

Chapter 25

The Development of BelRAI, a Web Application for Sharing Assessment Data on Frail Older People in Home Care, Nursing Homes, and Hospitals

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ABSTRACT

As the complexity of caregiving rises and surpasses traditional models of care, the need for comprehensive and integrated assessment systems increases. The use of standardised and computerised data—available to those who must make decisions—has become paramount. In Belgium, the BelRAI Web application has been developed to support the use of interRAI assessment instruments in a multidisciplinary way and to exchange client-centred information across care settings. This chapter describes the particularities of BelRAI, the security aspects, the support tools, the gradual process of implementation, the dos and don'ts, the pros and cons, and the challenges for the future. The benefits seem to overrule the drawbacks, but it has also become clear that only a significant expenditure on resources with regard to adequate staffing in healthcare environments, appropriate information technology, and training facilities can contribute to a successful introduction, maintenance, and full exploitation of this innovative health information system.

INTRODUCTION

As people live longer, healthcare and social care environments are increasingly confronted with older persons having chronic conditions and long-term care needs. In addition, the number and the diversity of services provided to older people increases. As a consequence, the complexity of caregiving rises and surpasses traditional models of care.

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As people move through this maze of healthcare providers, the need for integrated and coordinated assessment systems increases. The use of standardized, understandable and computerized data, available to those who must make decisions at the personal, clinical, managerial, and public policy levels consequently becomes very important.

The interRAI suite of assessment instruments addresses the changing strengths, preferences and needs of vulnerable people and offers opportunities to improve continuity as well as efficiency and quality of care. During an expert meeting organized by OECD on November 14th, 2012, it was clearly shown that the interRAI instruments provide great opportunities for supporting integrated eCare and for sharing high quality data between and within care organizations and care sectors (Carpenter & Hirdes, 2012).

In Belgium, different government-funded feasibility studies have been conducted on the implementation and use of interRAI instruments in home care, nursing home care and acute hospital care for frail older people. Concurrently, BelRAI—a web application (<http://www.belrai.org>)—has been developed to support the use of the instruments in the three official Belgian languages (Flemish-Dutch, French and German). BelRAI allows caregivers to assess the condition of a frail older person in a multidisciplinary way and to exchange information over time and between providers in different organizations in a secure way, anywhere and at any time. In addition, BelRAIWiki—an online information and support platform (<http://wiki.belrai.org>)—was made available. The whole system was developed in constant communication and collaboration with the potential users—caregivers and researchers. The Belgian government intends to stimulate and in time mandate the use of the system for all frail older people. The system is innovative because it is the first to fully interconnect different interRAI assessment instruments in the continuum of care.

The development and implementation of information technology to support a shared dataset is a difficult, slow and gradual process in a world that is still flooded with paper-based files. Furthermore, the care sector for older people is a sector in which there is high working pressure and little patience for learning how to work with new systems. Therefore, a lot of effort was given in order to make the system acceptable and interesting to all potential users.

In this chapter, we describe the way in which BelRAI was developed, its dos and don'ts, pros and cons and challenges for the future.

BACKGROUND

The Nursing Home Reform Act, a part of the Omnibus Budget Reconciliation Act of 1987 of the U.S. Congress, resulted from significant and widespread quality of care concerns related to nursing homes' inability to identify residents' problems and needs (Morris et al., 1990). It consisted of comprehensive federal reforms addressing the regulation of nursing homes. Among those reforms, the development of a standardized Minimum Data Set (MDS) was one of the most fundamental mandated changes (Fries et al., 2003; Hawes, Morris, Phillips, & Fries, 1997; Morris et al., 1990).

In 1988, a consortium of researchers from Research Triangle Institute, Hebrew Rehabilitation Center for the Aged, Brown University, and the University of Michigan (<http://www.interrai.org>), assisted by clinical work groups, determined the goals that would guide the development of the federally mandated Nursing Home Resident Assessment Instrument (NH-RAI). They reviewed scientific literature and more than 80 existing mainly “first generation” individually validated geriatric assessment instruments such as the Barthel Index for functional evaluation of the activities of daily living (Mahoney & Bar-

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