



Universiteit
Leiden
The Netherlands

Creating a continuum of care : smart technology in patients with cardiovascular disease

Treskes, R.W.

Citation

Treskes, R. W. (2018, September 19). *Creating a continuum of care : smart technology in patients with cardiovascular disease*. Retrieved from <https://hdl.handle.net/1887/65636>

Version: Not Applicable (or Unknown)

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

Downloaded from: <https://hdl.handle.net/1887/65636>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/65636> holds various files of this Leiden University dissertation.

Author: Treskes, R.W.

Title: Creating a continuum of care : smart technology in patients with cardiovascular disease

Issue Date: 2018-09-19

Creating a continuum of care
Smart technology in patients with cardiovascular disease

Roderick W. Treskes

Colophon

The studies described in this thesis were conducted at the Department of Cardiology of the Leiden University Medical Center, Leiden, The Netherlands

Cover and lay-out: SVDH Media | www.svdhmedia.nl

Illustration design: SVDH Media | www.svdhmedia.nl

Printed by: ProefschriftMaken | www.proefschriftmaken.nl

ISBN: 978-94-6295-987-3

Financial support for this thesis by Abbott Medical Nederland B.V., Actelion Pharmaceuticals, AliveCor, Boehringer Ingelheim, BIOTRONIK Nederland B.V., Personal MedSystems, De Waard & Faber Computerdienstverlening, Also Nederland B.V., Sanofi and Servier Farma Nederland B.V. is gratefully acknowledged.

Financial support by the Dutch Heart Foundation for the publication of this thesis is gratefully acknowledged.

© 2018 Roderick W. Treskes, Leiden, The Netherlands.

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

Creating a continuum of care

Smart technology in patients with cardiovascular disease

Proefschrift

Ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. mr. C.J.J.M. Stolker,
volgens het besluit van het College voor Promoties
te verdedigen op woensdag 19 september 2018
klokke 15.00 uur

door

Roderick Willem Treskes
Geboren te Alkmaar
in 1993

Voor mijn ouders

Promotores:

Prof. Dr. M.J. Schalijs

Prof. Dr. D.E. Atsma

Co-promotor:

Dr. Ir. E.T. van der Velde

Leden promotiecommissie:

Prof. Dr. N.H. Chavannes

Prof. Dr. M.P. Schijven (Academisch Medisch Centrum, Amsterdam)

Prof. Dr. F.W. Asselbergs (Universitair Medisch Centrum Utrecht)

Prof. Dr. H. Saner (Universitätsspital Bern, Switzerland)

Dr. S.L.M.A. Beeres

Dr. M. Bootsma

Dr. T.X. Wildbergh (Meander Medisch Centrum, Amersfoort)

Thesis outline

Chapter 1	General introduction and outline of the thesis	9
Chapter 2	Mobile health in cardiology: a review of currently available medical apps and equipment for remote monitoring	17
Chapter 3	Redesigning healthcare: The 2.4 billion euro question? Connecting smart technology to improve outcome of patients	41
Chapter 4	The Box: using smart technology to improve outcome of myocardial infarction patients. Rationale and design of a randomized-controlled trial	55
Chapter 5	Mobile phones in cryptogenic strOke patients Bringing single Lead ECGs for Atrial Fibrillation detection (MOBILE-AF): study protocol for a randomised controlled trial	77
Chapter 6	Comparison of the diagnostic accuracy of four smartphone-compatible blood pressure monitors in post-myocardial infarction patients	95
Chapter 7	Implementation of smart technology to improve medication adherence in patients with cardiovascular disease: is it effective?	109
Chapter 8	Performance of ST and ventricular gradient difference vectors in electrocardiographic detection of acute myocardial ischemia	131
Chapter 9	Adults with congenital heart disease: ready for mobile health?	149
Chapter 10	mHealth to screen for central sleep apnoea in patients with stable heart failure	163
Chapter 11	Summary and Conclusions	179
Chapter 12	Samenvatting en Conclusies	187
	List of abbreviations	196
	List of publications	199
	Dankwoord	201
	Curriculum vitae	203