Approaches to developing integrated care in Europe: a systematic literature review

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Abstract

Purpose: Many European countries have been undertaking measures to promote integration of health and social care. The purpose of this study is to identify different approaches to integrated care and retrieve a number of experiences and approaches of working in some European countries.

Methods: A systematic review of the integrated care literature was conducted in a 3-month period. The Pubmed, Embase, and BioMed Central databases were searched for articles from 2002 through 2008. The articles were selected according to inclusion and exclusion criteria. A standard form was used for data extraction.

Findings: A total of 24 studies that conformed to the criteria were found. The analysed articles describe integrated care in 16 European countries: UK, Germany, Finland, Sweden, Austria, Spain, Netherlands, Ireland, Portugal, Denmark, France, Greece, Italy, Norway, Poland, and Switzerland. The studies’ setting was primary care, social care, home care, or a combination of these. In majority of the studies similar challenges to health care systems were identified: advances in health care, ageing population, multi-system nature of chronic diseases, hospital-based care system, insufficient provision of community care services, lack of cooperation among health and social care providers, fragmentation of the health and social care systems, and rurality. These challenges are seen as a stimulus to the integration of care. The articles also mentioned some integration strategies that were categorized according to: changes in organizational structure, workforce reconfiguring, and changes in the financing system. Integrated care definitions were also derived from the articles, and from the verbatim text when possible. Definitions were grouped according to their sectorial focus: community-based care, combined health and social care, combined acute and primary care, the providers, and in a more comprehensive approach the whole health system.

Conclusion: Despite integrated care being implemented in some European countries since the beginning of the millennium, it is a relatively new concept in health management discourse. There is room for more studies on the need for integrated care and the effectiveness of the implemented strategies. Despite integration models having a similar background there is no European consensus about the definition of integrated care. The data collected are useful for debate on the topic within the international health management and marketing community.

Keywords: Integrated care, Health and social care, Chronic patient, Health policy, European health systems

Background

Since the ‘rediscovery’ of public health in the 1990s (i.e., WHO, Health for All by the Year 2000) many European countries abandoned the traditional orientation towards a health system almost exclusively oriented to treat illness through high-tech hospital-based services and rekindled the approach to some form of community-based health care system. Many countries have since taken measures to promote integration by developing comprehensive structures, closer collaboration between sectors, and coordination at all levels of care.

It is widely recognized that the reorientation of health care services from hospital-based to ‘community-based’ care requires integration between social and health care institutions and organizations. These are among the most complex and interdependent institutions but they have remained separated

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DOI: 10.1179/175330311X13016677137743
Journal of Management & Marketing in Healthcare 2011 VOL. 4 NO. 2 129
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for several reasons: different rules and jurisdictions, distinct budgets, different institutional and professional cultures, and different approaches in the provision of care.1

The aim of health and social care integration has led to a wide discussion about the appropriate, cost-effective mix of home health, community, and nursing home services for patients, especially the ones geared to deal with chronic conditions.2 Coordinating the delivery of ongoing health care services in a variety of health care and community settings has been termed as ‘continuity of patient care’, which posits a goal that is ‘based upon communication between health team members, the institutions, and the community’.3

In many European countries this concept is emerging as integrated care, that is, ‘the integration of activities between disciplines, professions, departments (…), organizations. It’s about tackling professional and organizational quality simultaneously (…) through integrating professional and organizational best practices’.4

Methods

A systematic review of the integrated care literature was conducted in a 3-month period.

Search strategy

The Pubmed, Embase, and BioMed Central databases were searched for articles from 2002 through 2008. Inclusion and exclusion criteria are summarized in Table 1.

We searched the Medical Subject Headings database to find useful keywords (MeSH headings) and selected eight potentially relevant terms. Using these 8 headings, 20 recent titles and abstracts were retrieved for each heading (the publication dates ranged from March 2002 through January 2008) and evaluated for relevance. If none of the abstracts retrieved was useful, the MeSH heading was discarded. From the relevant abstracts, we derived free-text keywords (for example, intermediate care, community-based care) to increase the specificity of our search strategy.

Corresponding keywords for Embase (subject headings) were found using Scope Note. We entered all MeSH headings from our list and found the corresponding Embase subject heading(s). A cross-check was performed by entering the Embase Subject headings in PubMed Scope Note to find additional MeSH headings. In order to meet the inclusion criteria, we limited the search to European articles published after 2002. All articles indexed by at least one of the MeSH headings (PubMed) or subject headings (Embase) were combined with articles containing at least one of the free-text keywords in the title or abstract. For the BioMed Central, the list with all the available standard keywords (subjects) was scanned to find useful subjects. The search strategy was directed at finding articles with at least one health system integration-related subject combined with at least one health and social care subject. After performing our search using the selected keywords and MeSH headings, articles were then selected based on the title and abstract.

Two reviewers independently scanned titles and abstracts to select studies for consideration, and together decided whether or not to obtain the article’s full text. Full publications of all selected abstracts were obtained (in electronic or printed form) to evaluate the full text. We found 8 relevant MeSH headings in Embase and 12 relevant subject headings in PubMed. Eighteen free-text keywords were selected. Using a combination of at least one of these headings and at least one of the free-text keywords as well as the inclusion criteria.

Table 1: Inclusion and exclusion criteria.

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Contain abstract</td>
<td>(i) Have been published after 1 January 2002</td>
</tr>
<tr>
<td>(b) Be published and available in the public domain</td>
<td></td>
</tr>
<tr>
<td>(c) Address an issue related to integrated or integrating care</td>
<td></td>
</tr>
<tr>
<td>(d) Discuss health policy-relevant results</td>
<td></td>
</tr>
<tr>
<td>(e) Address or make reference to innovation</td>
<td></td>
</tr>
<tr>
<td>(f) Describe patient flow and/or process design with the purpose of improving patient care in terms of integrated care process</td>
<td></td>
</tr>
<tr>
<td>(g) Contain a description of the intervention to developing integrated care</td>
<td></td>
</tr>
<tr>
<td>(h) Contain quantitative data about at least one dimension of patient care but including: time factors (length of stay, waiting time, access time) or capacity factors (resource utilization, planning issues) have a randomized or non-randomized control group design, a before – after design or an interrupted time series design changing the health structures at national levels</td>
<td></td>
</tr>
</tbody>
</table>

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(containing abstract and publication period), about 400 abstracts were found. In BioMed Central, about 30 health system integration-related subjects and 50 health and social care-related subjects were identified. Using our search strategy of combining at least one health system integration-related subject with at least one health and social care subject, we found about 100 articles that met our inclusion criteria (abstract and publication period).

All 600 titles and abstracts were read by two reviewers, who selected 102 abstracts for further evaluation. Full-text articles could be obtained for 80 abstracts. The remaining abstracts were excluded. Of the articles, 77 were in English, 2 were in Spanish, and 1 was in Portuguese. All articles were evaluated by two reviewers, who selected 24 articles that met all the inclusion criteria (see Appendix for full list of the 24 selected articles).

Data collection and content analysis

A standard form was used for data extraction. This form contained the following variables:

- publication year;
- country or region;
- method;
- study setting (primary care, home care, social care, or a combination of these);
- study objective;
- key points (to summarize the article);
- challenges (for the health system);
- interventions (strategic approaches to implement integrated care);
- integrated care definition (as stated in the article, or when it was not explicitly mentioned, derived from the context).

Fourteen articles were case studies and 10 were systematic literature reviews. Six studies were undertaken in a primary care setting, four studies in home care, two in social care and the remaining analysed the all health system in what concerns integrated care. Table 2 summarizes the studies general characteristics (publication year, study setting, and country or region). Studies describe integrated care in 16 European countries: UK, Germany, Finland, Sweden, Austria, Spain, Netherlands, Ireland, Portugal, Denmark, France, Greece, Italy, Norway, Poland, and Switzerland. Most of the studies were performed in the UK and the Netherlands.

Results

The systematic literature review identified the following challenges for the development of health systems and health policies: (1) advances in health care offer; (2) ageing population; (3) multi-system nature of chronic diseases (social and health); (4) hospital-centered care system; (5) insufficient provision of community care services; (6) lack of cooperation among health and social care providers; and (7) fragmentation of services delivered and rurality.

All articles discuss and explore evidence on how to overcome difficulties promoting continuity and integration in the delivery of health care services'. The strategies/interventions derived from the articles were categorized for further analysis according to the following:

1. changes in organizational structure:
   - building up a network of health and social services,
   - decentralize social and health care to the regions,
   - create coordination tools,
   - care programmes that map out patients individual steps through the net,
   - local strategic partnerships,
   - set up intermediated care facilities,

2. workforce reconfiguring:
   - joint working,
   - restructuring and delegation of tasks,
   - create case managers,

Table 2: General characteristics of the studies included.

<table>
<thead>
<tr>
<th>Publication date</th>
<th>2002-2004</th>
<th>2005-2008</th>
<th>2009-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>Primary care</td>
<td>Home care</td>
<td>Social care</td>
</tr>
<tr>
<td>Country or Region*</td>
<td>UK</td>
<td>Netherlands</td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>10 studies</td>
<td>14 studies</td>
<td>4 studies</td>
</tr>
<tr>
<td></td>
<td>6 studies</td>
<td>12 studies</td>
<td>8 analysis</td>
</tr>
<tr>
<td></td>
<td>2 studies</td>
<td></td>
<td>4 analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 analysis</td>
</tr>
</tbody>
</table>

*Some countries are analysed in more than one article.
3. changes in the financing system:
   - shared funding system,
   - change patients payment mechanisms,
   - decentralization of financing of the services to the local level.

Table 3 summarizes key interventions found per article and per country. Some have been implemented in more than one country and analysed in more than one article. The UK and the Netherlands were pioneers in implementing integrated care and more dynamic concerning the number of experiments and interventions.

Integrated care definitions were also derived from the articles, and from the verbatim text when possible. Definitions were grouped for further analysis according to their sectorial focus: community-based care, both health and social care, both primary and acute care, providers, health system (comprehensive approach).

Table 4 exemplifies and typifies the grouped definitions according to their sectorial focus matching them with the articles.

Discussion

We found 24 studies about integrated care that met our inclusion criteria. Despite the fact that it has been under implementation in some European countries since the beginning of the millennium, it is a relatively new concept for others and there are still few studies published on the matter. The need of integration is clearly justified and consensual in all studies: advances in health care offer, ageing population, multi-system nature of chronic diseases, hospital-based care system, insufficient provision of community care services, lack of cooperation among health and social care providers, fragmentation of the system and rurality are pointed as the main reasons to bridge health and social care sectors.

We found in this review a core set of integration initiatives that we categorize according to the (1) changes in organizational structures; (2) workforce; and (3) financing systems.

The initiatives mentioned above do not differ much from country/region to country/region. Articles did not analyse the impact that initiatives may eventually have had on the experience of people using health and social care services. We believe that this may be due to the initiatives being in a relatively early stage of implementation at the time of the article’s publication. Moreover, it is not always easy to distinguish short-term implementation problems from long-term deficits.

We found that despite integration models having a similar background it cannot be argued that there is a European consensus about the concept of integrated care. For some it means the whole health system restructuring, for others the improvement of relations between parts of the system (health and social care, or acute and primary care, etc.), and for others it

<table>
<thead>
<tr>
<th>Intervention category</th>
<th>Examples of interventions</th>
<th>Country/region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in organizational structure</td>
<td>Building up a network of health and social services</td>
<td>UK, Germany, Netherlands, Italy, France, Austria, Finland, Norway, Poland, Switzerland, Spain</td>
</tr>
<tr>
<td></td>
<td>Decentralize social and health care to the regions</td>
<td>Spain, UK, Netherlands, Ireland, Sweden</td>
</tr>
<tr>
<td></td>
<td>Create coordination tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care programmes that map out patients individual steps through the net</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local strategic partnerships</td>
<td>Spain, Netherlands, UK, Denmark</td>
</tr>
<tr>
<td></td>
<td>Set up intermediated care facilities</td>
<td>Netherlands, Ireland, UK, Denmark</td>
</tr>
<tr>
<td></td>
<td>Joint working</td>
<td>Ireland, UK, Scotland, Spain</td>
</tr>
<tr>
<td>Workforce reconfiguring</td>
<td>Restructuring and delegation of tasks</td>
<td>Netherlands, UK</td>
</tr>
<tr>
<td></td>
<td>Create case managers</td>
<td>UK, Ireland</td>
</tr>
<tr>
<td></td>
<td>Shared funding system</td>
<td>Ireland, Spain, UK</td>
</tr>
<tr>
<td>Changes in the financing system</td>
<td>Change patients payment mechanisms</td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td>Decentralization of financing of the services to the local level</td>
<td>Ireland, UK, Netherlands, Finland</td>
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</tbody>
</table>
Table 4: Sectorial focus of integrated care programmes.

<table>
<thead>
<tr>
<th>Sectorial focus</th>
<th>Integrated care definition</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community-based care</td>
<td>A well-planned and well-organized set of community-based services and care processes targeted at the multifaceted/multi-dimensional needs of an individual client or group of persons with similar needs/problems</td>
<td>The Domiciliary Support Service in Portugal and the change of paradigm in care provision⁵</td>
</tr>
<tr>
<td></td>
<td>Collaboration between members of different community organizations and teams to deliver a service centred on service users</td>
<td>The effectiveness of quality improvement tools: joint working in integrated community teams⁶</td>
</tr>
<tr>
<td>Health and social care</td>
<td>A mixed system comprising formal and informal care to provide social support and preventive medical services to the elderly</td>
<td>Health and social care in aging population: an integrated care institution for the elderly in Greece⁷</td>
</tr>
<tr>
<td></td>
<td>To provide care without service gaps, fragmentation or lack of cooperation between Home Care Services (provision of medical support) and Home Help Services (provision of social services)</td>
<td>Clustering and inertia: structural integration of home care in Swedish elderly care⁸</td>
</tr>
<tr>
<td>Providers</td>
<td>Formalyzed cooperation between independent health care providers towards demand orientation given the multiple need of patients</td>
<td>Networks for integrated care provision: an economic approach based on opportunism and trust⁹</td>
</tr>
<tr>
<td>Primary and acute care</td>
<td>Intermediate care – to bridge acute and primary care, intending to reduce hospital stays and improve continuity of care</td>
<td>Intermediate care: for better or worse? Process evaluation of an intermediate care model between a university hospital and a residential home⁹</td>
</tr>
<tr>
<td></td>
<td>Integrated care system – system in which health promotion, disease prevention, diagnosis, treatment, rehabilitation, and care are seen as one continuous link of actions to improve health gain</td>
<td>Building integrated health systems in central and eastern Europe¹⁰</td>
</tr>
<tr>
<td>Health system</td>
<td>Integrated care programme – integration of activities between disciplines, professions, departments, and, in the case of a multi-organizational care path, organizations. It is about tackling professional and organizational quality simultaneously: optimizing effectiveness, efficiency, patient centeredness, and safety through integrating professional and organizational best practices</td>
<td>Bridging the quality chasm: integrating professional and organizational approaches to quality⁴</td>
</tr>
<tr>
<td></td>
<td>Integrated care – it can be reached when relationships between organizations exhibit at least several of the following characteristics: Joint goals</td>
<td>Breaking down barriers: integrating health and care services for older people in England¹¹</td>
</tr>
<tr>
<td></td>
<td>Highly connected networks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mutual and diffuse sense of long-term obligation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High degree of mutual trust and respect</td>
<td></td>
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<tr>
<td></td>
<td>Joint arrangements encompassing strategic and operational issues</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shared or single management arrangements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Joint commissioning at macro-, meso-, and micro-levels</td>
<td></td>
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</table>

means a partnership between providers, organizations, and professionals.

A limitation of this study is that most of the articles reviewed were systematic literature reviews. By using this method it is not possible to draw conclusions from the results of the original studies, and the details of the individual studies are washed out. Furthermore, there is a risk of publication bias, because of the acknowledged tendency to publish positive results and suppress negative results.
Nevertheless, this review suggests that integrated care programmes have widely varying definitions and components. We retrieved some model principles and ways of working that can be further discussed within the community of the journal. To compare and better understand integrated care programmes, definitions must be used and discussed and interventions must be described. Being able to recognize differences between countries and interventions will allow a better comprehension of the international options available and a structured approach to analysing the effectiveness of the programmes.

References

Appendix

Articles reviewed

Author information

Vanessa Antunes is a researcher at the national school of public health in Lisbon and a lecturer in health management. Her research interests include the development of integrated healthcare and the related skills mix for the delivery of integrated services. Vanessa holds a degree in Nursing and over 10 years work experience in different areas of healthcare.

J. Paulo Moreira is professor of health policy and management at the Universidade Nova de Lisboa and throughout the past fifteen years has held several international and national executive positions in the field of health management and communication. His research interests include the development of integrated health care. Collaboration in this article took place in the support of PhD project supervisor of the main author.