

Chapter 8

Integrated Care as a Strategic Solution for Active Aging in the Community: Tools and Models

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ABSTRACT

A rapidly aging population is an international challenge. Although much has been done, senior citizens today are not experiencing better health than our ancestors (WHO, 2016). This chapter reviews evidence on the current international good practices, the positive clinical and economic impact of integrated care, and how Operations Research/Management Science (OR/MS) methodologies add value to the implementation of integrated care. In the second half of the chapter, three enablers of implementing integrated care are reviewed: 1) a common technological platform, 2) service-restructuring with the introduction of new job roles and recruitment, and 3) creation of a financial model that incentivizes integrated care. In conclusion, while research has shown that integrated care is effective in fostering aging in place, challenges remain as to how it could be implemented given that population aging has increased the demands on healthcare resources. This chapter reviews how OR/MS methodologies can facilitate the implementation of integrated care.

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BACKGROUND

With the cost of medical and social care skyrocketing in relation to population aging, countries like the UK, Canada, Australia, New Zealand and those in the European Union have shifted their care strategies away from institution-based acute and long-term care (LTC) toward community-based preventive and proactive care, with the goal of maintaining the independence of the elderly.

Achieving this will require care integration that ensures that the right mix of services are available in the right place at the right time, where care is coordinated around the full spectrum of an individual's needs (rather than on single diseases), and prevention of diseases and support for maintaining functional independence of the elderly are prioritized. Successful integrative care employs comprehensive geriatric assessment at the proper time, and offers effective provision of coordinated primary, community and social care services close to home.

It has become clear to the above countries that, while the individual health or care facilities across the care continuum provide high quality services, the previously fragmented services are not meeting the needs of the aging population. Sectorization is seen as a major obstacle to the management of better health, especially for healthcare professionals treating patients with chronic conditions (Busse and Stahl, 2014). It has been shown that the elderly is a group that is most likely to suffer from the challenges in the coordination of care and the transitions between services, and integrated care is therefore a solution to enhance the quality and cost-effectiveness of care for an aging population.

Integrated care has many definitions. Armitage et.al (2009) in a review of the literature concluded that there are 175 definitions and concepts. Most of the definitions are referred to as a continuity of care within the healthcare system, and one expanded that scope to include social services (e.g. housing and meals). Evidence suggests that the integration between medical and social care improves subjective experience, care outcomes, and efficiency. In terms of care outcomes, Ouwens, Wollersheim, Hermens, Hulscher and Grol (2005) conducted a systematic review of integrated care programs for chronically ill patients, and found that functional health status has a positive trend. In one of two studies that performed meta-analyses, the result is found to be significant. There is also a decreasing trend in hospital readmission and length of stay in the three reviews. The authors concluded that integrated care programs have positive effects on care quality. While people of all ages require acute care, post-acute rehabilitation and enablement services, the majority of these resources are currently being allocated to the care of older people. This is true around the world, and particularly in Asia. Hence, an effective integrated elderly care program that improves the cost-effectiveness of elderly care and shortens acute lengths of stay for older people would release poorly utilized resources and make the healthcare system efficient for everyone.

THE HEALTH ECONOMICS OF INTEGRATED CARE AND WAYS OPERATIONS RESEARCH/MANAGEMENT SCIENCES (OR/MS) CAN ADD FURTHER VALUE

In addition to clinical research that demonstrates the impact of integrated care on clinical outcomes, health economists and researchers in the discipline of OR/MS have also demonstrated the health economic values of integrated care, and how healthcare resources could be optimized to deliver integrated care cost-effectively and sustainably in order for the population to age in place. Research has found that

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