Preeclampsia with Severe Features: How Do We Track Severe Features?

Kristen Harris,[1] Laura Sorabella,[1] Kim Boggess,[2] Marie-Louise Meng[1,3]

1. Department of Anesthesiology, Vanderbilt University Medical Center, Nashville, Tennessee, 2. Department of Obstetrics and Gynecology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States.3. Department of Obstetrics and Gynecology, Duke University Medical Center North Carolina.

Background

- Preeclampsia with severe features (PEC-SF) occurs in ~40% of preeclampsia cases
  - **4× increase in acute cardiac morbidity**

- Risk varies by **type and number of severe features** (e.g., pulmonary edema > headache)

- Individual severe features are **inconsistently documented**

- ICD coding typically captures **diagnosis only**, not **organ-specific dysfunction**
- This limits:
  - Epidemiologic research
  - Risk stratification
  - Understanding of disease heterogeneity

Hypothesis

- ICD-10 codes **do not reliably capture individual severe features**

- Organ dysfunction in PEC-SF is **underrepresented in administrative data**

- Therefore:
  - Identifying severe features using ICD codes alone is **not feasible**

Study Design and Methods

Study Design

- Retrospective cohort study
- Data source: **Premier Healthcare Database**
- Study period: **2016–2020 deliveries**
- Identified cases using **ICD-10 diagnosis codes**
- Population: patients w/ ICD codes for
  - Preeclampsia with severe features (PEC-SF)
  - HELLP syndrome
  - Eclampsia

Methods

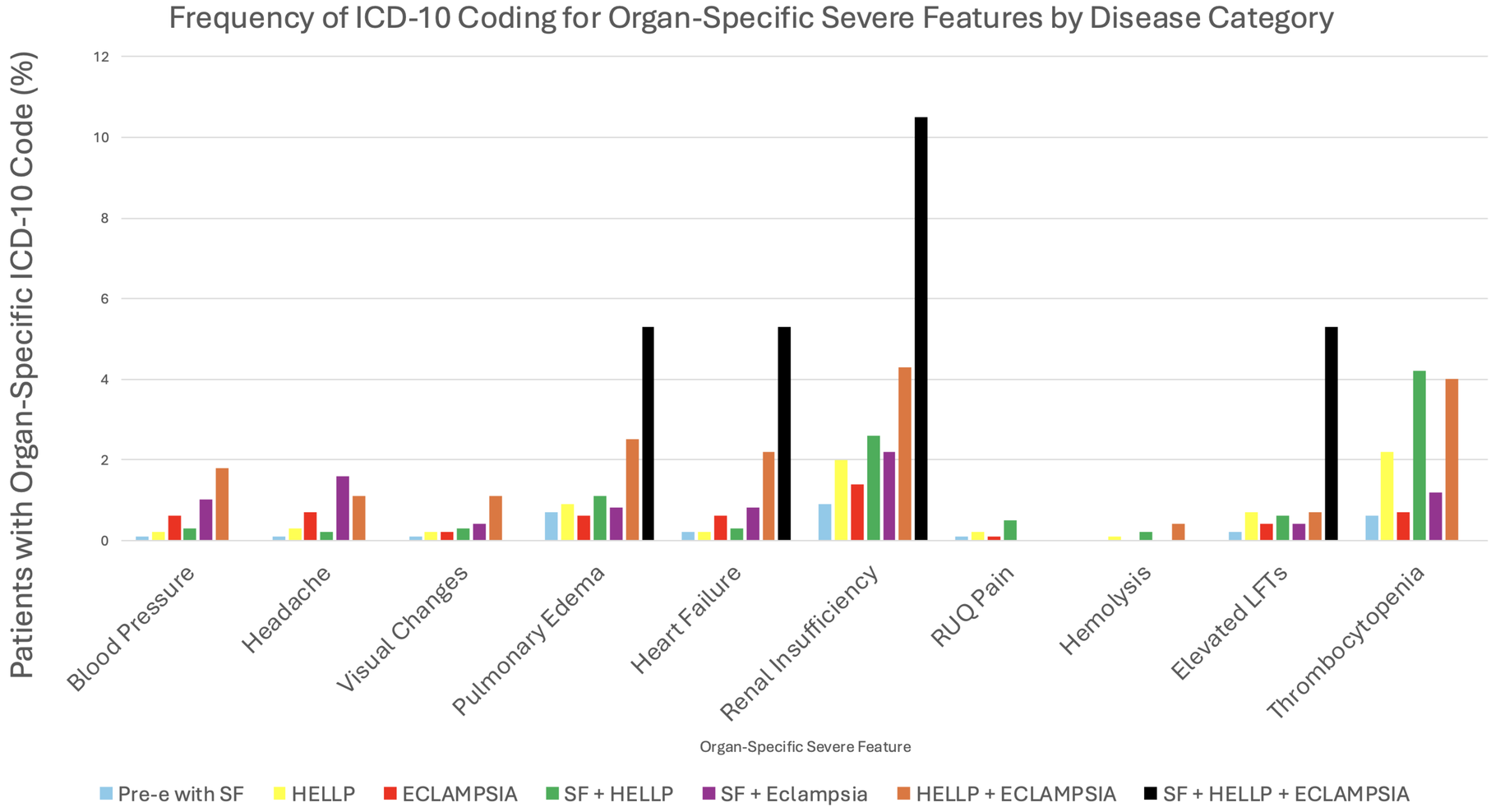
•Developed code set for **organ-specific dysfunction**, including:

- •Hypertension
- •Neurologic symptoms (headache, visual changes)
- •Pulmonary edema, heart failure
- •Renal insufficiency
- •RUQ pain, hemolysis
- •Elevated liver enzymes
- •Thrombocytopenia

•Calculated **frequency of organ dysfunction codes** within PEC-SF spectrum

•Compared coding rates across: PEC-SF. HELLP, and Eclampsia

Results: Frequency of ICD-10 coding for Organ-Specific Severe Features



Conclusion and Discussion

•Preeclampsia with severe features (PEC-SF) is associated with **significant maternal and long-term cardiovascular risk**

•**ICD-10 codes largely fail to capture organ-specific manifestations**, with consistently low coding rates across severe features

•Current coding practices **collapse a heterogeneous condition into a single diagnosis**, obscuring variation in disease severity

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•This limitation **impairs risk stratification and epidemiologic research**

•Administrative data likely **underrepresents the true burden of organ dysfunction**

•**Systematic documentation of organ-specific involvement alongside diagnosis is essential**

- •Improved granularity may enhance:
- •Clinical risk assessment
- •Research accuracy
- •Maternal health outcomes