

## A case series review of pregnant and postpartum patients admitted to general critical care in a large inner city hospital from January 2007 to August 2013

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While few obstetric patients require admission to intensive care they often have different pathology to general intensive care patients and therefore warrant particular attention.<sup>1</sup> This study aimed to review all pregnant and postpartum admissions to ICU at Glasgow Royal Infirmary.

### Methods

A search was made for all patients admitted to GRI ICU between January 1<sup>st</sup> 2007 and August 31<sup>st</sup> 2013 entered as “pregnant”, “currently pregnant”, “recently pregnant”, “obstetrics” or “gynaecology”. Patients found to be clearly non-obstetric were excluded. An electronic and paper case note review was made for relevant patients.

### Results

46 patients were identified. This equates to one obstetric admission per 88.3 ICU admissions (1.1%), and 1.1 ICU admissions per 1000 maternities (0.1% of maternities) in this time period. Twenty-seven postpartum patients (73%) had undergone caesarean section, while four of the six pregnant patients who went on to have a live birth (66.6%) had a vaginal delivery.

Table 1 Obstetric Patients Characteristics

	<b>PREGNANT (n=9)</b>	<b>POSTPARTUM (n=37)</b>	<b>p value</b>
<b>Age (years) (Median (IQR))</b>	27 (25-29)	29 (23-35)	0.618
<b>Parity (Median (IQR))</b>	2 (1-2)	0 (0-1)	0.052
<b>APACHE II (Median (IQR))</b>	13 (12.5-18)	11 (9-15.5)	0.053
<b>Mortality In ICU (N (%))</b>	1 (11.1%)	0	0.04
<b>Obstetric Diagnosis (N (%))</b>	1 (11.1)	32 (86.5%)	<0.001
<b>Haemorrhage Diagnosis (N (%))</b>	0	25 (67.6%)	<0.001

<b>Sepsis Diagnosis (N (%))</b>	7 (77.8%)	4 (10.8%)	<0.001
<b>Length of ICU stay (calendar days) (Median (IQR))</b>	3 (2-5)	2 (1.5-2)	0.011
<b>Pregnancy resulting in live birth (N (%))</b>	6 (66.6%)	37 (100%)	<0.001

## Discussion

When compared with the most recent National Data the GRI ICU Obstetric population has fairly similar characteristics.<sup>2</sup> They do show fewer admissions per maternities however and more admissions with haemorrhage.<sup>2</sup> There are also significant differences between pregnant and postpartum patients. Reassuringly mortality in this group is low but this does not reflect those patients who do not reach ITU which may be a significant proportion.<sup>3</sup> Future work should focus on the reasons for the high relative rate of admission with haemorrhage and factors which might reduce the overall rate of admission further.

- 1 Maternal Critical Care Working Group. Providing equity of critical and maternity care for the critically ill pregnant or recently pregnant woman. RCOG. July 2011**
- 2 Female admissions (aged 16-50 years) to adult, general critical care units in England, Wales and Northern Ireland, reported as “currently pregnant” or “recently pregnant”. 1<sup>st</sup> of January 2007 to 31<sup>st</sup> of December 2007. ICNARC, 2009.**
- 3 Clutton-Brock T. CEMACE. Saving Mothers’ Lives. Reviewing maternal deaths to make motherhood safer: 2006-2008. BJOG 2011. 118; s1, Chapter 16.**