

# ALL TOGETHER NOW:

## A Conceptual Exploration of Integrated Care

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### **Abstract**

Integrated care is a key strategy in reforming health systems around the world. Despite its importance, the concept's polymorphous nature and lack of specificity and clarity significantly hamper systematic understanding, successful application and meaningful evaluation. This article explores the many definitions, concepts, logics and methods found in health system and service integration. In addition to framing this evolving, albeit imprecise field, the article summarizes the main elements or building blocks of integrated care and suggests a way to address its various complexities and unknowns in a real-world sense.

**Table 1. Some key definitions of integrated care and related concepts**

Original term/Author	Definition
Integrated Care/Øvretveit (1998)	The methods and type of organization that will provide the most cost-effective preventative and caring services to those with the greatest health needs and that will ensure continuity of care and co-ordination between different services
Integration/Leutz (1999)	The search to connect the healthcare system (acute, primary medical and skilled) with other human service systems (e.g., long-term care, education and vocational and housing services) to improve outcomes (clinical, satisfaction and efficiency)
Integrated Care/Gröne and Garcia Barbero (2001)	A concept bringing together inputs, delivery, management and organization of services related to diagnosis, treatment, care, rehabilitation and health promotion. . . [as] a means to improve the services in relation to access, quality, user satisfaction and efficiency.
Integrated Care/Kodner and Spreuwenberg(2002)	A coherent set of methods and models on the funding, administrative, organizational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors. . . [to] enhance quality of care and quality of life, consumer satisfaction and system efficiency for patients with complex problems cutting across multiple services, providers and settings.

## Introduction

“Integrated care” is a global buzzword in healthcare and a key concept that has helped to drive and shape major policy- and practice-level changes in the health systems of North America, Europe and other parts of the world for well over two decades. Integration is designed to create coherence and synergy between various parts of the healthcare enterprise in order to enhance system efficiency, quality of care, quality of life and consumer satisfaction, especially for complex and multi-problem patients or clients. In essence, integrated care can be seen as a demand-driven response to what generally ails modern-day healthcare: access concerns, fragmented services, disjointed care, less-than-optimal quality, system inefficiencies and difficult-to-control costs. These challenges are the result of a great many factors (Kodner 2008; Kodner and Kyriacou 2000; Leatt 2002; MacAdam 2008; Solinis 2008). Chief among them are the differentiation, specialization, segmentation and silo mindset deeply embedded in all aspects of the health system (i.e., policy, regulation, financing, organization, service delivery and professional/institutional culture). There is also the serious mismatch between the complex needs of increasing numbers of the frail elderly and people with chronic conditions and disabilities on the one hand, and the health system’s overwhelming and increasingly anachronistic acute, episodic medical orientation on the other (Kodner 2004). See “Drivers of the Integration Imperative” on the next page.

There are many cross-national differences in healthcare policy, funding, infrastructure and provision, yet policy makers, planners and providers in Canada, the United States and a great many other countries are nonetheless increasingly focused on more integrated or coordinated approaches to the organi-

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zation and delivery of services across the continuum of care (Delnoij et al. 2002; Ham et al. 2008; Kodner 2002; Suter et al. 2007). In order to continue providing affordable, quality healthcare, governments have no choice but to restructure the health system in ways that enhance efficiency and reduce fragmentation, and integration is a principal driver of reform (Contandriopoulos et al. 2003). Despite the prevalence of this trend, a fundamental challenge has arisen with respect to the lack of a common definition of *integrated care*. Like a Rorschach test, the term is often used by different people to mean different things. It is most frequently equated with *managed care*, *continuity of care*, *case/care management*, *transmural care*, *patient-centred care*, *shared care*, *transitional care* and *integrated delivery systems*, to name the most widespread appellations. Table 1 presents a sampling of some

of the more well-known international definitions. MacAdam (2008) characterizes the terminology as “elastic.” Kodner and Spreeuwenberg (2002) refer to the bewildering array of vague and confusing terms and concepts surrounding integrated care as being akin to the biblical Tower of Babel, while Howarth and Haigh (2007) characterize the many seemingly related and overlapping notions as a “quagmire of definitions and concept analyses.” According to Nolte and McKee (2008), this problem reflects integrated care’s polymorphous nature. Some of these viewpoints are illustrated in “Different Views of Integrated Care” on this page.

### Drivers of the Integration Imperative

- Lip service to consumer centredness
- Aging, chronic illness and disability
- Unbalanced “balance of care”
- Service fragmentation, gaps and redundancies
- Access, continuity and coordination problems
- Inefficient use of resources
- Suboptimal outcomes and medical errors
- Mounting, difficult-to-control costs
- Incomplete accountability
- Declining public confidence in health system

Terminology plays a crucial role with respect to how we envision, design, deliver, manage and evaluate healthcare services. The lack of specificity and clarity inherent in the definition of integrated care greatly hampers systematic understanding and successful, real-world application. This is further complicated by the lack of a solid empirical framework (Goodwin et al. 2004). Such a framework is needed to facilitate communication, hypothesis generation, policy formulation, program development and evaluation in the integrated care field (Kodner and Kay Kyriacou 2000). The goal of this article is to provide a better understanding of integrated care by examining definitions, concepts, logics and methods found in this important and evolving, albeit imprecise field.

### Many Roots and Branches

Like a tree, integrated care has many roots and branches. Following is a discussion of some of the better-known scientific and professional concepts and approaches that have cross-fertilized the broad swath of integrated care.

### Organizational, Managerial and Business Foundations

Organizational theory and management science encompass the systematic study of organizations from several different

### Different Views of Integrated Care

(Adapted from Lloyd and Wait 2006)

**Patients:** Easy access and navigation; seamless care

**Providers:** Interdisciplinary teamwork; coordination of tasks, services and care across professional and institutional boundaries

**Managers:** Oversight of combined funding streams; coordination of joint performance targets; supervision of enlarged and professionally diverse staff; management of complex organizational structures and inter-agency relationships; building and maintenance of shared culture

**Policymakers:** Design of integration-friendly policies, regulations and financing arrangements; evaluation of systems/programs on holistic basis

perspectives (i.e., individual and group dynamics, whole organization, and power, culture and networking) and the application of this knowledge to improve business and related practices, including those in healthcare (Robbins 2004).

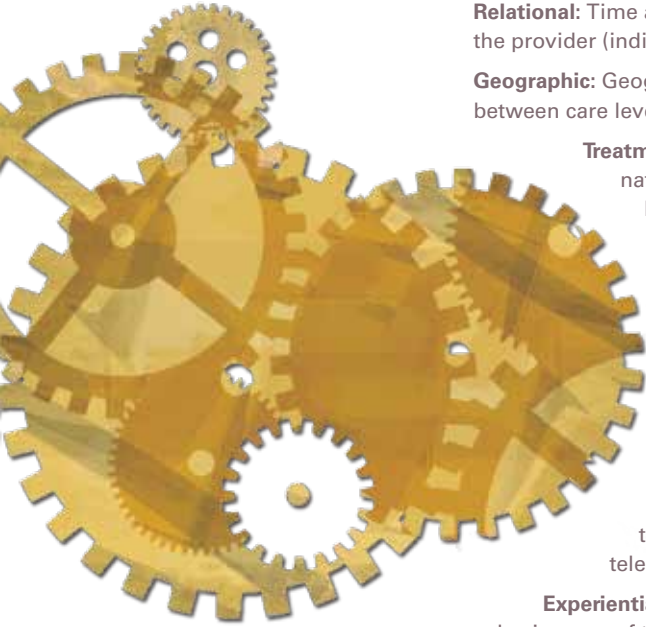
Effective organizational design and performance depends on achieving a state of integration (Scott 1992; Thompson 1967). All organizations consist of separate but interconnected parts; these parts are supposed to play complementary roles in order to accomplish shared tasks (Pfeffer 1982). However, the division, decentralization and specialization found in the architecture of more complex organizations tend to interfere with efficient operations (Lawrence and Lorsch 1967). The fulfillment of organizational aims demands cooperation and collaboration among and between the various components and processes (Galbraith 1973). Essentially, integration is the glue that bonds the entity together, thus enabling it to achieve common goals and optimal results (Kodner 2002).

In their seminal review of health systems integration, Suter and colleagues (2007) concluded that the principles and lessons of organizational behaviour and management practices in the business sector can contribute to our understanding of integrated care. Businesses have similar goals to those of healthcare providers with respect to integration as a structure and



**Various Aspects of Continuity of Care**

(Adapted from Solinis 2008)

**Longitudinal:** Period of time over which the patient relates with the provider.**Relational:** Time and quality of relationship with the provider (individual or group/team).**Geographic:** Geographic range of the relationship between care levels.**Treatment:** Integrated or fragmented nature of care within the same level.**Continuity as flexibility:** Capacity to adapt care to the changing needs of the patient.**Informational:** Registries and information related to the patient and patient care.**Communications:** Means of distant interaction between the provider and patient (e.g., telephone and Internet).**Experiential:** How patients experience the cohesiveness of their care.

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process. Organizational culture has also been identified as a significant barrier to becoming integrated.

### **Managed Care, Integrated Delivery Systems and Networks**

Robinson and Steiner (1998) describe the managed care model as a “health benefit intermediary” (HBI) organization that acts as an insurer and purchaser of services on behalf of subscribers (also known as members) or payer organizations (e.g., government programs like Medicare and Medicaid, and employers). There are many different forms of managed care; a major defining variable is the degree to which managed care plans effectively integrate the direct delivery of services. The best-known managed care prototype is the Health Maintenance Organization (HMO).

Although managed care reflects a unique American orientation to market-based competition and cost containment, a great many of its features in areas such as payment systems (e.g., capitation), organizational design, provider networking, integrated information systems and care coordination have ultimately ended up in present-day integrated care frameworks (Dubbs et al. 2004; Kane et al. 2005; Kodner and Kay Kyriacou 2000; Hunter and Fairfield 1997; Øvretveit 1998; Robinson and Steiner 1998).

Integrated delivery systems (IDSs) – also known as organized delivery systems, integrated delivery networks, integrated service networks and integrated care organizations – are managed care offshoots that generally follow the original framework posited by Shortell et al. (1994). The IDS represents a vertically integrated structure; that is, it brings together healthcare organizations such as hospitals, medical groups and other service providers, uses aligned incentives and is frequently linked to insurance plans. The form began to emerge in the 1990s as a more flexible means of

responding to local market conditions and also to compete with HMOs and other more traditional managed care options (Burns and Pauly 2002). While the IDS model has generally fallen short of expectations, some systems have managed to show modest signs of clinical and financial success. There is interest in Canada and on the other side of the Atlantic in home-grown versions to enhance integrated care (Fulop et al. 2005; Leatt 2002; Leatt et al. 2000; Rosen and Ham 2008).

Managed care plans and IDSs are examples of networks. Networks, which are *de rigueur* in policy and practice circles, represent an important pathway to integrated health and social services (Hudson 2004; Provan and Milward 2006). According to Goodwin et al. (2004), networks are inter-organizational or multi-organizational systems designed to promote integrated or seamless services. They come in four main configurations: *Informational networks* facilitate the sharing of knowledge and ideas. *Coordinated networks* bring together individual provider organizations into cross-institutional partnerships but leave the parties separately responsible for clinical and financial outcomes. *Procurement networks* create a comprehensive continuum of care with overall quality and fiscal accountability by linking various providers (and sometimes payers) through contractual arrangements (the IDS falls into this category). Finally, *managed*

*networks* represent the most structured and fully integrated form wherein the delivery and financing of care are through a single entity or hierarchical structure (HMO-like plans fit under this rubric). As illustrated, network types range from informal to highly organized; they differ largely in terms of network goals, management centrality, resource control and structural complexity. Success through networking demands managerial skill and persistence in the face of multiple challenges associated with a complex and dynamic environment (Goodwin 2004; Huerta et al. 2006).

### **Continuity of Care and Continuum of Care**

Many definitions of integrated care directly or indirectly touch on the theme of continuity of care, and the literature is full of definitions. Freeman et al. (2000) provide an excellent overview of aspects of continuity of care, as summarized by Solinís (2008). See “Various Aspects of Continuity of Care” on the previous page.

The continuum of care is an oft-recommended antidote to fragmented and uncoordinated health and social service systems in which continuity of care is often the victim. It is designed to connect and coordinate an array of providers and points of service capable of matching the needs and preferences of multi-problem patients over time and at various stages of illness and disability (Evashwick 1987).

To sum up, Reid et al. (2002) and Haggerty et al. (2003) conclude that continuity of care is the method by which patients experience the cohesiveness and connectedness of the health system. Clearly, these dimensions are key concerns of integrated care.

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### **Coordination of Care and Case Management**

The terms coordination and integration are frequently used interchangeably (even in this article), although integration seems to some observers to have a more organizational and managerial (and, therefore, less patient-oriented or clinical) tone.

Hofmarcher et al. (2007), in a report published by the Organisation of Economic Co-Operation and Development (OECD), examine the nature of care coordination, its rationale and impact on cost-efficiency. According to the authors, the strategy consists of linking services and making sure they are

delivered in tandem – when and where needed. It specifically targets the frail elderly and other complicated or high-risk groups in order to reduce the need for high-cost hospitalization, ensure that patients receive the appropriate mix of acute and long-term care services, eliminate fragmentation and make service systems more user-friendly. While the evidence presented on cost-efficiency is inconclusive, care coordination programs – including case/care management and disease management – do appear to improve quality. Clearly, care coordination is crucial to achieving quality outcomes, although by itself it is too limiting to achieve overall integration.

Case management is one of the better-known care coordination approaches<sup>1</sup> and is an essential integrated care tool. It is a comprehensive and systematic process of case finding/screening, assessing, planning, arranging, coordinating and monitoring multiple services for clients with long-term care needs and other complex or high-risk conditions across time, setting and discipline (Kodner 1993). This proactive process operates at multiple levels (administrative, service delivery and/or clinical) (Kodner 2003) and has at least three main goals: (1) improve appropriateness, coordination and consistency between services, (2) enhance choice and flexibility in service delivery, and (3) improve service efficiency and patient outcomes (Davies 1994; Kane et al. 2005). Case management programs can be effective. However, Kane et al. (2005) conclude that results for patients with chronic conditions are for the most part equivocal.

### **Management of Chronic Conditions**

Disease management was the earliest phase in the worldwide effort to prevent and manage chronic conditions (Boston Consulting Group 1993). The strategy emerged in the US during the decade of the 1990s and has quickly spread to other countries. There are multiple and competing definitions, as with all the integrated care-related terms presented in this paper. Disease management is a systematic, population-based approach involving the identification of people at risk of a particular disease, intervention throughout the condition's lifecycle and the packaging and management of treatments and services across the entire care and disease spectrum in order to achieve better and more cost-effective health outcomes. Programs target individual chronic conditions (e.g., diabetes, asthma, cardiac disorders and depression, to name the most obvious) rather than their underlying causes. A variety of tools (case management, clinical protocols and practice guidelines, and patient education) are employed. Several meta-analyses show that disease management yields modest positive effects (Krause 2005; Mattke et al. 2007; Tsai et al. 2005). However, it is unclear which disease management components or combinations are the most effective (Weingarten et al. 2002).

The Chronic Care Model (CCM), developed by Wagner and collaborators, offers a more all-encompassing and collabo-

rative approach to chronic illness management than conventional disease management. The CCM is essentially an idealized, evidence-based framework that rests on more than 30 specific interventions spanning six key areas: healthcare organization, community resources, self-management support, delivery system design, decision support and clinical information systems (Wagner et al. 1996). These elements cut across the health system and community setting and are designed to engage informed patients in productive interaction with an experienced, proactive, interdisciplinary provider team. Unlike narrow, medically-oriented disease management programs, the CCM recognizes the importance of building links outside the health system, since this is where much of the work of chronic care takes place (Bodenheimer et al. 2002a). In addition to incorporating the role of primary care, it actively promotes greater reliance on patient self-management (Bodenheimer et al. 2002b). A great many health systems in Canada and the US (e.g., Alberta Health Services in both Calgary and Edmonton, and the US Department of Veteran's Affairs) and in other countries (e.g., the United Kingdom, New Zealand) have at least partially adapted the CCM, thus making it the world's best-known framework.

Singh and Ham (2006) reviewed 44 international studies and found the CCM a robust model that is positively associated with better processes and outcomes of care, satisfaction and costs. However, like disease management and other forms of care coordination, it remains uncertain which components are specifically responsible for observed improvements.

### The Integration "Nest"

Integration is a nested concept (Kodner 2008; MacAdam 2008; Nolte and McKee 2008). The following five dimensions are helpful in differentiating integrated care archetypes<sup>2</sup>:

#### Foci of Integration

According to Kodner (2008), integration efforts can focus on (1) entire communities or enrolled/rostered populations irrespective of health status, (2) vulnerable client sub-groups (e.g., the frail elderly and persons with disabilities), or (3) patients with complex illnesses (e.g., chronic conditions, some cancers). Vulnerable and complex patients need and benefit the most from integrated care (e.g., see Leutz 1999).

#### Types of Integration

There are six types of integration: (1) functional integration (the degree to which back-office and support functions are coordinated across all units), (2) organizational integration (relationships between healthcare organizations), (3) professional integration (provider relationships within and between organizations), (4) service or clinical integration (coordination of services and the integration of care in a single process across

### Typical Range of Integrated Care Methods and Tools

#### Funding:

Pooling of funds (at various levels)  
Prepaid capitation (at various levels)

#### Administrative:

Consolidation of responsibilities/functions  
Inter-sectoral planning  
Needs assessment/allocation chain  
Joint purchasing or commissioning

#### Organizational:

Co-location of services  
Discharge and transfer agreements  
Inter-agency planning and/or budgeting  
Service affiliation or contracting  
Jointly managed programs/services  
Strategic alliances or care networks  
Consolidation, common ownership or merger

#### Service delivery:

Joint training  
Centralized information, intake and referral  
Case management  
Disease management  
Interdisciplinary team work  
Around-the-clock (on call) coverage  
Integrated information systems

#### Clinical:

Standard diagnostic criteria (e.g., DMS IV)  
Uniform, comprehensive assessment procedures  
Joint care planning  
Shared clinical record(s)  
Continuous patient monitoring  
Common decision support tools (i.e., practice guidelines and protocols)  
Regular patient/family contact and ongoing support



time, place and discipline), (5) normative integration (shared mission, work values and organizational/professional culture), and (6) systemic integration (alignment of policies and incentives at the organizational level) (Contandriopoulos et al. 2001; Fulop et al. 2005; Nolte and McKee 2008; Shortell 2000).

### Levels of Integration

Closely related to the above dimension, integrated care also operates on five different levels: (1) funding, (2) administrative, (3) organizational, (4) service delivery, and (5) clinical (Kodner and Spreeuwenberg 2002).<sup>3</sup> It is thought that interventions that span multiple, interlocking domains, both in terms of levels and types of integration, allow for better patient outcomes and system-level performance (Kodner and Kay Kyriacou 2000).

### Breadth of Integration

Organizations link up to provide a range of clinical and functional services in two ways: (1) horizontal integration, wherein similar organizations/units at the same level join together (e.g., two hospitals), and (2) vertical integration, which involves the combination of different organizations/units at different levels (e.g., hospital, community health centre, home care agency and nursing home) (Shortell et al. 1994). Vertically integrated solutions, whether hierarchical or virtual in nature, are a major ingredient of integrated care.<sup>4</sup>

### Degree of Integration

Walter Leutz is the author of perhaps the most well-known framework for health-related service integration. According to Leutz (1999), there are three different configurations: (1) linkage, the least-change approach, entails providers working together on an ad hoc basis within major system constraints, (2) coordination is a structured, inter-organizational response involving defined mechanisms to facilitate communication, information-sharing and collaboration while retaining separate eligibility criteria, service responsibilities and funding, and (3) full integration, the most transformative combination, refers to a “new” entity that consolidates responsibilities, resources and financing in a single organization or system in order to deliver and pay for the entire continuum of care.<sup>5</sup>

### A Bundle of Technologies

Integrated care is also characterized by the use of various technologies (Kodner 2008). It is beyond the scope of this paper to describe each and every technique available. Nonetheless, Kodner and Spreeuwenberg (2002) identified a wide range of methods and tools, and organized them according to the five aforementioned integrated care levels (see “Typical Range of Integrated Care Methods and Tools”). A study of several vertically integrated eldercare models in North America concluded, for example, that the following cluster of methods and tools

appear to be responsible for their success: a closely-knit organizational structure; case-managed, inter-professional care with a single point-of-entry and the use of comprehensive service packages; an organized provider network with defined referral and service procedures and enhanced information management; and the pooling of funds (i.e., a single funding envelope) (Kodner 2008).

**Integrated care as a concept is an imprecise hodgepodge. Its meanings are as diverse as the numerous actors involved.**

### Key Conclusions

Integrated care is essential to sustaining our health systems. It is a multi-level, multi-modal, demand-driven and patient-centred strategy designed to address complex and costly health needs by achieving better coordination of services across the entire care continuum. Not an end in itself, integrated care is a means of optimizing system performance and attaining quality patient outcomes. While there is growing consensus that high-performing healthcare organizations cannot do without health system integration in order to meet changing patient needs and community expectations, there is much less agreement on the best ways to accomplish the goal of integrated care. The purpose of this review was to explore and provide a clearer picture of integrated care. Our conclusions are that:

Integrated care as a concept is an imprecise hodgepodge. Its meanings are as diverse as the numerous actors involved. This poses difficulties for policy makers, planners, managers, clinicians and researchers with an interest in promoting, implementing and studying integrated care. In the end, it would be very helpful to somehow develop broad consensus around a common terminology and typology (or taxonomy).

Integrated care is at once global, systematic and comprehensive in its orientation to needs-based healthcare. It is built around related notions of continuity of care and coordinated care. Together, they form the backbone of health system and service integration efforts.

Integrated care offers an opportunity to address overall healthcare efficiency and effectiveness concerns. However, it is especially relevant for multi-problem patients like the elderly and persons with chronic, disabling, medically fragile or high-risk conditions. These populations bear the brunt of access, continuity, fragmentation and quality problems found in all health systems.

Integrated care entails achieving connectivity, alignment and collaboration within and between the “cure” and “care” sectors. It accomplishes this by ensuring easy links and seamless transitions for patients – both sequentially and simultaneously – at various points along the continuum of care, that is, between primary, secondary and tertiary care; between ambulatory, home- and community-based and institutional care; and between medical/acute care, long-term care, mental health care, social services, and so forth.

Integrated care depends on a tailor-made combination of structures, processes and techniques to address unique patient needs and system–institutional–community circumstances. To use a medical analogy, integrated care is more a precise surgical procedure than a broad-spectrum antibiotic. There are no “one size fits all” or “magic bullet” approaches to integrating health systems or services.

Integrated care frequently makes use of organizational structures or networking arrangements to bring together institutions and providers in a systematic whole. It also draws on a wide range of techniques – case management and disease management being the most prominent – to deliver appropriate, high-quality care within an integrated framework. These techniques are frequently confused with being integrated care; they are, however, only part of the means to achieve that end.

Integrated care is like a country. It demands a culture of its own, one that spans differing organizational and professional mindsets, eliminates boundaries and biases, and creates a shared space to facilitate much-needed inter-agency collaboration and interdisciplinary teamwork on behalf of the patient.

Integrated care appears to be associated with a number of positive outcomes, including improved system performance, better clinical results and enhanced quality and patient satisfaction. However, the accumulating evidence on effectiveness is indirectly derived from studies of different models and separate components (e.g., case management, disease management, etc.). Furthermore, there is less certainty with respect to which bundle of strategies produces the best results or whether integrated care generates cost savings, at least in the long run. Clearly, much more sophisticated work needs to be done to expand the evidence base on integrated care.

The theory behind integrated care owes much to management science. On a more practical level, practices and lessons in the world of business shed important light on what, and what not, to do in integrating health systems and services.

Integrated care is not only a difficult concept to understand, but also one that in the final analysis is enormously challenging to implement and manage.

Having set out to explore and describe the realm of integrated care, it is impossible to escape the conclusion that we are speaking about an unfolding field, one that lacks a clear and complete knowledge base. In some ways, we are like blind men and the proverbial elephant, each aware only of the part of the animal touched and with no experience of the whole; the reality of integrated care still depends in part on one’s own perspective. Nonetheless, as this paper demonstrates, we have gone beyond the intuitive belief that integration is a good thing that can ultimately lead to better health services and outcomes. Experience tells us that integrated care does work, and that there are a number of basic building blocks and lessons that are responsible. To sum up, whatever the dilemmas and unknowns inherent in integrated care, it is nonetheless still possible to make it happen. It may not be easy, but with clear vision, the right combination of strategies and resources, and the circumstances to support it, we can bring the many benefits of integration to populations with the greatest need, as well as to the health system at large.

## Notes

1. The OECD report and others in the field make what this author believes to be an artificial distinction between case and care management. Case management, which began in the 1950s in the US mental health system, has since been applied to the long-term care elderly and persons with disabilities, patients with medically complex, high-risk and high-cost conditions, and other populations in the health and human service fields. Programs differ in terms of targeting, setting, intensity, duration, type, (e.g., individual versus team), caseload size, control over services/resources and professional background of the case manager.
2. Nolte and McKee (2008) suggest a sixth dimension, namely the processes of integration. In addition to the ubiquitous structural integration, Fabricotti (2007) observes that there are three other processes or “streams” that should be taken into account: (1) cultural; (2) social; and (3) those related to objectives, interests, power and resources.
3. Other authors view healthcare integration from the perspective of the macro, meso and micro levels (Nolte and McKee 2008; Epping-Jordan et al. 2004). The two approaches are not mutually exclusive. Kodner and Spreeuwenberg’s policy and funding levels, for example, fit comfortably within the macro domain.



4. Jeff Goldsmith (1994) and others argue that hierarchical or structured approaches to vertical integration (i.e., where a single, consolidated provider entity is in charge) are more costly and less flexible than “virtual” arrangements achieved through contracting, joint venturing or alliance building.
5. Leutz’s framework also associates each level with particular dimensions of need and priority clinical tasks. For example, low-risk patients with stable, mild to moderate conditions and the need for a few services are best served in linkage models where the emphasis is on referral and follow-up, as well as the identification of emerging problems. On the other hand, high-risk patients with complex, long-term, severe and unstable needs belong in fully integrated models where interdisciplinary teams manage comprehensive services across the entire continuum, and funding is pooled. **HQ**

## References

- Bodenheimer, T., E. Wagner and K. Grumbach. 2002a. “Improving Primary Care for Patients with Chronic Illness: The Chronic Care Model, Part 1.” *Journal of the American Medical Association* 288: 1775–9.
- Bodenheimer, T., E. Wagner and K. Grumbach. 2002b. “Improving Primary Care for Patients with Chronic Illness: The Chronic Care Model, Part 1.” *Journal of the American Medical Association* 288: 1909–14.
- Boston Consulting Group 1993. *The contribution of pharmaceutical groups: What’s at stake for America*. Boston: Boston Consulting Group.
- Burns, L. and M. Pauly. 2002. “Integrated Delivery Networks: A Detour on the Road to Integrated Care?” *Health Affairs* 21: 128–43.
- Contandriopoulos, A.-P., J.-L. Denis, T. Nasser and C. Rodriguez. 2003. “The Integration of Health Care: Dimensions and Implementation.” Working Paper. Montreal: Groupe de Recherche Interdisciplinaire en Santé, Université de Montréal.
- Davies, B. 1994. “Improving the Case Management Process.” In OECD, ed., *Caring for Frail Elderly People: New Directions in Care*. Paris: Organisation for Economic Co-operation and Development (OECD).
- Delnoij, D., N. Klazinga and I. Glasgow. April – June. 2002. “Integrated Care in an International Perspective.” *International Journal of Integrated Care* 2(1). Retrieved January 29, 2009. <www.ijic.org>.
- Dubbs, N., G. Bazzoli, S. Shortell and P. Kralovec. 2004. “Reexamining Organizational Configurations: an Update, Validation, and Expansion of the Taxonomy of Health Networks and Systems.” *Health Services Research* 39: 207–20.
- Epping-Jordan, J., S. Pruitt, R. Bengoa and E. Wagner. 2004. “Improving the Quality of Care for Chronic Conditions.” *Quality and Safety in Health Care* 13: 299–305.
- Evashwick, C. 1987. “Definition of Continuum of Care.” In C. Evashwick and L. Weiss, eds., *Managing the Continuum of Care: a Practical Guide to Organization and Operation*. Rockville, MD: Aspen Publishers.
- Fabricotti, I. 2007. *Zorgen voor zorgketens: Integratie en fragmentatie in de ontwikkeling van zorgketens* [Taking care of integrated care: Integration and fragmentation in the development of integrated care arrangements]. Doctoral thesis. Rotterdam: Erasmus University.
- Freeman, G., S. Sheppard, I. Robinson, K. Ehrlich and S. Richards. 2000. *Continuity of Care: Report of a Scoping Exercise for the SDO Programme of NHS R&D*. London: National Research and Development Programme, National Health Service (NHS).
- Fulop, N., A. Mowlem and N. Edwards. 2005. *Building Integrated Care: Lessons from the UK and Elsewhere*. London: The NHS Confederation.
- Galbraith, J. 1973. *Designing Complex Organizations*. Reading, MA: Addison-Wesley.
- Goldsmith, J. 1994. “The Illusive Logic of Integration.” *The Healthcare Forum Journal* 36(2): 36–42.
- Goodwin, N. 2008. “Are Integrated Networks the Answer to Achieving Integrated Care?” *Journal of Health Services Research and Policy* 13(2): 58–60.
- Goodwin, N., G. P., E. Peck, T. Freeman and R. Posaner. 2004. *Managing Across Diverse Networks of Care: Lessons from Other Sectors*. Birmingham: Health Services Management Centre, University of Birmingham.
- Gröne, O. and M. Garcia-Barbero. 2001. “Integrated Care: A Position Paper of the WHO European Office for Integrated Health Services.” *International Journal of Integrated Care* 1(3). Retrieved January 24, 2009. <www.ijic.org>.
- Haggerty, J., R. Reid, G. Freeman, B. Starfield, C. Adair and R. McKendry. 2003. “Continuity of Care: A Multidisciplinary Review.” *BMJ* 327: 1219–21.
- Ham, C., J. Glasby, H. Parker and J. Smith. 2008. *Altogether now? Policy options for integrating care*. Birmingham: Health Services Management Centre, University of Birmingham.
- Hofmarcher, M., H. Oxley and E. Rusticelli. 2007. *Improved Health System Performance through Better Care Coordination. Health Working Paper No. 30*. Paris: Organisation for Economic Co-operation and Development (OECD).
- Howarth, M. and C. Haigh. 2007. “The Myth of Patient Centrality in Integrated Care: the Case of Back Pain.” *International Journal of Integrated Care* 7(3). Retrieved January 22, 2009. <www.ijic.org>.
- Hudson, B. 2004. *Whole Systems Working: A Guide and Discussion Paper*. London: Integrated Care Network (ICN).
- Huerta, T., A. Casebeer and M. Vanderplaat. 2006. “Using Networks to Enhance Health Services Delivery: Perspectives, Paradoxes and Propositions.” *Healthcare Papers* 7(2): 10–26.
- Kane, R., R. Priester and A. Totten. 2005. *Meeting the Challenge of Chronic Illness*. Baltimore: Johns Hopkins University Press.
- Kodner, D. 1993. *Case Management: Principles, Practices and Performance*. Brooklyn, NY: Institute for Applied Gerontology, Metropolitan Jewish Geriatric Center.
- Kodner, D. 2002. “The Quest for Integrated Systems of Care for Frail Older People.” *Aging Clinical and Experimental Research* 14(4): 307–13.
- Kodner, D. 2003. “Long-Term Care Integration in Four European Countries: a Review.” In J. Brodsky, J. Habib and M. Hirschfeld, eds., *Key Policy Issues in Long-Term Care*. Geneva: World Health Organization (WHO).
- Kodner, D. 2004. “Vertically Integrated Systems of Care for the Frail Elderly.” In M. Knapp, D. Challis, J.-L. Fernandez and A. Netten, eds., *Long-Term Care: Matching Resources and Needs*. Aldershot, England: Ashgate Publishing.
- Kodner, D. 2008. What Do We Mean by “Integration”? PowerPoint presentation of keynote speech delivered at Building Connections: A National Symposium on Integrating Health Systems, Capital Health,

Edmonton, AB, April 21, 2008.

Kodner, D. and C. Kay Kyriacou. 2000. "Fully Integrated Care for the Frail Elderly: Two American Models." *International Journal of Integrated Care* 1(1). Retrieved January 21, 2009. <www.ijic.org>.

Kodner, D. and C. Spreeuwenberg. 2002. "Integrated Care: Meaning, Logic, Applications and Implications – a Discussion Paper." *International Journal of Integrated Care* 2(3). Retrieved January 21, 2009. <www.ijic.org>.

Krause, D. 2005. "Economic Effectiveness of Disease Management Programs: a Meta-Analysis." *Disease Management* 8(2): 114–34.

Lawrence, P. and J. Lorsch, J. 1967. *Organization and Environment: Managing Differentiation and Integration*. Boston: Division of Research, Harvard Business School.

Leatt, P. 2002. *Integrated Service Delivery*. Ottawa: Health Canada.

Leatt, P., G. Pink and M. Guerriere. 2000. "Towards a Canadian Model of Integrated Healthcare." *Healthcare Papers* 1(2): 96–103.

Leutz, W. 1999. "Five Laws for Integrating Medical and Social Services: Lessons from the United States and the United Kingdom." *The Milbank Quarterly* 77(1): 77–110.

Lloyd, J. and S. Wait. 2006. *Integrated Care: a Guide for Policymakers*. London: Alliance for Health and the Future.

Macadam, M. 2008. *Frameworks of Integrated Care for the Elderly: A Systematic Review*. Ottawa: Canadian Policy Research Networks (CPRN).

Mattke, S., M. Seid and S. Ma. 2007. "Evidence for the Effectiveness of Disease Management: Is \$1 Billion a Year a Good Investment?" *American Journal of Managed Care* 13(12): 670–6.

Nolte, E. and M. McKee. 2008. "Integration and Chronic Care: a Review." In E. Nolte and M. McKee, eds., *Caring for People with Chronic Conditions: a Health System Perspective*. Maldenhead, Berkshire, England: Open University Press.

Øvretveit, J. 1998. *Integrated Care: Models and Issues. Briefing Paper*. Gothenburg: The Nordic School of Public Health.

Pfeffer, J. 1982. *Organizations and Organizational Theory*. Boston: Pitman.

Provan, K. and H. Milward. 2006. "Health Services Delivery Networks: What Do We Know and Where Should We Be Headed?" *Healthcare Papers* 7(2): 32–6.

Reid, R., J. Haggerty and R. McKendry. 2002. *Defusing the Confusion: Concepts and Measures of Continuity of Health Care*. Final Report. Ottawa: Canadian Health Services Research Foundation.

Robbins, S. 2004. *Organizational Theory: Concepts, Controversies, and Applications*. 4th Edition. Upper Saddle River, NJ: Prentice Hall.

Robinson, R. and A. Steiner. 1998. *Managed Health Care: US Evidence and Lessons for the National Health Service*. Buckingham, England: Open University Press.

Rosen, R. and C. Ham. November 21, 2008. *Integrated Care: Lessons from Evidence and Experience*. London: The Nuffield Trust.

Scott, R. 1992. *Organizations: Rational, Natural and Open Systems*. 3rd Edition. Englewood Cliffs, NJ: Prentice Hall.

Shortell, S. 2000. *Remaking Health Care in America: The Evolution of Organized Delivery Systems*. San Francisco: Jossey Bass.

Shortell, S., R. Gillies and D. Anderson. 1994. "The New World of Managed Care: Creating Organized Delivery Systems." *Health Affairs* 13(5): 46–64.

Sing, D. and C. Ham. 2006. *Improving Care for People with Long Term Conditions. a Review of UK and International Frameworks*. Birmingham: Health Services Management Centre, University of Birmingham.

Solinis, R.N. 2008. "Exploración conceptual de la atención integrada" [Conceptual Exploration of Integrated Care]. In R. Bengoa and R.N. Solinis, eds., *Curar y cuidar. Innovación en la gestión de enfermedades crónicas: Una guía práctica para avanzar* [To cure and care. Innovation in the management of chronic diseases: A practical guide for advancement]. Madrid: Elsevier Masson.

Suter, E., N. Oelke, C. Adair, C. Waddell, G. Armitage and L. Huebner. 2007. *Health Systems Integration. Definitions, Processes & Impact: A Research Synthesis*. Calgary, AB: Health Systems & Workforce Research Unit, Calgary Health Region.

Thompson, J. 1967. *Organizations in Action*. Englewood Cliffs, NJ: McGraw-Hill.

Tsai, A., S. Morton, C. Mangione and E. Keeler. 2005. "A Meta-Analysis of Interventions to Improve Care for Chronic Illness." *American Journal of Managed Care* 11(8): 478–88.

Wagner, E., B. Austin and M. Von Korff. 1996. "Organizing Care for Patients with Chronic Illness." *The Milbank Quarterly* 74: 511–44.

Weingarten, S., J. Henning, E. Badamgarav, K. Knight, V. Hasselblad and A. Gano. 2002. "Interventions Used in Disease Management Programmes for Patients with Chronic Illness: Which Ones Work?" *British Medical Journal* 325: 925–32.

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