There are great expectations regarding the potential contribution of integrated care interventions to improved outcomes, but so far the evidence is mixed. In this dissertation, we focussed on why, when and how some integrated care interventions contribute to improved outcomes, while others do not. To this purpose, we developed the COMIC Model for studying the Context, Outcomes and Mechanisms of Integrated Care interventions. Evaluations that make use of the COMIC Model take into account the context in which an intervention is implemented and can thereby provide insights into why an intervention does (not) work and how the intervention and/or the context can be changed to achieve improved outcomes.

Keywords: integrated care; chronic conditions; evaluation; implementation; diabetes; geriatric conditions; workforce

Introduction

Integrated care is seen as one of the most promising approaches to providing appropriate care to people with (multiple) chronic conditions. There are great expectations regarding the outcomes integrated care is supposed to achieve, including improved quality of care and health outcomes, better patient experiences and increased cost efficiency. However, so far, findings have been mixed, with some studies indicating improved outcomes [1–4] and others pointing towards mixed evidence or no improvements [1, 3, 5–10]. In this dissertation, we aimed to understand when, why and how some integrated care interventions contribute to improved outcomes, while others do not. Specifically, we aimed to answer the research question: How is integrated care implemented and to which outcomes does it contribute?

We approached this question from different angles. In Part A of the dissertation, we studied the implementation of integrated care interventions for two different (groups of) chronic conditions, namely type 2 diabetes and geriatric conditions. In Part B, we focussed on a specific aspect of integrated care, namely workforce changes, implemented as part of integrated care interventions. In Part C, we developed methodological tools to support comprehensive evaluations of when, why and how integrated care interventions can contribute to improved outcomes. This included the development of the COMIC Model for studying the Context, Outcomes and Mechanisms of Integrated Care interventions. The different studies included in this dissertation are summarised in Figure 1. In this summary, we only focus on the COMIC Model.

Main findings

Comprehensive evaluations of integrated care interventions that aim to answer the when, why and how of successful outcomes must focus on the interplay between mechanisms, context and outcomes. The importance of this interplay has been described most appropriately in the Context-Mechanisms-Outcomes (CMO) Model, which postulates that interventions only have successful outcomes when they introduce appropriate mechanisms in the appropriate social and cultural contexts [11]. However, there is no consensus on the definition and operationalisation of what exactly is meant by the concepts ‘context’, ‘mechanisms’ and ‘outcomes’ [12, 13]. This is problematic for the consistent application of the model to the collection and analysis of empirical data, as well as the comparison of findings across studies.

In response to these challenges, we developed a model that provides definitions and operationalisations of these elements, as well as a visualisation of the interplay between these elements. The COMIC Model (Figure 2) to study the Context, Outcomes and Mechanisms of Integrated Care interventions assumes that an intervention is introduced using certain mechanisms, which are met with certain context factors, which combined, contribute to certain outcomes. Mechanisms are defined as the different components of an integrated care intervention and categorised according to the Chronic Care Model [14]. Context is defined as the...
setting in which mechanisms are brought into practice, described by barriers and facilitators and categorised according to the Implementation Model [15]. Outcomes are defined as effects triggered by mechanism and context and categorised by the World Health Organization’s dimensions of quality of care [16, 17].

Our research has shown that the COMIC Model makes it possible to comprehensively analyse mechanisms, context and outcomes within a given case, to visualise the relationships between the mechanisms, context and outcomes within a given case, and to compare several cases to each other in a systematic way that adds value to the analysis.
Conclusions
This dissertation has investigated the question of how integrated care is implemented and to which outcomes it contributes. Of course, an improved understanding of the implementation of integrated care is not an aim in itself, but stems from the desire to implement better interventions, and to implement them better, in order to achieve better outcomes, and to do so more consistently. We expect that the insights from this dissertation, and in particular the COMIC Model, will support future comprehensive evaluations of integrated care interventions. By focussing on the implementation of an intervention, including which type of intervention was implemented, how the setting in which the intervention was implemented affected its implementation, and which outcomes were achieved, these evaluations are expected to contribute to improved outcomes for people with or at risk of chronic disease. This is not a ready-made solution, but an instrument to be put in the hands of researchers, policy-makers, practitioners and patients.

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Note
1 The research conducted within the scope of the dissertation was part of project INTEGRATE and therefore co-subsidised by the European Union.

Competing Interests
The author has no competing interests to declare.

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