



Universiteit
Leiden

The Netherlands

Improving care for red blood cell alloimmunized pregnant women

Slootweg, Y.M.

Citation

Slootweg, Y. M. (2023, September 13). *Improving care for red blood cell alloimmunized pregnant women*. Retrieved from <https://hdl.handle.net/1887/3640573>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3640573>

Note: To cite this publication please use the final published version (if applicable).

Improving care for red blood cell alloimmunized pregnant women

Yolentha Slootweg

Improving care for red blood cell alloimmunized pregnant women

PhD Thesis, University of Leiden, The Netherlands.

Cover design and lay-out: Maartje Folkerts, Persoonlijkproefschrift.nl

Printed by: Ridderprint, Alblasterdam, The Netherlands

©Yolentha Slootweg, Rijnsburg, 2023

All rights reserved. No part of this thesis may be reproduced, stored or transmitted in any form or by any means, without written permission by the author.

The research presented in this Thesis was performed at the department of Translational Immunohematology, Sanquin and at the departments of Obstetrics and Hematology of the Leiden University Medical Center, and was financially supported by Sanquin Blood Supply.

Financial support for printing of this thesis was kindly provided by Waleus University Library, department of Obstetrics LUMC and Sanquin Research.

Improving care for red blood cell alloimmunized pregnant women

Proefschrift

ter verkrijging van

de graad van doctor aan de Universiteit Leiden,

op gezag van rector magnificus prof.dr.ir. H. Bijl,

volgens besluit van het college voor promoties

te verdedigen op woensdag 13 september 2023

klokke 15.00 uur

door

Yolentha Slootweg

geboren te Valkenburg (Z-H)

in 1986

Promotores en promotiecommissie

Promotor: Prof. Dr. M. de Haas

Co-promotores: Dr. I.L. van Kamp

Dr. J.M. Koelewijn (Sanquin Research)

Promotiecommissie: Prof. Dr. J.G. van der Bom

Prof. Dr. E Lopriore

Dr. E.J.T. Verweij

Prof. Dr. C. Verhoeven (AUMC, Amsterdam)

Prof. Dr. M. Nieuwenhuijze (AV-M, Maastricht)

Dr. M.G.A.J. Wouters (AUMC, Amsterdam)

Contents

General introduction

1. Development of preventive measures to reduce occurrence of severe hemolytic disease of the fetus and newborn 7

Prevention

2. Risk factors for RhD immunization in a high coverage prevention program of antenatal and postnatal Rhlg: a nationwide cohort study 21
3. Third trimester screening for alloimmunization in Rhc negative women 41
4. Facilitators and barriers for RhD-immunized women to become and remain anti-D donors 63

Timely detection and management

5. Predicting anti-Kell-mediated hemolytic disease of the fetus and newborn: diagnostic accuracy of laboratory management 81
6. Diagnostic performance of laboratory monitoring to predict severe hemolytic disease of the fetus and newborn in non-D and non-K-alloimmunized pregnancies 97

Evaluation of the prevention program from health care provider and patient perspective

7. Knowledge, attitude and practices of obstetric care providers towards maternal red-blood-cell immunization during pregnancy 123
8. When a pregnancy is complicated by red blood cell alloimmunization: the importance of sincere information – a qualitative study of women's experiences 145

Discussion and summary

9. General discussion 163
10. Summary 177
11. Nederlandse samenvatting 185

Appendices

- | | |
|------------------|-----|
| Publications | 194 |
| Curriculum Vitae | 196 |
| Dankwoord | 198 |
| Abbreviations | 200 |
| References | 202 |