RtKW 4: The fidelity-adaptation dilemma

The fidelity-adaptation dilemma in practice: experiences from implementing a complex intervention in routine clinical care in three specialised Dutch burn centres

Sharon Blok[1,2,3,] Marianne Nieuwenhuis[1,3,4], Sonja Scholten-Jaegers[1], Cornelis van der Vlies[5,6,7], Annabel Snoeks[8], Eelke Bosma[1,9], Corry van der Sluis[2], Sven Geelen[1,3]

Navigating Surgical Complexity: Balancing Rigor and Pragmatism in Surgical Safety Checklist Implementation

Robyn Cody[1], Christoph S. Burkhart[2], Katrin Burri-Winkler[3,4], Salome Dell-Kuster[3,4], Monika Finsterwald[1], Dieter Hahnloser[5], Zuzanna Kita[6], Luzius Steiner[3,4], Amanda van Vegten[6], Lauren Clack[1,7]

A tailored framework to assess the feasibility of the implementation of medication adherence interventions

Mirthe Oude Lansink[1,2], Bart van den Bemt[1,2], Caroline van de Steeg[3], Marcia Vervloet[4], Liset van Dijk[4], Charlotte Bekker[2]

Process evaluation of a personalised self-management support intervention for people living with Long Covid

Fiona Leggat[1], Anna Torrens-Burton[2], Nick Sevdalis[3], Monica Busse[2], Anne Domeney[4], Fiona Jones[1,4]

RtKW 47

The fidelity-adaptation dilemma in practice: experiences from implementing a complex intervention in routine clinical care in three specialised Dutch burn centres

Sharon Blok[1,2,3,] Marianne Nieuwenhuis[1,3,4], Sonja Scholten-Jaegers[1], Cornelis van der Vlies[5,6,7], Annabel Snoeks[8], Eelke Bosma[1,9], Corry van der Sluis[2], Sven Geelen[1,3]

[1]Alliance of Dutch Burn Care (ADBC), Burn Centre, Martini Hospital, Groningen, Netherlands [2]University of Groningen, University Medical Centre Groningen, Department of Rehabilitation Medicine, Groningen, NL
[3]Research group Healthy Ageing, Allied Health Care and Nursing, Hanze University of Applied Sciences, Groningen, NL
[4]University of Groningen, University Medical Centre Groningen, Department for Human Movement Sciences, NL
[5]Alliance of Dutch Burn Care (ADBC), Burn Centre, Maasstad Hospital, Rotterdam, NL
[6]Departments of Trauma and Burn Surgery, Maasstad Hospital, Rotterdam, Netherlands
[7]Trauma Research Unit Department of Surgery, Erasmus MC, University Medical Centre Rotterdam, NL
[8]Alliance of Dutch Burn Care (ADBC), Burn Centre, Red Cross Hospital, Beverwijk, NL
[9]Martini Hospital, Department of Surgery, Groningen, NL

Research aim
This study assesses the therapeutic effectiveness and implementation approach of *BreeZe*, a complex self-management support intervention, in three specialised Dutch burn centres.

Setting
Between 2022 and 2024, *BreeZe* was developed to enhance burn survivors' self-management skills after discharge from a burn centre through a co-creation approach involving burn survivors, healthcare professionals, and burn care managers. In 2024, *BreeZe* was implemented across three specialised Dutch burn centres.

Method(s)
After establishing Breezes' core functions (CFs; e.g., a holistic approach to care, case management, and training in patient empowerment strategies), barriers and facilitators for implementation in each burn centre were identified during CFIR-informed stakeholder meetings. Based on these findings, we selected the Model for Adaptation Design and Impact (MADI) to *promote adaptability* and *tailor strategies* to the context of each burn centre while retaining *BreeZe's* CFs. Adaptations were documented using the Framework for Reporting Adaptations and Modifications-Expanded (FRAME).

Key finding(s)
Key factors related to five inner setting constructs influenced implementation: 1) physical infrastructure, 2) work infrastructure, 3) relational connections, 4) tension for change, and 5) compatibility. Each centre has a distinct outpatient structure characterised by differences in logistical organisation and allocation of tasks and responsibilities. We made three adaptations per centre based on these factors to improve fit. Central was proactively adjusting *BreeZe's* start date in one centre (aligned with core functions) and the absence of case management in another (not aligned with core functions).

Discussion
While the MADI framework aided in proactively addressing the fidelity-adaptation dilemma without compromising CFs in most cases, one adaptation necessary at one centre was excluding *BreeZe's* CF, "case management." This may negatively impact outcomes, leading us to two key questions: (1) How do we navigate adaptations requested by key stakeholders but not aligned with an intervention's core functions? (2) How can a sound judgment of an intervention's effectiveness be ensured when such adaptations must be adopted?

Challenges
One of the main challenges was acknowledging various stakeholders' opinions and implementing the necessary adaptations while preserving *BreeZe's* core functions.

Key highlights

Our project highlights the fidelity-adaptation dilemma in clinical practice. We utilized the latest scientific implementation methods while addressing real-world challenges such as practical constraints and organisational readiness. Furthermore, our project stimulates a discussion on maintaining scientific rigour while accommodating the adaptations required by key stakeholders.

RtKW 140

Navigating Surgical Complexity: Balancing Rigor and Pragmatism in Surgical Safety Checklist Implementation

Robyn Cody[1], Christoph S. Burkhart[2], Katrin Burri-Winkler[3,4], Salome Dell-Kuster[3,4], Monika Finsterwald[1], Dieter Hahnloser[5], Zuzanna Kita[6], Luzius Steiner[3,4], Amanda van Vegten[6], Lauren Clack[1,7]

[1]*Institute for Implementation Science in Health Care, University of Zurich, Zurich, Switzerland*
[2]*Department of Anaesthesiology, Cantonal Hospital Graubünden, Chur, Switzerland*
[3]*Clinic of Anaesthesiology, University Hospital Basel, Basel, Switzerland*
[4]*Department of Clinical Research, University of Basel, Basel, Switzerland*
[5]*Department of Visceral Surgery, University Hospital Lausanne, Lausanne, Switzerland*
[6]*Quality Management and Patient Safety, University Hospital Zurich, Zurich, Switzerland*
[7]*Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich, Zurich, Switzerland*

Research aim
This project aims to optimise patient outcomes in the highly complex context of surgery by increasing the adherence and performance quality of the sign-out phase of the WHO's Surgical Safety Checklist (SSC) and introducing the standardised recording of intraoperative adverse events (iAEs) according to ClassIntra®.

Setting
This ongoing project takes place in hospital settings in Switzerland (n=9), including anaesthetists, surgeons, nurses, and five surgical disciplines: urology, visceral surgery, vascular surgery, orthopaedics/ traumatology, and neurosurgery. Initially, one Dutch hospital participated, focusing on implementing the SSC.

Method(s)
This hybrid type II effectiveness-implementation study consists of baseline, implementation and post phases. During baseline, a context analysis comprised ~100 individual interviews and four member-checking workshops with different stakeholders using the Consolidated Framework for Implementation Research (CFIR) to identify sign-out and iAE recording implementation determinants. Potential implementation strategies were derived using the CFIR-Expert Recommendations for Implementing Change (ERIC) matching tool and refined during member-checking workshops to optimally translate the scientific findings to pragmatic approaches for (re)introducing the sign-out phase during surgery.

Key finding(s)
The checklist and use of ClassIntra® were deemed complex and time-consuming yet also usable, adaptable, and from reliable sources. Varying information technology systems, efficiency-driven workflows, staff turnover, and unclear responsibilities were reported barriers, while varying cultures, information-sharing structures and alignment with existing procedures were seen as barriers or facilitators. Multifaceted, tailored implementation strategies were designed on project, hospital, and national levels, emphasising intervention and inner setting domains. Based on hospital-level strategies, an implementation plan (e.g., template for site-specific blueprints) was developed, including establishing implementation teams, adapting the intervention, educating staff, gaining support from leaders, and creating monitoring opportunities.

Discussion
While using frameworks like CFIR ensured methodological rigour, translating findings into pragmatic strategies required balancing diverse stakeholder needs and contextual variability. This prompts two key questions: (1) How can we effectively adapt evidence-based strategies to heterogeneous, fast-paced environments while preserving fidelity to the core intervention? (2) In complex settings like surgery and perioperative medicine, what methods can enhance the evaluation of implementation impact to capture both immediate outcomes and long-term sustainability?

Challenges

Key challenges include balancing streamlined surgical procedures with the intervention, requiring adaptations of the implementation plan and intervention. Multidisciplinary teams, speaking the same language but using discipline-specific terms, require tailored communication. Translation efforts are also required to address stakeholders' diverse linguistic backgrounds, and limited resources add complexity.

RtKW 164

A tailored framework to assess the feasibility of the implementation of medication adherence interventions

Mirthe Oude Lansink[1,2], Bart van den Bemt[1,2], Caroline van de Steeg[3], Marcia Vervloet[4], Liset van Dijk[4], Charlotte Bekker[2]

[1]*Sint Maartenskliniek, Nijmegen, Netherlands*
[2]*Radboudumc, Nijmegen, Netherlands*
[3]*SIR Institute for Pharmacy Practice and Policy, Leiden, Netherlands*
[4]*Nivel Netherlands Institute for Health Services Research, Utrecht, Netherlands*

Research aim
Although effective medication adherence interventions exist, they are hardly implemented in clinical practice. This study, therefore, aims to facilitate the implementation of adherence-improving interventions by creating a tailored framework that assesses the feasibility of implementing medication adherence interventions in a specific context in advance.

Setting
A Delphi study was conducted with Dutch adherence experts in the first stage. In the second stage, a prospective evaluation was performed in four living labs, consisting of Dutch community pharmacies and related general practices that were implementing medication adherence interventions.

Method(s)
Experts in the Delphi study rated determinants of the Consolidated Framework for Implementation (CFIR) on their importance for implementing medication adherence interventions, with consensus defined as more than 70% (dis)agreement. In the second stage, implementation determinants were identified after prospective evaluation using project meeting documentation and interview transcripts. These determinants were analysed using the CFIR. Determinants that influenced the implementation in 75% or more of the living labs were included in the tailored framework. Results of the two stages were compared to assess agreement between expert opinions and observations in real-world practice.

Key finding(s)
Eighteen adherence experts participated in the Delphi study. Of the 40 CFIR constructs, 28 were considered important for implementing medication adherence interventions. After prospective evaluation, 16 determinants were observed as important in the living labs and included in the tailored implementation framework for medication adherence interventions. These determinants belonged to the inner setting, characteristics and roles of involved individuals and implementation process domains. Expert expectations matched living lab observations for 18 (45%) determinants regarding their (un)importance.

Discussion
This study developed a tailored framework to assess the feasibility of implementing a medication adherence intervention in a specific setting. Our study suggests that the organisation's context, characteristics and roles of involved individuals and the actions undertaken to stimulate the implementation process are important for implementing medication adherence interventions. A discrepancy was found between expert opinions and observed determinants regarding their importance for implementing medication adherence interventions.

- How could we manage the difference between expert opinions and real-world observations in future implementation initiatives?
- How would a tailored implementation determinant framework benefit you in your field?

Challenges
During analysis of the second stage, the CFIR had been updated to the 2022 version. Despite the 2009 version used in the first stage, results were comparable after translating 2009 determinants to the 2022 version using the provided construct mapping document and reaching consensus between two researchers.

RtKW 253
Process evaluation of a personalised self-management support intervention for people living with Long Covid

Fiona Leggat[1], Anna Torrens-Burton[2], Nick Sevdalis[3], Monica Busse[2], Anne Domeney[4], Fiona Jones[1,4]

[1]City St Georges, University of London, London, United Kingdom
[2]Cardiff University, Cardiff, United Kingdom
[3]National University of Singapore, Singapore, Singapore
[4]Bridges Self-Management, London, United Kingdom

Research aim
To explore the context, implementation, mechanisms of impact and reported outcomes from a two-arm randomised controlled trial evaluating a personalised self-management support (LISTEN) intervention for people with Long Covid (LC), compared to usual LC services accessed within National Health Services (NHS).

Setting
The process evaluation and randomised control trial included 24 sites from England and Wales. These were UK National Health Service (NHS) primary and secondary care sites and one non-NHS site. Participants living anywhere in England or Wales were eligible to take part, recruited by NHS teams or through self-referral.

Method(s)
The process evaluation utilised a convergent mixed methods study design. Four primary data collection methods were used to assess intervention delivery fidelity, intervention feasibility and acceptability, context, and experiences engaging with the intervention or usual care. Observations of healthcare professionals (HCPs) delivering intervention sessions were conducted and given fidelity scores using a checklist of intervention principles. Implementation science measures were gathered from HCPs and intervention participants, and a subset of participants and HCPs participated in semi-structured interviews and focus groups, respectively. Data sources were analysed independently and subsequently integrated, informed by the Consolidated Framework for Implementation Research (CFIR) v2.

Key finding(s)
Twenty-five HCPs were observed, 27 participated in the focus groups and 38 completed implementation measures. Forty-nine participants from intervention and usual LC care groups participated in interviews and 197 intervention participants completed implementation measures. Six integrated cross-cutting themes were constructed collectively from analysis of all data sources: 'Delivery during uncertainty and ambiguity', 'Diversity and consistency of usual care, 'Drivers for self-care and the impact of self-generated expertise', 'Appropriate if unexpected support', 'Personalisation at the core of success' and 'A spectrum of individual change'. These themes illustrate links between the context, intervention, implementation, mechanisms of impact and participant-reported outcomes.

Discussion
- A fidelity checklist was used to score HCPs' use of intervention principles. However, as a personalised self-management support intervention, use of principles was guided by the needs and priorities of their participants, as well as participants' ability to self-manage. In the future, what other methods could be used to assess the delivery fidelity of complex, personalised intervention?
- In addition, HCP outcomes were assessed qualitatively, and several profound impacts were reported on their perspectives on care. Should we routinely measure an intervention's impacts on HCPs and their future practice? What might be the best way to do this?

Challenges
Four data collection processes produced a large bank of rich information. While able to make sense of the data during analysis, challenges arose when deciding how to present complexities while still showing the complete landscape behind the trial implementation. To illustrate both concepts, theory-informed graphics and cross-cutting themes were constructed.