

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)

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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*. 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.