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## Safe motherhood : severe maternal morbidity in the Netherlands. The LEMMoN study

Zwart, J.J.

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**Safe motherhood:  
Severe acute maternal morbidity in  
the Netherlands**

*The LEMMoN study*

**Joost Zwart**

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# **Safe motherhood: Severe acute maternal morbidity in the Netherlands**

*The LEMMoN study*

**PROEFSCHRIFT**

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**Joost Jan Zwart**

geboren te Wageningen

in 1972

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Promotor            Prof. J. van Roosmalen

Overige leden      Prof. A. Brand  
                         Prof. J.M.M. van Lith  
                         Prof. J.M. Richters  
                         Prof. J.P. Vandenbroucke  
                         Prof. J.I.P. de Vries (VU University Medical Center)  
                         Dr. G.G. Zeeman (University Medical Center Groningen)

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*Dus moeten we dansen en moeten we vrijen  
Moeten we lachen en drinken vol vuur  
God verbood wat we allemaal deden  
Leef toch je leven als je allerlaatste uur*

(Uit: Niemand weet hoe laat het is, Youp van 't Hek)

Aan: Maaïke, Hidde, Tijn en ...



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## Abbreviations

|        |                                                                                                                                                                                   |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFE    | amniotic fluid embolism                                                                                                                                                           |
| ARDS   | adult respiratory distress syndrome                                                                                                                                               |
| BMI    | body mass index                                                                                                                                                                   |
| BTL    | blood transfusion laboratory                                                                                                                                                      |
| CBS    | [Centraal Bureau voor de Statistiek], Statistics Netherlands                                                                                                                      |
| CI     | confidence interval                                                                                                                                                               |
| CS     | caesarean section                                                                                                                                                                 |
| CTG    | cardiotocography                                                                                                                                                                  |
| FFP    | free frozen plasma                                                                                                                                                                |
| HELLP  | haemolysis, elevated liver enzymes, low platelets syndrome                                                                                                                        |
| ICSI   | intracytoplasmatic sperm injection                                                                                                                                                |
| ICU    | intensive care unit                                                                                                                                                               |
| IVF    | in vitro fertilisation                                                                                                                                                            |
| LEMMoN | [Landelijke studie naar Etnische determinanten van Maternale Morbiditeit in Nederland], Nationwide study into ethnic determinants of severe maternal morbidity in the Netherlands |
| LVR    | [Landelijke Verloskunde Registratie], Dutch perinatal database                                                                                                                    |
| MOH    | major obstetric haemorrhage                                                                                                                                                       |
| NSCOG  | [Nationaal Signaleringscentrum Obstetrie en Gynaecologie], National Signalling Centre for Obstetrics and Gynaecology                                                              |
| NVOG   | [Nederlandse Vereniging voor Obstetrie en Gynaecologie], Dutch society of Obstetrics and Gynaecology                                                                              |
| OR     | odds ratio                                                                                                                                                                        |
| PRN    | [Perinatale Registratie Nederland], The Netherlands Perinatal Registry                                                                                                            |
| RBC    | red blood cells                                                                                                                                                                   |
| RR     | relative risk                                                                                                                                                                     |
| SAMM   | severe acute maternal morbidity                                                                                                                                                   |
| VBAC   | vaginal birth after caesarean section                                                                                                                                             |
| WHO    | World Health Organization                                                                                                                                                         |

