

University of Groningen

A New Instrument for Microbial Epidemiology

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DOI:
[10.33612/diss.177417131](https://doi.org/10.33612/diss.177417131)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Berends, M. (2021). *A New Instrument for Microbial Epidemiology: Empowering Antimicrobial Resistance Data Analysis*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.177417131>

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"Diagnostik gibt einen Befund - Diagnostic Stewardship gibt eine Antwort" [this thesis]. Performing antimicrobial resistance (AMR) data analysis is tremendously burdened by current solutions and a common lack of analytic tools and data availability [this thesis]. The AMR package for R provides a comprehensible instrument for microbial epidemiology, covering all aspects of AMR data analysis [this thesis]. Antimicrobial stewardship teams should and can continuously be provided with a user-friendly software application to comprehend trends in AMR and hospital-wide antibiotic use [this thesis]. Clinical specialists should be provided with (other professionals applying) a dedicated software solution for AMR data analysis instead of current general software solutions, to ensure reliable analysis outcome. Coagulase-negative staphylococci should not be treated as contaminating species forming one group, for there are major inter-species differences in occurrence and antibiotic resistance [this thesis]. Bacteria ignore national MDRO guidelines, although we ask healthcare workers in a border region to categorise them with a national mindset [this thesis] Differences in MRSA prevalence between the Dutch and German border regions are smaller than generally illustrated in continental surveillance programs, indicating that in-depth regional epidemiological analyses can yield a more detailed and reliable view on microbial prevalence [this thesis]. Multidrug resistant bacteria seem to ignore country borders and we should perhaps take their example [this thesis]. "Progress in science depends on new techniques, new discoveries and new ideas, probably in that order." Prof. Sydney Brenner, biologist and Nobel Prize laureate (Genome Biol. 2002; 3(9)) "All data have a story, and it's an epidemiologist's job to tell it." Julia Sohn, epidemiologist (blog of Médecins Sans Frontières, 26 June 2020) One should not try to combine a PhD with a fulltime job and a young family, and expect them all to be just fine – maintaining the combination demands resilience and a delicate balance.