

Development of an Adapted Operationalized Definition of Nudging for Healthcare and Medication Optimization

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Background

- Behavioural economics suggests that clinicians and patients are 'boundedly rational'
- Choices of clinicians and patients are influenced by environmental factors and cognitive biases
- Based on this theory, nudging has been proposed as a strategy to improve the safe and effective use of medications
- Despite its growing use in practice, there is no consensus definition for a "nudge"

Objectives

- To develop a precise definition of nudging for a healthcare and medication use context

Methods

- We conducted a literature review and consultations with behavioral economists with content expertise in nudging theory and application
- Core characteristics of nudges were identified and mapped out to inform a nudging definition developed for use in a healthcare and medication context
- Decision tree was developed to help assessors distinguish nudges from other behavioural interventions (e.g. shoves, boosts)
- Definition and decision tree were pilot tested to evaluate inter-rater agreement

Results

Core Characteristics of Nudging

- Review of published and grey literature review revealed no consistent or precise definition of a "nudge"
- Variable definitions have been proposed depending on the context (e.g. economics, public health)
- Several common features of nudging interventions were identified:
 - heuristic processing
 - non-coercive
 - non-fiscal
 - freedom of choice

Nudging Continuum

- Interventions exist on a continuum and fulfilling nudging criteria may be subject to judgment and interpretation
- Differential application of specific characteristics can make interventions more and less 'nudge-like'
 - Examples?
 - Real or perceived consequences
 - Medium of delivery
 - Frequency of delivery
 - Degree of interactivity
 - Messaging content or style

Operationalized Nudging Definition

- A "nudge" is an intervention that:
 - changes environment or architecture of decision or choice by altering the properties or placement of objects or stimuli within the relevant healthcare context/setting
 - alters behaviour in predictable way
 - influence behaviour change primarily through "heuristic" rather than "systematic" processing
 - requires minimal conscious engagement and/or cognitive effort by the target population
 - does not restrict freedom of choice
 - non-coercive, non-fiscal, non-regulatory

Nudging Decision Tree

- Decision tree developed to standardize evaluation of 5 specific features of interventions that exist on a continuum
 - Distinguishes nudges from other related, but distinct behavioural change interventions
 - Useful particularly for prompt or reminder type interventions

Pilot Testing

- Electronic database search strategy developed to capture studies evaluating nudging for medication optimization for use in a systematic review
- Sample of 100 studies were randomly selected from citation results
- Three independent assessors used the nudging definition and decision tree to evaluate potential eligibility of the described interventions as "nudges"
- **Mean weighted kappa = 0.82 (excellent agreement)**

Conclusion

- We have developed nudging definition for a healthcare context that can be used with good inter-rater reliability to distinguish nudges from non-nudges

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