Abstract:

Measuring the quality of long-term care is important for establishing standards of care and monitoring the performance of service providers, in addition to enhancing consumer choice and competition. Information on quality allows both purchasers and consumers to make informed decisions on providers based on performance, and to ascertain whether standards are achieved. Further, public reporting of provider performance across quality indicators spurs greater participation of providers in national and regional quality improvement initiatives.

Quality measurement involves collecting information on a variety of accepted quality indicators to assess the care given to older people across a variety of care settings, but most commonly in nursing homes and home health services. Quality of care is measured by using structure, process, or outcome indicators at both patient and provider-levels. Several countries, most notably the U.S., collect these measures using standardised and mandatory patient assessment systems. While existing evidence suggests that the adoption of such systems has lead to quality improvement, there are a number of important methodological challenges that limit the effectiveness and benefits of quality measurement.

To advance toward better quality assurance, various initiatives and reforms have been developed. The majority of improvements in this area have occurred in the U.S., with the European experience demonstrating limited efforts to measure quality and set performance standards. Although a number of Member States are increasingly introducing more formalised quality measurement and assurance programmes and policies, many are in the initial stages of implementation. To guide these new and future efforts toward effective quality measurement, further research is needed to improve quality measures and data collection processes. Several actions to enhance the accuracy and completeness of data collection activities could be undertaken, such as better training of facility staff on good patient assessment practices, further exploration of the information needs of consumers and purchasers, and how such information is actually employed to make decisions. More broadly, long-term care should be better coordinated with acute health services to ensure a consistent continuum of care for older persons. A focus on coordination should be extended to the various entities involved in quality improvement initiatives.

This Research Note has been produced for the European Commission by Corinna Sorenson and Elias Mossialos from the Health and Living Conditions Network of the European Observatory on the Social Situation and Demography. The views expressed are those of the authors and do not necessarily represent those of the European Commission.
Measuring quality and standards of long-term care for older people

I. Introduction
The implications of the ageing of the population for the demand for long-term care are of increasing concern. Between 2004 and 2050, Europe’s population aged 65 and over is projected to rise sharply, by 58 million (~77 percent), and the fastest-growing segment of the population will be the very old (aged 80+) (European Commission, 2005). This rapid growth in the older population will have a major effect on the demand for and supply of long-term care services. While improvements in overall health have been realised, many older persons are dependent and frail, with one or more chronic conditions or disabilities that typically increase with age. Some of these conditions may be life threatening; others affect quality of life. Given increases in life expectancy, the absolute number of years that people with disabilities require long-term care is likely to grow substantially (Wanless, 2006; Wittenberg et al., 2001; IOM, 2001).

To meet the needs of the growing older population, a vast continuum of long-term care services has emerged, ranging from nursing homes to alternative non-institutional settings, such as home health care, residential care, and care management services. As long-term care has become more pervasive, ensuring its quality has become an ever-pressing issue for local, regional, and national policy-makers. In conjunction, recent reports of poor conditions, neglect and abuse, and medical errors in long-term care facilities, particularly nursing homes, have captured national and EU-level attention (GAO, 1999; GAO, 1998; OIG, 1998; GAO, 1997), raising concerns not only for providers, but also for quality assurance organisations. These concerns are reflected in public and private initiatives and national reforms to assess and regulate the standards and quality of health and long-term care for older people (Cabinet Office, 2006; CMS, 2006; Zhang and Grabowski, 2004; Department of Health, 2002; Department of Health, 1998). Such efforts have been primarily focused on improving the quality of care, either by introducing quality improvement efforts or by reporting the performance of providers to consumers and decision-makers (e.g., regulators, purchasers) for quality assurance (Mor, 2005). Quality improvement strategies, such as setting targets and reporting quality indicators to the public, aim to improve clinical care with comparative reporting of performance. The underlying principal of such efforts is that providers will be motivated to invest in activities to improve quality of care, provided consumers and decision-makers use public information on performance and quality to select providers (Mor, 2005). Furthermore, quality improvements will ensue if providers are faced with regulatory sanctions based on poor performance.

Accepted indicators of quality of care are often employed to assess the care given to older people across a variety of care settings, but most commonly in nursing homes and home health services. Quality of care is measured by using structure, process, or outcome indicators (see following section), although a combination of process and outcome criteria are most frequently employed. Most countries, most notably the United States and, increasingly, EU Member States, collect these quality indicators using standardised and mandatory patient assessment systems.

While such systems may facilitate quality improvement and accountability in long-term care, there are important methodological considerations that limit the effectiveness and benefits of quality measurement. For instance, existing measures of quality or health status are often inappropriate for older people (RAND, 2004). For example, in the past, measures of quality of care in older people focused solely on specific diseases or aspects of care. Such focused approaches may not present a complete picture of overall quality, whereas broader systems of quality of care evaluation may exclude quality indicators for aspects of care that are most important to the well-being of older adults. This is slowly changing, as quality of life is increasingly viewed as a key quality indicator of long-term care. However, quality of care may be more difficult to measure for older people than for younger people, due to the fact that older adults show substantial variation in preferences for care and may be less able to advocate for themselves (RAND, 2004). Other methodological issues concern the consistency of measurement across providers, regional variation, and risk adjustment. Indeed, reliable and accurate information on quality of care is predicated on improving both the conceptual and empirical robustness of the data underlying quality measures. Finally, quality information can be collected and

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1 The views expressed are those of the authors and do not necessarily represent those of the European Commission.

2 A number of experts have contributed to this research note by providing country reports, for which the authors are grateful. Their names and affiliations are listed in Appendix C.
reported by providers themselves, purchasers (e.g., government or sickness funds), or an independent body. In cases where providers are also owners of the long-term care institution or affiliated with its management, conflicts of interest may arise.

Information on the quality of long-term care is used for two main purposes: 1) regulation and 2) to enhance consumer choice and competition (Mor, 2005; Mor, 2004; IOM, 2001). In terms of the former, collecting quality information is essential to set standards and monitor performance. For the latter, this information is vital for both consumers and purchasers to make informed choices. Thus, for purchasers to choose with which providers to contract, quality information is needed, as contractual arrangements typically include performance standards. The monitoring of quality is therefore vital to ensure these standards are met. There is evidence, most notably from the United States, that adopting standardized, clinically-relevant patient information and service performance reporting systems for long-term care institutions (e.g., nursing homes) has led to quality improvement. Moreover, the measurement and reporting of the quality of long-term care has informed organizational change to reduce the occurrence of adverse clinical events and to increase the rate of functional improvements among patients (Mor, 2004). With regards to consumer choice, there is evidence that public reporting of provider performance across quality indicators has had positive implications: it has spurred greater participation of providers in national and regional quality improvement initiatives, and it has led to more informed decision-making among consumers (Lee and Wendling, 2004).

The principal aim of this brief is to outline the methodological issues related to defining and measuring the quality of long-term care for older people. The first section of this paper presents the concepts of quality and quality assessment, followed by a discussion of key measurement issues. The subsequent section reports which indicators countries collect and use to assess the quality of long-term care. Finally, the brief will provide recommendations for improving quality assessment of long-term care.

II. Defining quality of long-term care

Defining the quality of long-term care in older populations is complex; it can be defined both as an input measure and as an outcome (IOM, 2001). For instance, aspects of care, such as adequate staffing levels and a supportive care environment, signify both a component and measure of high quality care. The nature of the patient population and the diverse array of providers and care settings (e.g., institutional and community-based) also lends complexity. For example, older patients residing in nursing homes typically possess a wide range of physical, emotional, and cognitive disabilities. Such patients also differ in their social circumstances compared with non-institutionalised persons of the same age group (IOM, 2001). Current evidence from the US suggests that nursing home residents are disproportionately single, widowed, and without extended family, and they are poorer than the older population in general (Sahyoun et al., 2001). Similar evidence has also been found in England (Davies et al. 1990). Moreover, older patients possess different care needs, in terms of the amount, types, and duration of care they require. Individuals with long-term needs typically present a spectrum of care requirements, ranging from those that are relatively independent and require modest amounts of care to those who are significantly disabled or impaired and require assistance in all activities of daily living (ADLs). Consequently, issues surrounding deficiencies in medical and nursing care or in housekeeping and dietary services become more salient to quality of care in long-term care settings, in contrast to acute medical services.

Given the differentiated care needs and environments of long-term care, as outlined above, quality of care emphasises both health and social realms of care. Long-term care needs of older people include health and social care; the former relies on clinical expertise and treatment, while the latter is aimed at services to assist patients with functional limitations live in ways that maximize their independence and quality of life (Mor et al., 2003a; Kane et al., 2003; IOM, 2001). Quality of life for the older population requiring health services normally encompasses general self-well-being, satisfaction with the care environment and services received, and control over one’s life (IOM, 1986). Many aspects of long-term care (e.g., nursing homes) that can affect a patient's perceptions of quality of life and, therefore, sense of well-being are intimately intertwined with quality of care. For instance, a nursing home resident's quality of life can be enhanced by an environment supporting independence and some degree of personal control over treatment decisions and daily activities. Quality of life also includes such issues as financial security, privacy, and personal safety (IOM, 2001).

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3 The discussion is limited to formal, as opposed to informal, unpaid long-term care services.
4 Defining the quality of long-term care has been informed by literature on acute health care services.
Indeed, defining quality of long-term care should capture its multidimensional nature and the diverse needs and interests of this population group, in addition to other involved parties (e.g., physicians, nurses, family members and caregivers). To that end, the conceptual issues in quality measurement are shaped by the diverse perspectives of such stakeholders on issues surrounding the nature and scope of long-term care, conceptual and operational definitions of quality, and what is deemed important to measure. As suggested by Mukamel (1997), quality measures should be developed and used according to their utility and meaningfulness to select audiences. In the case of older patients and their caregivers, providers, and relevant policy-makers, both clinical and psychosocial issues need to be duly considered to effectively assess the quality of long-term care. Indeed, the frameworks used to inform health system performance entail several dimensions of quality (Appendix A).

III. Measuring quality of long-term care

Overview of quality measures and assessment

Since the mid-1960s, quality of health care has been measured in terms of three primary components: structures of care, processes of care, and outcomes of care (Donabedian, 1980). These domains are used to measure quality of overall medical care and have been extended to assess the quality of long-term care.

**Structure** refers to a health care provider's or facility's capacity to provide high quality care. Structural variables encompass the level, mix, education, and training of staff, and the characteristics of the facilities in relation to characteristics of patients or residents, such as demographics, payer mix, and case mix. It also includes such issues as the safety and appropriateness of the environment and the availability of updated health technologies. **Process** measures assess the services actually provided or administered (Sangl et al., 2005; Mor et al., 2003a). Deficiencies in processes of care can be described as overuse of care, underuse of care, or poor technical performance (Mor, 2004; Chassin and Galvin, 1998). Other process problems in long-term care have been characterised as neglect or even abuse (e.g., physical assault, use of physical restraints). **Outcome** of care represents changes in health status and conditions (functional and psychosocial) attributable to care provided or not provided (Mor, 2004). In quality assessment, two types of outcomes are generally measured: subjective and objective outcomes. The subjective component may include satisfaction with one's treatment environment (e.g., nursing home) or morale. Alternatively, objective aspects of outcome focus on changes in functional and mental status, such as the ability to perform daily living activities (e.g., bathing, dressing) and cognitive capacity.

In quality assessment of long-term care, all three components of quality contribute useful and complimentary information. However, one can argue that for long-term care, as opposed to (acute) health care, the inputs and processes may be more important than the outcomes. In health care, it is postulated that structural elements of care have only a potential association to quality, in that the availability of capacity to provide quality care does not ensure that quality services are actually delivered (IOM, 1986). However, in long-term care, certain structural factors are highly associated with good quality care, such as the nurse-patient ratio, and availability of basic equipment. While process and outcome measures are most commonly used in quality evaluations (Sangl et al., 2005; Mor et al., 2003a), it is likely that process indicators are more important in the context of long-term care than outcomes, which are not as straightforward and attributable to the service(s) provided as in health care (e.g., survival rates after treatment). Therefore, while many publicly-reported quality measures combine both process and outcome components, more focus should be placed on processes of care (Sangl et al., 2005; Fortinsky et al., 2003). Shekelle et al. (2001) argue that process measures are preferable for assessing the care of older people, as processes are considered a more efficient measure of quality and amenable to direct action by providers and other relevant stakeholders. Process measures are often used along with structural criteria as proxies for outcomes measures, although the empirical evidence on the association between these measures varies widely (Kelley and Hurst, 2006; Mor, 2005; Sangl et al., 2005).

In addition to structure, processes, and outcomes which provide the foundation of quality measurement, quality of care should also be evaluated in terms of accessibility and variation of care. For example, evidence of variations in quality of care has been shown in the U.S., with worse quality disproportionately associated with ethnic minority populations, as well as residents in poor communities (Mor et al., 2004; Mor and Zinn, 2004; Epstein and Ayanian, 2001; Fiscella et al., 2001; Weinick et al., 2000). Other considerations for quality measures include the following factors: 1) importance/relevance to consumers, 2) accuracy, in terms of reliability and validity, among other
technical issues (outlined in further detail below), 3) possibility of allowing comparability between providers/facilities, and 4) possibility of being influenced/improved by the provision of high quality care (CMS, 2007).

As well as provider level information, quality assessment also involves collecting structural, process and outcome information the patient level (Mor, 2004). Typically, the patient level individual data derive from clinical assessments of patients at specific intervals during their care. Data is collected on the patient’s physical and clinical condition and abilities, as well as preferences and life care objectives, and is subsequently recorded and entered into a standardised database. Table 1 presents the areas of information typically collected for patient assessment systems\(^5\) in the U.S. The data collection instruments used includes both micro- (limited to specific conditions) and macro- (multidimensional across health conditions) measures.

In the U.S., and increasingly elsewhere, standardised and mandatory patient assessment systems are computerised in all nursing homes and home health agencies. These assessments are conducted by medical staff (e.g., nurses) upon patient admission and periodically thereafter, often at discharge. Data is normally collected with standardised instruments for only those patients that undergo more than one assessment and exhibit the potential for improvement (Sangl et al., 2005). Such information is then used to calculate an aggregated measure of quality, typically at the provider-level. In the U.S., provider- or facility-level data is subsequently used by state survey agencies to target survey and quality monitoring activities (CMS, 2007). The data are also shared with the facilities; each facility receives a report of its own data, as well as its state-wide information. The reports are typically used by providers and facilities as a tool to rate performance compared to the overall state and to target areas of care for improvement. In addition, this information can be used for the purpose of service determination and rate-setting for reimbursement purposes. As these data reports can be generated for sequential time frames, they are also useful for tracking trends.

Table 1: Select information areas collected for patient assessment systems in acute & long-term care

<table>
<thead>
<tr>
<th>Information Area</th>
<th>Definition</th>
<th>Commonly-Used Data Collection Instruments</th>
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| Functional competency/impairment                      | Discrete task performance in independently transferring, ambulating or wheeling, dressing, toileting, bathing, eating, communication, grooming, etc. | • Katz Index of Activities of Daily Living (ADLs)  
  • Barthel Index  
  • Kenny Self-Care Evaluation  
  • Motoricity index  
  • Linn’s Rapid Disability Scale  
  • Functional States Questionnaire |
| Intellectual impairment/behavioural problems           | Wandering, depression, memory deterioration, demented, requiring supervision, etc. | • Mental Status Questionnaire  
  • Mini-Mental State Examination  
  • Comprehensive Assessment and Referral Evaluation |
| Medical status                                         | Blood pressure, pain, visual ability, medication use, elimination/incontinence, malnutrition/dehydration, weight, etc. | • Direct, objective measurement |
| Subjective well-being                                  | Demoralization, dissatisfaction, self-esteem, autonomy, personal local of control, etc. | • Short Form General Health Survey SF-36  
  • Nottingham Health Profile  
  • Burden Interview Scale  
  • Caregiver Strain Index  
  • Quality of life-AD Scale  
  • D-QOL  
  • Apparent affect rating scale |

Source: IOM, 2001; Logsdon et al., 1999; Brod et al., 1999; Lawton et al., 1999; IOM, 1986.

5 Sociodemographic information (age, ethnicity, gender, education, familial relationships) is also collected.
Key methodological issues in measuring quality

The development and use of valid and reliable quality measures are critical to effective quality assurance efforts in long-term care. Moreover, good measurement of quality has positive implications for the planning and provision of care, as well as informed consumer choice. However, there are several technical and methodological challenges that exist in using quality assessment data.

First, as previously mentioned, the concept of quality is complex and multi-dimensional, which can make capturing a holistic notion of quality difficult. While existing measures appear to reliably measure quality in certain clinical areas, information specific to quality of life, autonomy, and satisfaction (on behalf of both residents and caregivers) is often overlooked in patient assessment systems, and where available, most of the existing research only focuses on nursing homes, as opposed to other long-term care settings (Mor, 2005; Sangl et al., 2005; Mor, 2004). In a related sense, differences in the way quality is defined may impact what measures are used and how resulting data is interpreted.

Another concern is the accuracy and completeness with which data are collected and the uniformity of data reporting over time and across providers. For example, as quality assessments are, in part, based on clinical evaluations made by different staff in different facilities, the resulting quality measures may reflect differences in assessment practices or training and education, rather than true variations in quality (Mor, 2005; Wu et al., 2003). In addition, complicated care processes may be difficult to document and assess based solely on medical records, which may or may not accurately reflect actual care (Schnelle et al. 2004). These concerns have implications for both comparative utility and quality improvement. Research conducted by Bernabei et al. (1997) suggested the use of detailed guidance on the data collection and reporting of care processes as one potential solution to circumvent these issues. More consistent training practices among facility staff in clinical and, more broadly, quality assessment have also been recommended (Roy and Mor, 2005).

Small sample sizes, rare events, and instability of some conditions experienced by older people also affect the validity and reliability of quality measurement (Mor, 2005). More specifically, many relevant events of interest to quality are relatively rare (e.g., incidence of pressure ulcers) and unstable or variable. If measurement occurs during a period of low incidence, the small sample can make it difficult to calculate reliable estimates of such events. Furthermore, quality indicator values can change over time, but should be reasonably stable over shorter periods to serve as a good indicator of quality. Some research has questioned the use of patient preferences in quality measurement, as they may be unstable, although the evidence base in this regard is quite limited (Clearly and McNeil, 1999; Kravitz, 1998; Jackson and Kroenke, 1997).

An issue typically considered in comparing quality measures is the effect of case mix differences among various subgroups using long-term care services. Residents of nursing homes are generally more disabled than people using home health care services, and nursing home residents may, therefore, be at greater risk for certain adverse health outcomes regardless of the quality of care they receive. Even within a single care setting, it is common for the populations served by some providers to possess more serious health problems than those served by other providers. Risk adjustment techniques are used to ‘equalize’ patients, thereby compensating for case mix differences between providers (Mor, 2005). However, there are limitations to the usefulness of risk adjustment. The methods used for risk adjustment can vary by facility type. For instance, nursing homes often use prevalence-based adjustments, as residents are provided care over extended periods, while home health agencies measures tend to assess changes from admission to discharge (Mor, 2005). In the case of nursing homes, it may be difficult to determine initial status from which to measure changes in quality indicators, thereby hindering valid attributions of outcome to quality care. Moreover, in many health care markets, there tends to be a significant proportion of providers specialised in various areas of care, such as rehabilitation services or dementia care. Such specialisation results in different types of patients being referred to different providers (Mor, 2005; Mor, 2004). The more this takes place, the less risk adjustment can account for substantial differences in outcomes.

Risk can be adjusted either using stratification (identifying which patients fall in particular stratum) or regression-based approach (compares observed and the expected rate of a clinical event, based on observed provider vs. an average provider).
While the aforementioned issues constitute the key methodological issues associated with quality measurement of long-term care, there are several other challenges requiring consideration:

- **Use of composite quality measures** – While decision-makers (e.g., consumers) prefer having a composite, single measure to ascertain the quality of providers, it can introduce problems, as research has generally found minimal association between various provider quality measures (Baier et al., 2005; Sangl et al., 2005). Therefore, analysis of trends may demonstrate no improvement of quality if providers performed well on certain measures, but poorly on others. Additionally, it limits the ability of public reporting to inform consumer decision-making based on particular quality domains of interest. For instance, a consumer may consider the social environment of a facility more important than staffing to patient ratios when making a choice between providers.

- **Propensity to underreport due to potential regulatory action** – Facility staff may be reluctant to document problems if sanctions may ensue as a result of poor quality care.

- **Exclusion of certain patient groups in assessments** - Certain patient groups, such as the cognitively impaired, may be excluded from participating in assessment, leading to bias and poor representation of important elder groups.

- **Social desirability and acquiescent response biases** – Providing socially desirable responses to assessment questions is prevalent among dependent groups, such as the institutionalized older persons, who may be fear repercussions from caregivers (La Monica et al., 1986). Moreover, older adults, especially women, tend to report higher rates of satisfaction with care services regardless of its quality (IOM, 2001).

Finally, there are important technical issues associated with the use of quality indicator information. One concern regards the establishment and use of performance benchmarks (specific standards of care) to compare providers (Mor, 2005). Discussions on this topic relate to the use of different benchmarks for different types of providers, varying standards with improved performance, and whether national benchmarks should be based on the quality distribution across providers. For instance, setting minimum performance for some quality indicators may be inappropriate, given a lack of evidence-based standards from which to determine the benchmark (Mor et al., 2003b). Inherent in some of these issues is whether and how to account for geographic differences in practice patterns, case mix, and payment structures that may impact quality. Despite the technical and methodological issues outline above, continued refinement and evaluation of these data should continue to forward better quality measurement of long-term care.

**IV. Current EU-level and national quality measures**

This section examines the key quality indicators for long-term care used in the EU, with an additional focus on the U.S. As previously discussed, the collection of quality indicators serves a variety purposes. On the national-level, countries are interested in gathering this information for regulating and certifying long-term care facilities; determining distributions in quality (and equitable) care across localities or states; setting reimbursement rates for providers; and, guiding and monitoring long-term care services and quality improvement policy. On the provider-level, quality information is employed to monitor the quality of their own performance in providing care; tracking gains in productivity; flagging and reviewing unexpected outcomes; and, planning resource use and treatment plans. Finally, on the consumer level, information on quality is needed in order to make informed choices, which serves to stimulate competition amongst providers based on quality.

Most of the progress on quality measurement and reporting has originated in the U.S., especially in terms of mandatory and standardised patient assessment systems. In the mid-1980s, an assessment system was developed that would provide a standardised basis for establishing nursing home care plans, termed a minimum data set (MDS). While the initial goal was to capture information needed to primarily plan care, quality indicators were later developed as part of the Centers for Medicare and Medicaid Services’ (CMS) Nursing Home Case Mix and Quality Demonstration project (Mor, 2005). The indicators were based on MDS data and included measures for short-stay, post-acute, and long-term residents. In 2002, the CMS mandated public reporting of the quality indicators and actions to assist providers to improve their quality of care were put in place (Baier et al., 2004). Concurrently,

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7 Composite measures are typically used in public reporting of quality information. For instance, a given provider may receive an overall or composite quality score of '70', 'C', or 'average', representing an aggregation or average of all collected quality data.
similar quality assessment systems, including indicators, were established for home health agencies (Outcome and Assessment Information Set or OASIS) and for a variety of Medicare and Medicaid certified health facilities, such as nursing facilities, hospice, and rehabilitation centers (On-line Survey and Certification and Reporting System or OSCAR). Appendix B provides details on these data sources, including collected quality indicators and their relative strengths and weaknesses. These measurement efforts have simulated broad interest and financial support of state and federal quality initiatives in the U.S., as well as provider-based quality improvement programs.

In contrast to the U.S., few EU Member States have some sort of systematic compilation of quality indicators for long-term care. However, the situation is changing, with more countries developing national, standardised quality measurement efforts (Table 2). It is unclear to what extent the information that is collected on quality is actually used by those who collect it, and what the motivations underlie these collection exercises.

**Table 2: Current quality measurement activities in selected EU Member States**

<table>
<thead>
<tr>
<th>Country</th>
<th>Current System</th>
<th>Projected System</th>
<th>No significant activity</th>
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<tbody>
<tr>
<td>Belgium</td>
<td>No significant activity</td>
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<td>Bulgaria</td>
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<td>Czech Republic</td>
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<tr>
<td>Denmark</td>
<td>Some data is already collected, but various counties and the Ministry of Social Affairs are currently negotiating an updated reporting system to provide ongoing information on quality of care for older people. A separate project recently initiated by the Ministry supports the development of new methods of ongoing data collection on quality in long-term care.</td>
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<td>Estonia</td>
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<tr>
<td>Finland</td>
<td>Uses Residence Assessment Instrument, with 22 total quality indicators. Currently, the RAI is being used in 25 municipalities.</td>
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<td>France</td>
<td>Data collected via INSEE and DRESS, which reports on living conditions in facilities, types of patients, and number and qualification of staff. DRESS also examines quality of home care.</td>
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<td>Germany</td>
<td>The Medical Service of the Sickness Fund has performed quality assessment of ambulatory and institutional long-term care providers since 1996. Quality assessment was formalised and standardised in 2002.</td>
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<tr>
<td>Greece</td>
<td>No significant activity</td>
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<tr>
<td>Hungary</td>
<td>No significant activity</td>
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<tr>
<td>Ireland</td>
<td>The Health Service Executive (HSE) carries out standard inspections of nursing homes. During this process, information on quality of care, staffing, welfare and well-being of patients, records, nutrition, and the physical environment is collected. Reports on the findings are publicly-available on the Internet, including areas of non-compliance.</td>
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<tr>
<td>Italy</td>
<td>Systems to assess quality of long-term care services have been established in Italy. However, only a limited sub-set of Italian regions have such systems in place. Of existing systems, the monitoring systems are not standardised across regions.</td>
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<td>Latvia</td>
<td>No significant activity</td>
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<td>Lithuania</td>
<td>No significant activity</td>
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<td>Poland</td>
<td>No significant activity</td>
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<tr>
<td>Romania</td>
<td>The Ministry of Labour, Social Solidarity, and Family collects quality information around organization/administration, access to services, services provided, recipient rights, and ethics, as part of meeting specific minimal quality standards for home health and residential care for older people.</td>
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<tr>
<td>Country</td>
<td>Information</td>
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<td>Slovenia</td>
<td>A national quality standards system (along with quality indicators) is under development by the National Institute for Social Care. The proposed system will evaluate all aspects of care – structure, processes, and outcomes. This should eventually provide a model of ongoing evaluation for all providers.</td>
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<tr>
<td>Spain</td>
<td>** Indicates that the government announced a new program to measure quality (not yet defined), costs, and efficiency. The aim is to realise national comparisons on processes and outcomes, as a basis for quality improvement, and to provide consumers with information for choosing between institutions (as part of the government’s ‘choice agenda’).</td>
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<tr>
<td>Sweden</td>
<td>In January 2007, the government announced a new program to measure quality (not yet defined), costs, and efficiency. The aim is to realise national comparisons on processes and outcomes, as a basis for quality improvement, and to provide consumers with information for choosing between institutions (as part of the government’s ‘choice agenda’).</td>
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<tr>
<td>Turkey</td>
<td>** Indicates that the government announced a new program to measure quality (not yet defined), costs, and efficiency. The aim is to realise national comparisons on processes and outcomes, as a basis for quality improvement, and to provide consumers with information for choosing between institutions (as part of the government’s ‘choice agenda’).</td>
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<tr>
<td>United Kingdom</td>
<td>Much of effort for quality improvement of long-term care services has stemmed from new policies (e.g. Care Standards Act of 2000; performance frameworks, namely the Best Value (BV) regime). The CSA established several organisations dedicated to quality improvement, including the National Care Standards Commission (NCSC) and the Commission for Social Care Inspection (CSCI). The CSCI is responsible for quality assurance via regulatory and inspection mechanisms; it collects data on quality during inspection activities. This information is used to assess whether the National Minimum Standards for care services are being met and to assess the performance of providers and councils. The CSCI is responsible for providing councils with star ratings (0-3) indicating how well they performed against a set of preferred indicators. The ratings are published on a yearly basis (separate evaluations for children’s and adult’s services). Under the BV, local authorities are required to set targets for improving quality and efficiency of services, and criteria against which to measure progress, review their services, and produce annual BV performance plans.</td>
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Source: Country expert reports; PRSSU, 2006 (UK); Bevan & Hood, 2006 (UK); DH, 2006 (UK).

**Indicators may soon be developed out of new regulations related to long-term care.**

Indeed, many Member States are increasingly debating issues and policy solutions related to long-term care for older people, from standardised monitoring activities to patient choice. For example, in November 2006, a mandate to promote personal autonomy and care for dependent persons was approved in Spain. The law guarantees the universal access to publicly-provided long-term care for every Spanish citizen, as well as resident immigrants. It also establishes the necessity of ensuring long-term care quality through the development of broad criteria for quality assessment. The UK also provides an example of recent policy activity related to quality assurance of long-term care services (Box 1).
Box 1: Strategies for improving quality of long-term care services in the UK

Since the late 1990’s, the government has put forth several actions to improve the quality of long-term care services. Such initiatives span inspections of structural and legal regulations; accreditation mechanisms; public procurement with respective quality criteria/indicators and standards; and measures for consumer protection or client protection. In particular, recent key measures to improve the quality of long-term care include:

- **Care Standards Act of 2000** – Put in place the building blocks of the government’s programme for modernising social care and improving quality and consumer protection. The Act made the provision for several agencies with a specific role in improving quality of care, most notably the CSCI (see above).

- **Best Value (BV) regime/Performance Assessment Framework (PAF)** – Placed a legal duty on local government to deliver services to meet clear standards and increase accountability. Under BV and PAF, local authorities were required to set targets for improvements in both quality and efficiency for their services. These criteria were to be used to measure progress, review services, and produce annual performance plans. In 2002, the Comprehensive Performance Assessment (CPA) largely replaced the role of the BV in guiding inspections and improving quality.

However, the top-down approach employed by these strategies has been subject to several critiques. Specific criticisms include the burden of regulatory requirements; fragmentation of inspections; and, unintended consequences of quality targets, such as limiting innovation and creating perverse outcomes. Recent actions have been taken to address some of these concerns by streamlining reviews and inspections, merging organizations, and removing extraneous targets. Such efforts have been coupled with an overall focus to make services more consumer-focused.


At the international level, the OECD spearheaded a major initiative on quality measurement of long-term care. This effort extends the use of the Resident Assessment Instrument (RAI)/MDS internationally, to form the InterRAI. InterRAI is an international group of researchers and clinicians with ownership rights to RAI/MDS instruments, used to conduct multinational collaborative research to develop, implement, and evaluate the RAI/MDS instruments and their related applications (Carpenter, 2006; OECD, 2001). The group developed the RAI/MDS-HC and RAI/MDS-MH, which entails a broader scope of measurement (e.g., role of informal support, IADLs, compliance with care) and a shorter assessment tool, specific to home care and mental health care, respectively. These instruments are currently translated and validated in over 10 countries, including the U.S. and Canada (select states and provinces), as well as in Japan and several EU countries, such as Finland, the Netherlands, France, Switzerland, and the UK.

A key element to quality measurement activities is the reporting of resulting information to the public. As many Member States begin to implement national quality assessment systems, an examination of existing U.S. report activities may be helpful to guide future efforts. As aforementioned, the CMS mandates regular public reporting of quality information for nursing home facilities. This requirement has been extended to other long-term care providers as well. To report such information, many states in the U.S. have assembled their own Internet-based “report cards” summarizing the quality of nursing homes using different schemes for presenting information (Castle and Lowe, 2005). Figure 1 illustrates an example of a report card.

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8 The RAI/MDS and RAI/MDS-HC share core assessment items, lending the possibility to track individuals between the two data sources.
While interest and demand for quality reporting is high, there is limited understanding about who uses this information, how, and whether it actually informs decision-making (Mor, 2005). For instance, existing evidence suggests that public reporting may be of more interest to providers than consumers and policy-makers, although payers are increasingly using this information for provider contracting purposes (Mor, 2005; Chernew et al., 2004). In addition, some evidence suggests that quality reports have only slight impact on practice patterns, patient choice, and quality improvements to care (Romano and Zhou, 2004; Mukamel and Mushlin, 2001). There is also an issue with the availability of resource support to adequately fund such activities. While not a significant barrier in the U.S., some countries lack the infrastructure to enable them to properly conduct national patient and facility assessments.

As more countries move toward more comprehensive use of quality measurement to evaluate and improve care for older people, it will be important to adequately consider lessons learned, best practices, and key methodological issues during both the development and implementation stage. Considering the current status of quality measurement, the following section outlines a number of recommendations for effective and efficient quality assessment of long-term care.

V. Conclusions and recommendations

With a growing ageing population, ensuring the quality of long-term care is of significant importance to patients, providers, and policy-makers. The provision of high quality care is central for older populations, given often complex, diverse, and protracted health needs. Moreover, many long-term care settings (e.g., nursing homes) serve as both a treatment facility and a home for many residents. Consequently, the quality of care not only has implications for effectively managing relevant health conditions, but also quality of life.

Collecting information on quality of long-term care serves multiple purposes, most importantly to inform regulatory functions, such as setting standards and monitoring performance, and to enhance consumer and purchaser choice and competition. To advance toward better quality long-term care, various initiatives and reforms have been developed. While the majority of developments in this area have occurred in the U.S., several Member States are introducing efforts for more formalised quality measurement and assurance activities. Such efforts range from standardised collection of quality indicators to public reporting. However, too little is being done in Europe, and where efforts are being
made, it is unclear to what extent the information that is being collected is used to achieve the above objectives.

With a growth in quality measurement of long-term care for older people, a number of actions are recommended to improve current practices.

**Research Needs**

- Further exploration of improved processes for handling measurement errors is needed; such errors may confound true quality differences.
- Despite a plethora of evidence on the scope of quality improvement activities in long-term care facilities, there have been few systematic evaluations of their impact. The evidence from studies that do exist is mixed. More research effort is needed in this area.
- Further research is required on improving quality measures/indicators, and on how they can be expanded to capture a more global notion of quality of care for older people.
- Most of the research to date on quality measurement has focused on nursing homes; evaluation should be conducted on other long-term care settings.
- To enhance the usefulness of quality information, more research is needed on what elements of quality consumers, purchasers, and advocates value.

**Quality Measurement**

- Although patient and family or care-giver satisfaction is often considered in nursing home environments, there is limited use of such data in national reporting systems.
- More resources should be dedicated to training and educating staff on good patient assessment practices (from data collection to reporting).
- Additional focus on methods development is required to better handle methodological issues, such as small samples, rare events, and instability.
- Better understanding is required of existing measures, how they are reported, and how audiences use quality information to make decisions.
- As many Member States are beginning to develop quality assurance frameworks/systems, the conceptual and technical basis of quality indicators should be grounded, where possible, on the frameworks already development for such indicators by other countries. This would allow Member states to build upon previous experience and best practice.
- Strategies should be devised to help circumvent existing tensions between regulatory compliance and quality improvement. For example, quality improvement requires identifying and documenting problems in preparation for action. However, in doing so, this highlights care problems to regulators, possibly incurring penalties, thereby creating an incentive problem for providers to fully and accurately measure quality.
- For comparative purposes, further discussion is required on whether quality benchmarks should be based on national norms or some other standard(s).

**Long-Term Care Provision**

- Quality in long-term care depends also on the extent to which long-term care services are coordinated with (acute) health services. A recent study noted that care for older people remains insufficiently integrated and unreliable, particularly for older people with mental health problems such as dementia and depression (Morris et al., 2006). Greater integration between acute and long-term services will move toward providing older people with a consistent continuum of care.
- Currently, in many countries, there is a general lack of adequate social care qualifications and training among the majority of long-term care staff. A greater emphasis is needed on
improving qualification levels of care staff and monitoring relevant educational and training standards. The UK, for example, has introduced the National Vocational Qualification (NVQ) system\(^9\) to ensure certain staff qualification standards are met.

- While quality information plays a role in spurring quality improvement efforts among providers, it is important to ensure that providers have the ability to adequately institute continuous quality improvement processes.
- Initiatives to improve quality should be aligned and streamlined to guard against undue administrative burden placed on care facilities. Regulatory bodies across the health and social care divide need to work in partnership to ensure the efficiency of quality assurance activities.

By moving toward these suggested improvements in quality measurement and assurance of long-term care services, the complex needs and demands for care among older persons will be more effectively met. This can be achieved while rendering care services more quality-centered, grounded in enhanced consumer choice and provider competition.

\(^9\) NVQs are competence-based vocational qualifications based on national occupational standards. For further information, see http://www.qca.org.uk/14-19/qualifications/index_nvqs.htm.
References


Institute of Medicine, Committee of Nursing Home Regulation (1986). *Improving the Quality of Care in Nursing Homes*. Washington, DC: National Academy Press.


**Appendix A. Dimensions of quality of health care**

<table>
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<tr>
<th>Dimension</th>
<th>Definition</th>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>Extent to which attainable improvements in health are attained. Also, encompasses such elements as: appropriateness and competence.</td>
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<td><strong>Safety</strong></td>
<td>Degree to which health care processes avoid, present, and ameliorate adverse outcomes or injuries that stem from process of care.</td>
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<td><strong>Responsiveness</strong></td>
<td>Refers to how a system treats people to meet their legitimate health expectations – emphasizes patient-centeredness. Also, encompasses such elements as: acceptability, continuity, and timeliness.</td>
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<td><strong>Accessibility</strong></td>
<td>Ease with which health services are reached – emphasizes provider/patient relationship.</td>
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<td><strong>Equity</strong></td>
<td>Defines the extent to which a health care system deals fairly with all individuals concerned – related to access.</td>
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<tr>
<td><strong>Efficiency</strong></td>
<td>The health care system’s optimal use of available resources to yield maximum benefits or results. Essentially, represents the ability to function at lower costs, while still attaining desired results.</td>
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### Appendix B

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<th>Key Patient Assessment Systems</th>
<th>Description</th>
<th>Quality Indicators</th>
<th>Strengths and Weaknesses</th>
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</table>
| **Resident Assessment Instrument (RAI) and the Minimum Data Set (MDS)** | Uniform assessment tool for all nursing home residents. The RAI includes a set of core assessment items, known as the MDS, for assessment and care screening. There is also more detailed Resident Assessment Protocols (RAP) in 18 areas that represent common problem areas or risk factors for nursing home residents. Using data from the MDS, quality indicators (QI) were developed as part of a nursing home quality demonstration project. The QIs were designed to monitor the changes in residents and the outcomes of care for use by the state surveyors to identify problem areas in individual resident characteristics and in services within facilities. | **Accidents**  
- Incidence of new fractures  
- Prevalence of falls  
**Behaviour/Emotional Patterns**  
- Residents who have become (more) depressed or anxious  
- Prevalence of behavioural symptoms affecting others (overall)  
- Prevalence of behavioural symptoms affecting others (low risk)  
- Prevalence of behavioural symptoms affecting others (high risk)  
- Prevalence of symptoms of depression without antidepressant therapy  
**Clinical Management**  
- Use of 9 or more different medications  
**Cognitive Patterns**  
- Incidence of cognitive impairment  
**Elimination/Incontinence**  
- Low-risk residents who lost control of their bowels or bladders  
- Residents who have/had a catheter inserted and left in bladder  
- Prevalence of occasional or frequent bladder or bowel incontinence without toileting plan  
- Prevalence of fecal impaction  
**Infection Control**  
- Prevalence of urinary tract infections  
- Residents given influenza vaccine during the flu season  
- residents who were assessed and given pneumococcal vaccination  
**Nutrition/Eating**  
- Residents who lose too much weight  
- Prevalence of tube feeding  
- Prevalence of dehydration  
**Pain Management**  
- Residents who have moderate to severe pain  
**Physical Functioning**  
- residents whose need for help with daily activities has increased  
- residents who spend most of their time in bed or in a chair  
- residents whose ability to move in and around their room get worse  
- Incidence of decline in ROM  
**Psychotropic Drug Use**  
- Prevalence of antipsychotic use, in absence of psychotic or related conditions (overall)  
- Prevalence of antipsychotic use, in absence of psychotic or related conditions (high risk)  
- Prevalence of antipsychotic use, in absence of psychotic or related conditions (low risk)  
- Prevalence of anti-anxiety/hypnotic use  
- Prevalence of hypnotic use more than two times in last week  
**Quality of Life**  
- residents who were physically restrained  
- Prevalence of little or no activity  
**Skin Care**  
- High risk residents with pressure ulcers  
- Low risk residents with pressure ulcers | **PROS:**  
- Items shown to possess good reliability and clinical utility  
- Useful for care planning and internal QI efforts  
- Measures risk-adjusted, where necessary  
- Use has bolstered and standardized quality monitoring processes  
**CONS:**  
- Relies on reporting from facility staff, underreporting of problem areas is possible.  
- Reliability of data dependent upon sufficient training and acknowledgement of staff to perform assessments.  
- Use in RUG calculation for payment may provide incentives to “upcode” toward serious conditions (more serious=higher payment), which may distort MDS data.  
- MDS QI scores are difficult to interpret and understand by medical professionals and the general public.  
- Differences in scores between facilities may be small; therefore, the clinical significance of small differences in facilities may be difficult to interpret. As a result, consumers may make inappropriate decisions unless they receive assistance in understanding how to use the QIs in decision-making.  
- MDS QIs were designed as indicators, not as absolute measures of quality; therefore, their use as measures of quality for public reporting has limitations. |
### Post-Acute Care
- Short-stay residents with delirium
- Short-stay residents who had moderate to severe pain
- Short-stay residents with pressure ulcers

### On-Line Survey and Certification Assessment Reporting (OSCAR)
Computerized, uniform national database for LTC facilities used for maintaining and retrieving survey and certification data for providers and suppliers approved to participate in Medicare/Medicaid programs. Conjointly used as a quality assessment tool, as it provides information on how well a nursing home has met regulations and other areas of past performance. Data are collected and updated on a regular basis by state licensing and certification agencies (under contract with CMS). Each facility must have an initial survey to verify compliance with all federal regulatory requirements in order to be certified for Medicare/Medicaid. Follow-up surveys may be conducted to ensure that facilities correct identified deficiencies.

### Facility Characteristics
- Facility data (bed size, ownership type, occupancy)
- Number of full-time position equivalents over previous 14 days

### Resident Characteristics
- Number of residents with particular problems (bed sores, incontinence, psychological problems)
- Number of residents receiving special services (tube feeding, rehabilitation)

### Deficiencies (in meeting regulatory standards of care, by both scope and severity)
- Activities of Daily Living (ADLs)
- Use of restraints
- Nurse staffing hours per residents over previous 2 week period
- Resident rights
- Admission transfer
- Discharge rights
- Resident assessment
- Dietary services
- Dental services
- Physician services
- Rehabilitation services
- Nursing services
- Pharmacy services
- Infection control
- Physical environment
- Quality of life

### Complaints
- Number of complaints

### PROS:
- Items shown to possess good reliability, clinical and predictive utility
- Careful and thorough examination of deficiencies
- Consistent quality checks in place to ensure accuracy of data

### CONS:
- Relies on reporting from facility staff, underreporting of problem areas is possible.
- Usual staffing levels may differ from time of inspection, making it difficult to identify quality problems due to staffing levels.
- Does not include information on staff turnover, education, and training.
- Lack of cost and financial data (renders drawing connections between cost and quality difficult)
- Variation in states consistency of adherence to making deficiency citations.
- Underreports short-stay patients and over-reports on long-stay residents.

### Outcome and Assessment Information Set for Home Health Care (OASIS)
Resident assessment system applied to home health care agencies. Contains a group of data elements that represent core items of a comprehensive assessment of home health care patient and forms the basis for measuring patient outcomes for purposes of outcome-based quality improvement. Most data items are collected at the start of care and every 60 days thereafter, until the time of discharge.

### PROS:
- Items have demonstrated reliability and inter-rater reliability
- Measures risk-adjusted, where necessary
- System adapted to meet the needs of various audiences (e.g., home health care patients, clinicians, referring physicians, administrators/managers and policy makers)

### CONS:
- Lacks comprehensiveness, principally focused on outcomes.

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10 The scope of each deficiency is included ranging from “affecting few residents” to “affecting many residents.” The severity of each deficiency is included ranging from “potential for minimal harm” to “immediate jeopardy.”
Appendix C. Country experts

The following experts contributed to this research note by providing country reports:

Belgium – Dirk Corens and Maarten van Stiphout (Centre for Health Economics, Free University of Brussels); Bulgaria – Alexandrina Stoyanova (CRWE, University of Barcelona); Czech Republic – Martin Dlouhy (Czech Institute of Health Policy and Economics); Denmark – Karsten Vrangbaek (University of Copenhagen); Estonia – Triin Habicht (Health Economics Department, Estonian Health Insurance Fund) and Jarno Habicht (World Health Organization Country Office, Estonia); Finland – Jan Klavus (STAKES, Helsinki); France – Sandra Mounier-Jack (London School of Hygiene and Tropical Medicine); Germany – Stefanie Ettelt (London School of Hygiene and Tropical Medicine); Hungary – Roza Adany (School of Public Health, University of Debrecen); Ireland - Helen McAvoy (Institute of Public Health, Belfast); Italy - Margherita Giannoni-Mazzi (University of Perugia); Latvia - Daiga Behmane (University of Latvia); Lithuania - Skirmante Starkuvienė (Dept of Social Medicine, Kaunas University of Medicine); Netherlands – Jeanine Suurmond (Dept. of Social Medicine, Academic Medical Centre, University of Amsterdam); Poland - Adam Kozierkiewicz (Health Information Systems Unit, Institute of Public Health of Jagiellonian University, Kraków); Romania - Victor Olsavszyk (World Health Organization); Slovenia - Tit Albreht (Institute of Public Health of the Republic of Slovenia); Spain - Alexandrina Stoyanova (University of Barcelona); Sweden - Anna Melke (Göteborg University and the Vårdal Institute); Turkey - Omer Saka (Kings College London) and Nebibe Varol (London School of Economics and Political Science Health and Social Care); United Kingdom - Sara Allin, Cristina Masseria, Corinna Sorenson and Irene Papanicolas (London School of Economics and Political Science Health and Social Care).