Automated conflict resolution between multiple clinical pathways

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Abstract

Introduction

Context: By 2018 it is estimated that the number of people in the UK with three or more long-term conditions will have grown from 1.9 million to 2.9 million (1) and primary care plays a pivotal role in the management of these patients. To improve the quality of healthcare some 253 clinical guidelines have been published by the National Institute for Clinical Excellence (2), however, they almost entirely focus on single conditions. As a result, applying multiple guidelines to a patient can lead to conflicting recommendations for care.

Methods

Design: Semi-structured interviews with practitioners will elicit requirements which will be used to inform the software development of the resolution tool.
Setting: Purposively selected family practices in Birmingham (UK).
Participants: Family practitioners involved in managing patients with multimorbidities.
Interventions: We will develop a software tool comprising an automated method for navigating multiple clinical pathways for patients with multimorbidity sympathetic to the priorities of care provider and patient. To more readily compare guidelines we need to address how they are represented so as part of our work we will adapt a graphical modelling language and software tool that can capture the core-information in disease management guidelines. This will mean that the techniques discovered in this project can be used by healthcare providers to successfully manage patients with multimorbidity.

Results

The resolution of a conflict can entail different compromises and affect different measures such as time, resource, and cost. In this study we will investigate automated methods of detection of conflicts across multiple clinical pathways as used in treating

patients with more than one morbidity. We will consider the specific nature and parameters of each guideline, specific conditions of individual patients and propose solutions that resolve the conflict. The study has just completed the first of its 3-years and is funded by the Engineering and Physical Sciences Research Council (UK) and we would like to present our progress to date as a poster.

Discussion

If successful, our tool will improve the safe treatment of patients with multiple morbidities, increase efficiency of care and enable the systematic collection and abstraction of clinical data for audit against guidelines for best practice.

References

1. Long Term Conditions Compendium of Information: Third Edition - Publications - GOV.UK [Internet]. [cited 2016 Feb 23]. Available from: https://www.gov.uk/government/publications/long-term-conditions-compendium-of-information-third-edition

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