

Introduction

- Postpartum hemorrhage (PPH) - leading cause of preventable maternal death ¹.
- Limited data exist examining variation in US hospital rates of PPH.
- Study Aim: Determine the extent of variation in hospital-level PPH rates.

Methods

- **Data source:** Hospital discharge data, vital statistics data
- **Study Cohort:** Deliveries in 247 California hospitals between 2011 – 2014.
- **Outcome:** PPH (ICD-9 code 666.x)
- **Statistical Analysis:** Multi-level logistic regression analysis; Covariates = socioeconomic, pregnancy, and peripartum patient-level factors; hospital delivery volume, teaching status
- Median odds ratio (MOR) and intraclass coefficients (ICC): measures of variability in hospital-level rates of PPH

Results

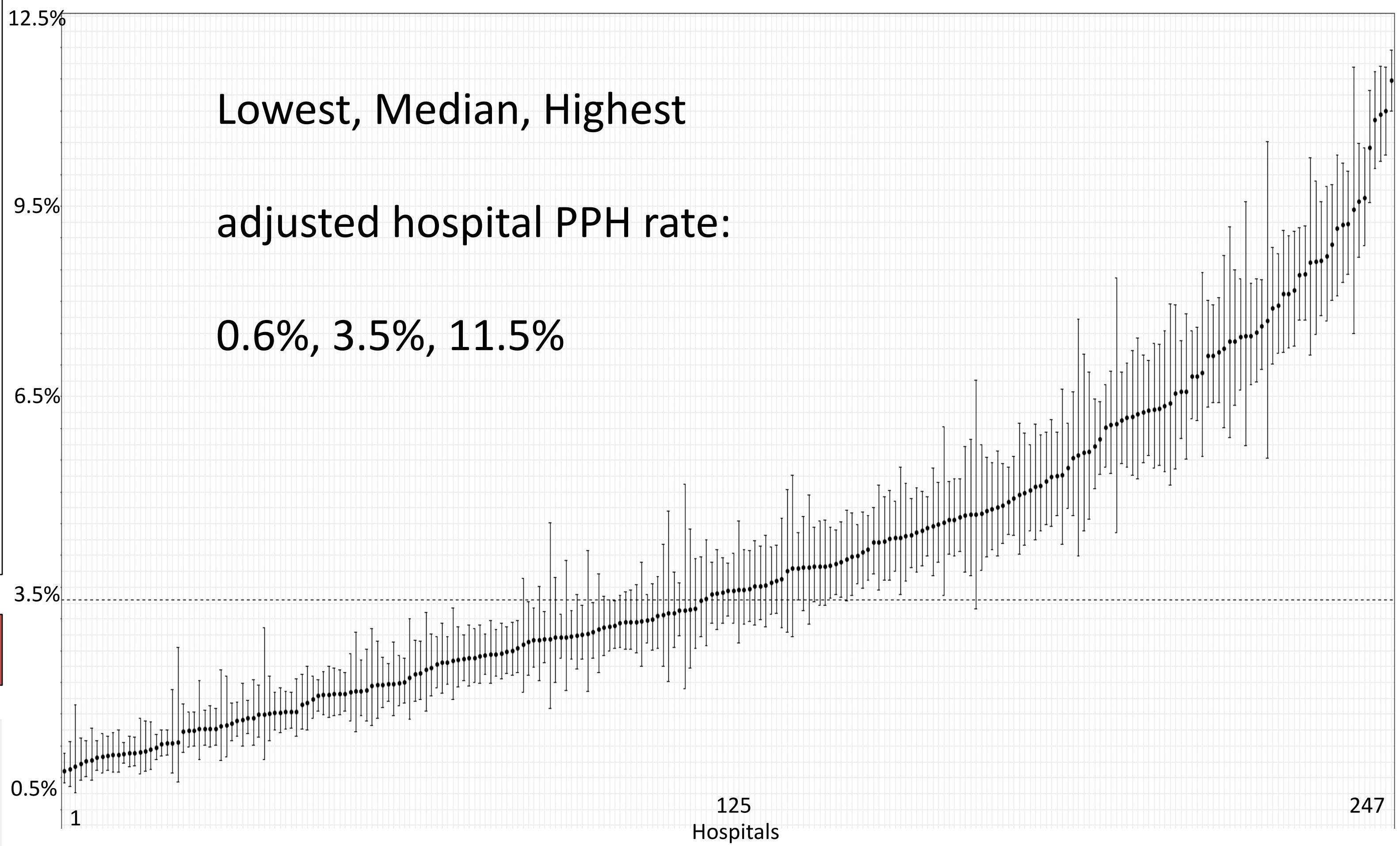
- 1.9 million women with a delivery
- 62,830 (3.3%) had PPH
- Table presents MORs and ICCs in the unadjusted and adjusted models
- Minimal changes in MORs or ICCs with adjustment
- Figure presents fully adjusted hospital rates of PPH

Table

	Model 1	Model 2	Model 3	Model 4	Model 5
MOR	2.1	2.1	2.1	2.0	2.0
(95% CI)	(2.0 – 2.2)	(2.0 – 2.2)	(1.9 – 2.2)	(1.9 -2.1)	(1.8 -2.1)
ICC	15.7	16.1	15.4	14.3	13.4
(95% CI)	(13.5 – 18.4)	(13.8 – 18.8)	(13.3-17.9)	(11.9-16.3)	(11.1-15.3)

Model 1; unadjusted; Model 2: adjusted for socioeconomic factors; Model 3:Model 2 + pregnancy factors; Model 4: Model 3 + peripartum factors; Model 5: Model 4 + hospital factors.

Figure



Discussion

- Between 2011-2014: substantial variation in California hospital rates of PPH.
- This variation was minimally explained by patient and hospital-level factors.
- The impact of PPH bundles/QI initiatives on hospital-level rates of PPH and PPH-related morbidity needs further examination.