Background
The importance of using theories, frameworks and models in implementation research and practice is widely recognised. The Reach Effectiveness Adoption Implementation and Maintenance (RE-AIM) framework is one of the most highly used implementation frameworks. We report a systematic review that provides (a) an updated synthesis of RE-AIM use over time (update of review by Gaglio et al, 2013)[1], (b) explores the pragmatic use of RE-AIM, in a sub-set of articles meeting inclusion criteria, and (c) provides an in-depth exploration of the reasoning and justification for full and pragmatic use of RE-AIM, in a sub-set of articles meeting inclusion criteria.
Method
We searched MEDLINE (R) and PsycINFO, via the Ovid interface, between January 2011 and December 2017. The search term 'RE-AIM' was used to search for relevant articles. Studies that applied RE-AIM as a planning and/or evaluation framework were eligible for inclusion.
Results
157 met inclusion criteria, of which 149 reported using RE-AIM as an evaluation framework, 3 as a planning framework and 5 as a planning and evaluation framework. Reach was the most frequently reported RE-AIM dimension followed by adoption, implementation, effectiveness and maintenance. Fifty articles applied RE-AIM pragmatically (i.e., not in its entirety). Within the sub-set analysis (approximately 10% of articles meeting inclusion criteria), 9/15 articles evaluated all RE-AIM dimensions, therefore justifying the rationale for not evaluating RE-AIM dimensions was not applicable. Of the 6/15 articles that did not evaluate one or more RE-AIM dimensions, 5 articles did not justify the rationale for not evaluating RE-AIM dimensions.
Conclusion
RE-AIM has gained increased use in recent years and there is evidence that it is being applied pragmatically. However, the rationale for its pragmatic use is often not reported, making it impossible to rule out that key aspects of the framework have not simply been overlooked.

Trial Registration:
Non applicable

Consent to publish
Yes

Reference
1. Gaglio B, Shoup JA, Glasgow RE. The RE-AIM framework: a systematic review of use over time. Am J Public Health. 2013;103(6):e38-46.

O20

(Re-)conceptualising implementation depth of healthcare innovations – A systematic review and concept analysis

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Background
Implementation depth, the extent to which innovations are implemented successfully, is a matter of great interest in healthcare practice. Yet, the way implementation depth is conceptualised varies between different studies, settings and contexts. The aim of this study is to report on the clarification and re-conceptualisation of implementation depth in healthcare, by synthesising the theoretic scientific literature from multiple disciplinary backgrounds.
Method
We applied a pragmatic utility concept analysis approach, a meta-analytic and interpretative method aiming at providing new insights of partially mature concepts using literature as data source. We followed the BeHEMoTh (Behaviour or phenomenon of interest, Health context, Exclusions, Models and Theories) approach for systematically searching for and identifying a comprehensive compilation of concepts from the scientific literature. The following databases were searched: Medline, Embase, CINAHL, PsychInfo, Global Health, HMIC, Business Source Complete, and Social Policy and Practice. In addition to handsearching references of selected publications, key textbooks and citation tracking. First order-concepts' definitions, characteristics/attributes and boundaries/allied concepts were extracted and analysed to derive second-order concepts of implementation depth.
Results
We identified 66 publications that met our eligibility criteria. The preliminary results reveal the consolidated conceptualisation of implementation depth encompasses five concepts: low implementation depth (*abandonment*), high implementation depth (assimilation), normalising and sustaining innovation over time (*sustainability*), removal/reduction or substitution of an existing practice (*de-implementation*), and progression of implementation stages (*stickiness of implementation stages*). The second-order concepts of implementation depth clarify a unified structure to conceptualise the dynamic successes and/or failures of implementation efforts.
Conclusion
The consolidated framework of implementation depth delineates the type of implementation 'success'. It offers a useful heuristic for operationalising shallow to deep implementation, that may be better suited for understanding challenges with sustaining, scaling and spreading healthcare innovations.

O21

Self-monitoring of blood pressure (SMBP) in pregnancy: a national roll-out in the context of a pandemic

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Background
In April 2020, the Royal College of Obstetricians and Gynaecologists (RCOG) published guidance on establishing services so women with pregnancy hypertension could have additional remote monitoring during the COVID-19 pandemic [1]. To support implementation, NHS England distributed over 16,000 blood pressure (BP) monitors free of charge to maternity providers on request.
Method
The evaluation included the following:

1. Survey of 127 maternity providers in England about their implementation of SMBP
2. Survey of 166 women who were currently pregnant or who had had a baby since March 2020 regarding their experiences with SMBP

Results
Of 127 providers contacted, 35% responded, of whom most (78%) did not regularly provide BP monitors to pregnant women prior to the COVID-19 pandemic. SMBP was most commonly offered to women who had developed gestational hypertension (89%) and used for additional monitoring (93%) rather than as a replacement for a routine face-to-face contact. Almost all (98%) providers provided written information to women alongside the BP monitor, as provided in the RCOG COVID-19 SMBP guidance. Overall providers were positive about the ability of SMBP to reduce face-to-face contacts (80%). Providers aimed to recycle monitors for multiple women but return rates averaged around 40%. Monitoring was largely

undertaken at the request of healthcare professionals (86%). Feedback was strong with 96% feeling safe undertaking SMBP during the COVID-19 pandemic, 78% saying that SMBP made them feel more confident, and 25% more anxious. The most positive aspect reported by women was greater control/insight into their own BP.

Conclusion

Many providers in England have commenced a SMBP service since March 2020 to provide additional monitoring in pregnancy. Overall providers and women were positive about use. Consideration needs to be given to the longer term role of SMBP in pregnancy in light of forthcoming trial results, strategies for BP monitor provision and any service reconfigurations post-pandemic.

Trial Registration

NA

Consent to publish

NA

Reference

1. Royal College of Obstetricians and Gynaecologists (RCOG) (2020) Self-monitoring of blood pressure in pregnancy. Accessed online: https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-30-self-monitoring-of-blood-pressure-in-pregnancy.pdf on 13 May 2020.

O22

Supporting the physical health of people admitted to mental health wards during the Covid19 pandemic: Prospective implementation evaluation of two novel service developments

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Background

The Covid-19 pandemic emphasised the need to provide robust support to people who are inpatients in psychiatric hospitals. Within the South London and Maudsley NHS Foundation Trust (SLaM) in London, UK, rapid implementation of two initiatives has taken place. Consultant Connect (CC), a clinician to clinician telephone advice service, and the Virtual Physical Health Clinic (VPHC), a virtual clinic staffed by a Consultant Physician and Advanced Clinical Practitioner were launched in June 2020 to support the physical health of inpatients. We report interim data from the prospective evaluation of these interventions, including the uptake and reach of each service and the benefits reported by staff.

Method

We are evaluating the implementation process of both services using quantitative data on uptake and reach, and data collected from interviews with clinical staff and through validated implementation outcome assessment measures. We are assessing implementation strategies using the Expert Recommendations for Implementing Change (ERIC) strategies as a framework. We will assess the health economic impact of both services using established health economic methods including cost comparison scenarios and health service utilisation analyses.

Results

From June 2020 until April 2021, CC has been used on 338 occasions. The answer response rate is 67%. In the same time span, 16 referrals have been made to the VPHC. Referrals have originated from 4/6 pilot wards. The study is ongoing so updated results will be presented.

Conclusion

This initiative is one of the first service evaluation protocols of its kind to be reported in the UK at the time of the COVID-19 pandemic. These are novel service developments to support the management of physical health needs jn inpatient units and understanding the implementation challenges are key to future development.

Trial Registration

NA

Consent to publish

NA

References

If applicable, please see guidelines

O23

Analyzing Rwanda's COVID-19 response using implementation science

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Background

Even though the evidence-based interventions (EBIs) for COVID-19 response were known, the success of their implementation varied globally. Rwanda was one of the successful countries, with only 26,141 cases and 344 deaths (May 16, 2021).

Method

We used a mixed method IS approach, with literature review, to identify strategies and contextual factors contributing to Rwanda's successful COVID-19 response.

Results

More than 2 months before the first COVID-19 case, Rwanda used emerging global scientific knowledge concerning the new coronavirus and planned the equitable implementation of non-medical and medical EBIs across the country using context-specific strategies. These included leveraging existing strategies used to manage the health sector as well as facilitating contextual factors such as: the strong facility and community primary health care (PHC) system, strong community engagement, data audit and feedback, focus on enforcement of public health measures, its strong leadership, the culture of accountability, and the equity agenda. This response was accompanied by an in-depth analysis on how to mitigate the negative impacts of COVID-19 for different communities to ensure adherence to COVID-19 guidelines. Strategies included free testing, full hotel accommodation for quarantine and isolation, food and financial support to the poor, and legally delayed payments such as taxes, loans, and rent. Rwanda also used campaigns to reduce fear of seeking ordinary health services. New strategies to address access to care include preventing suspected COVID-19 cases from crossing paths with other patients, and implementing systematic testing and contact tracing across its land borders and in airports starting from the first case.

Conclusion

IS can help governments to put evidence into policy and practice and build a trusted, equitable strong PHC system to ensure resiliency for pandemic preparedness. IS also helps decision-makers adapt existing strategies and identify new ones to implement known EBIs according to contextual factors to successfully prepare and respond to pandemics.