

## Maternal admissions to Intensive Care Units in France: trends in rates, causes and severity Nolwenn Regnault

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### Introduction:

Maternal intensive care unit admission (ICU) is an indicator of severe maternal morbidity. This study aimed to estimate rates of maternal ICU admission during or following pregnancy in

France, and to describe the characteristics of women admitted, the severity of their condition, associated diagnoses, regional disparities, and temporal trends between 2010 and 2014.

**Methods:**

Women hospitalised in France in ICU during pregnancy or up to 42 days after pregnancy between 2010 and 2014 were identified using the national hospital discharge database (PMSI-MCO). The Simplified Acute Physiology Score (SAPS II) was used to estimate the severity. Trends in incidence rates were quantified using percentages of average annual variation based on a Poisson regression model.

**Results:**

In total, 16,011 women were admitted to ICU, representing an overall rate of 3.97 ‰ deliveries. The average annual decrease in this rate between 2010 and 2014 was 1.7% (IC95%: -2, 00%; -1, 45%;  $p < 0.0001$ ) on average per year. The SAPS II score increased significantly from 18.4 in 2010 to 21.5 in 2014. Obstetrical hemorrhage (39.8%) and hypertensive complications during pregnancy (24.8%) were the most common reasons for admission. Within mainland France, we found notable disparities in maternal ICU admission rates between regions, from lowest in Pays-de-la-Loire region (2.69‰) to highest in Ile-de-France (5.05‰).

**Conclusions:**

The rate of maternal ICU admission decreased from 2010 to 2014 in France, with a concomitant increase in case severity. Additional studies are needed to understand the territorial disparities identified in our study.

**Key messages:**

- The decreasing incidence of maternal ICU admission could be due to organisational changes with increased admission to intermediate care units.
- These changes have to be understood to accurately use maternal ICU admission for maternal health surveillance.