Substantial between-country differences in organising community care for older people in Europe—a review

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Background: The European population is aging. The main drivers of public spending on health care for people of 65 years and older are hospital admission and admission to long-term care facilities. High quality community care can be a cost-effective and quality solution to respond to the impact of ageing populations on health-care systems. It is unclear how well countries are equipped to provide affordable and quality community care. The aim of this article is to describe and compare community care delivery with care-dependent older people in Europe. Methods: This study is conducted within the European Union-financed IBenC project [Identifying best practices for care-dependent elderly by Benchmarking Costs and outcomes of community care (FP7)] in which six European countries are involved. To compare the community care delivery with care-dependent older people in these countries, we performed a systematic comparison of macro indicators using metadata complemented with data from multinational surveys. Results: Data on the following dimensions are described and compared: population of the country, governmental expenditures on health, sources of community health services funding, governmental vision and regulation on community care, community care organisations and care professionals, eligibility criteria for and equity in receiving care and the involvement of informal care. Conclusion: Because of the variations in the European community care contexts, the growing demand for community care as a cost-effective and quality solution to the care burden of aging populations will have country-specific impacts. When learning from other countries’ best practices, in addition to researchers, policy makers should take full account of local and national care contexts.

Introduction

The European population is aging. The average population of 65 years and older will increase from 16% in 2010 to 27.8% in 2050. Consequently, by 2050, one out of five people in Iceland and up to one out of three people in Germany and Italy will be 65 years or older. Associated with this, the number of frail and disabled older people who need long-term care will increase. In most Organisation for Economic Co-operation and Development countries, four out of five long-term care users are over 65 years.

In order to serve the large number of older people in the future, European health-care policy makers are looking for sustainable ways to organise health care. Currently, 40% of public spending on health care is for people of 65 years and older, with hospital admission and admission to long-term care facilities as the main cost drivers. Part of these admissions is premature or unnecessary. The admissions could be postponed, or even avoided, by providing high quality care to people in their own home. In this way, high quality community care for older people, including medical and social services, could be a cost-effective solution in comparison with institutionalisation, with a positive effect on people’s wish for autonomy and on the sustainability of European health-care systems. Moreover, the sustainability of health-care systems is high on the European agenda.

In Europe, between 50% and 75% of all formal long-term care is provided in the community. There is a large variation in funding, organisation and delivery of community-based care. These variations can be expected to have an impact on the extent to which community care is a cost-effective and quality solution to the care burden of ageing populations. By describing and comparing countries’ community care organisation, we may identify and learn from best practices.

The aim of this article is to compare the context, regulations and conditions for community care delivery for care-dependent older people in six European countries in order to provide more insight into existing differences in community care organisation in Europe and the populations they address.

Methods

This study was conducted within the IBenC project [Identifying best practices for care-dependent elderly by Benchmarking Costs and outcomes of community care (FP7)]. Since the IBenC project aims to collect data of European community-dwelling older people by means of the interRAI instruments, we included community care organisations from European countries where the interRAI Home Care instrument is known to be implemented. In this way this review was therefore focused on the following six European
countries: Belgium, Finland, Germany, Iceland, Italy and the Netherlands. Home care or community care is defined as ‘care provided at home by social and health-care professionals’.13 Care is defined as ‘domestic aid services, personal care and supportive, technical and rehabilitative nursing’. The three subgroups are described below.

- Nursing care: Activities of nurses that are of a technical, medical, supportive or rehabilitative nature.
- Personal care: Providing assistance with activities of daily living (ADL) such as dressing, feeding, getting in or out of bed, washing and toileting.
- Domestic care: Help with instrumental ADL, such as shopping, food preparation, housekeeping, transportation, taking medication and financial administration.

To compare the community care delivery for care-dependent older people in six European countries, we performed a systematic comparison of macro indicators using metadata complemented with data from multinational surveys that cover the period of 2011–13.

In the first step, we examined the dimensions that are important to describe and compare the community care delivery in Europe. Therefore we used two recent literature reviews on community care in Europe,10,11 an international comparative study to explain governmental involvement in community care across Europe,13 the EurHOMap study in which the community care systems were described16–22 and an additional paper on the contribution of environmental involvement in community care across Europe,15 the Percentage of clients in long-term care at home who are 65+ years.

to date.

Finally, we compared the country-specific dimensions of the community care across the six countries.

Results

Based on the literature consulted during the first step,10,14–23 we distinguished the following dimensions to describe community care delivery on a macro level:

1. Population of the country

2. Governmental expenditures
3. Sources of community health services funding
4. Governmental vision on community care
5. Governmental regulation on the organisation of community care
6. Provision of community care: organisations and professionals
7. Eligibility criteria for and equity in receiving care
8. Involvement of informal care

In the following paragraphs we describe the results per dimension.

Population

Table 1 shows that, compared with the other countries, Germany has the highest number of inhabitants (80 523 746), the second highest old-age dependency ratio (31.2), but the lowest percentage of the population who receive professional long-term care at home (0.7%).16,22,24

Iceland has the lowest number of inhabitants (321 857), has an extremely low population density (3.2 inhabitants/km²) and counts the lowest old-age dependency ratio (18.9).16,22,24

Finland also has a low population density (17.7 inhabitants/km²).24 There are twice as many inhabitants in Belgium than in Finland (11 161 642 vs. 5 426 674) and the population density in Belgium is 20 times higher (364.4 inhabitants/km²).24

Notwithstanding, both countries have about the same old-age dependency ratio (26.4 and 27.7) and the same percentage of persons who receive long-term care at home (1.4% and 1.3%).17,21,24

The Netherlands is extremely densely populated (494.5 inhabitants/km²).18,24 Compared with the other countries and the European average (27.7), the Netherlands counts a low old-age dependency ratio (24.4) but has the highest percentage of the population who receive long-term care at home (4.8%).16,18,24

Italy has the highest old-age dependency ratio (31.6) but has the second lowest percentage of the population who receive long-term care at home (1%).16,20,24

The EurHOMap study17–22 shows that 81% (Italy and the Netherlands) to 90% (Belgium and Finland) of the persons who receive long-term care at home are 65 years or older.

Governmental expenditures

Figure 1 shows that the Netherlands have the highest government expenditures on health (8.5% of the Gross Domestic Product (GDP)) and on long-term care (= home and institutional care, 3.8% of the GDP). Both expenditures are also higher than the European averages (7.3% and 1.8%, respectively). Nevertheless, the

| Table 1 Characteristics of the population per country (Eurostat24 and EurHOMap-project16–22) |
|---------------------------------|--------|--------|--------|--------|--------|--------|
| Population                       | Belgium | Finland | Germany | Iceland | Italy   | The Netherlands |
| Total population (persons)        | 11 161 642 | 5 426 674 | 80 523 746 | 321 857 | 59 685 227 | 16 779 575 |
| Population density (inhabitant/km²) | 364.3 | 17.7 | 229 | 3.2 | 201.5 | 494.5 |
| Old-age dependency ratio         | 26.4 | 27.7 | 31.2 | 18.9 | 31.6 | 24.4 |
| Persons with long-term care at home (% of the population) | 152 318 (1.4%) | 70 529* (1.3%) | 504 232 (0.7%) | N/A | N/A | 610 180 (4.8%) |
| Percentage of clients in long-term home care who are 65+ years | 89.8% | 89.8% | N/A | N/A | 81% | 81.3% |

N/A = not available.

a: The inhabitants as on 1 January 2013 (Eurostat).
b: Data from Eurostat for the population in 2011.
c: This indicator is the ratio between the total number of older persons of an age when they are generally economically inactive (aged 65 and over) and the number of persons of working age (from 15 to 64) (Eurostat update: 2012).

*This includes the ‘regular clients’ with long-term care in Finland. In the official statistics only those (i) with a care plan and (ii) with a visit minimum once a week are calculated as regular clients.
governmental expenditures on long-term home care are at the same level as the European average (0.5% of the GDP). Only Finland and Belgium have higher governmental expenditures on long-term home care compared with the European average (0.7% and 0.6%, respectively). Germany is the only country that scores lower than the European average on the three kinds of governmental expenditures (7.0%, 1.4% and 0.4%).

Sources of community health services funding

The main sources of long-term care health services funding are public insurances, taxations and client co-payments (supplementary appendix). In Iceland, Finland and Italy, the health services are mainly funded through national or municipal taxation, while in the Netherlands and Germany this is primarily through obligatory public insurances. The Belgian financing depends on the type of care. Care provided by nurses is mainly funded by public insurances, while family care (which includes personal and domestic care) is mainly funded by community taxation.

Client co-payment is a source of funding in all countries. Most the client co-payment is means-tested but in Finland, the co-payment levels depend on the policy of local authorities and thus differ according to where one lives. In Italy and Belgium, in certain situations, such as home nursing for frail older people, co-payment is not needed. In Germany, only part of the needed care is covered. Clients can opt to co-pay for more care, but can also choose simply to receive less care.

Governmental vision on community care

The EurHOMap project reports on governmental visions on community care in country-specific community care descriptions. From the different visions, we can extract five aspects (supplementary appendix). All six countries stress the importance of integrated care. The importance of facilitating older persons to stay at home as long as possible is stressed in all countries, except for Italy. Only Iceland and Italy do not mention the importance of high quality of care in their vision on community care. In addition, two countries stress the importance of affordable formal care (Belgium and the Netherlands) and the importance of supporting informal care (Belgium and Germany). The Italian law does not mention the importance of supporting informal care, but stresses the importance of preventing social isolation of older people.

Governmental regulation on the regulation of community care

In all countries, the regulation of nursing care and domestic care is decentralised. Finland seems to have the most decentralised regulation, since municipalities are primarily responsible for home care (Finland consisted of 320 municipalities in 2013). In Germany, the government determines the legal framework for nursing and personal care. At the same time, the health-care insurance funds play an extremely powerful role. The operative responsibility of community care is located on the level of federal states and municipalities. The regulation of home care in Belgium and the Netherlands is controlled by two different instances. In Belgium, nursing care is a federal responsibility, while domestic care is mainly a community responsibility. In the Netherlands, the government has the prime responsibility for home nursing, while the essential actors for domestic care are the municipalities. Italy and Iceland seem to have the least decentralised community care regulation. The responsibilities of home nursing and domestic care are spread over two governmental departments. However, home nursing and social care services in Iceland are increasingly managed by the municipalities.

The definition of nursing care differs over the countries. In all countries, the purpose of nursing care is the provision of technical nursing activities. Nevertheless, nursing care also includes personal care such as washing, toileting and dressing in Belgium. In Germany and Finland, nurses also provide personal care, but in Germany this type of care is defined as ‘domestic long-term
care and in Finland the nurse’s job description is to some extent determined by the municipalities.

**Provision of community care Organisations**

With the exception of Germany, in most countries the majority of community care organisations is not-for-profit organisations. In Germany, about 63% of the organisations are private for-profit organisations. However, the share of private for-profit organisations is also growing in the other countries. In Belgium, it is estimated that half of the nursing care is already provided by self-employed or independent nurses. In Finland, private services and partnerships among public, private and third sectors are accepted as a solution for the increasing demand for care. In the Netherlands, the share of commercial agencies is also growing, but there also is a revival of neighbourhood-centred home care services with small-scale autonomous professional teams. Only in Iceland and Italy, are there few private organisations. Moreover, in Italy, the private care organisations are a part of an informal market and often fall outside the public regulations.

**Care professionals**

As shown in figure 2, compared with other European countries, Belgium and the Netherlands score just below the average of 3.2 physicians per 1000 inhabitants (respectively 2.9 and 3.0). The other countries score above the European average, with Italy on top with 4.1 physicians per 1000 inhabitants. Belgium however does have the most general practitioners (GPs) and the most nurses per 1000 inhabitants (respectively 1.1 and 15.4). Iceland has the lowest number of GPs, but does have a high number of nurses (0.6 and 14.8 per 1000 inhabitants). With 6.3 nurses per 1000 inhabitants, Italy is the only country that scores below European average (8.7 nurses per 1000 inhabitants). There is a large variation in the number of active care professionals. The number of active care professionals in Finland and the Netherlands is about three times higher than in Italy and Belgium (25.2 and 18.4 care professionals per 1000 inhabitants vs. 7.7 and 6.9, respectively).

**Figure 2**

Number of care professionals per 1000 inhabitants (OECD Health data 2013, based on data from 2011). (a) From OECD Health Data 2013, based on data from 2011 (except for The Netherlands and Finland where the data are based on data from 2010). Professionally active caring personnel includes caring personnel professionally active in care and other caring personnel for whom their education is a prerequisite for the execution of the job. Caring personnel active in care includes both health-care assistants (nursing aide, patients care assistant, psychiatric aide, foreign health-care assistants practicing in the country) in institutions and home-based personal care workers (home care aide, nursing aide, personal care provider and foreign personal care workers practicing in the country). Other caring personnel includes caring personnel working in administration, management, research and in other post exclude direct contact with patients. (b) From OECD Health Data 2013, based on data from 2011 (except for The Netherlands where the data are based on data from 2010). The figures for Finland are from 2013 and are derived from the Finnish Nurses Association (http://www.sairaanhoitajaliitto.fi/viestinta/tlastoja/). In Germany and Iceland, the data refer to active nurses active in health care, those providing care directly to patients. In the Netherlands and Italy, the data refer to professionally active nurses. They include nurses active in health care plus other nurses working in the health sector as managers, educators, researchers and so on (adding another 5–10% of nurses). In Belgium, the data refer to all nurses who are licensed to practice. The OECD average counts 8.7 nurses per 1000 inhabitants. (c) From OECD Health Data 2013, based on data from 2011. The data for Finland are derived from the Finnish Medical Association (http://www.laakariliitto.fi/tutkimus/laakarityovoima/) in 2013. In Belgium, Germany, Iceland and Italy, the data refer to practicing physicians. Practicing physicians are defined as those providing care directly to patients. In the Netherlands, the data refer to professionally active physicians. They include active physicians plus other physicians working in the health sector as managers, educators, researchers and so on (adding another 5–10% of doctors). n/a = information is not available; OECD = Organisation for Economic Co-operation and Development.
However, it is not clear how many nurses and active care professionals are working in the home care setting.

**Eligibility for and equity in receiving community care**

**Nursing care**

To receive home nursing care, the eligibility in all countries is needs-tested. Italy and the Netherlands also assess the availability of informal caregivers as eligibility criteria. The assessments in the Netherlands are based on more criteria related to seven domains: (i) the general health status, (ii) the limitations in functioning as a consequence of the disease/handicap, (iii) the home and living environment, (iv) the psychological and physical functioning, (v) the social circumstances, (vi) the amount and duration of currently offered care and (vii) the best suitable client profile. In Belgium, Germany, Italy and the Netherlands, uniform criteria are used, while the needs assessments are subjective in Iceland. In Finland, the municipalities are free to decide about eligibility for community care. To be eligible for technical nursing care a prescription by a physician is required in all countries.

**Personal and domestic care**

Eligibility criteria for personal and domestic care are mostly independent of income, except in Italy where home help is also means-tested. In the Netherlands and Belgium, the personal situation of the older person, such as the availability of informal care, is taken into account in the decision to allocate personal or domestic care. Only in Italy is a GP’s assessment certificate needed for personal and domestic care.

**Equity in receiving care**

The ANCIEN project focused on two key concepts of equity: (i) horizontal equity, which requires the equal treatment of individuals who are alike and (ii) vertical equity, which requires different treatment of individuals who are different. Two types of equity were analysed: equity of revenue raising and equity of resource allocation. Revenue raising takes into account how resources are raised for funding care. The two key aspects of the revenue-raising system, 'degree of risk pooling and coverage' and 'progressive', impact the potential for the care system to be more or less equitable. Equity of resource allocation is subdivided into 'equity of access' and 'equity in levels and mix of services relative to needs'.

Both Belgium and Germany score high in terms of horizontal equity but low in terms of vertical equity. So people with the same level of need are able to access the home care system in the same way and to obtain the same care. However, people with a higher level of need will not access the home care system easier and will not necessarily receive more care. An individual assessment of care needs is used to access care in the Netherlands (see Section 1.7.1) which also has the effect that the Netherlands score high in terms of equity. The ANCIEN project concludes that there is a low equity of access in Italy and Finland. In Italy, the access to care is needs-tested, means-tested and also the availability of informal caregivers is taken into account. In Finland, the multidisciplinary assessment of care needs is legislation based since 1 July 2013. However, the law does not define the assessment tools and municipalities are free to decide about eligibility for community care. In this way, there are no mechanisms to guarantee that people with same level of needs will access the home care systems in Finland or Italy.

**Informal care**

The long-term (home) care system in Belgium, Finland and Germany is characterised by high informal care use and high informal care support. Also in the Netherlands there is a high informal care support but with a low informal care use. The informal care support mainly consists of cash benefits and respite care. Additionally, informal caregivers can receive training in Belgium and Germany, e.g. in caregiving for persons with dementia, and in Belgium, Germany and Finland they can take a career break compensated with a financial contribution.

Iceland is known as a country with low informal care use and low informal care support. Financial compensation may only be available when a spouse loses income as a result of quitting full-time employment to provide care at home.

According to the ANCIEN project, Italians have to rely on informal carers but with little informal care support. This is somewhat inconsistent with the description of the Italian home care system in the EurHOMap study wherein it is stated that the following support measures for informal caregivers are possible: payment by the clients through care allowances; support for working caregivers in terms of flexible working times, paid or unpaid care leaves; a deduction in income taxation; day centres for the clients; self-help groups for the informal carers and respite care.

**Discussion and conclusion**

Germany and Italy have the highest old-age dependency ratio, along with the lowest percentage of the population that receives long-term home care. Both countries also have the lowest governmental expenditures on long-term care at home. The Netherlands, on the contrary, have a rather low old-age dependency ratio, but a percentage of clients who receive long-term care at home nearly five times higher than in the other countries. The governmental expenditures for long-term home care are the highest in Finland and Belgium. Nevertheless, in all countries, only a small part of the governmental expenditures on health is spent on long-term home care, the largest part being spent on acute care. If high quality community care for older people could be a cost-effective solution, and taking into account the fact that governments promote community care, we may expect a future shift in the distribution of funding between health-care sectors. To facilitate high quality community care, governmental expenditures should shift from acute to long-term care, and specifically to long-term care at home. Public insurances, taxations and co-payment are main sources of community care funding. Thus, the funds for long-term home care can be increased in different ways and with different combinations of types of funding.

However, it is also important that home care remains affordable for everyone. The availability of informal care plays a very important role in this. Along with the growing demand for home care, there will also be a growing demand for informal care. A need for higher informal care use will probably also have an impact on policy regarding informal care support. Appropriate support of informal caregivers encompasses helping the older person and the carers. According to the ANCIEN project, the informal care support is already high in Belgium, Finland, Germany and the Netherlands. At the moment, only Belgium and Germany stress the importance of supporting informal care in their policy on community care. Depending on the actual situation, more investment will be needed in either formal care or support for informal caregivers. On the one hand, the growing demand for home care may for example force Iceland, where the use and support of informal care is low, to invest in more informal care support. Informal care use could be promoted more in countries by supporting this type of care with benefits and incentives in nature, like informal carer training programmes and by strengthening social networks around clients. On the other hand, Italy will rather have to invest in more formal care, since older persons in that country have to rely on informal care with some informal care support and a lower number of nurses and professionally active caring personnel compared with the other countries.
The investment in more affordable community care could also have an impact on the job description of nurses. After all, qualified nurses in Belgium, Germany and Finland provide personal care such as washing, toileting and dressing, while providing personal care can also be considered as a task of home health aides or of informal carers. This review provides an overview on the differences and similarities of community care delivery for care-dependent older people in six European countries. The results should be interpreted bearing in mind the study’s limitations. First, since this study is conducted within the IBenC project, we focused on the community care in the six European countries which are involved in the IBenC project. These countries all are Western European. A second limitation concerns the comparability of the data. Since there are no standardised ways of collecting data in the different countries and since there are many different legislations, not all data are available for all countries and not all data were collected in the same way.

Despite these limitations, this article offers a framework of important macro-level issues that may help understanding the community care context. This framework could be of help for researchers and policymakers to define country-specific solutions for community care for older people. However, further research is needed to identify best practices of community care for older people.

Supplementary data
Supplementary data are available at EURPUB online.

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Key points
- Since the European population is ageing and since most of the governmental expenditures on health are spent on acute care, high quality community care for older people could be a cost-effective solution.
- This article compares the community care deliveries at the macro level in six European countries with regard to the population of the country, governmental expenditures, sources of community health services funding, governmental vision on community care, governmental regulation on the organisation of community care, provision of community care, eligibility criteria for and equity in receiving care and involvement of informal care.
- Country-specific impacts because of the growing demands on home care for frail older people are discussed.

References
Gender differences in the relationship between diabetes process of care indicators and cardiovascular outcomes

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Background: Adherence to recommended guidelines in the care for diabetes has been demonstrated to significantly prevent the excess risk of hospitalization and mortality for cardiovascular diseases. Aim of this study was to evaluate whether adherence to a standardized process quality-of-care-indicator in diabetes, is able to predict, equally in men and women, first hospitalization or mortality risk after acute myocardial infarction (AMI), ischemic stroke (IS), congestive heart failure (CHF), lower extremity amputations (LEA) or any of above major adverse cardiovascular events (MACE). Methods: Guideline composite indicator (GCI), a process indicator including one annual assessment of HbA1c and at least two among eye examination, serum lipids measurement and microalbuminuria, was measured in the year 2006 in 91 826 (46 167 M/45 659 F) diabetic patients, living in Tuscany (Italy). By a Cox-proportional hazard regression model, the effect of GCI adherence was assessed on adjusted hospitalization mortality risk for AMI, IS, CHF, LEA and MACE in both genders in a follow-up period of 6 years (2007–12). Results: After adjusting for covariates, adherence to GCI exerted a significant positive effect on AMI, CHF and LEA outcomes among men, whereas among women, GCI adherence significantly decreased hospitalization risk only for CHF and mortality risk after IS. Finally, GCI adherence significantly reduced hospitalization risk for MACE of about 15% and 11% in men and women, respectively. On the contrary, GCI adherence seemed to have no significant influence on mortality risk after hospitalization for MACE in both genders. Conclusion: In this cohort, over a 6-year follow-up, GCI adherence was found to be a significant predictor of lower cardiovascular risk, with some evident gender differences.

Introduction

Diabetes greatly increases the risk of hospitalization and mortality due to cardiovascular events, and both organizational factors and adherence to recommended guidelines in the care for diabetes have been demonstrated to significantly prevent this excess risk. However, up until now, what remains unclear is whether a measure of compliance to screening guidelines significantly predicts the risk of cardiovascular outcomes (hospitalization or mortality) equally in diabetic men and women.

Gender differences, as a matter of fact, do exist in the relation between diabetes and the incidence of cardiovascular disease. Diabetes-associated risk of acute myocardial infarction (AMI) or ischemic stroke (IS) seems to be greater in women than in men and, additionally, the probability of major outcomes (i.e. readmissions and mortality) after acute cardiovascular events is higher for diabetic women than for their male counterparts. Nonetheless, to the best of our knowledge, the reasons for this gender difference are poorly understood. In addition to previously suggested explanations for this difference, we deem it plausible that gender adherence to guidelines exerts a different cardiovascular protective effect in diabetic women, when compared with men.

In light of the discussion above, this study aims at evaluating whether the relationship between adherence to guidelines and...