



Universiteit
Leiden
The Netherlands

Improving antimicrobial prescription in primary care: a multi-dimensional approach to antimicrobial resistance

Sijbom, M.

Citation

Sijbom, M. (2024, October 24). *Improving antimicrobial prescription in primary care: a multi-dimensional approach to antimicrobial resistance*. Retrieved from <https://hdl.handle.net/1887/4107162>

Version: Publisher's Version

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

License: <https://hdl.handle.net/1887/4107162>

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

IMPROVING ANTIMICROBIAL PRESCRIPTION IN PRIMARY CARE

**a multi – dimensional approach to
antimicrobial resistance**

Martijn Sijbom

**Improving antimicrobial prescription in primary care: a multi – dimensional approach
to antimicrobial resistance**

Martijn Sijbom, 2024

Department of Public Health and Primary Care of the Leiden University Medical Center
/ Health Campus The Hague

ISBN: 978-94-6506-190-0

Cover design: Suze van der Velde

Lay-out and printing: Ridderprint | www.ridderprint.nl

Copyright © 2024 Martijn Sijbom, The Hague, The Netherlands

This thesis is protected by international copyright law. All rights reserved. No part of this thesis may be reproduced, stored, or transmitted in any form or by any means without prior permission of the author, or when applicable, of the publishers of the scientific paper.

The study in chapter 5 was part of a project on improving antibiotic allergy registrations, which was funded by the Dutch Ministry of Health, Welfare and Sport (Reference number 327952). The other studies were internally funded by the LUMC.

Improving antimicrobial prescription in primary care

a multi – dimensional approach to antimicrobial resistance

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 donderdag 24 oktober 2024

klokke 16:00 uur

door

Martijn Sijbom

Geboren te Emmen

in 1977

Promotoren

Prof. dr. M.E. Numans

Prof. dr. M.G.J. de Boer

Copromotor

Dr. M. Boelens

Promotiecommissie

Prof. dr. L.G. Visser

Prof. dr. J.G. van der Bom

Prof. dr. M.L. van Driel (The University of Queensland)

Dr. C. van Nieuwkoop

Prof. dr. T.J.M. Verheij (Universitair Medisch Centrum Utrecht)

CONTENTS

Chapter 1	Introduction	8
Chapter 2	Trends in antibiotic selection pressure generated in primary care and their association with sentinel antibiotic resistance patterns in Europe	20
Chapter 3	Determinants of inappropriate antibiotic prescription in primary care in developed countries with general practitioners as gatekeepers: a systematic review and construction of a framework	46
Chapter 4	Comparing antibiotic prescriptions in primary care between SARS-CoV-2 and influenza: a retrospective observational study	94
Chapter 5	Cues to improve antibiotic-allergy registration: A mixed-method study	114
Chapter 6	Routine data registries as a basis to analyse and improve the quality of antimicrobial prescription in Primary Care	142
Chapter 7	Discussion	184
English summary		204
Nederlandse samenvatting		212
Curriculum vitae		220
Literatuur lijst		222
Nawoord		226