

Healthcare improvement based on learning from adverse outcomes Vos, M.S. de

Citation

Vos, M. S. de. (2018, December 18). *Healthcare improvement based on learning from adverse outcomes*. Retrieved from https://hdl.handle.net/1887/67419

Version: Not Applicable (or Unknown)

License: License agreement concerning inclusion of doctoral thesis in the

Institutional Repository of the University of Leiden

Downloaded from: https://hdl.handle.net/1887/67419

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

Cover Page



Universiteit Leiden



The following handle holds various files of this Leiden University dissertation: http://hdl.handle.net/1887/67419

Author: Vos, M.S. de

Title: Healthcare improvement based on learning from adverse outcomes

Issue Date: 2018-12-18

PHD PORTFOLIO

	37
	Year
Courses	
- Basic course regulations and organisation for clinical investigators, LUMC, Leiden [1.0 ECTS]	2017
- Communication in Science, LUMC, Leiden [1.5 ECTS]	2016
- Basic Methods and Reasoning in Biostatistics, LUMC, Leiden [1.5 ECTS]	2016
- Lean six sigma yellow belt training, LUMC, Leiden [0.5 ECTS]	2016
- Tripod Beta incident analysis training, Erasmus MC, Rotterdam [0.5 ECTS]	2016
- Advanced Biostatistics for Medical Researchers, BWH Center for Clinical Investigation,	2013
Harvard Medical School [3.75 AMA PRA Category 1 credit]	
Conferences (scientific presentations and participation)	
- Presentation 'FRAM to study work-as-done in Australia and Europe', Resilient Health Care Net meeting, Middelfart, Denmark	2018
- Presentation 'Towards Safety-II in hospital care', Resilient Health Care Net meeting, Vancouver, Canada	2017
- Presentation 'Learning from M&M conferences: observational study of frequency, type and recurrence of lessons for patient care', European Surgical Association 24th annual meeting, Bucharest, Romania	2017
- Participant International Forum on Quality & Safety in Healthcare, London, UK	2017
- Participant Resilient Health Care Net Meeting, Middelfart, Denmark	2016
- Participant Functional Resonance Analyis Method (FRAM) workshop, Lisbon, Portugal	2016
- Poster presentation 'Patient feedback driven improvement on the ward', International Forum on	2016
Quality & Safety in Healthcare, Gothenburg, Sweden	
- Participant High Reliability Organizing (HRO) conference, the Hague	2016
- Poster presentation 'Strengths and key elements of different format for Morbidity & Mortality	2015
conferences', International Forum on Quality & Safety in Healthcare, London, United Kingdom	
- Presentation 'Learning from patient feedback: transparent improvement in clinical practice'	2015
Modernising Postgradute Specialty Training conference, Amersfoort, the Netherlands	
Other presentations (invited speaker)	
- Meeting with dr. van Diemen on behalf of Inspectorate (IGJ), HMC, The Hague	2018
- National meeting on healthcare-related harm, NVZ/NFU/FMS/V&VN/Patient Federation, Eemnes	2018
- FRAM workshop for Dutch regional hospitals, MediRisk medical liability insurance, Utrecht	2018
- Educational conference, Department of Gynecology and Obstetrics, LUMC, Leiden	2018
- Educational conference, Department of Gynecology and Obstetrics, HMC, The Hague	2018
- Educational conference, Department of Thoracic Surgery, LUMC, Leiden	2017
- Annual meeting of hospital committee for serious incident analysis, LUMC, Leiden	2017
- Educational conference, Department of Surgery, Groene Hart Hospital, Gouda	2017
- National Construction Safety Day, TBI Holdings Headquarters, Rotterdam	2017
- LUMC Top Research Seminar, Leiden	2017
- Cross-industry Safety Group, den Haag	2017
- TBI Annual Safety Day, TBI construction sites Rijswijk/Rotterdam	2016
- TBI Safety Advisory Board meeting, TBI Holdings Headquarters, Rotterdam	2015
Teaching, supervising	
- Critical Appraisal of a Topic (CAT) project, Daphne Raad	2017
- Research internship, Robyn Heitz	2017
- Research internship, Donald van Bruggen	2016
- Research internship, Barbara Bol	2015



Miscellaneous

$- \ Member\ task force\ Safety-II,\ national\ health care-related\ harm\ project\ NVZ/NFU/FMS/V\&VN/Patient$	2018
Federation	
- Participant Doctor Meets Director project, Medical Business Foundation, ETZ hospital Tilburg	2017-18
- Member taskforce Patient Safety, Education Council, Federation of Medical Specialists, Utrecht	2016-18
- Member Cross-industry Safety Group, The Hague University of Applied Sciences	2015-18
- Board member JongLUMC (hospital's young professionals network), Leiden	2015-17

AUTHOR AFFILIATIONS

Leiden University Medical Center, Leiden, the Netherlands

Department of Surgery

Jolanda C. Chua, Jaap F. Hamming

Department of Medical Decision Making

Perla J. Marang-van de Mheen

Directorate of Quality and Patient Safety

Hileen Boosman, Leontine den Dijker

Department of Cardiothoracic Surgery

Rob A.F. de Lind van Wijngaarden

VU University Medical Center, Amsterdam, the Netherlands

Amsterdam Public Health Research Institute, Department of Public and Occupational Health Marco I. Moesker

Brigham and Women's Hospital, Harvard Medical School, Boston, USA

Department of Surgery

Stanley Ashley, Danny Mou, Louis L. Nguyen, Douglas S. Smink, Ann D. Smith, Edward E. Whang

Macquarie University, Sydney, Australia

Australian Institute for Health Innovation Jeffrey Braithwaite, Robyn Clay-Williams, Nikki L. Damen Faculty of Medicine and Health Sciences, Macquarie University Hospital Jason Kaplan

Griffith University, Brisbane, Australia

Safety Science Innovation Lab Sidney W.A. Dekker



LIST OF PUBLICATIONS

Submitted

de Vos MS, Hamming JF, Boosman H, Marang-van de Mheen PJ. The association between complications, incidents and patient experience in surgical care: retrospective linkage of routine patient experience surveys and safety reporting.

2018

de Vos MS, Hamming JF. From retribution to reconciliation after critical events in surgery. Brit J Surg. Forthcoming 2018.

de Vos MS, Hamming JF, Chua-Hendriks JC, Marang-van de Mheen PJ. Connecting perspectives on quality and safety: patient-level linkage of routinely collected incident, adverse event and complaint data. BMJ Qual Saf 2018 Jul 21. [Epub ahead of print]

Damen NL & de Vos MS, Moesker M, Braithwaite J, de Lind van Wijngaarden RAF, Kaplan J, Hamming JF, Clay-Williams R. Preoperative anticoagulation management in everyday clinical practice: an international comparative analysis of work-as-done using the functional resonance analysis method. J Patient Saf 2018 Jul 7. [Epub ahead of print]

de Vos MS, Hamming JF, Marang-van de Mheen PJ. The problem with using patient complaints for improvement. BMJ Qual Safety 2018;27:758-762.

de Vos MS, Marang-van de Mheen PJ, Smith AD, Mou D, Whang EE, Hamming JF. Towards Best Practices for Surgical Morbidity and Mortality Conferences: A Mixed Methods Study. J Surg Educ 2018;75:33-42.

Algra AM & de Vos MS, Tijdink J. Discipline-overstijgend opleiden: van CanBetter naar CanDiffer. *Medisch Contact* 2018;10:34-36. [article in Dutch]

2017

de Vos MS, Hamming JF, Marang-van de Mheen PJ. Learning From Morbidity and Mortality Conferences: Focus and Sustainability of Lessons for Patient Care. J Patient Saf 2017 Oct 30. Epub ahead of print]

de Vos MS, Hamming JF, Marang-van de Mheen PJ. Barriers and facilitators to learn and improve through morbidity and mortality conferences: a qualitative study. BMJ Open 2017;7:e01883.



Sandberg EM, Leinweber FS, **de Vos MS**, Linthorst J, Holman FA, Twijnstra ARH, Jansen FW. Optimising postoperative recovery at home; individualised discharge policy and task division between GP and medical specialist. *Ned Tijdschr Geneeskd* 2017;161:D1672. [article in Dutch]

de Vos MS, den Dijker L, Hamming JF. How we can learn better and more safely from serious incidents: translation of 'Just Culture' and 'Safety-II' into clinical practice. *Ned Tijdschr Geneeskd* 2017;161:D1090. [article in Dutch]

2016

Boosman H, **de Vos MS**, Kievit J, Marang-van de Mheen PJ. Patiëntervaringen: meten én verbeteren. *KiZ* 2016;5:22-5. Available from: http://archief.tijdschriftkiz.nl/downloaden/15151/ Pati%C3%ABntervaringen-meten-%C3%A9nverbeteren [article in Dutch]

Smith AD, **de Vos MS**, Smink DS, Nguyen LL, Ashley SW. Text paging of surgery residents: Efficacy, work intensity, and quality improvement. *Surgery* 2016;159(3):930-7.

Smith AD, Hawkins AT, Schaumeier MJ, **de Vos MS**, Conte MS, Nguyen LL. Predictors of major amputation despite patent bypass grafts. *J Vasc Surg* 2016;63(5):1279-88.

2015

Hawkins AT, Schaumeier MJ, Smith AD, **de Vos MS**, Ho KJ, Semel ME, Nguyen LL. Concurrent venography during first rib resection and scalenectomy for venous thoracic outlet syndrome is safe and efficient. *J Vasc Surg Venous Lymphat Disord* 2015;3(3):290-4.

2014

de Vos MS, Bol BJ, Gravereaux EC, Hamming JF, Nguyen LL. Treatment planning for peripheral arterial disease based on duplex ultrasonography and computed tomography angiography: consistency, confidence and the value of additional imaging. *Surgery* 2014;156(2):492-502.

de Vos MS, Hawkins AT, Hevelone ND, Hamming JF, Nguyen LL. National variation in the utilization of alternative imaging in peripheral arterial disease. *J Vasc Surg* 2014;59(5):1315-22. Hawkins AT, Smith AD, Schaumeier MJ, **de Vos MS**, Hevelone ND, Nguyen LL. The effect of surgeon specialization on outcomes after ruptured abdominal aortic aneurysm repair. *J Vasc Surg* 2014;60(3):590-6.

2013

de Vos MS, Smith AD, Shimizu N, Whang EE. Surgical Quality Improvement Book (chapter 5): Morbidity and Mortality Conference: a Weekly Conference Designed to Improve Surgical Quality. Available from: http://www.brighamandwomens.org/Departments_and_Services/ surgery/qiChapter5.aspx?sub=0



CURRICULUM VITAE

Marit Suzanne de Vos was born on April 17th, 1990 in Rotterdam, the Netherlands. In 2007, she graduated cum laude from Johan de Witt gymnasium secondary school in Dordrecht, after which she moved to Leiden to attend Medical School. During her studies, she worked as an assistant in post-mortem transplant procedures and participated in other activities, such as debating tournaments and sailing camps. Between September 2010 and 2011, she interrupted her studies to join the board of her student union 'Minerva' full-time, where she was responsible for alumni affairs and development.

In September 2012, Marit again interrupted her medical studies to move to Boston, MA, USA, for a one-year research internship at Brigham and Women's Hospital, under the supervision of Dr. Louis Nguyen, Associate Professor of Surgery at Harvard Medical School. Her research was focused on duplex ultrasonography imaging as a less-invasive alternative to angiography for patients with peripheral arterial disease. During this year, she also served as an abroad columnist for Leiden University's weekly newspaper and as a correspondent for a national radio show about Dutch people living abroad. It was in Boston that Marit developed a great interest in patient safety and quality improvement, particularly through being involved in writing a chapter about morbidity and mortality conferences (M&M).

When Marit returned to Leiden to finish medical school, she decided to focus her research more on quality and safety improvement practices, such as M&M. Besides the two years of medical clerkships, she worked on proposals and funding applications for additional research projects, under supervision of professor Jaap Hamming, who also served as Dutch supervisor during her internship abroad. Perla Marang-van de Mheen joined as co-supervisor. After receiving her M.D. degree cum laude in October 2015, Marit worked as a full-time PhD researcher in the departments of Surgery and Medical Decision Making of Leiden University Medical Center on research committed to learning and improvement in healthcare, as described in this thesis. She also participated in networks connecting safety experts from various industries, such as railway and the oil and gas sector, and joined the national task force committed to facilitate the incorporation of patient safety content in the residency training programs of all Dutch medical specialties.

Marit aspires a career as a gynecologist while additionally pursuing research into healthcare quality and safety improvement. She currently works as a resident (not in training) at the Department of Obstetrics and Gynecology of the Franciscus Gasthuis Hospital in Rotterdam. Recently, Marit was accepted in the Obstetrics and Gynecology Residency Program of Leiden University Medical Center starting April 2019.



ACKNOWLEDGMENTS

This thesis would not have been possible without the support of various people and institutions. This specifically applies to all **funders**, and also **all clinicians and patients** who have participated in the interviews and/or surveys, who were willing to reflect on these topics so openly. Many thanks to **all co-authors**, listed in the author affiliations section, for their collaboration and commitment. I gratefully acknowledge the help from my friends from the Commonwealth, **Carl**, **Ellie** and **Ruben**, who closely read some parts of this thesis for grammar.

First of all, I would like to thank my thesis advisors and mentors **professor Jaap Hamming** and **dr. Perla-Marang-van de Mheen,** for their guidance and patience. Dear Jaap, you have been my research supervisor for almost seven years now, and I could not thank you enough for all the opportunities you have given me. I have very good memories of your visit to Boston and our meetings in Bucharest and Vancouver. I admire your talent for saying a lot with only a few words, as well as your leadership and diplomatic skills. Perla, this thesis would not have been the same without your mentorship and commitment. Our weekly research meetings were very important and valuable to me: they kept me going when I felt like I was lost in a maze.

I would also like to thank **Dr. Louis Nguyen**. The research internship in the Nguyen group developed my research knowledge, skills and experience, as well as giving me the opportunity to live in the wonderful city of Boston. You have taught me all about the 'art of doing research' from protocol to publication, and I could not thank you enough for your mentorship and hospitality.

Special thanks go to **Amanda**, **Rachel**, **Alex** and **Nathanael**. I specifically owe many thanks to **Ann DeBord Smith**, who has been a great colleague and mentor during my time in Boston and beyond. Thank you, Ann, for including me on your M&M chapter project, which has ignited my interest and passion towards patient safety and healthcare improvement.

The people from the Resilience Healthcare Net, particularly Erik Hollnagel, Jeffrey Braithwaite, Robyn Clay-Williams, David Vaughan, Carl Horsley, and Karl Hybinette are a constant source of inspiration. I would like to specially thank Jeanette Hounsgaard for her very practical guidance on the use of FRAM. The same applies to Nikki Damen, Marco Moesker, and colleagues from the former CanBetter kernteam – it is great to find like-minded people who sharpen your thinking. Various professionals from other industries were a great source of inspiration for me during these past few years. I would like to specifically mention Victor Roggeveen, David van Valkenburg, Herman de Bruine, Jurriaan Cals and Ruud Plomp.



Special thanks go to the colleagues of the former **department of Medical Decision Making**. Thank you for welcoming me as one of your own and for being a source of support and joy at work. I would also like to thank **Leontine den Dijker**, **Philomeen Weijenborg**, **Hileen Boosman** and **Daphne van Soest**, for welcoming me into their meetings on peer support, sentinel events and patient experiences, and **Simone Cammel** for a great collaboration.

Colleagues of **JongLUMC**, it has been a lot of fun working with you. **Frouzan**, thank your for your dear friendship both inside and outside the hospital. The same applies to **Leonie**, **Noor**, **Annemijn** and **Annelieke**, thank you for sharing all the ups and downs of PhD life, and for your friendship.

I would also like to thank my friends from Boston, particularly Louisa, Carmen, Do, Hannah, Pieter, Tiago, Gwen, Ellis, Jan Willem, Bote, Shuthesh, Philip Z., and Berit, as well as those from Leiden: the girls from Papengracht 11 and Voltt, and my dearest friends from BG 2010-2011. In particular, I would like to thank Michelle, Merel, Charlotte, Florentijn and Elvira for continuously showing an interest in my research, despite being non-medics, and for their dear friendship.

My dear **parents**, **brother** and **sister-in-law**, you have been an unlimited source of support and love.

Philip, thank you so much for your relentless patience, support and advice. Neither this thesis nor I would have been complete without you.

