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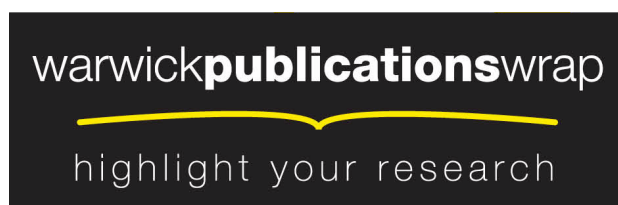
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Addressing the Challenge of Integrated Care through Digital Technology

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Abstract

There is a need to constantly tackle a range of diverse and, sometimes, contradictory requirements of people with multiple chronic conditions. Integrated Care provides a potential solution to this need and digital technology can be the proposition for addressing its implementation challenge. Digital technology can support clinical teams to achieve care across all levels and provide independence in patients' lives, by supporting them in enhanced and integrated activity within our societal structures.

Introduction

We are currently experiencing an increased occurrence of chronic diseases amongst the population. The World Health Organization estimates that 68% of all annual deaths (~36 million people) is attributable to non-communicable, chronic diseases¹. Furthermore, chronic conditions are usually complex, rarely existing in isolation. Many people suffer from multiple conditions at the same time, a circumstance we usually refer to as multi-morbidity, making the management of their diseases a challenge for the healthcare system. As the life expectancy of people is improving, such a challenge becomes more critical for an individual's health and wellbeing.

The Need

The clinical management of patients with multi-morbidity is much more complex and time-consuming, while it involves a multifaceted organisation of care provision across different healthcare stakeholders. Different healthcare professionals, community and home-care givers, and the patients themselves, need to be involved in a co-ordinated approach to care provision activities. There is, therefore, a necessity to equip all involved in chronic-disease management with new approaches and tools, which can empower our modern healthcare system in dealing with this need. The way we look at healthcare provision for chronic diseases has to radically change.

The Role of Integrated Care

At present, it is suggested that there is no 'single model' that can be applied universally to achieve care services for people with complex needs². Integrated Care, defined as "the management and delivery of health services so that citizens receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health system"³, can potentially provide such a co-ordinated approach.

Digital Technology as Solution

In C3-Cloud, recently funded EU Horizon2020 programme, we advocate that digitally-enabled approaches can provide more adaptive and radical solutions to the provision of integrated care. In particular, in the ever growing digital capability of our society, such technology can bring forward the power of information for an effective realisation of chronic disease management. An individual's healthcare data, through the concept of electronic healthcare records, can be more readily available and provides a core facility in understanding the complexity of disease. Such data can also provide better insights for the whole patient journey in the context of chronic conditions. Quality digital healthcare data, combined with our current evidence-based medical knowledge, allows health and social care professionals to make more precise, informed decisions on care provision and patient support. Moreover, the transparent use of this information can empower the individual patient in their awareness of health and wellbeing.

Conclusion

The impact of digital technology and information can be transformative for healthcare. The benefits to individuals and society are multiple. People's health journeys are better understood and appropriate lifestyle choices can be better tailored and promoted to the individual. In the case of chronic conditions, disease management can be more effectively supported and avoidable deaths can be prevented.

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