Utilizing the RE-AIM framework provides a comprehensive and systematic approach for evaluating health interventions across diverse settings, informing decision-making processes related to program planning, implementation, and refinement.

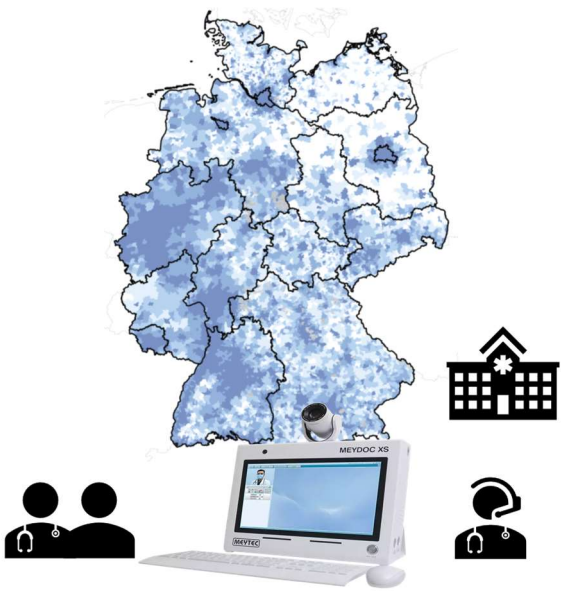
Applying the RE-AIM framework to neurologic tele-consultations in primary care in rural areas in Germany: protocol for the evaluation of the NeTKoH project's implementation

Kerstin Wainwright[1], Ricarda S. Schulz[1], Hans-Aloys Wischmann[1], Imke Mayer[1,3], Paula Filser[1], Anselm Angermaier[2], Tobias Kurth[1] and the NeTKoH-Consortium

[1] Institute of Public Health, Charité – Universitätsmedizin Berlin;
[2] Department of Neurology, University Medicine Greifswald, Greifswald;
[3] Owkin UK Ltd

German Innovation Fund 01NVF19007: 1/1/2021 – 7/31/2025

Introduction



MEYDOC XS (Source: © MEYTEC)

Background:
Neurologic diseases represent a major health burden both globally and nationally [1, 2], exacerbated in underserved rural areas

Objective NeTKoH:
Establish neurological consultations in local GP offices in rural Western Pomerania (Germany) via telemedicine devices

Methods

Source: https://re-aim.org

Could NeTKoH be successfully implemented?

NeTKoH - Hybrid Design [3, 4]:
Efficacy + Implementation + Costs + ICERs

RE-AIM Framework [5]
Quantitative approach with 5 dimensions each on a scale 0 - 100% and benchmarks [6]

Applied Metrics & Insights

RE-AIM Dimension	Data Source
REACH: Does the intervention reach its target population?	
% Reached Patients: # patients that participated/# approached patients	GP Screening Log
% Patients with completed intervention: # patients with completed tele-consultation/ # patient eligible for tele-consultation (intervention)	Tenedoc-Database
Characteristics of participants/nonparticipants (lost to follow-up), Representativeness of participants	Patient Questionnaire, GP Questionnaire, Tenedoc-Database
Reasons for patients not to participate/receive intervention	Tenedoc-Database
Effectiveness: Does the intervention reach its goals/intended outcomes? What is the success rate?	
Effect size: % patients remaining at GP office (solved neurologic question), intervention	Tenedoc-Database
Quality of Life: % patients with higher QoL- Index in Follow-Up, intervention	EQ-5D-5L Patient Questionnaire, Phone Interview
Just-in-Time Care: % of patients with same day contact with a neurologist, Intervention	Tenedoc-Database
Acceptance, satisfaction, recommendation: % patients with 3 positive answers, Intervention	Patient Questionnaire
Adoption: To which extent do settings, practices, and plans adopt the intervention?	
% Participating GPs: # participating GPs/# GPs interested in participating	Log UMG
% Continuous participation: # continuously participating GPs/# overall participating GPs	Log UMG
Characteristics of continuously participating GPs compared to GPs not continuously participating (dropouts), representativeness	Baseline Questionnaire GP
Reasons for GP dropout/no continuous-participation	Log UMG
Implementation (Fidelity): To which extent is the interventions implemented as intended in the real world?	
Equipment %: # installed video-conference appliances/ # planned video-conferencing systems in GP offices, reasons for no delivery	Log UMG
Visit pre switch %: # trainings on equipment and process delivered/# trainings on equipment and process planned	Log UMG
Tele-consultation delivery %: # GPs that delivered a tele-consultation/# GPs intervention	Tenedoc-Database
Usage %: # delivered tele-consultations/# requested tele-consultations	Tenedoc-Database
Maintenance: To which extent is the intervention sustained over time?	
% Intention for future use (indicator): # GPs with intention for future use/# GPs with Exit-GP-Questionnaire	Exit-GP-Questionnaire
% Intention for future use (indicator): # patients with intention for future use/# patients in intervention	Patient Questionnaire

Lessons Learned:
- Consider the organizational workload of staff in GP settings (Adoption).
- Adjust to setting & funding structure by using prognostic indicators (Maintenance).
- Pay attention to common denominators and representativeness (Reach, Adoption).
- Report transparently!

Conclusion & Implications: RE-AIM…

- balances internal and external validity to provide meaningful empirical results;
- emphasizes representativeness;
- addresses multilevel factors on an individual and organizational level;
- encourages pragmatic use via its metrics to facilitate translation of research into practice;
- provides a comprehensive and systematic approach for informing evidence-based decision-making.

References
[1] Carroll WM. The global burden of neurological disorders. Lancet Neurol 2019;18:418–9.
[2] Feigin VL, Nichols E, Alam T, Bannick MS, Beghi E, Blake N, et al. Global, regional, and national burden of neurological disorders, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet Neurol 2019;18:459–80.
[3] Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. Med Care 2012;50:217–26.
[4] Landes SJ, McBain SA, Curran GM. Reprint of: An introduction to effectiveness-implementation hybrid designs. Psychiatry Res 2020;283:112630.
[5] Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. Am J Public Health 1999;89:1322–7.
[6] King, D., R. Glasgow, and B. Leeman-Castillo, Reaiming RE-AIM: Using the Model to Plan, Implement, and Evaluate the Effects of Environmental Change Approaches to Enhancing Population Health. American journal of public health, 2010. 100: p. 2076-84

Kontakt: Kerstin Wainwright | kerstin.wainwright@charite.de | https://www.netkoh.de