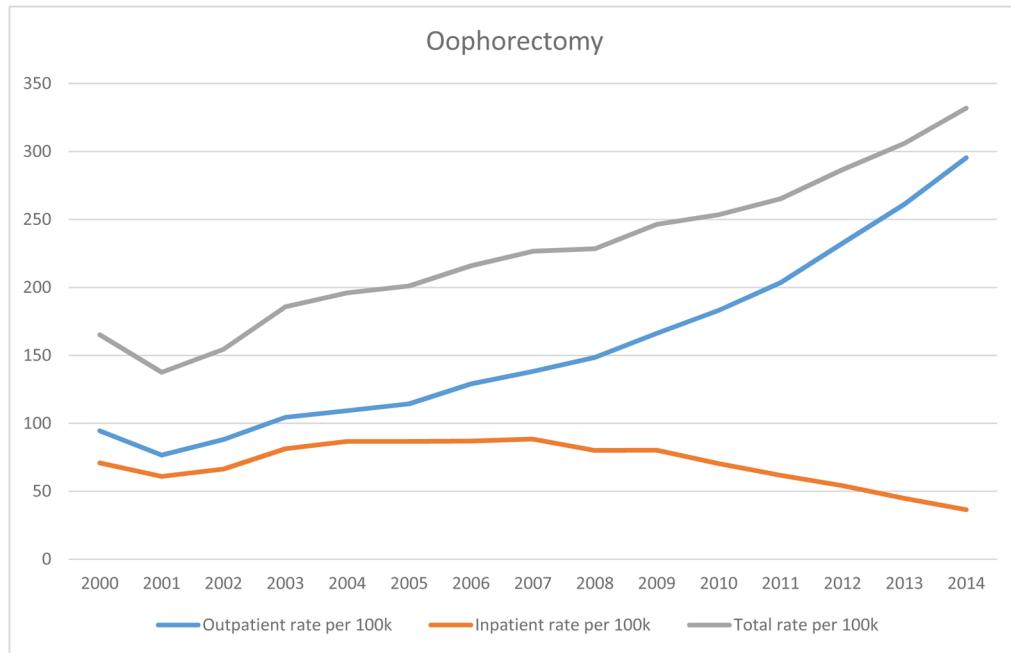


Figure 2.
Rates of oophorectomy per 100,000 women aged 18–64 enrolled in Commercial Health Plans, 2000 – 2014.
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