

POLICY SUMMARY 13

# Public reporting in health and long-term care to facilitate provider choice

Stephanie Kumpunen, Lisa Trigg,  
Ricardo Rodrigues

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This policy summary is one of a new series to meet the needs of policy-makers and health system managers.

The aim is to develop key messages to support evidence-informed policy-making and the editors will continue to strengthen the series by working with authors to improve the consideration given to policy options and implementation.

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**Stephanie Kumpunen, Lisa Trigg, Ricardo Rodrigues**

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# Public reporting in health and long-term care to facilitate provider choice

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## List of acronyms

|       |   |
|-------|---|
| CABG  | coronary artery bypass graft                            |
| CAHPS | Consumer Assessment of Healthcare Providers and Systems |
| CSCI  | Commission for Social Care Inspection                   |
| CQC   | Care Quality Commission                                 |
| CQI   | Consumer Quality Index                                  |
| HSMR  | hospital standardized mortality ratio                   |
| ICT   | information and communications technology               |
| NHS   | National Health Service                                 |
| OECD  | Organisation for Economic Co-operation and Development  |
| RAI   | Resident Assessment Instrument                          |

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## Key messages

### Context

The availability of public reporting initiatives on the quality of health and long-term care providers has increased since the 1990s when many countries began introducing choice of care provider policies.

One of the primary reasons for public reporting of quality information is to assist patients and users, and other purchasers of care, in making informed and rational choices regarding care providers. However, despite the extensive investment, take-up of choice and use of quality information to inform decisions by users and patients has been slow to materialize. This can be linked to a range of barriers, including a lack of user-friendly quality information.

Public reporting of quality information often has other aims. These include encouraging providers to improve the quality of their services, increasing provider accountability, identifying failures, and providing the public with reassurance over quality of care. However, this policy summary focuses on its use as a mechanism to facilitate choice of provider by consumers or other purchasers of care.

### Policy issue

'Public reporting' is used as a term to describe the publication of information and reports on the quality of care of health and long-term care providers for use by patients and users. This is frequently made available on the Internet, and in brochures and other paper-based materials.

The uptake and use of quality information by patients and users, and other purchasers of care, is challenging because rational decision-making is innately difficult for people. Comparing care providers can also require high levels of numeracy and literacy and an understanding of what constitutes high-quality care. Many patients and users instead choose providers based on their personal experiences and those of their friends and families. Many others also rely on the recommendations of professionals.

Most research on public reporting focuses on health care rather than long-term care, as well as on a small number of countries, namely the Netherlands, the United Kingdom and the United States.

### Developing and designing a public reporting system

Quality has many different dimensions. The different goals of health and long-term care mean that these dimensions might be given different priorities in different sectors. For example, a common goal in long-term care can



be to maintain the independence of a user with a long-term condition or disability. Judging the quality of care will encompass all aspects of quality of life. While quality of life is increasingly used to also measure health-care interventions, there are often more immediate outcomes associated with restoring good health.

Targets or standards can be attached to indicators to encourage their collection and reporting, but there is also concern that they can trigger adverse provider behaviour.

An additional challenge for data presentation and analysis is the necessity to adjust quality indicators to reflect the different factors that are likely to affect the outcomes of services. Risk-adjustment techniques can be used to level the playing field for providers by adjusting for certain characteristics of patients and users. Case-mix adjustment can also be used, for example, to reflect the different services and specialties of care providers.

The information used to create quality indicators is commonly drawn from three broad sources: administrative, surveillance and bespoke data. Ratings and reviews generated directly by patients and users represent a newer phenomenon in quality reporting.

Most published indicators are accompanied by visual aids. Some examples used in long-term care include: a combination of traffic light colours, ticks, crosses (England); coloured bars for indicators and scores out of five (Finland); and star ratings (the Netherlands).

### **Policy implications**

In order to increase the use of publicly reported quality information for user choice, some of the key considerations for a successful strategy should include:

- displaying relevant information;
- designing indicators to match the skill levels of users;
- improving presentation methods;
- educating patients and users about quality in health and long-term care and increasing patient and user awareness of public reporting;
- enlisting professionals in supporting public reporting systems; and
- designing decision aids and encouraging their use.

In addition, when considering how to implement public reporting, information providers should consider such factors as:

- financial and human resource requirements;
- whether reporting will be mandatory or voluntary for care providers;
- whether data might be generated as part of regulatory inspections or clinical audits (or similar); and
- processes for addressing poor performance in data provision.

### **Conclusions**

Successful public reporting strategies to facilitate choice require the support of professionals, patients and users, who should collectively agree which indicators are to be measured and how success of the reports will be defined and measured.

## 1 Context

The introduction of choice in health and long-term care partly stems from a view that individuals should have more influence and control over decisions affecting their treatment and care, and for long-term care, over their daily lives. Some areas where patient and service user ('user') choice policies have been applied include choice of insurer, treatment, provider in primary and secondary health care, personal health budget, personal budget (such as direct payment), or residential care accommodation. To support these policies, particularly, choice of provider policies, there has been a substantial increase in the availability of public reports on the quality and performance of health and long-term care providers.<sup>2</sup> The development and design of these public reports are the focus of this policy summary.

### 1.1 Choice policies: supportive factors, benefits and implications

Choice in public services such as health care and long-term care has been advocated on the basis of its instrumental and intrinsic value for the public. Le Grand (2007) has argued that choice is fundamental in bringing about, together with competition, improved outcomes and responsiveness of care providers and increased efficiency. Choice policies can be used to improve access to providers or services, to encourage new entrants, and to send signals to care providers to improve their quality, efficiency and performance to attract and retain patients and users (Baxter, Glendinning & Greener, 2011). However, choice policies can also have an intrinsic value for patients and users, as people may derive a sense of control and autonomy and enhanced independence from being able to exert choice (Dowding & John, 2009). For patient and user choice to live up to its potential, however, a number of conditions need to be in place.

For choice of health and long-term care provider policies to function, a market of care providers should exist – i.e. there should be more than one care provider available per service, and the available providers should be perceived by patients and users as reasonable alternatives. Patients and users tend to only consider reasonable alternatives as those that are relatively close to their homes and do

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<sup>1</sup> In this summary, the term 'patient' describes people who use or are potential users of health-care services. The term 'service user' or 'user' describes people who use or are potential users of long-term care services.

<sup>2</sup> In this summary, the term 'health-care provider' is used to describe any person or institution providing health care. This includes doctors and other clinicians based in different settings, and organizations such as primary care practices and hospitals (providing secondary or tertiary specialist care). The term 'long-term care provider' refers to an individual care worker or organization of care workers that provide personal care and nursing care to people, in their homes, in the community or in residential care facilities. Informal carers are unpaid individuals who are often family members or friends.

not require longer than reasonable waiting times, as well as care providers that they can financially afford to attend for treatment.<sup>3</sup> However, patients and users value different aspects of care, and their personal circumstances and previous experiences will drive their choices (Dixon et al., 2010).

Good knowledge of the system is important in facilitating choice. In many systems, gatekeepers or insurers will also play an important role in outlining to patients the types of choices that are available to them (Marshall & McLoughlin, 2010). Allowing patients and users adequate time frames to choose can also aid in facilitating choice. The length of an ideal time frame is unknown, but will vary among patients and users and the situation. Finally, providing patients and users with access to timely and accurate information on the quality of providers will be crucial in enabling them to compare differences across providers (Victoor et al., 2012). Information is essential to assist users and patients to make a decision that best meets their needs and preferences, and also to prevent people from inadvertently making decisions that might adversely affect their health and well-being (Rice, 2001).

In many countries, patients and users are empowered to make choices and appear to be broadly supportive of choice policies, but this has not always been the case. For example, in the United Kingdom, when choice of provider policies was first introduced in the early 1990s, general practitioners were the ones who actually made choices on behalf of their patients (Le Grand, Mays & Mulligan, 1998) and care managers on behalf of users of long-term care. Many years later, around 50% of people surveyed are making choices about public services like schools, hospitals, general practices and long-term care providers, and around 80% of people surveyed think that having choice of health and long-term care providers is important (Boyle, 2013). However, there is mixed evidence as to what extent the 'take-up of choice' is influenced by age, gender, family obligations and socio-economic status. One study (Dixon et al., 2010) found that older patients (aged 51 years or older) and more frequent users of health services are more aware of choice and more likely to travel to their non-local hospital (a proxy measure for exercising choice) than younger patients (aged 16–35 years) or less frequent users. In a 2010 national survey carried out in England, awareness of the opportunity to ask for choice of hospital was lowest among black and ethnic minorities (Department of Health, 2010).

When implementing choice of provider policies, policy makers are attempting to:

- change referral patterns, both to and within organizations, as patients and users begin to exercise choice over who they receive care from;

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<sup>3</sup> Another important precondition for choice is that patients or users have sufficient funding to allow them the capacity to exert choice. As this relates more closely to issues surrounding entitlements and access to care, it is not directly covered in this summary.

- better match treatments and care to the preferences of patients and users, as they become more involved in decisions about their care;
- improve the quality of services and patient and user experience in the medium term as providers respond to the choices patients make, leading to improved outcomes, convenience and experience for patients and users; and
- improve the spending decisions in the medium- to longer-term, as purchasers respond to signals from patients and users to change in usage patterns (Department of Health, 2013).

## 1.2 Evidence to invest in public reporting: mixed results so far

Widespread use of quality information and take-up of choice by patients and users have been slow to materialize, despite the extensive investment in reporting systems by governments and private sector organizations, both for-profit and not-for-profit. Advances in the volume and nature of reporting have in part been made possible by improved technology and capacity for data collection and storage.

Even so, a number of in-depth reviews of research on public reporting suggest that quality information is rarely used by patients to make choices (Marshall et al., 2000; Fung et al., 2008; Shekelle et al., 2008; Ketelaar et al., 2011; Victor et al., 2012).

There was some limited evidence of a small increase in patient volumes following the publication of the outcomes of cardiac surgery in New York in the early 1990s; however, a number of other studies have yet to find an effect (Hannan et al., 2012). In the Netherlands, a survey of 1404 former hospital patients showed that only 3% had used the Internet to help with making their choice (Berendsen et al., 2010). Likewise, in England, only 4% of people asked had looked at quality information on the government-run National Health Service (NHS) Choices website when choosing a hospital (Dixon et al., 2010). In Sweden, the most common source of information about primary care doctors was the provider themselves, with only 3% turning to the Internet for information (Glenngård, Anell & Beckman, 2011). Respondents to market research in the United States on behalf of Healthgrades Inc., a provider of quality reports, were likely to spend more time researching the quality of a car or fridge before purchasing than researching a hospital before having a surgical procedure (Harris Interactive, 2012). Even high-profile investigations and publication of reports and newspaper coverage of problems with infections in three hospitals in England did not prompt patients to switch hospitals. There were declines in inpatient admissions and outpatient visits in only one of the three hospitals examined, and these changes disappeared six months of the initial coverage (Laverty et al., 2012).

In health care, the main exception to these findings is that reporting has been used to choose health insurers in the United States (Dafny & Dranove, 2008; Reid et al., 2013). Recent market research on the use of the Medicare star rating system showed that about one-quarter of older people asked knew how to find information about the rating system. Even here, knowledge of the star rating system was quite patchy, and less than one-third of those who knew about the system were using it to make decisions about their own plans (Harris Interactive, 2011).

The findings in long-term care are similar. There is low awareness of quality reports, and they are rarely consulted by users and their friends or family to make decisions. In 2009, the Commission for Social Care Inspection (CSCI) commissioned market research into the use of its star ratings for providers. It revealed that while one-fifth of relatives said they had looked at the ratings when choosing a residential care provider, only 1% of residents said they had used them. The most important sources of information and advice were friends and relatives, social services staff, care home staff, and feedback from the existing residents (CSCI, 2009). In the United States, while 12% of the family members of residents had used the reporting website to obtain information on nursing homes, it was not clear whether this was simply to access address and contact information (Castle, 2009). A study examining whether reporting had an effect on choice showed that the impact was minimal (Werner et al., 2012).

Despite this, there is some evidence that public reporting encourages providers to improve in the belief that they will attract more business if they do. A study of the effect of public reporting on nursing homes in the United States showed that homes improved their performance on certain measures (Konetzka & Werner, 2010; Werner et al., 2012), particularly in more competitive markets (Grabowski & Town, 2011). This response was more pronounced in lower-quality providers (Clement, Bazzoli & Zhao, 2012). There is also evidence that publishing reports has encouraged hospitals to improve specific aspects of clinical quality (Shekelle et al., 2008).

Even though patients do not tend to seek out performance information (Marshall & McLoughlin, 2010), both patients and users have expressed a view that quality information should be widely available to ensure the accountability of providers, to increase transparency in the spending of public money, and to support them in selecting a care provider. In one study in England, participants reported that as taxpayers they believed that they were entitled to access the performance information of publicly funded hospitals and that monitoring would improve accountability (Magee, Davis & Coulter, 2003). Likewise, in the United States, 96% of market survey respondents said they somewhat or strongly agreed that they had the 'right to information that might be available

to help them select a physician or a hospital', but a very low percentage of respondents knew where to access this information (Harris Interactive, 2012).

There are a number of issues that might explain why the use of publicly reported information by users and patients is so low. These include:

- a lack of awareness of a right to choose a provider;
- a lack of genuine choice of provider (e.g. catchment areas) or a perceived lack of choice of providers (e.g. distance to alternative providers);
- a lack of capacity to exert choice (e.g. budgetary constraints);
- a lack of awareness and understanding of variations in quality between providers;
- a lack of personal preferences for particular aspects of reported quality in providers;
- a lack of awareness of the information available to guide decisions;
- difficulty in navigating the wide range of websites and information that report quality information;
- difficulty in understanding reported quality information;
- difficulty in accessing the Internet (where quality information is often published);
- high 'cost of regret' involving decisions with substantial consequences in the future (e.g. elective surgery) where patients or users might feel more comfortable in delegating choice;
- a preference for anecdotal evidence from family and friends over empirical evidence; and
- feeling as if the primary care provider, or other professional offering a referral, would prefer to make the choice without consulting the patient or user.

### **1.3 Moving forward with public reporting**

The focus of this policy summary is to review the literature on the measurement and reporting of quality information, provide insights to support future investment in public reporting mechanisms, and increase the use of reporting by patients and users. The summary synthesizes evidence from a variety of public reporting systems so that policymakers, care providers and information developers can make the best use of their resources to create reports that will be used and valued by patients and users when choosing health or long-term care providers. The summary pays particular attention to the barriers to creating

and implementing public reporting systems that aim to improve the decision-making process for patients and users choosing care providers. Overall, the summary covers three areas:

- *Policy issue:* A review of major public reporting initiatives and the types of quality information they present, as well as a discussion on the reasons why decision-making is challenging and how patients and users access quality information.
- *Developing and designing a public reporting system:* A description of how data can be collected and reported, and who should be responsible for data collection, governance and presentation.
- *Policy implications:* A discussion on how the use of public reporting to facilitate choice can be increased through public awareness and education, professional participation in public reporting initiatives, provision of decision-making support (through decision aids), and most fundamentally, a well-planned strategy.

## 2 Policy issue

### 2.1 What is public reporting of quality data?

In this policy summary, the term ‘public reporting’ is used to describe the publication of information and reports on the quality of care of health and long-term care providers (‘providers’) for use by patients and users. This is frequently made available on the Internet, but is also delivered on paper and in other formats.

In addition to aiding patients and users to make informed choices, public reporting systems or schemes targeted at different audiences, such as purchasers, regulators and providers may also be used to achieve the following (Longo et al., 1997; Marshall et al., 2000; Nuffield Trust, 2013):

- *Accountability:* Increase accountability of providers to the public, patients, users, purchasers, funders and governments.
- *Reassurance:* Provide the public with reassurance as to the quality of care of health and long-term care systems.
- *Performance:* Help improve the performance of providers by:
  - helping to establish benchmarking (thus encouraging poor performers to ‘catch up’ with other providers);
  - by creating concern among strong performers about losing their ‘good’ reputation; and
  - by increasing responsiveness of providers overall.



- *Failures*: Identify and prevent failures in quality of care by encouraging providers to focus on quality problems.
- *Purchasing*: Assist institutional purchasers of care, such as health insurers or national and local governments in developing quality-focused contracts and/or payment systems.
- *Efficiency*: Promote more efficiency in purchasing and the provision of services across health and long-term care systems.
- *Marketing tools*: Allow providers to use results as marketing tools to attract patients and users.

The publication of information on the quality of health and long-term care providers has gathered pace over the past three decades. Many high-income countries now have a proliferation of public reporting websites that provide information on health and long-term care providers – some targeted at purchasers, regulators and providers, while others are developed for the public. The content of websites varies, but reporting of quality information exists at local, regional and national levels, and is operated by different stakeholders including governments, insurers and commercial organizations. The primary purpose of some systems is to provide information on one aspect of performance, most commonly waiting times (e.g. Ventetider in Denmark and Våntetider i vården in Sweden), while other systems are more complex and report detailed clinical and patient experience indicators (e.g. NHS Choices in England and KiesBeter ('Choose better') in the Netherlands). In some insurance-funded systems, the reporting of some data is mandatory (e.g. hospital admissions in Germany) and data are used collectively at the national level and again at the regional or insurance level. In more fragmented systems like the United States, additional initiatives contribute to an already large quantity of administrative and quality data. This makes the use of reporting more complex for patients and users (Marshall et al., 2003). There are, additionally, significant differences between public reporting of health care versus long-term care data.

## 2.2 How is quality defined in health and long-term care?

Health and long-term care are often organized and delivered through separate systems. Health care involves clinically focused care that aims to improve health status, while long-term care is commonly understood as care that brings together a range of services for persons who are dependent on help with basic activities of daily living over an extended period of time. The Organisation for Economic Co-operation and Development (OECD, 2005) reported that activities of daily living can include bathing, dressing, eating, getting in and out of bed, moving around and using the bathroom. Long-term care can include services such as help with administrative tasks or cleaning or shopping, and can also include basic

medical services, nursing care, prevention, rehabilitation or palliative care. The goal of long-term care services is often to assist people to manage their condition and maintain their physical or functional status, or to increase their control over basic aspects of their lives – rather than result in an improvement in health status.

Quality can be understood in diverse ways, using different terms and labels – all of which tend to differ based on the disciplinary paradigm being used. The definitions are also constantly evolving, making it difficult to define consistent frameworks for measurement (Legido-Quigley et al., 2008). Initially, only professionals and researchers were viewed as able to define and assess quality; however, there is now a growing recognition that the preferences and views of patients, users and the public are also very important (Shaw & Kalo, 2002). Despite some disagreement on other aspects, quality (or quality of care) in health and long-term care is commonly understood to include the aspects of patient or user safety, effectiveness and experience of treatment.

Within long-term care, the quality of the process of care-giving is also essential in understanding the quality of the service. However, the goals of long-term care tend to differ from those of health care. Objectives of long-term care can be to bring about improvement in the health status or independence of users, for example, in supporting users through rehabilitation. However, much more often, long-term care is provided for the purpose of maintenance or prevention, and is intended to compensate users for lost functional ability (Malley & Fernández, 2010). The principal goal for services therefore is to maintain or improve the quality of life of users of long-term care and this is increasingly a focus of measurement (Kane, 2003). Focusing on quality of life incorporates the concept of care being ‘coproduced’, which recognizes that quality of life is dependent not only on the actions of the formal caregiver, but also on the involvement and response of the user, as well as their families, friends and other informal carers (Malley & Fernández, 2010). Many aspects of quality of life are measured and published in the Netherlands (at the provider level) and the United Kingdom (at the regional level). In England, one of the main tools used to measure quality of life is the Adult Social Care Outcomes Toolkit (Netten et al., 2009). The toolkit includes eight domains of quality of life: control over daily life, personal cleanliness and comfort of accommodation, and dignity. Examples of quality frameworks across both health and long-term care systems are shown in Table 1.

The mapping of aspects or domains of quality is helpful for governments, policymakers, care providers, purchasers and researchers who develop and use indicators. Yet, there is a great deal of scope for public education regarding quality. Research has found that people experience significant difficulties in assessing quality because:

**Table 1: Aspects of quality in health and long-term care**

|                         | Health           |                             |             | Long-term care   |                                 |
|-------------------------|------------------|-----------------------------|-------------|--|---------------------------------|
|                         | Donabedian, 1988 | Institute of Medicine, 2001 | Darzi, 2008 | European Centre for Social Welfare Policy and Research, 2010 | OECD/ European Commission, 2013 |
| Effectiveness           | ✓                | ✓                           | ✓           | ✓  | ✓                               |
| Safety                  | ✓                | ✓                           | ✓           | ✓  | ✓                               |
| Efficiency              | ✓                | ✓                           |             | ✓  |                                 |
| Continuity              |                  |                             |             | ✓  | ✓                               |
| Equity                  | ✓                | ✓                           |             |  |                                 |
| Patient/user experience |                  |                             | ✓           | ✓  |                                 |
| Responsiveness          |                  | ✓                           |             |  | ✓                               |
| Timeliness              |                  | ✓                           |             | ✓  |                                 |
| Access                  | ✓                |                             |             |  |                                 |
| Appropriateness         | ✓                |                             |             |  |                                 |
| Health improvement      | ✓                |                             |             |  |                                 |
| Quality of life         |                  |                             |             | ✓  |                                 |

- Quality spans a range of aspects (i.e. it is multidimensional) and some of its different aspects may be in conflict with one another (for example, attempts to minimize the physical risks to patients living with dementia might have a detrimental effect on mental and emotional well-being).
- Quality may not be immediately visible and the outcomes of care may take time to become apparent (e.g. patients may experience ongoing pain and inflammation following surgery, but will eventually experience improved function and quality of life).
- There may be different levels of quality within organizations, for example, between different teams and individual professionals. The quality of care can also vary from day to day, as it is essentially a 'performance' each time.
- Understandings and interpretations of quality may be subjective, as these are sometimes based on individuals' experiences, care needs and preferences. This can make it complex to assess the benefits and effects of care, and for this reason determining quality should involve gathering the

views of different stakeholders, including patients or users, their families and friends, professionals and organizations, and potentially other third parties.

- Assessing benefit (and effect) is complicated by the coproduction and co-consumption of care, where users have an impact on the way in which care is provided and experienced (particularly in long-term care), and the relationship built between patient or user and carer may obscure objective assessments.
- There are technical or clinical aspects of quality that require detailed knowledge or expertise to assess, such as with complex interventions in medical or nursing care. In long-term care, this applies less to aspects of personal care where users are often the best judges of, for example, whether they were assisted with sensitivity and respect, for example.
- Finally, by the presence of caring externalities, where care can provide both immediate and far-reaching benefits (and 'disbenefits') for both users and their carers or relatives.

*Sources:* Malley & Fernández, 2010; Nuffield Trust, 2013.

Overall, these challenges to understanding quality as a concept highlight the need to communicate quality information in a user-friendly and understandable way.

### **2.3 What is public reporting in health care?**

The first high-profile public reporting initiatives in health were launched in the United States, namely the New York State and Pennsylvania's Cardiac Reporting Systems in 1989 and 1992, respectively, and the publication of mortality rates by the Health Care Financing Administration in 1986 (now the Centers for Medicare & Medicaid Services) (Schneider & Epstein, 1998; Shahian et al., 2011). Much of the research conducted into the effectiveness of public reporting in health to date has been focused on United States-based report card systems and websites (Shekelle, 2009); however, public reporting systems have been set up in Australia, Belgium, Denmark, Finland, France, Germany, Norway and Sweden, as well as other high-income countries. Public reporting in the Netherlands and the United Kingdom, both countries that have relatively advanced public reporting systems compared to the rest of Europe, has been the focus of a number of academic studies (Shekelle et al., 2008; Konetzka & Werner, 2010; Victoor et al., 2012; Nuffield Trust, 2013), while other European public reporting systems have been the subject of far fewer studies (Cacace et al., 2011; Victoor et al., 2012). As a result of the majority of research having been concentrated in a small number of countries, a significant number of examples in this policy summary are drawn from the Netherlands, the United Kingdom and the United States.

Where public reporting exists, there are often many initiatives in place, often serving slightly different purposes. Systems can include those initiatives narrow in scope (e.g. to inform waiting times only; see, for example, Ventetider in Denmark), or broad in scope (e.g. systems that give detailed information on provider quality; see, for example, KiesBeter in the Netherlands). Other extensive public reporting initiatives for health measures exist in Denmark and Germany (Cacace et al., 2011).

Denmark hosts a patient web portal with built-in quality information, Sundhed, which was developed by the Danish Regions in 2001 to provide a single point of access to health services and information. Patients can use the web portal to access quality of care data delivered by hospitals (for selected conditions) from a set of national indicators, as well as book appointments with their general practitioner, renew prescriptions and access their medication data (Cacace et al., 2011). More detailed comparative information has also been available since 2006 on Sundhedskvalitet, including a system of star ratings of a series of quality indicators and a mandatory system for reporting adverse medical events (Cacace et al., 2011).

The Weisse Liste ('White List') in Germany was developed in 2008 by a private foundation in collaboration with patient and consumer organizations. It aims to increase transparency of provider performance and to be used by patients, with the aid of doctors, to choose providers. A range of structural, process and outcome data are collected by various information systems operated by a range of social insurance funds, such as AOK-Gesundheitsnavigator, and private hospitals' initiatives like Qualitätskliniken. Outcome scores – e.g. in-hospital death following coronary artery bypass graft (CABG) – are accompanied by a traffic light system telling patients whether providers' outcomes are within or outside expected limits of proximity to the national average. Clinical data is complemented by patient experience data collected through a patient questionnaire specifically developed for the system, the Patient Experience Questionnaire; however, this is not mandatory and the number of hospitals using the questionnaire is not documented (Cacace et al., 2011).

## **2.4 What is public reporting in long-term care?**

Most of the literature available on the use of publicly reported data on care home quality is focused on the United States, and particularly on the Medicare.gov Nursing Home Compare website (available online since 2002), operated by the government through the Centers for Medicare & Medicaid Services. Much of the information reported is based on the Resident Assessment Instrument (RAI) measures developed in the late 1980s (Capitman et al., 2005). The website includes three other areas of measurement at the long-term care

facility level: a rating based on government health inspections, a rating on the level of staffing, and selected commentary on the characteristics of the facility (Centers for Medicare & Medicaid Services, 2011). Since the 1990s, the RAI has been promoted internationally through interRAI, an international collaboration with the aim of improving quality of care with versions of the RAI developed for different care systems, either as a mandatory government initiative or on a voluntary basis in countries including Canada, Finland and Switzerland (InterRAI, 2012). It started as a clinical care planning tool, but it is now being used to monitor and report the quality of care (as in Finland on the Palveluvaaka website) and set payment levels (Mor et al., 2009).

In the Netherlands, information on the performance of residential and home care providers is published on the KiesBeter website by the National Institute for Public Health and the Environment. The website reports on indicators from the Quality Framework for Responsible Care and includes patient experience indicators, as measured by the Consumer Quality Index (CQI), a tool for measuring patient and user experience created in 2006 (Delnoij, Rademakers & Groenewegen, 2010). KiesBeter also includes performance indicators reported by providers, and quality of care information such as the number of falls, prevalence of pressure ulcers and medication errors (Quality Framework for Responsible Residential and Domiciliary Care (VV&T) Steering Committee, 2008).

In England, since 2010 the information available to potential users of care homes has centred on the inspection reports of the Care Quality Commission (CQC), available via its website ([www.cqc.org.uk](http://www.cqc.org.uk)). Between 2008 and 2010, a central feature of this website was a star rating, which was arrived at as a subjective marking by a CQC inspector. The CQC is currently working towards a rating system to replace this (CQC, 2013). In addition, provider profiles are now published on the NHS Choices website, with a range of information, including whether the provider participates in specific quality schemes.

In Germany, similar to England, information is gathered through yearly inspections of the Medical Service of Sickness Funds in residential and home care providers, and is published on a dedicated website ([www.pflegelotse.de](http://www.pflegelotse.de)) and displayed in care homes. The website includes information on nursing and medical care, care of residents with dementia and the results of a regular user survey (Büscher, 2010).

As in health care, much of the research in reporting in long-term care has focused on the systems in the Netherlands, the United Kingdom and the United States, and more on residential than on home care.

## 2.5 Why is it difficult to choose health and long-term care providers?

### *Rational decision-making is challenging*

The provision of comparative quality information should, in theory, enable patients and users to seek out the data they need to make trade-offs between different features of care, and then between different providers. For this to constitute a rational choice, however, the patient or user has to identify their own needs and preferences for different aspects of quality, to understand that there is variation in quality between providers, to believe that differences between providers can be revealed through information, and finally to use quality information to choose a provider that benefit them most (Marshall & McLoughlin, 2010). These issues are not specific to health and long-term care; other examples could include the choice of school or saving plan (Thaler & Sunstein, 2008). Yet overall, when it comes to health care, patients feel less able to make decisions due to knowledge barriers that they do not experience with schools or saving plans (Marshall & McLoughlin, 2010). Decisions made by patients and users are also often complex, have to be made under time pressure, and often involve significant and possibly irreversible implications for the future (such as moving to a care home).

Researchers have many understandings of how people make decisions. Some researchers suggest that people typically use either fast, uncontrolled and unconscious decision-making processes, or a rule-based, conscious, deliberative and controlled approach to choose the best quality care option (Boyce et al., 2010). The former approach is sometimes called automatic-decision making and involves people relying on their intuition or simply being satisfied with confirming their prior beliefs rather than searching for the best quality option (Victoor et al., 2012). Automatic-decision making often involves the use of 'heuristics', which are shortcuts that reduce the complexity of processing and evaluating information. A common example would be weighing pros and cons to make a decision (Kahneman, Slovic & Tversky, 1982). Other researchers view decision-making as a social, rather than cognitive process, which involves people drawing on past experiences and being influenced by their expectations and fears, as well as by the views of trusted others (instead of involving rational processes such as the weighing of pros and cons) (Gooding, 1995). When using social processes to make decisions, patients and users consider varying influences, such as past experience and views of others, and can appear to make irrational trade-offs. Yet researchers suggest that they are, in fact, applying a logic that makes sense to them. An example might be a person not choosing a highly rated hospital only because their grandmother died there (Marshall & McLoughlin, 2010).

While all forms of decision-making processes could end in negative results and consequences, making decisions quickly is seen as particularly problematic. This is because people do not tend to have fixed preferences of what is important to them and their opinions can change rapidly. This means they can be easily influenced by the way information is presented (Boyce et al., 2010). In contrast, switching after making a decision happens much less frequently (Moser et al., 2010). For example, once people have chosen a provider of health insurance, it is rare for them to switch even if their circumstances change. They seldom change providers even if their benefits packages are reduced or premiums are increased. This feature of the decision-making process is often referred to as the status quo bias (Samuelson & Zeckhauser, 1988). Therefore, strategic and purposeful presentation of information is very important, an issue discussed in the 'Developing and designing a public reporting system' and 'Policy implications' sections of this summary.

### ***The public has different levels of comprehension to interpret quality information***

High levels of numeracy are needed to process many of the statistics, charts and diagrams used within public reporting of quality information. Hospital standardized mortality ratios (HSMRs), for example, are so complex that they require lengthy and complicated explanations of how indicators have been derived and how to interpret their results.<sup>4</sup> Online health information in general has been found to be overly complex, with almost no websites judged to be easy to read when considered against readability guidelines (Kalk & Pothier, 2008; Fitzsimmons et al., 2010). The lack of consideration for the different skill levels of users and patients is problematic. Across OECD countries it is estimated that between 4.9 and 27.7% of adults are proficient at only the lowest levels of literacy and therefore will struggle to interpret even the most straightforward information (OECD, 2013). Numeracy is an even more important predictor of the ability to comprehend comparative health information and statistics (Hibbard et al., 2007), and between 8.1 and 31.7% of adults from the same OECD sample are proficient at only the lowest levels in numeracy (OECD, 2013). In a United States-based study exploring numeracy, three-quarters of a nationally representative sample was unable to convert 1 in 1000 to a percentage correctly. Even when doctors were asked to perform the same calculation, only three in four could do so (Gigerenzer et al., 2007).

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<sup>4</sup> HSMRS are used in a number of countries, including Australia, Canada, England and New Zealand. The HSMR web pages of the Canadian Institute for Health Information provide information about HSMRs and on how they are calculated (<http://www.cihi.ca/cihi-ext-portal/internet/en/tabbedcontent/health+system+performance+quality+of+care+and+outcomes/hsmr/cihi022025>, accessed 16 July 2014).



Anecdotal information from other patients and users can be more appealing, and more easily understandable, and this has led to an increasing focus on providing online ratings and reviews to assist with making choices. For example, a patient's personal account of surgery will clearly reveal that the patient survived, and will also likely reveal whether the patient improved, which is easier to relate to and understand than mortality rates or surgical measures. Personal accounts have been shown to have a disproportionate impact on choices, despite the fact that a personal account only represents the view of one person. When people were asked in an experiment whether they would opt for bypass surgery or balloon angioplasty to treat angina, patient testimonials were found to have a much greater effect on the decision than statistical information on recovery and effectiveness rates (Ubel, Jepson & Baron, 2001; Fagerlin, Wang & Ubel, 2005).

It is important to recognize that some people may be particularly disadvantaged with regard to seeking out quality information and making sense of it. Older adults, for example, were asked in a study to process information and make decisions about health plans alongside younger adults. The older adult participants were found overall to have had more difficulties with comprehension of quality data than younger adults, and were more inconsistent in their decisions (Finucane et al., 2002). The researchers observed more use of shortcuts and heuristics among older adults, compared with a greater use of detailed analysis by younger participants and concluded that providing older adults with large amounts of information was unlikely to help them in making better decisions. Similarly, in another study, older adults tended to look up less information and take longer to process it, in addition to using simpler, less cognitively demanding strategies than younger adults (Mata, Schooler & Rieskamp, 2007).

Older adults are also disadvantaged because they have the lowest rates of access to and use of the Internet relative to younger people. While more than nine out of 10 young people aged 16–24 years are regular users of the Internet, the figure is only four out of 10 for people aged 55–74 years (Seybert, 2012). There is speculation that this will change in the future as today's younger adults who are regular Internet users reach old age, and as the numbers of older people who use the Internet continue to grow, which will inevitably mean increased searching for health information (Wagner, Hassanein & Head, 2010). However, there are also issues associated with reaching older age, including physical impairment (e.g. visual impairment or arthritis) and cognitive impairment (e.g. dementia) which may continue to cause difficulties with accessing technology (Redish & Chisnell, 2004).

Education level and socio-economic status have also been demonstrated to have an effect on patients' and users' searching habits when looking for quality

information. In a study on how adults choose medical specialists and hospitals in the Netherlands, quality information was used more commonly by those with higher education levels (Rademakers et al., 2014). Researchers in the United Kingdom also found that while 50% of those in higher socio-economic status groups were likely or very likely to look for general health information on the Internet, the figure was only 22% of those from lower socio-economic groups (Ellins & Coulter, 2005).

It is important, however, not to make broad assumptions about the preferences of groups of patients and users. Where patients were offered choice of hospital in England, levels of awareness of the legal right to choose were similar across younger and older patients, and also between different socio-economic groups and levels of education (Department of Health, 2010; Dixon et al., 2010). Choice was particularly valued by lower socio-economic groups and older people where patient advisors helped them to choose an alternative hospital to avoid excessive waiting times. In contrast, a review of 118 studies concluded that choice, of either a primary care doctor or hospital, is more likely to be exercised by patients who are more highly educated, younger, have higher incomes, and who do not have satisfactory existing relationships with their providers (Victoor et al., 2012).

***Some quality information currently available is confusing or does not meet the needs of patients and users***

There are many examples of public reporting formats that are ill-suited to the needs of the public and require specialist knowledge in order to be helpful (Cacace et al., 2011). Researchers consistently find that when people are exposed to public reports on quality of care providers, they are easily overwhelmed by the quantity of information provided (Boyce et al., 2010). Exacerbating this is the increase in the number and types of producers of publicly reported quality information (including commercial providers of information, health and long-term care providers, governments and insurers). This has led to a wide range of websites, often presenting the same data differently, which in turn leads to a lack of confidence among the public (Victoor et al., 2012). Due to the multiple ways in which suppliers of information define particular aspects of quality, develop indicators (using different sets of data as numerators and denominators), measure indicators at different time points, and include different patient populations, it is no surprise that the 'top performing' care providers can vary across different websites (Rothberg et al., 2008; see Box 1). Unfortunately, these conflicts can confuse patients and users and may act as an added disincentive to using quality information to make choices (Leonardi, McGory & Ko, 2007; Rothberg et al., 2008).

**Box 1: Conflicting websites make hospital choice difficult**

Rothberg and colleagues (2008) examined how the five leading health-care rating services in the United States ranked large hospitals (those with 250+ beds) in a metropolitan area. Rating services included:

- Healthgrades Inc.
- Leapfrog Group
- Hospital Compare
- Massachusetts Healthcare Quality and Cost
- U.S. News & World Report

The hospitals ranked were all within a 30-mile radius of Boston, Massachusetts. The purpose of the geographical limit was to ensure that all hospitals could be reached within 1 hour, and therefore better reflect the reality of how patients exercise choice of provider policies. Researchers found that for any given diagnosis there was little overall agreement among rating services with regard to quality. Some of the nine hospitals ranked first or second by one system were often ranked seventh or eighth by another.

In another, similar study, three hospital ranking websites (labelled below as A, B and C) found completely conflicting information with regard to a surgical procedure (colectomy) at four hospitals in one metropolitan area in the United States. Hospital 2 was ranked best by websites B and C, but worst by website A. Hospital 4 was also ranked worst by website A, but best by website C (Leonardi, McGory & Ko, 2007).

| Hospital | Website A    | Website B    | Website C |
|----------|--------------|--------------|-----------|
| 1        | Best         | Average      | Best      |
| 2        | Worst        | Best         | Best      |
| 3        | Not reported | Worst        | Worst     |
| 4        | Worst        | Not reported | Best      |

There is also evidence that some quality information is not helpful or relevant. Several participants in a recent study in the Netherlands reported that information was not sufficiently specific to suit their needs as patients and users (Victoor et al., 2012). Researchers have argued that less information can often be more helpful than extensive amounts of information (Peters et al., 2007a; Peters et al., 2007b; Boyce et al., 2010). Other common challenges with quality reporting are finding and understanding the information (Boyle, 2013).

## 2.6 How do patients and users currently choose their health and long-term care providers?

### *Based on particular aspects of services*

Patients and users select providers based on a wide range of characteristics of the service. Some decisions are informed by quality of care or outcomes, but the literature suggests that most decisions are linked to non-clinical factors, such as the location of the provider. Preferences for characteristics vary across patient and user groups. They also vary when choosing different types of providers, such as hospitals, primary care doctors, home care or care home providers as shown in Table 2.

### *Choosing a hospital*

In England, the provision of quality information has featured in a number of government policies in recent years. This is in part supported by studies where participants say that they would be influenced to choose providers based on the quality of care, cleanliness (which is often closely aligned with hospital infections in patients' minds), the standards of facilities (e.g. the age and appearance of buildings), hospital reputation, and consultants' special interests, their clinical experience and their success rates (Magee, Davis & Coulter, 2003; Dixon et al., 2010; Laverty, Dixon & Millett, 2013). However, observations of actual choices of hospital demonstrate that decisions are more often based on the proximity of the hospital to workplaces or homes, personal experiences of the hospital, or waiting times for appointments (Dixon et al., 2010). This may be because people have reported high levels of difficulty and indecision in making trade-offs between aspects of quality like safety and patient experience versus convenience factors, such as location, when asked to choose a hospital (Boyce et al., 2010). Yet, Fasolo and colleagues (2010) found that once people understand the meaning of quality indicators, they tend to value them more. Schwartz and colleagues identified similar findings in their US-based study of individuals aged 65 years or more who had undergone recent surgery. They found that only 11% of respondents had heard of a measure called minimum surgery volume standards. However, after researchers explained this concept, 82% of respondents said they would recommend their friend go to a different hospital if their chosen hospital did not meet the appropriate standard (Schwartz, Woloshin & Birkmeyer, 2005).

### *Choosing a primary care doctor*

Preferences within primary care are similar across European countries, with any variations reflecting the different structures of health systems (e.g. prevalence of single-handed primary care doctor practices) and the roles of primary care doctors (e.g. as gatekeepers). In one study involving 3540 patients across eight countries – including Denmark, Germany, Israel, the Netherlands, Norway, Portugal, Sweden and the United Kingdom – patients most valued:

- getting enough time during the consultation;
- quick access to services in case of emergencies;
- confidentiality of their information;
- doctors telling them all they want to know about their illness;
- doctors making patients feel free to talk about their problems;
- doctors attending courses regularly; and
- clinics offering preventive services (Grol et al., 1999).

An additional study that asked participants to choose a primary care doctor based on hypothetical report cards found that participants used both technical and interpersonal quality ratings to select a doctor. A majority favoured doctors with high ratings on technical quality of care, but not to the exclusion of interpersonal aspects of quality such as communication (Fung et al., 2005).

### *Choosing a long-term care provider*

There is less evidence on users' preferences for care and priorities for information in long-term care settings. A study examining preferences for quality of residential care services across England, the Netherlands and Spain revealed that relatives, residents and older people thought that 'good' quality providers were the ones located close to a previous home or family/friends, had affordable copayments for publicly funded places, and a homely atmosphere. However, once they were presented with indicators from quality frameworks across Europe and this information was explained, participants in all three countries preferred homes that had respectful and friendly staff and that were recommended by the residents and their family and friends. Even though they were in agreement that specific aspects of clinical care were important, these did not factor highly in their priorities (Trigg et al., unpublished data, 2013).

**Table 2: Factors that influence choice of hospital, primary care practice and long-term care provider**

| Hospital                             | Primary care practice                | Long-term care provider              |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Location/close to where I live (57%) | Location/close to where I live (80%) | Professional recommendation (21%)    |
| I had no other choice (18%)          | Ease/speed of access (16%)           | Quality of service (17%)             |
| Quality of service (12%)             | Reputation (13%)                     | I had no other choice (15%)          |
| Professional recommendation (11%)    | Quality of service (9%)              | Reputation (12%)                     |
| Ease/speed of access (10%)           | Availability (9%)                    | Location/close to where I live (10%) |

Source: Adapted from Ipsos MORI, 2012.

### 3 Developing and designing a public reporting system

#### 3.1 Which indicators can be measured and reported?

As quality is a multidimensional concept, it is difficult to identify a single indicator that can directly measure it and many different indicators or measures are needed. Indicators used to publicly report quality of care can be split most simply into three types: structural, process and outcome measures (Donabedian, 2005). Examples of these are shown in Table 3. Structural indicators are relatively easy to measure and more easily understood by patients because they involve tangible factors of care with which they may be familiar, such as the size of a room in a nursing home or the number of staff on duty. However, both structural and process measures can be misleading because it is often difficult to link these directly to outcomes. While some outcome measures are easily understood by patients, such as whether treatment has successfully relieved an infection, others can be far more difficult to understand where they involve complicated and unfamiliar methods of measurement, such as in the case of HSMRs.

**Table 3: Examples of structural, process and outcome indicators**

| Structural indicators       | Process indicators                         | Outcome indicators       |
|-----------------------------|--|--------------------------|
| – Staff ratios              | – Patients screened for certain conditions | – Mortality rates        |
| – Room sizes                | – Medications prescribed                   | – Quality of life scores |
| – Availability of equipment |  |                          |

In addition to the division of indicators into structures, processes and outcomes of care, many different indicators can be combined to create composite indicators, also referred to as summary or global measures because they summarize numerous pieces of information. Indicators can be referred to as generic where they are relevant to most patients or disease-specific where they express the quality of care for patients with specific diagnoses.

Data can also be recorded or reported at different levels of care. For example, indicators can measure the quality of care provided by a health-care professional (e.g. consultant level), or the team/unit within which the professional works (e.g. hospital ward or specialty level), or the entire organization (e.g. hospital level). The quality of care can vary between all of these. This is a problem because high-quality treatment in one hospital ward may be concealed by a poor rating for the hospital overall (caused by poor care practices in other parts of the hospital) (Nuffield Trust, 2013). Patients have reported that they would find information about individual specialties or surgeons more useful in choosing their health-care provider for elective surgery (Boyce et al., 2010), yet researchers that searched web pages for information on orthopaedic surgeons in the United Kingdom found that beyond their qualifications and general areas of interest, very few websites reported consultants' death rates, teaching status, involvement in research, management or leadership skills and none reported morbidity rates (i.e. any postoperative complications) (Radha et al., 2012).

Of critical importance for consideration when selecting indicators is ensuring that indicators encourage professionals and providers to deliver the care required, and do not incentivize undesirable behaviours to achieve better results. For example, there is a risk that professionals might focus on the aspects of clinical care that are measured and reported (to their colleagues or the public), while neglecting other important areas of care that would benefit the patient or user. This can be especially true if indicators are attached to financial sanctions or incentives. There is also a risk that clinicians or providers might select healthier patients (known as 'cream skimming') to achieve good results. To ensure that this does not happen, it is important to consider how reporting should be supported by risk and case-adjustment methods (see below). However, risk selection, cream skimming or cherry-picking can exist regardless of whether indicators are in use because healthier patients require less time, and providers may be reimbursed the same amount of funds for them as less healthy patients (Rice & Smith, 2001). Examples of the unintended consequences of reporting include:

- hospitals in England keeping patients waiting in ambulances outside emergency departments so that they could meet the national target of 95% of all patients being seen within four hours of arriving (Bevan & Hood, 2006);
- cardiac surgeons in New York achieving better mortality rates by turning away sicker patients (Werner & Asch, 2005);

- nursing homes in the United States focusing more on improving reported measures than unreported measures (Werner, Konetzka & Kruse, 2009).

The design and mix of these indicators therefore deserves careful attention, and it is also important to consider the mechanisms that can be used to prevent or detect these behaviours. These might include penalties for misinformation, inspections by external agencies or the validation and auditing of data (Nuffield Trust, 2013).

### **3.2 What are the challenges to developing reliable indicators and data reporting systems?**

Governments are establishing different approaches to data management and governance with the aim of improving the quality of data to support health and long-term care systems (OECD/European Commission, 2013). It is important that instructions for collecting data for use in indicators are clear and unambiguous so that data collection is conducted in the same way across providers and over time for comparison. This ensures the accuracy, reliability and comparability of data. A challenge that affects the comparability of data, and the public's perception of reporting, is its timeliness. In comparing websites reporting hospital performance in the United States, Leonardi, McGory & Ko (2007) found significant inconsistencies, and this was in part caused by the fact that data on some websites were more than two years old and being combined with current data for comparison.

Two specific issues in presenting meaningful data to users and patients include adjusting data to reflect the effect of different characteristics of patients and users, and the challenges of dealing with small sample sizes.

#### ***Case-mix adjustment***

One of the key challenges in reporting data on quality of care is to ensure that important differences in patients and users are taken into account when presenting outcomes. A number of factors may contribute to improved outcomes associated with the provision of a given service, from individual to environmental factors. There can be considerable variation between groups of patients and users and these differences can impact on the outcomes of treatments or on the incidence of certain events. For example, younger, healthier adults will potentially benefit more from treatment than older people with multiple comorbidities. In the same vein, care homes situated in more deprived regions may take in users living nearby that have poorer health and those that accept very frail, older residents may experience more falls or pressure ulcers than other care homes. Presenting outcomes without adjusting for these differences is likely to be misleading. To adjust for these differences, risk-adjustment methods are widely used.



Case-mix adjustment or risk adjustment can be based on many different factors, and is often based on aggregate data. Categories of risk factors can include demographic characteristics, clinical factors, socio-economic and psychosocial factors, health-related behaviours and activities, and attitudes and perceptions (Iezzoni, 2009). Selecting risk factors that can adequately compensate for differences is challenging and providers are often critical of the quality of risk-adjustment processes (Marshall et al., 2000; Werner & Asch, 2005). Alternatively, other case-mix adjustments can be used, such as restricting the patients or users to whom the indicator is applied and compared (i.e. allowing exceptions), or performing stratified analysis of particular groups of patients or users (Mainz, 2003; Kuhlthau, Ferris & Iezzoni, 2004). The latter is particularly appropriate when using process measures and may allow for process measures to be used in comparisons where outcome measures lack the necessary statistical power due to small sample size.

### ***Small sample sizes***

Publishing outcome indicators derived from small sample sizes is also problematic (Dimick, Welch & Birkmeyer, 2004; Walker et al., 2013). This can include providers with small numbers of patients – typical examples might include the use of mortality indicators where a surgeon performs a limited number of treatments or surgeries during the data collection period. For example, while CABGs are carried out in high volumes in England, other surgeries are less common, for example, bowel cancer resection (Walker et al., 2013). A procedure must be performed frequently and have a relatively high mortality rate in order for mortality to be a meaningful measure of quality (i.e. the outcome must be frequent or common) (Dimick, Welch & Birkmeyer, 2004). An option where the rate of procedures is low for individual surgeons is to use the hospital as the unit of reporting (Walker et al., 2013); however, this can decrease the usefulness of reports where patients are seeking surgeon-specific information.

With outcome indicators, the number of observations necessary to be able to ascertain differences that are statistically significant, for example, between hospitals, may sometimes be far greater than the annual number of interventions or patients treated (Mant, 2001). Alternatively, process indicators can be used when small sample sizes are an issue, as they are more sensitive to differences and therefore require much smaller samples to establish significant differences.

### **3.3 From where are data on quality of care sourced?**

The sources of information for generating reporting fall under three broad headings: administrative, surveillance and bespoke. Examples of each are shown in Table 4.

**Table 4: Types of data used in constructing quality indicators**

| Administrative                     | Surveillance                | Bespoke   |
|------------------------------------|-----------------------------|---|
| – Hospital records and activity    | – Clinical registers        | – Inspections                                     |
| – General practice patient records | – Assessment instruments    | – Accreditation schemes                           |
| – Insurance records                | – Screening data            | – Patient and user experience and outcome surveys |
|                                    | – Immunization coverage     | – Staff surveys                                   |
|                                    | – Waiting times             | – Clinical audits                                 |
|                                    | – Delayed transfers of care |   |

*Administrative data* is collected routinely for purposes other than reporting, such as the processing of payments or the allocation of funding. Information on performance is then derived from these records. An example of this is the calculation of HSMRs in England. These are based on the Hospital Episode Statistics, which is a data set of admissions, outpatient appointments and emergency department attendances submitted monthly by hospitals to facilitate payment for patient care by the NHS.

*Surveillance data* is collected on a routine basis to detect anomalies or changes in activities or performance. Sweden has implemented a set of registries for users of long-term care, including: the ‘Senior Alert’ registry for gathering individual-level data on falls, pressure sores and malnutrition; a registry for collecting data on individuals receiving palliative care; and a registry for collecting information on diagnosed cases of dementia.

*Bespoke data* is collected specifically to monitor aspects of quality and performance. This data may be collected routinely, at regular intervals, or on an ad hoc basis, depending on the governance requirements and policies surrounding performance information in particular health or long-term care systems. So, for example, the CQI used in the Netherlands to monitor the experience of users and their families and friends in long-term care, is administered at regular intervals and the results are reported on the KiesBeter website. The CQI was originally based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys launched in the United States in 1995 and then conducted on a regular basis for different care settings. The data from the CAHPS surveys are used by many public reporting systems, including Hospital Compare, which is provided by the Centers for Medicare & Medicaid Services, and a number of commercial websites. The results of ad hoc data collection, such as the outcomes of regulatory inspections, are routinely made available on websites in Australia, England and the Netherlands.

### **Patient- and user-generated reviews**

A newer phenomenon in quality reporting is ratings and reviews generated directly by patients and users. In England, patient reviews have been incorporated into the provider profiles available on the government-run website, NHS Choices. The website includes functionality for patients to provide narrative feedback about different care providers, including hospitals, general practitioners and long-term care providers. It also features feedback and provides links to other feedback websites. Care Map Netherlands (Zorgkaart Nederland; [www.zorgkaartnederland.nl](http://www.zorgkaartnederland.nl)) also provides links to a large commercial website providing patient and user ratings. In the United States, the lack of user reviews on Medicare.gov Nursing Home Compare is seen as an important reason why the site is not better used (Lagu & Lindenauer, 2010). There are advantages and disadvantages, however, to user reviews, which are highlighted in Table 5.

**Table 5: Advantages and disadvantages of user reviews**

| <b>Advantages</b>  | <b>Disadvantages</b>   |
|--|--|
| <ul style="list-style-type: none"> <li>– Patients and users are well placed to comment on many aspects of care</li> <li>– Testimonials may be more meaningful to people seeking information</li> <li>– Feedback may include aspects of care that are not covered in standard surveys</li> <li>– Reviewers may post comments that they would otherwise not be able to share through other channels</li> <li>– Providers can act on comments if they have the processes in place to do so</li> </ul> | <ul style="list-style-type: none"> <li>– Patients and users may not have the knowledge to comment on technical and complex aspects of care</li> <li>– Anecdotal information may trump more statistically significant information</li> <li>– Encouraging people to post reviews may be problematic, particularly where there are low volumes or issues with anonymity</li> <li>– Reviews may be spread across many sites, requiring significant effort from information seekers</li> <li>– Reviewers' identities and credibility cannot be easily verified</li> <li>– People requiring information may not have access to the Internet</li> </ul> |

Sources: Trigg, 2011; Trigg, 2014.

### **3.4 Who is responsible for public reporting?**

Research has tended to focus on the provision of public reporting of health-care-related quality information more so than long-term care-related quality information. Research has also focused on information produced by government institutions. However, in social insurance-funded health and long-term care systems it is common for insurers to undertake separate, sometimes overlapping, public reporting initiatives (Cacace et al., 2011). In addition, many different reports are available to consumers from for-profit and not-for-profit organizations,

as well as from individual providers. In the United States, there is a plethora of organizations providing quality information on hospitals to consumers, some of the largest being Healthgrades Inc. and Leapfrog Group (see Box 1).

It is important for policymakers to establish which source of reporting is most likely to be trusted by patients and users, as this is likely to influence the extent to which they make use of the data. Research in the United Kingdom suggests that people are sceptical about government statistics and suspect that the government and hospital managers manipulate data to make the quality of care provided appear better (Magee, Davis & Coulter, 2003). Various stakeholders, including policymakers, agree that there is uncertainty surrounding figures supplied by care providers (Sinaiko, Eastman & Rosenthal, 2012). However, preferences for particular sources of information may be country specific and are often related to how a system is funded and developed. Overall, the source of the information should be identified to assist the public in making judgements about its value (Marshall et al., 2006).

### **3.5 Where is quality information made available?**

Increasingly, quality of care information is made available to the public via the Internet. The websites of some established, health and long-term care public reporting systems and the information they provide are shown in Figure 1. The number of public reporting websites that help people find the right doctor, hospital or nursing home is growing rapidly. In the United States, the number of websites has grown so substantially that an independent website ([www.informedpatientinstitute.org](http://www.informedpatientinstitute.org)) has been set up with the sole purpose of advising patients on where to find the most useful information (Informed Patient Institute, 2014).

Providing information online has a number of advantages, such as the ability to create personalized search functions for users and update information quickly. However, there are also disadvantages as shown in Table 6. It is important to consider multiple channels for the distribution of information to ensure that people without access to the Internet have comparable access to information than those with Internet access. In many countries, there are large proportions of the working-age adult population that have no experience with, or lack the basic skills needed to use information and communications technology (ICT), like computers and the Internet, for many everyday tasks. The highest levels of ICT skills in 2013 were recorded for the Netherlands, Norway and Sweden and the lowest levels in Italy, Poland, the Slovak Republic and Spain (OECD, 2013). Researchers and consumer rights groups argue that information providers should be more cautious about leaving patients and users (even those who are computer-literate) to filter and interpret information and make complex decisions without professional support (Dixon et al., 2010; Moran, 2012).

Figure 1: Examples of public reporting websites

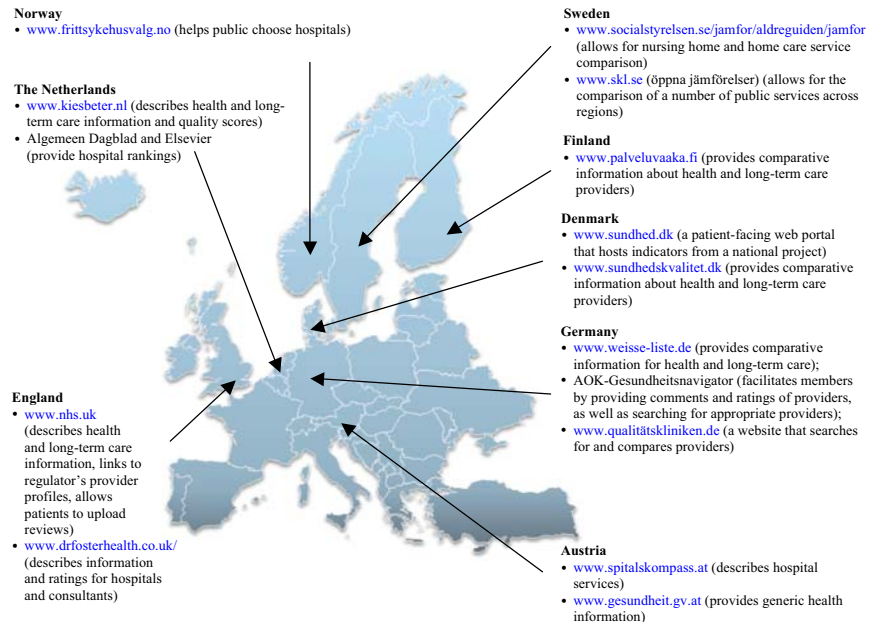


Table 6: Advantages and disadvantages of online public reporting

| Advantages  | Disadvantages  |
|---|--|
| <ul style="list-style-type: none"> <li>– Has the ability to create web pages customized to the users' preferences: For example, allowing for unique comparisons based on dimensions of quality preferred by patients or users or customization of display (such as font size)</li> <li>– Provides timely updates of information</li> <li>– Allows for cross-referencing between data and indicators, as well as for pop-up explanations of data</li> <li>– Websites can be relatively easier to set up, compared to alternatives, such as specialized magazines and publications</li> </ul> | <ul style="list-style-type: none"> <li>– Excludes people without access to the Internet</li> <li>– Often excludes older adults and those who are part of low socio-economic status groups</li> <li>– Website numbers are growing, making them difficult to navigate, to distinguish differences between them or potentially contributing to overload of information</li> </ul> |

Sources: Murray et al., 2003; Stevenson et al., 2007; Boyce et al., 2010.

### 3.6 How are quality indicators presented in reports?

The diversity of approaches to public reporting is reflected in the variation in presentation methods for similar data. Presentation methods in use across Europe include star ratings, traffic light systems, numerical ratings, percentages, plain text, symbols, or a mixture of one or more methods. Indicators are presented as absolute scores where high numbers can mean good or poor performance, and sometimes as scores in relation to other providers (Rodrigues et al., 2014). Some examples from long-term care in Europe can be seen in Table 7.

**Table 7: Examples of quality information presentation methods in long-term care**

| Country         | Presentation method  |
|-----------------|--|
| England         | A combination of traffic light colours, ticks and crosses. Compliance with regulatory standards is now shown with a green tick, failure to comply with a red cross, and improvement required with a grey tick. This replaced a star rating system in place between 2008 and 2010 where inspectors assigned a star rating of zero for poor, and up to three stars for outstanding performers. |
| Finland         | Green-coloured bars, indicating a combination of percentages for achievement against structural indicators and scores out of five (high) for user satisfaction surveys. These are supplemented by yes/no answers, for example, regarding staff availability during the evenings.   |
| Germany         | Numerical scores are used to provide a grade of 1–5 for each of the quality criteria, excluding user surveys, and a composite grade is calculated from these. In contrast to other countries, lower scores represent higher quality as they are deemed to mimic how school grades are shown in Germany.  |
| Sweden          | Scores for 10 selected quality indicators (for example, the proportion of residents with updated care plans, percentage of falls and staff turnover) are provided for every care home, day centre and home care service at municipal level, with the national average shown for comparison.  |
| The Netherlands | Star rating format, with the rating reflecting how a particular provider compares to the mean score for all providers. They range from one star (poor) to five (good).   |

Source: Rodrigues et al., 2014.

To simplify the challenges faced by the public in interpreting quality information, many policymakers are turning to the concept of summary or composite indicators. These indicators aim to create a single score or rating for providers, based on their performance across a range of quality domains (Goddard & Jacobs, 2009). Summative scores are often presented as pictures, for example, star ratings, which are used in the United States for nursing homes and health plans, and are under consideration for hospitals (Department of Health and Human Services, 2013). Star ratings were also used in England between 2001 and 2010, initially to rate hospitals, and from 2008 to 2010 to rate providers of long-term care. In England, providers were categorized into four groups: three-

star organizations were judged to have the highest level of performance; two-star organizations were judged to be performing well overall, but not achieving the same consistently high level of performance as three-star organizations; one-star organizations were judged to have some cause for concern; and zero-star organizations were judged to have the lowest level of performance against key government targets. In hospitals, doctors felt that the star ratings did not accurately reflect performance across the whole organization, did not take into account its specific circumstances and created cultures of focusing on specific targets to the detriment of other priorities (Mannion, Davies & Marshall, 2005). In long-term care, however, market research found that the star ratings used in England were more warmly received as they were more straightforward to understand. In addition, the ratings gave some guidance in a highly fragmented environment dominated by private sector organizations. Social services staff were mainly in favour of ratings, as they helped to compare different providers, to guide purchasing decisions and to support user choice. There was also some evidence that they were used by relatives and carers (CSCI, 2009).

In the development of a rating system, clarity is needed around a number of questions (Nuffield Trust, 2013):

- What is the quality framework underpinning the rating? Which elements of care are important enough to be rated?
- What is being rated, for example, the organization, the department or the care professional?
- Are generic or condition-specific measures better?
- What are the individual components to include in a rating and how and by whom should they be assessed? What is the role of third parties or experts?
- What are the methods for scoring, combining and weighting individual elements?
- How frequently will the rating take place?
- How can the rating best be presented and explained? Should they be presented in absolute values or in relative terms?

League tables are another format for presenting quality data. They bring together data to compare and rank providers, such as hospitals, and to inform patient and user choice. They are often constructed by commercial companies or not-for-profit organizations that purchase the data to generate reports or provide support to providers for quality improvement. Examples include the Dr Foster rankings in England, Healthgrades Inc. in the United States and Elsevier's annual 'Best Hospital' (De beste ziekenhuizen) rankings in the Netherlands. League tables are also intended to be used by provider organizations

for benchmarking and quality improvement, by allowing them to compare quality with other organizations. There is evidence to suggest that the public does not like the use of league tables to compare the performance of care providers (Magee, Davis & Coulter, 2003), as they do not always look for the highest possible quality (Victoor et al., 2012) and are instead more interested in the availability of services and their willingness to improve rather than the absolute or relative performance of providers (Marshall et al., 2006).

## 4 Policy implications

### 4.1 How can the use of public reporting be increased?

While patients and users express a desire for more information on the quality of care of providers, in reality, very few people use this information to select one (Faber et al., 2009). There are a number of approaches to increase the likelihood that reporting will be successful in achieving its goals, including:

- displaying information on quality dimensions that are relevant for users;
- designing indicators to match the skill levels of users;
- improving presentation methods;
- educating patients and users about quality in health and long-term care and increasing patient and user awareness of public reporting;
- enlisting professionals in supporting public reporting systems;
- designing decision aids and encouraging their use; and
- developing an overarching strategy for public reporting.

#### ***By displaying information on quality dimensions that are relevant for users***

The aspects of care valued by patients and users differ across primary and secondary care and long-term care; they also vary by type of condition or procedure. These preferences should be accounted for in the development of quality indicators to ensure that the information presented is relevant to patients and users. There is also a strong drive for more specific information that can be available below the organizational level. This might mean providing data at the department or ward level (Nuffield Trust, 2013).

In the scoping review of determinants that influence patient choice of health-care provider carried out by Victoor and colleagues (2012), 55 out of the 118 (47%) studies included reported that patients were influenced to choose providers most often by structural characteristics of 'quality', such as distance and convenience of the care provider's location. The type and size of institution



was also important. However, the specific disease influenced the importance attached to distance for many patients, for example, distance was more important for people who needed cataract surgery than those who needed hip or knee surgeries. Process measures were less frequently mentioned than structural measures as influential, but the physician's communication style was still listed as influential in 40 (34%) of the reviewed studies. Outcome characteristics, like the mortality or pressure sore rates, were described as influential in 50% of the studies, and not influential in the other 50%. The authors accounted for the difference of opinions by the fact that some studies reviewed past decisions and others examined hypothetical decision-making; a major factor that influences the importance placed on outcomes. They argued that patients who are asked to discuss the hypothetical future indicate that they are willing to use more quality information items, including outcome indicators, in future choices than they have actually used in past choices. Outcome indicators influenced the advice they would give to friends, but did not have a strong influence on their own previous choices (Victoor et al., 2012). However, there are also suggestions that regardless of whether the decision was made in the past or would be made in the future, people with higher levels of education were more likely to think outcomes are important than those with lower levels of education, and patients with more complex or severe diseases attach less importance to outcome characteristics of care. This highlights potential areas where people have unequal access to public reporting, as well as the need to cater for the different needs and abilities of patients and users. There should be significant importance placed on working with varied user groups from varied educational and socio-economic backgrounds, age groups, disease groups, and so on, to develop reporting systems.

There are several successful examples of the involvement of users and other stakeholders in the decision-making process to determine which indicators to display. A range of stakeholders were involved in the development of the system in the Netherlands, there was involvement from a range of stakeholders, including the national associations of care providers, insurers and patients (Delnoij, Rademakers & Groenewegen, 2010). In Germany, the development of the nursing care quality indicators also involves presentation and consultation in a public forum (Büscher, 2010).

### ***By designing indicators to match the skill levels of users***

Overall, it is important to ensure that information is accurate and does not mislead the public. For example, the German public reporting system presents indicators in a scale that mimics school grades to make information easier to grasp by users. The key to successful public reporting, however, is to select indicators that can be easily understood by the public, a challenge that has eluded many producers of information (Sinaiko, Eastman & Rosenthal, 2012).

The format of quality indicators is particularly important to ensure equity in access to care as patients and users with lower health literacy or social capital are more likely to have difficulties understanding information displayed in a complex way (Faber et al., 2009).

Moving forward, there could be value in developing reports that reflect and adapt to the preferences and needs of patients and users. This may include customized reports or customized (weighted) summary measures based on individuals' preferences for information or specific health conditions, treatments, or particular populations of interest.

### ***By improving presentation methods***

One of the primary ways to increase the understanding and use of quality information is to improve the presentation of information (Hibbard et al., 2007; Faber et al., 2009; Dixon et al., 2010; Fasolo et al., 2010). Some of the strategies have already been mentioned. They include carefully selecting information that is relevant to patients and users, so as not to overwhelm them with too much information, ordering information to highlight desired areas (Hibbard et al., 2001, 2002), as well as using summary measures. However, with regard to summary measures, there is also evidence that it is important to provide disaggregated or broken down 'individual' measures for younger or more highly numerate patients and users who are better able to make comparisons based on multiple factors (Hibbard et al., 2001, 2002; Fasolo et al., 2010).

There are many tools that can be used to improve data presentation so that it facilitates the use of quality information. Two key methods are discussed here. The first method essentially ensures that data presentation is easy to understand, intuitive and provides the necessary information to make suitable judgements about the data presented. The second method is a technique called 'ordering' to ensure that the most important information is more obvious than other, less important, data.

## **4.2 Best practice data presentation**

There are proven 'good' or best practice methods of presenting information, as well as 'poor' or non-transparent methods. Guidance suggests the following:

### ***Indicators***

- Use round numbers and avoid decimals.
- Use values and numbers that are consistent, and if possible, use the same denominator (out of 10 is best).
- Scale consistently. Higher numbers are generally better than lower numbers but be aware of local variations.

- Present risks as gains rather than losses (for example, survival rates rather than mortality rates).

### **Graphics and labelling**

- Use consistent labelling and symbols across different indicators (use stars, avoid bar charts for graphics).
- Provide narrative text to accompany information to aid interpretation of diagrams.
- Pair numerical performance information with non-numerical labels (using clear language that is easy to understand), as this increases the use of information by less numerate people. For example, evaluative labels such as 'excellent', 'good' and 'poor', or 'better', 'average' and 'worse' when making comparisons to average scores of the region or country.

### **Communicate definitions and missing data**

- Explicitly describe and define quality, using a framework where possible, and provide clear links between chosen indicators and definitions.
- Explain why missing data is not available and what it means, otherwise it is assumed to indicate poor performance against the indicator.

*Sources:* Gerteis et al., 2007; Hibbard et al., 2007; Castle, 2009; Du Moulin, van Haastregt & Hamers, 2010; Sinaiko, Eastman & Rosenthal, 2012.

## **4.3 Ordering**

People tend to systematically review only a relatively small proportion of information shown and they spend a short time reviewing information overall. Therefore, using methods such as ordering can ensure that people are directed towards the most 'important' information (Tversky & Kahneman, 1986; Gigerenzer et al., 2007). Ordering is essential because people construct preferences on the spot so there is an opportunity to influence what people pay attention to by making some aspects, such as safety or quality indicators (as opposed to 'hospitality' indicators like availability of private rooms), appear more obvious or important. Ordering is also important because there is evidence that certain data can sabotage choices, for example, providing information on prices can cause people to make choices opposite to those intended (Hibbard et al., 2012).

Guidance on ordering online information suggests the following:

- Ensure that users seeking information online do not need to scroll through many web pages.

- Organize provider information in rows rather than columns.
- Put the most 'important' options in the middle (at least if the display is horizontal).
- Use opportunities to tailor information displays to those aspects of care that people indicate are most important to them, personalizing the type and information presented.
- Use tools that eliminate or demote indicators on which there are no (or only negligible) differences between providers (and could therefore reduce the amount of information people need to consider).

Sources: Vaiana & McGlynn, 2002; Boyce et al., 2010; Fasolo et al., 2010.

Overall, many of these presentation methods and strategies discussed can help lower the effort required to interpret quality information.

### ***By increasing education about quality of health and long-term care and increasing awareness of public reporting***

Action is required to tackle the lack of awareness regarding variations in quality between providers. One goal of this is to motivate people to actively seek quality of care information. Many years of research by a leading United States expert suggest that the most 'activated' or motivated people are better able to understand and use comparative information, even when they have lower skill levels. Simply helping consumers to better understand what is at stake when they make health-care choices can by itself increase the motivation to comprehend and use quality information (Hibbard et al., 2007).

Educating the public on the different aspects of quality will also help to equip individuals with the knowledge to identify their own individual preferences in terms of provision. This will allow them to understand what is important and what trade-offs in quality or provider attributes might be appropriate for their own needs. Compared with choices in consumer markets – where consumers often have clear preferences – many patients are not experts in making decisions about health and long-term care. Difficulty in identifying one's own preferences makes important decisions about which hospital or care provider to choose even more difficult. Even complex decisions can be simplified if someone is able to understand their requirements in an ideal provider (Chernev, 2003).

Education is also required to help patients and users to interpret quality data. Studies in both health and long-term care have shown that careful explanation of even complex indicators can help patients and users gain a better understanding of quality (Fasolo et al., 2010; Trigg et al., unpublished data, 2013).

Equipped with sufficient understanding of how to interpret quality information, patients and users must then be aware of the availability of public reporting. Only a third of people in a large United States-based study were aware of the quality reports published by Medicare on health plans. Only just over 50% of this group had used the ratings to choose a health plan. An overwhelming majority (over 97%) were not aware of how their own plan scored (Harris Interactive, 2011). Similarly, in England, very few in a study of 50 participants knew what star rating their local hospital trust had been awarded (Magee, Davis & Coulter, 2003). Another survey in the United Kingdom found that 59% of people would be concerned about how to find information on the options available if they needed to select a provider of long-term care (Darian, 2011). Awareness can be facilitated through a number of channels that are discussed in the next section, but they have their own challenges.

### ***By engaging professionals in supporting public reporting initiatives***

In a recent study, three-quarters of experts surveyed believed that the lack of engagement and support from professionals was a significant impediment to progress on public reporting (Sinaiko, Eastman & Rosenthal, 2012). There is also evidence that many people need more than just data, and require face-to-face advice or interpretation to make sense of information (Boyle, 2013). There are a number of ways in which professionals should be engaged more actively in using information for their own needs, and engaging patients in better understanding information.

First, more communication and incentives are required to encourage professionals to use reporting to select providers with and on behalf of patients and users. Even professionals have been found to make limited use of public reporting. When referring patients to surgeons, doctors have been found to choose them based on prestige and characteristics like bedside manner or availability, rather than clinical indicators like mortality rates (Schwartz, Woloshin & Birkmeyer, 2005). A study in Pennsylvania found that referral patterns did not change following the publication of a key quality report on CABG surgery, even though many doctors were aware of the report (Epstein, 2010). Also in the United States, approximately two-thirds of representatives of managed care organizations surveyed were aware of the New York State Cardiac Surgery Reporting System, but less than a third indicated that the reports were a major factor in their contracting decisions (Mukamel et al., 2000).

In the Netherlands, more than 50% of the respondents in a survey of 170 primary care doctors had never used publicly available quality information to inform referrals. Despite considerable investment in reporting via the government, reports were rarely used by 37% of respondents and 90% said that they had never or rarely suggested quality information as a support for

decision-making to their patients. They instead made their referrals based on patient feedback and specialists known to them. They were generally negative towards quality information, expressed concerns that the data were not sufficiently relevant to their daily practice, and that the rankings produced were not sufficiently transparent. Very few of them thought that the information was reliable (8%), up to date (6%) and fulfilled their information needs (7%) (Doering & Maarse, 2014).

Convincing professionals of the value of public reporting is also important as they are likely to be integral to the process of data collection and report generation. This can include the accurate and comprehensive capture of both administrative and surveillance data, responding to surveys, and encouraging patients and users to share their experiences through both surveys and their own reviews. Additionally, it is important that they support and promote external reporting initiatives where appropriate, for example, through their own professional associations.

It is also important that professionals are encouraged to use indicators in their communication with patients. This extends beyond health care to long-term care, where a range of skilled professionals and care managers and untrained care workers provide advice to people choosing support options. Other groups of professionals could be important in helping the public navigate quality and reports, and some public services have attempted to introduce 'choice advisors' or 'choice navigators', but their roles were dissolved due to the extra costs associated with their employment (Boyle, 2013). When asked about the decisions they had made about residential care providers, residents and their families reported that some of the most helpful resources in providing information were voluntary sector organizations and patient advocacy groups (Trigg et al., unpublished data, 2013). For this reason, a recent government review in England argued for pilot research into the cost-effectiveness of the extension of current support services and volunteer schemes like hospital friends (Boyle, 2013). The review also recommended that these local groups could be linked together through a national network that would be diverse and locally controlled to ensure the effectiveness of the coproduction approach to public services.

In health care, studies have consistently shown that the public considers doctors and other health professionals to be their primary source of information. It is important that professionals be more prepared to communicate information to patients and users as more information is made available via an increasing number of sources. This will mean helping professionals to better understand their own role in processing information and the role patients would like them to play.

***By supporting the public with decision aids***

Decision aids are structured tools for helping patients and users make informed choices, and have two main components:

1. Evidence-based information about different options and their outcomes; and
2. Tools that help patients to clarify their preferences and guide them through the decision-making process.

They can be delivered in many different formats – from simple brochures, through videotapes, to interactive computer software. While some are designed to be used by the patient or user independently, decision aids are intended to supplement rather than replace professional support (Ellins & McIver, 2009). The use of decision aids is supported by a strong evidence base; evaluations have found that they improve patients' health-care knowledge, involvement in decision-making and uptake of appropriate services (O'Connor, Légaré & Stacey, 2003). Moreover, there is some evidence from the United States to suggest that disadvantaged groups gain the most benefit from using these tools, and their potential value as a health literacy strategy is now being more fully explored (Gustafson et al., 2002).

***By developing an overarching strategy for public reporting***

Finally, a critical factor in determining the success of public reporting for the purposes of facilitating patient choice in a provider market is creating a reporting system that keeps the public in mind as its audience. This will ensure that the quality indicators are relevant and presentation methods are appropriate for patients and users, as well as friends, relatives and carers who may be helping them to make decisions. It is also very important to have a vision and strategy to guide decisions around design, technology, content, communication and measurement. The vision should include a clear understanding of how success of 'use of quality information' can be measured to ensure that evaluation and research can be conducted for comparison with other systems and over time.

Setting out the vision and strategy should include consideration of following issues:

- scope of reporting in terms of types of care and treatments, provider types (public, private, voluntary) and geographical areas (regional, national, international);
- size of the budget to support data collection and analysis;
- rules surrounding reporting (i.e. statutory or voluntary);

- links to regulatory inspections or accreditation processes;
- links to provider payment and incentives for the provision of data;
- role of government(s) in collecting and publishing information;
- role of government(s) in regulating or assuring the quality of private information providers;
- role of private organizations in generating and publishing information;
- design of data collection methods and analysis to support reporting (website analytics, surveys, bespoke measurement);
- design of presentation methods, decision aids and alternative methods of distribution;
- design of systems to continually upgrade indicators and methods to ensure they are evidence-based;
- selection of technology to support data collection, analysis and publication;
- processes for addressing poor performance in data provision; and
- processes for measuring success, or the extent to which reports are effective (for example, increased traffic to the website, switching to the highest quality providers, improvements in quality of providers or identification of failing providers).

Having clear objectives will enable policymakers to evaluate whether public reporting has been effective. It has been argued that the assessment of the impact of public reporting systems so far has proved difficult because the objectives of reporting have not been sufficiently defined and documented (Cacace et al., 2011). A critical question for policymakers is whether the benefits of public disclosure of performance data outweigh the administrative and financial costs associated with high-quality reporting initiatives.

## 5 Conclusions

This policy summary has highlighted that the provision of user-friendly information to patients and users choosing health and long-term care providers is critical for making better informed decisions. This is liable to become an even greater policy concern as choice policies increasingly place decisions in the hands of patients and users. A number of examples from countries with well-established public reporting systems in place were reviewed, most notably the Netherlands, the United Kingdom and the United States where the most significant amount of research has been carried out to date.



There are challenges to the increased use of quality information in both health and long-term care that are associated with the reliance of patients and users on family, friends and health and long-term care professionals. Notwithstanding this, this policy summary has described a number of strategies to improve the selection, design and use of quality information by patients and users. Selection of indicators should reflect the domains of quality that are relevant for patients, users and those making decisions. Design should consider best practice presentation methods, using quality indicators that are meaningful and relevant. This will increase the likelihood that people with varying numeracy skills and techniques for decision-making might benefit from public reporting.

To increase the use of publicly reported information in the future there is a need for greater public education about quality and what it looks like across different health and long-term care services. There is also a need for health and long-term care professionals to embrace quality information as a tool for continuous improvement and commit to using quality information when making referrals and recommendations for patients and users, and also to encourage patients and users to refer to information when choosing a provider. Appropriate decision aids should also be developed and deployed to support the choice process.

Equally crucial for the success of public reporting systems is that patients and users have the financial means to exert choice and enough alternatives to choose from.

Finally, in advance of creating or refining a public reporting system, a strategy must be developed in consultation with a wide range of stakeholders, including patients and users. Stakeholders should collectively agree which indicators are to be measured and how success will be defined and measured.

## References

- Baxter K, Glendinning C, Greener I (2011). The implications of personal budgets for the home care market. *Public Money & Management*, 31(2):91–98.
- Berendsen AJ et al. (2010). Patient's need for choice and information across the interface between primary and secondary care: a survey. *Patient Education and Counseling*, 79(1):100–105.
- Bevan G, Hood C (2006). What's measured is what matters: targets and gaming in the English public health care system. *Public Administration*, 84(3):517–538.
- Boyce T et al. (2010). *Choosing a high-quality hospital: the role of nudges, scorecard design and information*. London, The King's Fund.

- Boyle D (2013). *Good choice. Bad choice. The barriers to choice review: how are people using choice in public services? Report for the Cabinet Office* ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/80070/Barriers\\_to\\_choice\\_review\\_0.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80070/Barriers_to_choice_review_0.pdf), accessed 16 July 2014).
- Büscher A (2010). Public reporting, expert standards and indicators. Different routes to improve the quality of German long-term care. *Eurohealth*, 16(2):4–7.
- Cacace M et al. (2011). How health systems make available information on service providers: experience in seven countries. *Rand Health Quarterly*, 1(1):11.
- Capitman J et al. (2005). *Long-term care quality: historical overview and current initiatives*. Washington, DC, National Commission for Quality Long-term Care (Report for the National Commission for Quality Long-term Care; <http://www.newschool.edu/lccc/pdf/txBackground03-10-05FINAL.pdf>, accessed 16 July 2014).
- Castle NG (2009). The Nursing Home Compare report card: consumers' use and understanding. *Journal of Aging and Social Policy*, 21(2):187–208.
- Centers for Medicare & Medicaid Services (2011). *Medicare.gov. Nursing Home Compare* (<http://www.medicare.gov/NHCompare/>, accessed 16 July 2014).
- Chernev A (2003). When more is less and less is more: the role of ideal point availability and assortment in consumer choice. *Journal of Consumer Research*, 30(2):170–183.
- Clement JP, Bazzoli GJ, Zhao M (2012). Nursing home price and quality responses to publicly reported quality information. *Health Services Research*, 47(1 Pt 1):86–105.
- CQC (2013). *A fresh start for the regulation and inspection of adult social care: working together to change how we inspect and regulate adult social care services*. Newcastle upon Tyne, Care Quality Commission ([http://www.cqc.org.uk/sites/default/files/documents/20131013\\_cqc\\_afreshstart\\_2013\\_final.pdf](http://www.cqc.org.uk/sites/default/files/documents/20131013_cqc_afreshstart_2013_final.pdf), accessed 16 July 2014).
- CSCI (2009). *CSCI quality ratings: market research report*. London, Commission for Social Care Inspection.
- Dafny L, Dranove D (2008). Do report cards tell consumers anything they don't know already? The case of Medicare HMOs. *Rand Journal of Economics*, 39(3):790–821.
- Darian L (2011). *Consultation response. 'Caring for our future'*. London, Which? (<http://www.staticwhich.co.uk/documents/pdf/caring-for-our-future-which-response-277271.pdf>, accessed 16 July 2014).
- Darzi A (2008). *High quality care for all: NHS next stage review final report*. London, Stationery Office.

Delnoij DM, Rademakers JJ, Groenewegen PP (2010). The Dutch consumer quality index: an example of stakeholder involvement in indicator development. *BMC Health Services Research*, 10:88.

Department of Health (2010). *Report on the National Patient Choice Survey, England: February 2010*. London, Department of Health.

Department of Health (2013). *Response to consultation 'Liberating the NHS: no decision about me, without me'*. London, Department of Health.

Department of Health and Human Services (2013). *Federal register, vol. 78, no.91, part II* (<http://www.gpo.gov/fdsys/pkg/FR-2013-05-10/pdf/2013-10234.pdf>, accessed 16 July 2014).

Dimick JB, Welch HG, Birkmeyer JD (2004). Surgical mortality as an indicator of hospital quality: the problem with small sample size. *JAMA*, 292(7):847–851.

Dixon A et al. (2010). *Patient choice: how patients choose and how providers respond*. London, The King's Fund.

Doering N, Maarse H (2014). The use of publicly available quality information when choosing a hospital or health-care provider: the role of the GP. *Health Expectations*. doi: 10.1111/hex.12187.

Donabedian A (1988). The quality of care. How can it be assessed? *JAMA*, 260(12):1743–1748.

Donabedian A (2005). Evaluating the quality of medical care. 1966. *Milbank Quarterly*, 83(4):691–729.

Dowding K, John P (2009). The value of choice in public policy. *Public Administration*, 87:219–233.

Du Moulin MF, van Haastregt JC, Hamers JP (2010). Monitoring quality of care in nursing homes and making information available for the general public: state of the art. *Patient Education and Counseling*, 78(3):288–296.

Ellins J, Coulter A (2005). *How engaged are people in their health care? Findings of a national telephone survey*. Oxford, Picker Institute Europe.

Ellins JL, McIver SA (2009). *Supporting patients to make informed choices in primary care: what works?* Birmingham, University of Birmingham (Health Services Management Centre).

Epstein AJ (2010). Effects of report cards on referral patterns to cardiac surgeons. *Journal of Health Economics*, 29(5):718–731.

European Centre for Social Welfare Policy and Research (2010). *Measuring progress: indicators for care homes*. Vienna, European Centre for Social Welfare

Policy and Research ([http://www.euro.centre.org/data/progress/PROGRESS\\_ENGLISH.pdf](http://www.euro.centre.org/data/progress/PROGRESS_ENGLISH.pdf), accessed 16 July 2014).

Faber M et al. (2009). Public reporting in health care: how do consumers use quality-of-care information? A systematic review. *Medical Care*, 47(1):1–8.

Fagerlin A, Wang C, Ubel PA (2005). Reducing the influence of anecdotal reasoning on people's health care decisions: is a picture worth a thousand statistics? *Medical Decision Making*, 25(4):398–405.

Fasolo B et al. (2010). Helping patients choose: how to improve the design of comparative scorecards of hospital quality. *Patient Education and Counseling*, 78(3):344–349.

Finucane ML et al. (2002). Aging and decision-making competence: an analysis of comprehension and consistency skills in older versus younger adults considering health-plan options. *Journal of Behavioral Decision Making*, 15(2):141–164.

Fitzsimmons PR et al. (2010). A readability assessment of online Parkinson's disease information. *Journal of the Royal College of Physicians of Edinburgh*, 40(4):292–296.

Fung CH et al. (2005). Patients' preferences for technical versus interpersonal quality when selecting a primary care physician. *Health Services Research*, 40(4):957–977.

Fung CH et al. (2008). Systematic review: the evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, 148(2):111–123.

Gerteis M et al. (2007). Testing consumers' comprehension of quality measures using alternative reporting formats. *Health Care Financing Review*, 28(3):31–45.

Gigerenzer G et al. (2007). Helping doctors and patients make sense of health statistics. *Psychological Science in the Public Interest*, 8(2):53–96.

Glenngård AH, Anell A, Beckman A (2011). Choice of primary care provider: results from a population survey in three Swedish counties. *Health Policy (Amsterdam, Netherlands)*, 103(1):31–37.

Goddard M, Jacobs R (2009). Using composite indicators to measure performance in health care. In: Smith PC, Mossialos E, Papanicolas I, Leatherman S, eds. *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press:339–368.

Gooding SK (1995). The relative importance of information sources in consumers' choice of hospitals. *Journal of Ambulatory Care Marketing*, 6(1):99–108.

Grabowski DC, Town RJ (2011). Does information matter? Competition, quality, and the impact of nursing home report cards. *Health Services Research*, 46(6 Pt 1):1698–1719.

- Grol R et al. (1999). Patients' priorities with respect to general practice care: an international comparison. European Task Force on Patient Evaluations of General Practice (EUROPEP). *Family Practice*, 16(1):4–11.
- Gustafson DH et al. (2002). CHES: 10 years of research and development in consumer health informatics for broad populations, including the underserved. *International Journal of Medical Informatics*, 65(3):169–177.
- Hannan EL et al. (2012). The New York State cardiac registries: history, contributions, limitations, and lessons for future efforts to assess and publicly report healthcare outcomes. *Journal of the American College of Cardiology*, 59(25):2309–2316.
- Harris Interactive (2011). *Medicare star quality rating system study: key findings*. Rochester, NY, Harris Interactive Inc. (<http://xnet.kp.org/newscenter/pressreleases/nat/2011/downloads/101011medicarerankingsHarrisSurveyInfo.pdf>, accessed 16 July 2014).
- Harris Interactive (2012). *Consumer research: America's readiness to choose a doctor or hospital*. Rochester, NY, Harris Interactive Inc. ([http://c773731.r31.cf2.rackcdn.com/70/e6/eecf6e0a47c1ac637c487f1344e3/HealthgradesConsumerResearchReport\\_October2012.pdf](http://c773731.r31.cf2.rackcdn.com/70/e6/eecf6e0a47c1ac637c487f1344e3/HealthgradesConsumerResearchReport_October2012.pdf), accessed 16 July 2014).
- Hibbard JH et al. (2001). Making health care quality reports easier to use. *Joint Commission Journal on Quality Improvement*, 27(11):591–604.
- Hibbard JH et al. (2002). Strategies for reporting health plan performance information to consumers: evidence from controlled studies. *Health Services Research*, 37(2):291–313.
- Hibbard JH et al. (2007). Consumer competencies and the use of comparative quality information: it isn't just about literacy. *Medical Care Research and Review*, 64(4):379–394.
- Hibbard JH et al. (2012). An experiment shows that a well-designed report on costs and quality can help consumers choose high-value health care. *Health Affairs*, 31(3):560–568.
- Iezzoni LI (2009). Risk adjustment for performance measurement. In: Smith PC, Mossialos E, Papanicolaos I, Leatherman S, eds. *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press:251–285.
- Informed Patient Institute (2014). *Informed Patient Institute* (<http://www.informedpatientinstitute.org/index.php>, accessed 16 July 2014).
- Institute of Medicine (2001). *Crossing the quality chasm: a new health system for the 21st century*, Washington, DC, National Academy Press.

- InterRAI (2012). *Long-term care facilities (LTCF)* (<http://www.interrai.org/long-term-care-facilities.html>, accessed 16 July 2014).
- Ipsos MORI (2012). *Choice review survey: summary report*. London, Ipsos MORI ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/80072/Choice\\_review\\_survey\\_ipsosMORI.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80072/Choice_review_survey_ipsosMORI.pdf), accessed 16 July 2014).
- Kahneman D, Slovic P, Tversky A (1982). *Judgment under uncertainty: heuristics and biases*. Cambridge, Cambridge University Press.
- Kalk NJ, Pothier DD (2008). Patient information on schizophrenia on the internet. *Psychiatric Bulletin*, 32:409–411.
- Kane RA (2003). Definition, measurement, and correlates of quality of life in nursing homes: toward a reasonable practice, research, and policy agenda. *Gerontologist*, 43(Spec No 2):28–36.
- Ketelaar NA et al. (2011). Public release of performance data in changing the behaviour of healthcare consumers, professionals or organisations. *Cochrane Database of Systematic Reviews*, CD004538. doi: 10.1002/14651858.
- Konetzka RT, Werner RM (2010). Applying market-based reforms to long-term care. *Health Affairs*, 29(1):74–80.
- Kuhlthau K, Ferris TG, Iezzoni LI (2004). Risk adjustment for pediatric quality indicators. *Pediatrics*, 113(1 Pt 2):210–216.
- Lagu T, Lindenauer PK (2010). Putting the public back in public reporting of health care quality. *JAMA*, 304(15):1711–1712.
- Laverty AA et al. (2012). High-profile investigations into hospital safety problems in England did not prompt patients to switch providers. *Health Affairs*, 31(3):593–601.
- Laverty AA, Dixon A, Millett C (2013). Do patients' information requirements for choice in health care vary with their socio-demographic characteristics? *Health Expectations*. doi: 10.1111/hex.12086.
- Legido-Quigley H et al. (2008). *Assuring the quality of health care in the European Union: a case for action*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health systems and Policies.
- Le Grand J (2007). *The other invisible hand: delivering public services through choice and competition*. Princeton, NJ, Princeton University Press.
- Le Grand J, Mays N, Mulligan J-A (1998). *Learning from the NHS internal market: a review of the evidence*. London, The King's Fund.
- Leonardi MJ, McGory ML, Ko CY (2007). Publicly available hospital comparison websites: determination of useful, valid, and appropriate information for comparing surgical quality. *Archives of Surgery*, 142(9):863–868.

- Longo DR et al. (1997). Consumer reports in health care. Do they make a difference in patient care? *JAMA*, 278(19):1579–1584.
- Magee H, Davis LJ, Coulter A (2003). Public views on healthcare performance indicators and patient choice. *Journal of the Royal Society of Medicine*, 96(7):338–342.
- Mainz J (2003). Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*, 15(6):523–530.
- Malley J, Fernández J-L (2010). Measuring quality in social care services: theory and practice. *Annals of Public and Cooperative Economics*, 81(4):559–582.
- Mannion R, Davies HT, Marshall MN (2005). Cultural characteristics of “high” and “low” performing hospitals. *Journal of Health Organization and Management*, 19(6):431–439.
- Mant J (2001). Process versus outcome indicators in the assessment of quality of health care. *International Journal for Quality in Health Care*, 13(6):475–480.
- Marshall MN et al. (2000). The public release of performance data: what do we expect to gain? A review of the evidence. *JAMA*, 283(14):1866–1874.
- Marshall MN et al. (2003). Public reporting on quality in the United States and the United Kingdom. *Health Affairs*, 22(3):134–148.
- Marshall M et al. (2006). Development of an information source for patients and the public about general practice services: an action research study. *Health Expectations*, 9(3):265–274.
- Marshall M, McLoughlin V (2010). How do patients use information on health providers? *BMJ*, 341:c5272. doi: 10.1136/bmj.c5272.
- Mata R, Schooler LJ, Rieskamp J (2007). The aging decision maker: cognitive aging and the adaptive selection of decision strategies. *Psychology and Aging*, 22(4):796–810.
- Mor V et al. (2009). Long-term care quality monitoring using the interRAI common clinical assessment language. In: Smith PC, Mossialos E, Papanicolas I, Leatherman S, eds. *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press:472–505.
- Moran J (2012). *Consultation response. Draft Care and Support Bill*. London: Which? ([http://www.staticwhich.co.uk/documents/pdf/which\\_response\\_draft-care-and-support-bill\\_oct-12-300549.pdf](http://www.staticwhich.co.uk/documents/pdf/which_response_draft-care-and-support-bill_oct-12-300549.pdf), accessed 16 July 2014).
- Moser A et al. (2010). Themes affecting health-care consumers’ choice of a hospital for elective surgery when receiving web-based comparative consumer information. *Patient Education and Counseling*, 78(3):365–371.

Mukamel DB et al. (2000). Do quality report cards play a role in HMOs' contracting practices? Evidence from New York State. *Health Services Research*, 35(1 Pt 2):319–332.

Murray E et al. (2003). The impact of health information on the internet on the physician-patient relationship: patient perceptions. *Archives of Internal Medicine*, 163(14):1727–1734.

Netten A et al. (2009). *Outcomes of social care for adults (OSCA): interim findings*. Canterbury, University of Kent (PSSRU Discussion Paper 2648; [http://www.pssru.ac.uk/pdf/dp2648\\_2.pdf](http://www.pssru.ac.uk/pdf/dp2648_2.pdf), accessed 16 July 2014).

Nuffield Trust (2013). *Rating providers for quality: a policy worth pursuing?* London, Nuffield Trust (A report for the Secretary of State for Health; [http://www.nuffieldtrust.org.uk/sites/files/nuffield/130322\\_rating\\_providers\\_for\\_quality\\_full\\_report-final.pdf](http://www.nuffieldtrust.org.uk/sites/files/nuffield/130322_rating_providers_for_quality_full_report-final.pdf), accessed 16 July 2014).

O'Connor AM, Légaré F, Stacey D (2003). Risk communication in practice: the contribution of decision aids. *BMJ*, 327(7417):736–740.

OECD (2005). *Ensuring quality long-term care for older people*. Paris, OECD Public Affairs Division.

OECD (2013). *OECD Skills Outlook 2013: first results from the survey of adult skills*. Paris, OECD Publishing.

OECD/European Commission (2013). *A good life in old age? Monitoring and improving quality in long-term care*. OECD Health Policy Studies. Paris, OECD Publishing.

Peters E et al. (2007a). Less is more in presenting quality information to consumers. *Medical Care Research and Review*, 64(2):169–190.

Peters E et al. (2007b). Numeracy skill and the communication, comprehension, and use of risk-benefit information. *Health Affairs*, 26(3):741–748.

Quality Framework for Responsible Residential and Domiciliary Care (VV&T) Steering Committee (2008). *The tone is set: a common language for quality*. Utrecht, Quality Framework for Responsible Residential and Domiciliary Care (VV&T) Steering Committee (<http://www.biomedcentral.com/content/supplementary/1472-6963-10-95-s2.pdf>, accessed 16 July 2014).

Rademakers J et al. (2014). The relative effect of health literacy and patient activation on provider choice in the Netherlands. *Health Policy (Amsterdam, Netherlands)*, 114(2–3):200–206.

Radha SS et al. (2012). Can patients really make an informed choice? An evaluation of the availability of online information about consultant surgeons in the United Kingdom. *BMJ Open*, pii:0:e001203. doi:10.1136/bmjopen-2012-001203.



Redish J, Chisnell D (2004). *Designing web sites for older adults: a review of recent research*. Washington, DC, AARP ([http://assets.aarp.org/www.aarp.org/\\_articles/research/oww/AARP-LitReview2004.pdf](http://assets.aarp.org/www.aarp.org/_articles/research/oww/AARP-LitReview2004.pdf), accessed 16 July 2014).

Reid RO et al. (2013). Association between Medicare Advantage plan star ratings and enrollment. *JAMA*, 309(3):267–274.

Rice N, Smith PC (2001). Capitation and risk adjustment in health care financing: an international progress report. *Milbank Quarterly*, 79(1):81–113.

Rice T (2001). Should consumer choice be encouraged in health care? In: Davis JB, ed. *The social economics of health care (Advances in Social Economics)*. London, Routledge:9–39.

Rodrigues R et al. (2014). The public gets what the public wants: experiences of public reporting in long-term care in Europe. *Health Policy (Amsterdam, Netherlands)*, 116(1):84–94.

Rothberg MB et al. (2008). Choosing the best hospital: the limitations of public quality reporting. *Health Affairs*, 27(6):1680–1687.

Samuelson W, Zeckhauser R (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1(1):7–59.

Schneider EC, Epstein AM (1998). Use of public performance reports: a survey of patients undergoing cardiac surgery. *JAMA*, 279(20):1638–1642.

Schwartz LM, Woloshin S, Birkmeyer JD (2005). How do elderly patients decide where to go for major surgery? Telephone interview survey. *BMJ*, 331(7520):821.

Seybert H (2012). *Internet use in households and by individuals in 2012*. Luxembourg, Eurostat ([http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-SF-12-050/EN/KS-SF-12-050-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-12-050/EN/KS-SF-12-050-EN.PDF), accessed 16 July 2014).

Shahian DM et al. (2011). Public reporting of cardiac surgery performance: part 1 – history, rationale, consequences. *Annals of Thoracic Surgery*, 92(3 Suppl):S2–S11.

Shaw CD, Kalo I (2002). *A background for national quality policies in health systems*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health systems and Policies.

Shekelle P (2009). Public performance reporting on quality information. In: Smith PC, Mossialos E, Papanicolaou I, Leatherman S, eds. *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press:537–551.

- Shekelle PG et al. (2008). *Does public release of performance results improve quality of care? A systematic review*. London, Health Foundation.
- Sinaiko AD, Eastman D, Rosenthal MB (2012). How report cards on physicians, physician groups, and hospitals can have greater impact on consumer choices. *Health Affairs*, 31(3):602–611.
- Stevenson FA et al. (2007). Information from the Internet and the doctor-patient relationship: the patient perspective – a qualitative study. *BMC Family Practice*, 8:47.
- Thaler RH, Sunstein CR (2008). *Nudge: improving decisions about health, wealth, and happiness*. New Haven, CT, Yale University Press.
- Trigg L (2011). Patients' opinions of health care providers for supporting choice and quality improvement. *Journal of Health Services Research & Policy*, 16(2):102–107.
- Trigg, L. et al. (2013). Evaluating Care Across Borders Work Package 6: Long Term Care. Final Report for the European Commission (unpublished).
- Trigg, L. (2014). Using Online Reviews in Social Care. *Social Policy & Administration*, 48(3): 361–378.
- Tversky A, Kahneman D (1986). Rational choice and the framing of decisions. *Journal of Business*, 59(4):S251–278.
- Ubel PA, Jepson C, Baron J (2001). The inclusion of patient testimonials in decision aids: effects on treatment choices. *Medical Decision Making*, 21(1):60–68.
- Vaiana ME, McGlynn EA (2002). What cognitive science tells us about the design of reports for consumers. *Medical Care Research and Review*, 59(1):3–35.
- Victoor A et al. (2012). Determinants of patient choice of healthcare providers: a scoping review. *BMC Health Services Research*, 12:272.
- Wagner N, Hassanein K, Head M (2010). Computer use by older adults: a multi-disciplinary review. *Computers in Human Behavior*, 26(5):870–882.
- Walker K et al. (2013). Public reporting of surgeon outcomes: low numbers of procedures lead to false complacency. *Lancet*, 382(9905):1674–1677.
- Werner RM, Asch DA (2005). The unintended consequences of publicly reporting quality information. *JAMA*, 293(10):1239–1244.
- Werner RM, Konetzka RT, Kruse GB (2009). Impact of public reporting on unreported quality of care. *Health Services Research*, 44(2 Pt 1):379–398.
- Werner RM et al. (2012). Do consumers respond to publicly reported quality information? Evidence from nursing homes. *Journal of Health Economics*, 31(1):50–61.

## Joint policy summaries

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2. Assessing future health workforce needs  
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