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Statistical challenges in observational cohort studies

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CURRICULUM VITAE

Michel Hendrik Pieter Hof was born on July 27th 1987 in Heemskerk. After finishing the gymnasium at the Bonhoeffer College in Castricum (2005), he studied both the Bachelor and Master Medical Informatics (MIK) at the University of Amsterdam. During his master, Michel started to work with prof. dr. A.H. Zwinderman at the department of Clinical Epidemiology, Biostatistics, and Bioinformatics (KEBB) at the Academic Medical Center in Amsterdam. His master project, entitled “Improving the statistical methods of cohort studies”, was part of the MIK honors trajectory (top trainee-ship). In 2010 Michel finished his Master in Medical Informatics (cum laude) and he continued his work at the KEBB as a PhD student under the supervision of prof. dr. A.H. Zwinderman from 2010 until 2014. His PhD project was funded by an AMC PhD Scholarship.

LIST OF PUBLICATIONS

M. H. P. Hof, A. E. VAN DIJK, M. VAN EIJSDEN, T. G. M. VRIJKOTTE, and A. H. ZWINDERMAN. “Comparison of growth between native and immigrant infants between 0-3 years from the Dutch ABCD cohort.” In: *Annals of Human Biology* 38.5 (2011), pp. 544–55

M. H. P. Hof and A. H. ZWINDERMAN. “Methods for analyzing data from probabilistic linkage strategies based on partially identifying variables.” In: *Statistics in Medicine* 31.30 (2012), pp. 4231–42

J. M. SCHAAF, **M. H. P. Hof**, B. W. J. MOL, A. ABU-HANNA, and A. C. J. RAVELLI. “Recurrence risk of preterm birth in subsequent twin pregnancy after preterm singleton delivery.” In: *BJOG* 119.13 (2012), pp. 1624–9

J. M. SCHAAF, **M. H. P. Hof**, B. W. J. MOL, A. ABU-HANNA, and A. C. J. RAVELLI. “Recurrence risk of preterm birth in subsequent singleton pregnancy after preterm twin delivery.” In: *American Journal of Obstetrics and Gynecology* 207.4 (2012), 279.e1–7

M. H. P. Hof, TANJA G. M. VRIJKOTTE, M. L. A. DE HOOG, M. VAN EIJSDEN, and A. H. ZWINDERMAN. “Association between infancy BMI peak and body composition and blood pressure at age 5-6 years.” In: *PloS one* 8.12 (2013), e80517

H. S. VAN MEURS, P. TAJIK, **M. H. P. Hof**, I. VERGOTE, G. G. KENTER, B. W. J. MOL, M. R. BUIST, and P. M. BOSSUYT. “Which patients benefit most from primary surgery

or neoadjuvant chemotherapy in stage IIIC or IV ovarian cancer? An exploratory analysis of the European Organisation for Research and Treatment of Cancer 55971 randomised trial.” In: *European Journal of Cancer* 49.15 (2013), pp. 3191–201

M. H. P. Hof and A. H. ZWINDERMAN. “A mixture model for the analysis of data derived from record linkage.” In: *Statistics in Medicine* 34.1 (2014), pp. 74–92

M. H. P. Hof, A. C. J. RAVELLI, and A. H. ZWINDERMAN. “Adaptive list sequential sampling method for population-based observational studies.” In: *BMC Medical Research Methodology* 14 (2014), p. 81

N. KOK, L. RUITER, **M. H. P. Hof**, A. RAVELLI, B. W. MOL, E. PAJKRT, and B. KAZEMIER. “Risk of maternal and neonatal complications in subsequent pregnancy after planned caesarean section in a first birth, compared with emergency caesarean section: a nationwide comparative cohort study.” In: *BJOG* 121.2 (2014), pp. 216–23

S. P. KAANDORP, T. E. VAN MENS, S. MIDDELDORP, B. A. HUTTEN, **M. H. P. Hof**, J. A. M. VAN DER POST, F. VAN DER VEEN, and M. GODDIJN. “Time to conception and time to live birth in women with unexplained recurrent miscarriage.” In: *Human Reproduction* 29.6 (2014), pp. 1146–52

J. BESSELING, I. KINDT, **M. H. P. Hof**, J. J. P. KASTELEIN, B. A. HUTTEN, and G. K. HOVINGH. “Severe heterozygous familial hypercholesterolemia and risk for cardiovascular disease: a study of a cohort of 14,000 mutation carriers.” In: *Atherosclerosis* 233.1 (2014), pp. 219–23

P. TAJIK, D. P. VAN DER HAM, M. H. ZAFARMAND, **M. H. P. Hof**, J. MORRIS, M. T. M. FRANSSEN, C. J. M. DE GROOT, J. J. DUVEKOT, M. A. OUDJIK, C. WILLEKES, K. W. M. BLOEMENKAMP, M. PORATH, M. WOISKI, B. M. AKERBOOM, J. M. SIKKEMA, B. NIJ BIJVANK, A. L. M. MULDER, P. M. BOSSUYT, and B. W. J. MOL. “Using vaginal Group B Streptococcus colonisation in women with preterm premature rupture of membranes to guide the decision for immediate delivery: a secondary analysis of the PPRMEXIL trials.” In: *BJOG* 121.10 (2014), 1263–72, discussion 1273

PHD PORTFOLIO AMC GRADUATE SCHOOL

PhD training

<i>Course</i>	<i>Year</i>
Statistics Alps: longitudinal data analysis with time-dependent covariates for inference and prediction by prof. dr. P. J. Heagerty	2011
Erasmus university short course: strategies for Bayesian modeling, sensitivity analysis, and causal inference by prof. dr. M. Daniels	2011
ISCB short course: statistics for curves and surfaces, the analysis of functional data by prof. dr. J. Ramsay	2011
ISCB short course: estimating treatment effects using longitudinal data by prof. dr. M. Hernán	2012
IBS short course: parameter redundancy by dr. Diana Cole	2013
ISCB short course: regression modeling strategies by prof. dr. F. E. Harrell jr.	2013
ISCB short course: extension of frailty models for recurrent or clustered survival data with prediction by dr. V. Rondeau	2014
Weekly departmental seminars	2010-2014

Teaching

<i>Name</i>	<i>Year</i>
Lecture bachelor medical informatics: medical record linkage	2010-2014
Tutorial bachelor medical informatics: decision trees	2010
Tutorial bachelor medical informatics: medical statistics	2014
Tutorial bachelor medicine: medical statistics	2011-2013

Presentations (orals and posters)

<i>Conference</i>	<i>Year</i>
WEON Nijmegen: multi-ethnic comparison of reference growth charts for infants 0-3 years from the ABCD cohort	2010
ISCB Ottawa: methods for analyzing data from probabilistic linkage strategies based on partially identifying variables	2011
ISCB Bergen: estimating the effect of insulin treatment on cardiovascular disease rates in diabetic type-II patients	2012
ISCB Bergen: multistage dynamic sampling for population-based observational studies	2012
IBS St. Andrews: a mixture model for the analysis of data derived from record linkage	2013
ISCB Munchen: a mixture model for the analysis of data derived from record linkage	2013
ISCB Viena: joint modeling of multiple longitudinal markers and recurrent events of multiple types	2014

Supervising

<i>Student</i>	<i>Year</i>
Lilli Gong: record linkage methods with failure time data	2013-2014

Other

<i>Activity</i>	<i>Year</i>
Organizer PhD day medical statistics	2013

Grants

<i>Name</i>	<i>Year</i>
AMC MIK Top Stage	2009-2010
AMC AMC PhD Scholarship	2010-2014

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