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Public Reporting on the Quality of Healthcare: Emerging Evidence on Promising Practices for Effective Reporting

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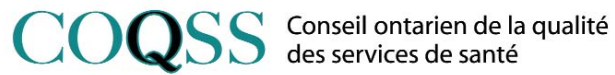
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TABLE OF CONTENTS

1. CONTEXT	1
2. IMPLICATIONS	1
3. APPROACH	2
4. RESULTS	2
4.1. Objective	4
4.1.1. Accountability	4
4.1.2. Quality Improvement	5
4.1.3. Consumer Choice	6
4.1.4. Reporting Objectives for Reporting Agencies in Canada	6
4.2. Audience	6
4.2.1. Accountability	6
4.2.2. Quality Improvement	7
4.2.3. Canadian Experiences in Managing Dual Objectives of Public Reports	8
4.3. Content	8
4.3.1. Level of Aggregation in Reports	8
4.3.2. Data Issues	9
4.3.3. Making the Information Useful	10
4.3.4. The Importance of Context	11
4.4. Product	11
4.4.1. Reducing Cognitive Effort	11
4.4.2. Addressing the Needs of Multiple Audiences	12
4.4.3. Web Sites	12
4.5. Distribution	32
4.5.1. Paper	13
4.5.2. Web Sites	13
4.5.3. News Media	13
4.5.4. Direct Engagement	14
4.6. Impacts	15
5. ADDITIONAL RESOURCES	16
6. FURTHER RESEARCH	16
7. REFERENCES	17
APPENDIX A: Methodology	22
APPENDIX B: Empirical Investigations into the Effects of Public Reporting	24
APPENDIX C: Public Reporting Programs in Canada and Internationally	30

1. CONTEXT

Improving the quality of healthcare has become a major concern in recent years.^{1,2} “Significant quantitative studies have repeatedly shown that the quality of care is often highly variable about a mediocre mean and that medical errors abound.”³ One response to this concern has been an increased effort to provide information on the performance of healthcare systems to the public.⁴ Within the last two decades, public reporting on the quality of healthcare has evolved worldwide due to an increased commitment to health quality improvement, an increase in public expectations for accountability and an improvement in the data systems used to measure performance.⁴⁻¹⁵ In Canada, public reporting is conducted by provincial^{1,16-19} and federal governments,²⁰ advocacy groups,²¹ independent agencies²² and increasingly by arm’s-length agencies established by governments.^{5,18,23,24}

Public reporting on the quality of healthcare has not been without controversy; researchers debate its utility as well as the potential intended and unintended consequences.²⁵⁻³⁰ However, there is general agreement in the literature that public reporting is here to stay. Therefore, it is not a matter of whether public reporting *should* be done, but rather *how*. In the words of Marshall et al. (2003), “...the debate should now be moving from whether to use them [public reports] to how best to deploy them in particular circumstances. In this respect, public reporting should be treated like any other technology or policy option. Its benefits against stated objectives should be evaluated in light of its costs, including both direct costs and inadvertent side-effects.”²⁶

The purpose of this paper is to describe what is known about the design and evaluation of public reporting initiatives on the quality of healthcare to begin to answer the question: How can Canada make the most effective use of public reports on healthcare? (Appendix A outlines the methodology undertaken for the research.) It is important to note that the evidence base concerning the effectiveness of report design and dissemination strategies is in very early stages of development. There are very few evaluative studies in the literature addressing the central question of this paper. The evaluative studies identified in the course of our literature search are identified in Appendix B. Other than where these studies are explicitly cited, many of the recommendations and conclusions of this paper are based on evidence derived from the experience, opinion and non-peer-reviewed evaluative work of experts and practitioners in the field of public reporting on healthcare quality.

2. IMPLICATIONS

The common denominator motivating all public reporting on healthcare quality in Canada is the principle of transparency in publicly funded healthcare. Transparency is one element of accountability and, in principle, members of the public should have access to any and all information about the quality of the health system they fund through taxes, particularly because the collection and analysis of such information is generally also paid for by tax revenue. Another reason for transparency is to address asymmetries of information among different stakeholders in healthcare. Making relevant information on quality (and costs) widely available is seen as important to empower patients/consumers. In the United States especially, this is seen as crucial to effective use of “consumerism” as a means of controlling healthcare costs and driving quality improvement.^{31,32} The key challenge facing designers of reporting programs is when, how and in what format to bring the information into the public domain. There are no universal right answers to these questions.

Although public reporting on healthcare performance and quality has increased dramatically worldwide since the mid-1980s, studies on the impact of this practice are still infrequent in academic literature. Nevertheless, there are a few generalizable “promising practices” to be gleaned from the current literature.

First, the objective(s) of a public reporting program on healthcare quality needs to be explicit and specific. By definition, to work toward being effective and to be able to evaluate impact,

reporting programs need a clear statement of purpose and of the desired and anticipated impact. Merely stating that a report's objective is "to enhance the accountability of the healthcare system" or "to support quality improvement" is insufficient. With a well-defined objective, report developers will naturally give greater consideration to the intended audience, including the specific products and dissemination methods that will best reach them.

The general public, by and large, does not know its role in ensuring accountability for the healthcare system, nor does it have a good understanding of its role in influencing quality.³³ An important task for public reporting programs is to educate the public about the roles to play in democratic accountability and quality improvement. It could be that information on how the healthcare system is organized or what care a patient should expect for a particular condition will be more valuable in promoting accountability or quality than will tables of results comparing hospitals or providers on performance.

What does seem to be clear from the literature is that simply releasing reports into the public realm is unlikely to have the desired impacts on either accountability or quality. Agencies that report on healthcare quality to the public need to develop an understanding of the informational needs of their audience(s) as well as knowledge of how they use information. Furthermore, agencies may need to expend considerable effort to educate their audiences about the value and meaning of the information they are distributing. Thus, to truly achieve the objectives of accountability and quality improvement, public reporting on healthcare quality needs to be embedded in an ongoing effort of relationship-building with the audiences who are expected to use the information.

3. APPROACH

This study includes two main components. First, we conducted a review of the literature on public reporting on healthcare quality to identify key components of an effective reporting program and to determine which factors contribute to successful reporting. Our literature review involved examination of many public reports on healthcare quality and commentaries about the topic in the scientific literature, but was particularly focused on finding and reviewing studies that evaluated the effectiveness of public reporting.

Second, given the paucity of published evaluative research identifying effective strategies for public reporting, we also sought to identify strategies used by Canadian organizations with healthcare quality reporting mandates, to enhance the effectiveness of their public reports. We interviewed senior leaders at five organizations: Cancer Care Ontario; Ontario Health Quality Council; Health Quality Council of Alberta; Canadian Institute for Health Information; and the Health Quality Council in Saskatchewan.

A more detailed description of the study methodology for this project can be found in Appendix A.

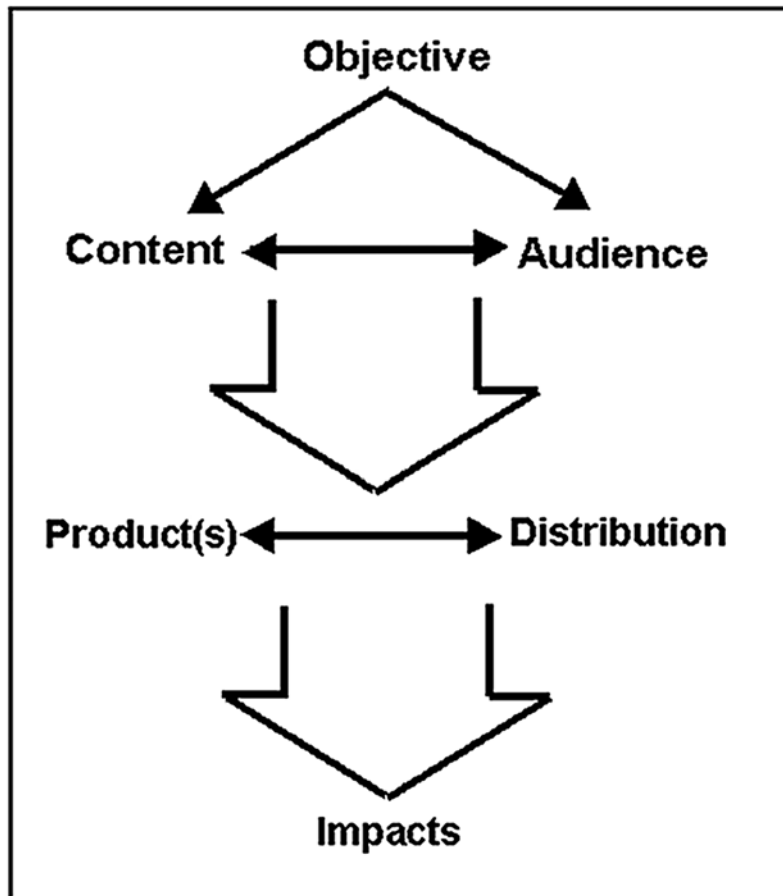
4. RESULTS

There is a growing body of literature about public reporting on healthcare quality and performance. The breadth of issues addressed suggests there is a great deal to consider in effectively reporting to the public. Here we define reporting to the public as effective if the public has the information, understands the information and uses the information in a manner that accomplishes the objectives of the reporting program. Some reports on healthcare quality are released to the public even though the target audience may be health system managers or care providers rather than the general public. The effectiveness of this latter kind of report may not be tied to direct use of the information by the public.

Our synthesis of the literature suggests that if a public reporting program is to be effective, it must address several key components: objective(s), audience, content, products, distribution and impacts (intended and unintended).

Marshall and Davies (2001) explain that “...identifying the purpose and audience for the information is more than an academic exercise. Knowing why the information is being released and the target audience will influence the content of the data, the process of developing and using the data, and the style of presentation.”³⁴ The components described by Marshall and Davies are also echoed in Talking Quality, a web site developed by the U.S. Agency for Healthcare Research and Quality as a resource for the developers of public reports.³⁵

FIGURE 1. Conceptual Map of a Public Reporting Program



The interrelationships between these components are represented in Figure 1. The objective drives all other aspects of reporting.^{5,36} The objective should define both the audience and report content.³⁵ Caution must be taken, however, to ensure that the content is relevant to the intended audience.³⁵ Reporting products should be designed with characteristics of the intended audience in mind,³⁷ and the strategy for dissemination should be based on careful consideration of where and how the intended user will receive the report.³⁵

Unfortunately, to date there has been little formal evaluation of the impact of these components on the effectiveness of public reporting. “Despite the interest in and resources expended on the production of comparative performance reports, there has been little formal evaluation of their impact on the various stakeholders or the effect of the reports on the processes and outcomes of care.”³⁴ Nevertheless, the limited evidence that exists from formal evaluations of public reporting initiatives will be discussed in this paper.

Because the vast majority of public reporting on healthcare quality has been done in the United Kingdom and the United States, most of the evidence of its effectiveness is from these two countries.³⁸ Even within that limited scope, most of the literature comes from the United

States and focuses on a much different healthcare system than that found in Canada. When organizing a public reporting program, context matters.³ The objective of the report, the structure of the system and its affected elements, and the political landscape all need to be taken into consideration when developing each component of a reporting program. Although American reporting systems are designed for a market-driven healthcare system, there is still much that can be adapted for use in Canada from the U.S. research on public reporting.

The rest of this paper is devoted to exploring the different components in the conceptual map above, including why they are important to effective public reporting programs.

4.1 OBJECTIVE

The importance of defining the objectives for a public reporting program should not be underestimated. The objectives inform all other components of the reporting program and suggest criteria by which it can be evaluated.^{5,36} The reporting agency should establish clear objectives in partnership with other stakeholders (such as healthcare organizations, system leaders and the public) to increase the likelihood that these aims are accomplished and to minimize unintended consequences.^{39,40}

The literature describes three main objectives for public reporting programs: accountability, quality improvement and consumer choice.^{5,34,38,39,41} Each is discussed in more detail below.

4.1.1 Accountability

There is an irreversible trend toward public disclosure as the public increasingly demands more accountability.³⁴ This is partly due to perceived and real deficiencies in quality of care, but also because “it is philosophically desirable in democratic societies.”³⁸

Accountability has two necessary components: a report on performance and a reaction to the report that reinforces good performance or punishes bad performance.⁴² It also implies that those who are being held to account have defined responsibilities to the people to whom they are reporting. However, a healthcare system involves multiple accountability relationships between several governance elements (policy makers, managers, healthcare providers, system users and citizens). Although public reporting programs are often initiated to increase “accountability,” there has been a great deal of ambiguity about who is being held accountable, for what, to whom and with what (if any) consequences or rewards for performance and improvement.^{33,42,43}

Executive Accountability

Executive accountability refers to accountabilities between governance elements of the healthcare system. Executive accountability, while necessary, is not typically designed with a public audience in mind. There are, however, occasions where reports for executive accountability between hierarchical levels of a publicly funded healthcare system are *made public* to increase the overall transparency of the system (e.g., annual accountability reports between regional health authorities and provincial governments).

The latter kind of reporting highlights an important distinction to make when talking about public reporting; reporting can be *to* the public, or can be *made* (available to the) public.⁵ While executive accountability reporting is not the focus of this article, when such reports are *made public* they can serve another reporting objective: quality improvement, which is addressed in sections 4.1.2 and 4.2.2 of this paper.

Democratic Accountability

Democratic accountability (also described as public accountability) refers to the system being held accountable to the public that funds it.⁴² For democratic accountability to be achieved through public reporting, the reporting program must clearly state which element of the system is being held accountable to the public, for what purpose or with what expected outcome and with what consequence or reward.^{33,42,43}

There is growing demand in Canada for more public accountability of publicly funded healthcare.³³ Although key reports on the future and sustainability of healthcare – by Fyke (2001),² Kirby (2002)⁴⁴ and Romanow (2002)⁴⁵ – have recommended it, increased public accountability is hard to define and even harder to achieve.

While it has been argued in the past that simply making information available to the public constitutes democratic accountability, this notion has been rethought in Canada.

There is a gap between the desired and actual effect of reporting the information. Public reporting is an essential first step in creating a true accountability relationship, *but the reporting process itself does not create the relationship nor ensure effective accountability*. Implementation plans are needed to deal with the implications of the information. Citizens will need to understand what the information actually says about system performance, who is responsible for changing it individually or collectively, and what can be done at the local, regional or provincial level. As well, the reporting processes need to be tied to some evaluation and correction process identifying who has *not* made the necessary improvements.³³

This view of accountability sees citizens as active participants in health system transformation, requiring that they not only have access to information on system performance, but also that they understand it, can act on it and can see changes within the system as a result.

Some frameworks suggest true democratic accountability cannot be achieved without more meaningful dialogue than that offered by traditional public reporting programs.⁴⁶ Effective public reporting for the purpose of democratic accountability likely requires moving beyond passive reporting to more interactive, dynamic ways of engaging target audiences.^{46,47} However, public reporting remains a key aspect of any accountability framework.

In Canada, the task of reporting for the purposes of accountability is increasingly moving into the purview of arm's-length government organizations.³³ This strategy is encouraged by Marshall et al. (2004): "Public policy makers may usefully seek to depoliticize public reporting by handing responsibility over to independent agencies."³⁸ However, it will be necessary for these organizations to clarify their relationships with the system and the public, as they become intermediaries in the transfer of information about the system to the public.³³

4.1.2 Quality Improvement

One of the most frequently cited objectives of reporting to the public is to provide an impetus for providers and provider organizations to improve the quality of care they deliver.⁴⁸ In fact, public reporting is becoming a quality improvement tool in most developed countries.²⁶ The theory is that providers who know they are being reported on may be motivated to improve the quality of care that they provide, either due to professional responsibility or a desire to improve their public image.⁴⁹

In many ways, the objectives of accountability and quality improvement are related. One indication that the system is being accountable to the public is a continual increase in the quality of care it provides. In particular, there is an overlap between executive accountability and quality improvement. One form of executive accountability directly related to quality improvement is tying rewards to performance. Incentives that are thoughtfully developed and implemented can play a role in improving the quality of care delivered by a health system.⁵⁰ The practice of tying incentives to quality of care originated in the United States, but has subsequently been used elsewhere. It is difficult, however, to draw conclusions about its potential impact here in Canada, given the differences between the healthcare systems. In publicly funded systems, where competition is less apparent, incentives may have to take on different forms, such as increased governance autonomy for systems or providers with improved and high-quality performance.^{26,38}

Another issue in the use of public reporting to help achieve quality improvement is the distinction between reporting *to* the public and *making reports available* to the public. The former kind of report would need to provide practical information to members of the public that they could use to demand better quality of care, whether through lobbying as citizens or through their interactions with the system as healthcare users. Reports focused on healthcare system managers or provider audiences may be more likely to motivate action for improvement if they are made public, rather than just privately reported.^{51,52} However, the evidence is mixed as to whether *making reports public* has greater impact.⁵³ This issue will be discussed at greater length in Section 4.2 of the paper.

4.1.3 Consumer Choice

Much of the literature on consumer choice as an objective of reporting comes from the United States, where the healthcare system is market-based. The underlying theory is that citizens will read and understand information in healthcare quality reports, then act on that information when consuming healthcare services. Realistically, even in the market-driven U.S. system, there may be limited opportunities for consumers to choose their providers.⁴⁹ Restrictions are placed on consumers by their health insurance plans and their choices are constrained by time and monetary costs of travel.⁴⁷ The barrier of travel is particularly acute outside major metropolitan areas.⁵ There are also many barriers to consumers' access to and interpretation of the quality reports themselves, including literacy, numeracy, Internet access and the time or inclination to read them.

4.1.4 Reporting Objectives for Reporting Agencies in Canada

Given that healthcare is largely a publicly funded service in Canada, it is not surprising that each of the five organizations we interviewed indicated that their mandate to report comes directly from the governments that created them. Each of the organizations indicated that the purposes of reporting were not only to inform the public about the state of the healthcare system, either provincially or nationally, but also to stimulate quality improvement. In practice, the objectives of quality improvement and public accountability are seemingly inseparable for these organizations.

4.2 AUDIENCE

Setting clear objectives for a report will naturally lead to identification of audience(s). Determining the target users of a report will have an impact on the rest of the reporting program and is a key to developing the remaining components.⁵⁴

4.2.1 Accountability

The target audience for reports designed to keep the healthcare system accountable is typically the general citizenry. In light of differences in education, literacy, income, awareness, access to technology and other socio-economic factors, this is also the most difficult group with which to effectively communicate.^{5,35,49}

Many authors argue that public reports go largely unused^{26,33,55} because the public "either can't figure them out or ignores them completely."³² Healthcare report developers need to consider a number of characteristics about their intended audience – including level of education, socio-economic status, income and health status – if their reports are to be understood, believed and acted on.

The greatest barrier to achieving accountability with public reporting is a lack of awareness on the part of reporting agencies about what information is of most interest to the general public and how the public perceives its role in an accountability relationship with the healthcare system.^{33,51} It is unclear whether the information currently being provided to Canadians is what they want, if they are using it and if they are using it, how they are using it.³³

Reporting agencies should learn as much as they can about the information needs of their target audience(s) before they produce and distribute reports.^{33,35,56} By doing so, they can assess what information the public wants³³ and determine how much or little the audience

knows about a particular topic.³⁵ With respect to accountability, reporting agencies need to gain a better understanding of the specific responsibilities that citizens want the health system to uphold and the role(s) they see themselves playing in holding the health system to account for those responsibilities.

Prior to producing its first report, the Ontario Health Quality Council engaged with members of the general public through focus groups to understand what they thought a high-quality healthcare system looked like (report content) and how they would want information about quality reported to them (report product).

The U.S.-based Agency for Health Research and Quality argues that, because the general public is such a broad and diverse audience, reporting agencies should commit to and implement long-term education campaigns around reports to create demand for the information.³⁵

4.2.2 Quality Improvement

Reporting agencies that aim to improve healthcare quality cite health system managers, providers or policy makers as their primary target audiences.⁴⁹ Given the paucity of information on if and how citizens or healthcare consumers use public reports, many observers suggest that reports intended to promote quality improvement should be targeted to healthcare organizations since this is where action must start in response to report results.^{26,51,57-59}

Because providers have expert knowledge about healthcare services, they may want and be able to understand reports with greater detail than the general public would be able to use. The more detailed the information in a report, the more difficult it will be for the public to understand and use it. Providers and citizens are two separate and distinct audiences, each with their own unique information needs.

One strategy to motivate improvement is to make reports that are primarily aimed at health system managers or providers also available to the public. In their study of the effect of a public report in Wisconsin, Hibbard et al. (2003) found that making information available to providers and healthcare organizations does stimulate quality improvement, but the effect is greater when it is also released to the public.⁵¹ However, in Ontario, Guru et al. (2006) found that while private disclosure of coronary artery bypass graft mortality rates to hospitals stimulated improvements in care, publicly disclosing the data had no additional impact.⁵³ There are currently only a few, small-scale studies on the issue of whether or not public reporting stimulates quality over and above private feedback of results to healthcare managers and providers, so this issue needs more research. It may be that the contexts of particular healthcare systems determine whether reports on quality, intended for healthcare managers and providers, have greater impact if also made public.

It is worth noting that several unintended consequences, which are antithetical to quality improvement, may result from reporting to the public. Mannion and Davies (2002) argue that a public report may prompt providers and healthcare organizations to:

- focus on measured clinical areas to the detriment of others;
- focus on one narrow clinical area without co-ordinating with others;
- concentrate on short-term gains at the expense of long-term goals;
- be disinclined to experiment with new approaches to care; and
- alter behaviour to create an advantage at the expense of patients.⁴⁰

Other consequences, such as public distrust of the system, misinterpretation of the report and reduced staff morale, are made all the more likely when a report that is made public is difficult to understand.³⁴ Report developers should take note of these possible negative consequences in the design, writing and dissemination of reports, but should not be paralyzed by them because this area needs a great deal more study.

The Ontario Ministry of Health's web-based report on wait times¹⁷ is one example of a reporting program that has created specific reporting products for its public audience, as well as making public the reports intended for health system managers and providers. The report designed for the public focused on wait times, questions to ask providers and how the wait times are calculated, while the report designed for providers went into greater detail on information that would be useful for quality improvement.

4.2.3 Canadian Experiences in Managing Dual Objectives of Public Reports

Managing the dual objectives of public accountability and quality improvement means that organizations have to also manage different audiences and their information needs. For example, the Canadian Institute for Health Information has three distinct audiences to whom it reports:

One of them is health policy actors, and we use the term “actors” to acknowledge that there are people who are outside of government who have important influence on policy. The second... is health system managers, so those involved in the operational delivery of the health system, and the third is the public, but in their role as citizens. So it's reporting to the public, not to help them make individual healthcare decisions, but in their role as citizens, which means they need to be given information in terms of accountability and quality and overall system management.⁶⁰

Cancer Care Ontario and the Canadian Institute for Health Information have developed technical reports for providers, health authorities and health departments that are intended to influence decision processes and provide information useful for quality improvement. While these reports are made public, these organizations rely on the news media and other intermediaries (e.g., health charities) to create broader public awareness about the information contained in the reports.

Other organizations, like the Health Quality Council of Alberta and the Ontario Health Quality Council, have mandates to report directly to the public, as well as to provide information to different administrative levels within the healthcare system. To fulfill that mandate, technical reports need to be accessible to the general public, making it necessary to carefully consider what information is presented, in what level of detail and in what format, to achieve the desired objective.

The Health Quality Council in Saskatchewan has a primary mandate to promote and support quality improvement within the province. It accomplishes this mandate by not only reporting about providers and provider organizations, but also engaging the providers in action where improvements can be made. As a result, there is an inherent objective of accountability, in that fulfilling the mandate requires a demonstration, through reports, that quality is improving.

4.3 CONTENT

The specific content of a report needs to be based on the objective and needs of the key audience. Too often, report developers have paid little attention to what information potential users want, as well as what they can interpret and use.⁴⁰ Fortunately, this is beginning to change.

4.3.1 Level of Aggregation in Reports

One issue currently being debated is the level of data aggregation that should be used in public reports. Some observers favour reporting on performance of individual providers in circumstances where the providers have direct control over quality of care⁴¹ (e.g., coronary artery bypass graft surgery). Others suggest that the provision of healthcare is generally complex, involving many different providers and systems in which they operate, making facility-level reporting (or higher) more appropriate.^{26,38}

The clinical subject matter of the report and the associated responsibilities involved in providing care must be considered when deciding upon the level of data aggregation to use

in reports. Hofer et al. (1999) found that indicators of the quality of diabetes care at the level of individual clinicians were inaccurate and misleading.⁶¹ Providers treating patients with diabetes are just one of many factors that contribute to the patient's health outcomes, including environmental factors and patients' lifestyle choices. In contrast, New York State has seen improvements in quality of care and shifts in market share (amount of patient throughput and billings for services) as a result of reporting on post-surgical mortality rates associated with individual cardiac surgeons,²⁶ a situation where the individual doctor has significantly more control over the outcome than doctors who treat chronic diseases such as diabetes.

In practice, it is not always easy to predict what type of information members of the system need to improve care. Sometimes it is necessary to be responsive to those needs after the release of a report.

I think that I'll always remember our regional vice-president saying, 'It's great to know that pathology reporting in aggregate is improving in my region, but I notice that I'm not the top performer and I think that my centre where I live and work is doing pretty well, so I need the level of data that tells me who is in my region bringing my average down'... we will often go and drill down and give them the hospital data so that he could actually go out and have a conversation with another place.⁶²

Barr et al. (2006) found that healthcare organizations were more likely to respond to public reports than individual providers.⁵⁸ One reason for this is that most healthcare is provided by multiple practitioners, particularly in acute-care settings. Organizations develop cultures and behaviours that are often at the root of quality issues, making it favourable to report at the level of the healthcare organization to achieve any of the three main objectives described in this paper (accountability, quality improvement and consumer choice).³⁸ Furthermore, research evidence suggests that most quality improvement activities occur at the organizational level anyway.^{26,38,51,57}

Reports about performance at the system level may be of interest to citizens who feel the healthcare system as a whole must be accountable. However, reports at this level do not give providers the detail they need to improve care.^{49,63} A good example of this is reporting on wait times; these reports are of interest to the public, but do not directly provide healthcare professionals with useful information on what they can do to shorten waits.⁴² Providers find process-of-care indicators more useful for quality improvement than outcome measures. However, report developers must ensure that their process-of-care indicators are evidence-based (and based on current evidence). On the other hand, the public is more likely to understand and be concerned with the outcomes of care than information on clinical processes.

4.3.2 Data Issues

One barrier to including useful content in quality reports is the limitation of existing data.⁶⁴ "Most public reporting schemes, until now, have opportunistically relied on readily available information. In the future there will be increasing pressure to tailor reports more closely to the needs of users, necessitating the implementation of new data collection mechanisms."²⁶ In Canada, most readily available healthcare-related data are collected for administrative or financial purposes, not for performance measurement.

Data limitations can make it difficult to create effective reports on healthcare quality. Research shows that for reports to be acted on, the information they contain must be considered valid by target audiences.⁴⁹ For example, data must be properly risk-adjusted to ensure a report presents an apples-to-apples comparison. Another important issue is the timeliness of data contained in reports. The availability of most kinds of administrative health data are routinely delayed by several months or a year or more after the healthcare event. Reported information based on such "historical" data is more easily dismissed by system managers and providers, and has less value for evaluation of changes and improvement than reports based on very recent data.

When comparing performance to promote quality improvement, appropriate risk-adjustment is necessary to secure buy-in from healthcare providers and organizations.²⁶ However, reporting risk-adjusted data to the public is challenging, because there must be a clear explanation of what risk-adjustment is and why it is necessary.⁴

Indicators used in reports must accurately reflect quality of care.⁴ Some studies have found that performance measures or indicators need to be rethought.⁶¹ This suggests that more studies need to be conducted to ensure the validity of indicators.

Rethinking indicators should be an ongoing process. Through continual consultation with its audiences, the Canadian Institute for Health Information constantly reviews the appropriateness of its indicators, retiring those that are no longer valid or useful and introducing indicators that will provide valuable new information for the improvement of care.

4.3.3 Making the Information Useful

Several authors argue that quality indicators used in reports can be unfamiliar to the general public and need to be accompanied by explanatory information. Members of the public may not understand how the indicator reflects quality-of-care performance, why lower or higher rates are better, or how they can use the information.^{4,38,65}

Information must be timely, particularly if reporting is intended to promote quality improvement. The more recent the data, the more useful they are for informing improvement efforts. Accountability reports also require timely information, so that the public receives an accurate representation of the current state of the healthcare system.^{4,64}

Castle and Lowe (2005) suggest including benchmarks in quality reports to show providers where they are relative to national or provincial averages, and to give citizens a better idea of where quality of care should be.⁴ Benchmarks must be clearly explained, however, as the public may not understand what they are. It is also helpful, for the purposes of quality improvement and accountability, to identify top and bottom performers in reports.⁴⁹ Lower performers can look to top performers to find out how to improve care, and the public gets a sense of how much variability there is in the system.

Perhaps the best strategy for making information useful to the target audience is to find out its information needs. Some of the Canadian organizations we spoke to had discussed with system members what indicators would be the most fruitful in terms of improving quality of care. Others used similar processes to find out what topics were of interest to their target audience(s). The benefits of this approach are increased buy-in from the target audience, which increases the likelihood that the information will be used.

4.3.4 The Importance of Context

Even if the report does not contain information that providers and healthcare organizations can act on directly, if a report is seen as credible it can prompt them to collect the further data needed to facilitate quality improvement.³ The real challenge is getting the public to understand why quality reports are important. Hibbard (2001) argues that the public does not pay attention because information about the lack of quality of care has not been made apparent, and that it is a mistake to assume that the public is not interested.⁶⁵

The challenge is to tell the story in a way that does not blame providers for poor quality of care, and promotes a culture of learning.^{26,40} One way of achieving this is to provide context for the data.^{39,66} It is not enough to provide numbers. Because every care setting is organized differently, each will have different strengths and weaknesses that may or may not be reflected in the report. Telling the story is a good strategy to minimize the negative side-effects of public reporting.

Some of the organizations we spoke to discussed the importance of telling the story not just to reduce the negative side-effects, but also in terms of accountability.

We publish the Ontario Cancer Plan each year that tells the public and the provider community what we've been up to for the last year, what progress we've made in terms of quality and access and accountability, and then what we plan to do next year. And we tell the government in a public way what resources we need.⁶²

By describing the processes in place that affect the quality being reported on, providers, managers, policy makers and the public get a better idea of how the system is being accountable and improving the quality of care.

4.4 PRODUCT

Quality reports can take many forms. Typically, healthcare reports are published in paper format and in electronic format on the web.^{5,35} No matter how accurate and useful the information included in a report is, design plays a critical role in a report's utility.³⁸ We limited the focus of this section to characteristics of reports that specifically pertain to a public audience.

4.4.1 Reducing Cognitive Effort

Early in a report, readers should be made aware of its objective(s), why they should be interested in it and how the information is organized.³⁷ This allows readers to develop a frame of reference with which to interpret the rest of the report.⁶⁷

Hibbard et al. (2002) discuss the importance of making public reports easy to understand and act on, without a great deal of cognitive effort on the part of the reader.⁶⁷ Reducing the amount of energy needed to interpret and understand a report increases the likelihood that it will be used.⁶⁸ Several strategies are suggested to achieve this.

A common criticism of reports is that they provide too much information.⁵⁷ Hibbard and Peters (2003) recommend keeping reports to a manageable length by removing excess or unnecessary information, or combining several measures into one.⁶⁸

Using visual cues, like stars to rate performance, can make it easier for readers to interpret reports. Using a controlled study, Hibbard et al. (2002) found readers had an easier time interpreting information when it was presented using stars (from one to three) than when it was presented with numeric scores.⁶⁷ Other strategies for improving readability include ensuring that data sets are ordered,⁶⁷ using frequencies (two out of 100) instead of percentage points (2%),⁶⁸ and using example graphs and tables to help readers understand graphs and tables that contain actual data.³⁷

Text size must be easily readable, with important points in boldface.^{35,37} The layout should be consistent and uncluttered, with graphics to support written points.³⁵ Each page of a report should stand on its own, limiting the amount of backtracking a reader must do to correctly interpret the information,^{4,35} and charts should be easy to understand.³⁵ For more information on report design, please see Step 3.5 of the Agency for Healthcare Research and Quality's Talking Quality web site.³⁵

Vaiana and McGlynn (2002) point out that report developers must pay careful attention to how they use fonts, colours and other visual cues; overuse, as well as inconsistent use, of these elements can confuse readers.³⁷

In whatever format reports are presented, they should be tested with members of the target audience to identify problems in readability, clarity or design.^{35,56} A simple method for evaluating a report's ease of use is to assemble members of the target audience to review the document as a group and think out loud as they read through it.⁶⁹ This can help report developers identify problems in readability or design that are not as readily apparent to those already familiar with the content.

4.4.2 Addressing the Needs of Multiple Audiences

Canadian organizations readily identified the need to use visual cues, suitable font sizes, colour coding, appropriate information layout and plain language when developing reports for the public. “We [report developers] have to shift to accommodate the way we [readers] receive information.”⁷⁰ However, the public is not always the sole audience for reports.

From the credibility perspective, we realize we have to do a full report that gives all the graphs and cites all... the sources so that anyone who is the highly informed reader will accept it and believe it... So that's why we've got the big report. The smallest version of the report, this would be the four-pager... That one was designed for broad distribution through newspapers as an insert, and that one format came as a result of focus group testing... One of the things we learned out of that testing was that if it was longer than four pages they weren't going to pick it up... the summary that we did, that's 12 to 14 pages long; we were trying to look for something in the middle. We do trade shows and other types of events like that as well... if they're coming to a trade show and they're taking away information, they're more engaged already, so we wanted to give them something that was more than just the four-pager, but not quite as intimidating as the full report.⁷¹

The practice of packaging the same report differently for multiple audiences is also used by the Health Quality Council in Saskatchewan, Cancer Care Ontario and the Canadian Institute for Health Information.

4.4.3 Web Sites

Report developers typically supplement print reports with information on a web site, as well as making downloadable copies of the report available on the web. In some cases, public reports are available only on the web, though this approach may exclude people of low socio-economic status, as well as those unfamiliar or uncomfortable with newer technologies.⁴⁹ The literature does point to some general considerations for making web-based resources useful to a diverse public.

Navigating a web site can be a difficult task. Site developers should include an explanation of how the site is organized so that users can develop a mental model of how to use it.³⁷ Nelson (2007) argues that web sites containing reports on healthcare quality should require few mouse clicks to locate the desired information.⁵⁶ The more mouse clicks, the less likely that the individual will continue seeking out the information. It may also be helpful to assess how readily the web site is retrieved by search engines under different search terms. If it is not one of the first 10 sites that come up, it is less likely to be used.⁵⁶

Vaiana and McGlynn (2002) argue that one distinct advantage of a web-based report is the flexibility offered by the associated technology.³⁷ The general public is an extremely heterogeneous group with a diverse set of needs. Allowing readers to retrieve the desired information in a format that suits them can assist in making the report useful to a larger portion of the public. For example, England's National Health Service web site⁷ allows visitors to search a list of hospitals by geographical area, identify hospitals within that area that provide the desired service and then compare up to five facilities on a set of indicators including patient satisfaction. Information can also be structured on web pages to allow users to retrieve useful information without excess cognitive effort. For example, the level of detail on a topic can be layered to progress from web pages with more general information down to pages with specific details delimited by disease, geography, demographics, level or dimension of quality, etc.

The use of web-based products is on the rise. In some cases, as described by Cancer Care Ontario, users within the system look to web-based resources to facilitate planning.

We have a data mart that is a web-based tool that provides access to discrete kinds of users to our data stores so that they can use them for planning and other analytic purposes... most of the people who work for us, with us and our partners are actually getting most of their information on the web. Some people want a hard report, but we're finding less [demand for hard copy].⁶²

4.5 DISTRIBUTION

A frequent criticism of public reports is that they are not readily available at the time a patient needs them.⁵ Reporting agencies must think about where and when an intended audience is most likely to want or need a report.³⁵

4.5.1 Paper

In the past, paper reports have been included with periodicals or as paid advertisements, mailed out directly to audience members or made available at local libraries, physician offices or healthcare facilities.³⁵ Organizations that were interviewed, whose primary target is the general public, use this method of distribution. In particular, short public-friendly documents have been placed in free weekly newspapers to maximize the reach to the intended audience. Unfortunately, there is little evidence in the literature that intended audiences read and use materials distributed in these passive ways.⁶⁷ This concern was echoed by the Ontario Health Quality Council:

Our concern about the inserts, because we've heard this anecdotally from a number of sources, is that in the community newspapers there tends to be... all the grocery store ads and ads and ads, and that whole bundle falls out, there's our insert in the middle of it, and a lot of people don't notice it. So what we're going to try next year is an advertorial where it actually is like a full page in a newspaper so you can't miss it.⁷¹

Other audiences, such as practitioners and other health system decision makers, have been targeted through professional association newsletters, or in partnership with health authorities or other health organizations.

4.5.2 Web Sites

While web sites have a great deal of potential for presenting a lot of information in a variety of different ways, this method of distribution has not been fully evaluated.²⁶ Castle and Lowe (2005) found that among web sites in the United States containing healthcare quality reports, there is a great deal of variability in the detail of information presented and the ease with which the information can be accessed.⁴ When an individual is searching for information on the web, effective reports should be one of the first 10 documents retrieved by the search engine used.⁵⁶ Efforts that have been used to promote web-based reports include paid advertisements and e-mail listservs.³⁵

4.5.3 News Media

Another popular method for raising awareness about public reports is through the news media. The Agency for Healthcare Research and Quality in the United States recommends distributing information to those news outlets that are seen as respected and trustworthy by a reporting agency's target audience.³⁵ However, using the news media to promote public reporting is not without risks. Marshall et al. (2003) argue that journalists can sensationalize or misrepresent a report's findings.²⁶ "Considerable anxiety has been expressed about the media coverage of comparative information: in particular, the propensity of the media to be alarmist, to engender a culture of blame and to present complex data as overly simplistic league tables."²⁶ Reporting agencies can reduce the possibility of these problems by working closely with the journalists covering the story.^{26,38}

Although reports must be distributed if they are to be used, there is little evidence about the most effective ways to do this. Not much is known about consumers' use of reports in web or

print format,⁶⁷ or the impact of news media coverage — particularly given its fleeting nature.³⁸ Future studies should evaluate how different methods of distribution affect use of public reports.

The organizations we spoke to all stated that engaging the news media is a key method of reaching the public. Contrary to the literature, however, the challenges they associated with the news media had little to do with media distortion of their messages.

A lot of people get concerned, in a research world, about different distinctions between data and what is a data issue versus what is a real quality issue, and that promotes fear of public reporting. But in our experience, the media doesn't tend to go and look for the difference in data and then blow it up... I think it's a matter of constructive relationships with the media built up over time.⁶²

The main challenge seems to be getting the news media to pay attention to public reports because they compete with many other local, national and international news items. One of the problems associated with this is the lack of time reporters have to actively investigate reports on quality.

There is a debate going on right now about the media's capacity to report on healthcare quality and performance. There is a sense that the media could be asking more difficult questions, but they don't have the time to really investigate the information. These are busy reporters who are receiving information that is well prepared and are receiving good answers for the questions they are asking. In many cases you're dealing with new reporters every time you release a report.⁷²

All of the organizations interviewed spent time developing relationships with members of the news media, which serves several purposes. The information in healthcare quality reports is not necessarily of immediate interest to the news media. As a result, for public reporting organizations to get their messages out it is necessary to engage the news media so that they pay attention.

Once those relationships are established, the uptake of reports, as well as the associated key messages, are presented to the public with little distortion.

We organized a very active media training session, which really honed in on the key messages... Almost every single article and every piece of coverage we got was on message.⁷¹

4.5.4 Direct Engagement

Direct engagement of stakeholders, including the news media, is another way that the interviewed organizations get their reports distributed. Trade shows, stakeholder meetings and contact lists are all methods used to get information and key messages out, without the use of traditional reporting material.

We try and keep track of the people who are most interested in our reports by categories and we try to tailor our distributions so we have those push and pull distributions... we are in, I think, a continually improving system of being able to understand our clients more clearly and when we send them things they should be interested in... we have an incredibly broad range of stakeholders and managing that is no small undertaking.⁶⁰

Part of this strategy might also include early engagement of key stakeholders before a report is even released.

There is a targeted list of people thoughtfully generated through the life of the project by engaging stakeholders. If we are in the early process of establishing a quality indicator with input from stakeholders, then they are automatically included on that list. If we are talking to the regions about quality improvement initiatives, then those key stakeholders are also included. This way the report is not a surprise to anyone in the system.⁷²

4.6 IMPACTS

A number of empirical studies have attempted to assess the impact of public reporting (Appendix B summarizes their findings). Most focus on quality improvement and consumer choice as reporting objectives, although some address audience retention and use of the information.

We found no empirical studies that evaluated the impact of reporting on accountability. Hibbard et al. (2003) evaluated a report released in Wisconsin, which cited quality improvement and accountability as its objectives; however, the evaluation focused only on the objective of quality improvement.⁵¹ While regular measuring and reporting on quality might serve as a mechanism for achieving accountability in a publicly funded system, there has been no research done to date to evaluate effective accountability. The lack of research in this area likely reflects the lack of clarity about what “public accountability” of the healthcare system actually means in terms of specific responsibilities of governance elements to the public and the public’s role in the accountability relationship as well.

What evidence there is about effective reporting for consumer choice comes mostly from the United States and focuses primarily on changes in market share; thus far, results are mixed. Mukamel and Mushlin (1998) found changes in market share in New York State after the release of a public report,³⁰ while Hibbard et al. (2005) found no change in market share in Wisconsin.⁵² Romano and Zhou (2004) found a change in market share in New York State and little or no evidence of change in California.⁷³ Hibbard and Weeks (1989), in a controlled study, found that giving citizens in Oregon information on costs (by provider and service) did not reduce expenditures.⁷⁴ Castle et al. (2007) found that U.S. nursing homes located in competitive markets (higher availability of nursing home beds) had greater improvements in quality following public reporting than those in markets where nursing home beds were scarce.⁷⁵ They concluded that the potential for prospective clients to use the publicly available data on quality to choose their nursing home drove competing nursing homes to improve quality, whereas homes that had little competition were less-motivated to respond to the existence of the public information.

The evidence is somewhat stronger on the impact of reporting in promoting quality improvement. The studies in Appendix B that measured improvement of actual quality measures found some improvement, though the improvements were small.^{52,75,76} Other studies that looked at whether public reporting led to the start of quality improvement initiatives found reporting did stimulate activity in the organizations included in the report.^{51,58,77} However, these studies did not evaluate the actual impact of the improvement initiative and whether the activity was sustained.

In reality, organizations that report to the public on the quality of healthcare do not have the resources to launch empirical studies of impact after the release of every report.

Evaluation is something that has consistently been difficult... it’s just trying to figure out how to do it in a way that makes sense, that’s economically feasible and is plain old practical... where do you spend your bucks, right? Because you might spend huge money up front to put it in all the newspapers and then you have no money to evaluate, which is a vicious little cycle.⁷⁰

However, organizations are using some measures to assess impact, such as the number of health regions that are using a report in their planning, the number of referenced journal citations, the number of media stories (and their alignment with the key messages of the report), letters to the editor, responses to feedback surveys, the number of times the report is cited in policy decisions and the number of times documents are downloaded from web pages.

Perhaps the most compelling form of evaluation is whether or not the actual measures of quality are changing. The real challenge, however, is knowing where the impact of reporting stops and the effect of engaging the system begins.

We have evidence of different regions responding to different quality gaps that we highlight... but we actually as an organization foster active use of these data and quality improvement on an ongoing basis... So you know, we're not doing this public reporting solely.⁶²

It is not always within the purview of a reporting organization to “foster active use” of public reports or support quality improvement; however, maintaining relationships with providers, managers and decision makers, as well as the public, seems to be a key strategy for making reports effective.

5. ADDITIONAL RESOURCES

Additional resources can be located in the following appendices. Appendix B contains a summary of the bulk of the academic literature available on evaluations of public reporting. Appendix C contains summaries of examples of public reports on the quality of healthcare.

6. FURTHER RESEARCH

There is no shortage of topics for further research on reporting to the public on the quality of healthcare in Canada. A cursory Internet search will quickly reveal that there is a large amount of reporting going on across Canada. Whether this reporting is being done effectively and, if so, what factors are contributing to success, is more difficult to discern. The field of public reporting on healthcare quality would benefit from much more research into questions of what approaches seem to work best in different situations.

Further research would be valuable if it focused on understanding each of the components of a public reporting program. What information do the various audiences need to successfully accomplish each objective? How is information best distributed to the different audiences? What format is likely to encourage readers to use the information? What avenues for action are realistic for readers of reports?

While it is clear that public reporting is here to stay, there remains a great deal to learn before it can be applied consistently and effectively. Until a body of research in this field is more fully developed, report developers could benefit from paying attention to what is known from social marketing research – since public reporting on quality of healthcare is, in many cases, a form of social marketing.

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APPENDIX A: METHODOLOGY

LITERATURE REVIEW

The literature review had two distinct purposes. The first was to identify the key components of an effective public reporting program and organize them into a conceptual map. The second purpose was to review the literature to locate empirical studies of public reporting programs, to identify what has contributed to successful public reporting in the past and what outcomes can be expected.

We searched Medline, PubMed, EMBASE and ISI Web of Science for relevant literature from the past ten years. The search terms used were: public reporting, outcome reporting, performance reporting, performance measurement, quality indicator reporting, information reporting, and results reporting. We also searched these terms using the word “dissemination” in place of “reporting”. Searches were limited using the terms “health care” or “healthcare”.

Additional search strategies included reviewing the references from retrieved articles that had been identified through the above databases. As well, relevant grey literature and websites were identified via the internet using the Google search engine and the search terms listed above. The researchers scanned for conference proceedings, web-based resources, documents, and public reports.

KEY INFORMANT INTERVIEWS

The research took a phenomenological qualitative approach. In particular, it attempted to draw meaning from the subjective experiences of organizations that have participated in public reporting on the quality of health care.

Given the limited number of organizations in Canada that engage in reporting directly to the public, this study employed a purposive sampling frame.¹ The researchers identified organizations that report to the public on the quality of health care in Canada, and approached senior employees (CEO, Director of Communications, etc.) within each organization to participate in a semi-structured interview. This strategy has been used in other health care-related studies.^{2,3}

The organizations that participated in the interview were Cancer Care Ontario (CCO), Ontario Health Quality Council (OHQC), Health Quality Council of Alberta (HQCA), Canadian Institute for Health Information (CIHI) and the Health Quality Council (HQC) in Saskatchewan. While the organizations differ, each has a mandate to report on the quality of health care and to make the information available to the public.

It was the initial intent of this project to also interview two organizations outside of Canada, such as the National Health Service in the U.K. and the Agency for Healthcare Research and Quality in the U.S. Due to various constraints, it was not possible to attain interviews with these organizations. While this does not limit the conclusions that can be drawn from the scientific literature and from information provided by Canadian organizations, the research would have been enriched by learning from organizations outside of Canada that have been engaged in public reporting for many years.

INTERVIEW GUIDE

Objective

1. Where does the mandate for your organization to report to the public come from?
2. What are the specific objectives of your reporting program?

Audience

3. Who is the target audience of your reporting program?
4. How do you determine the target audience for your report?

Content

5. How was the topic for the report chosen?
6. How was the content of the report decided on (level of detail, presentation of information, etc...)?
7. How did the target audience impact the type of information presented in your report?

Product

8. What are the different products of your reporting program (paper, web-based, etc...)?
9. How did the choice of audience for the report impact the product design?
10. Was there any consultation with the target audience prior to the release of the report?

Distribution

11. What method(s) of distribution was used for each product of your reporting program?
12. How did the choice of target audience influence the method of distribution?
What were the other deciding factors?
13. To what extent was the audience reached using these methods of distribution?
What specific measures, if any, were used to evaluate this?
14. Media: To what extent did the organization use (or receive unsolicited attention from) the media to raise awareness about their report?
 - a. To what extent did the media cover the report and what elements of the report did the media focus on?
 - b. What about the media coverage was beneficial – and what was detrimental to their reporting objective(s)?
 - c. Did you purposely cultivate a relationship with key media outlets/reporters to ensure correct interpretation and reporting of their report content? If yes, describe...

Evaluation

15. What were the intended impacts of the report?
16. Was the impact measured? If yes, how?
17. Were the desired impacts achieved? Were there any unexpected outcomes?
18. Is there a plan to evaluate both short-term and long-term impacts of reporting?
19. Was there any evaluation of the report itself? If so, how will the evaluation impact future reports?
20. How did the process for creating, distributing and evaluating this report differ from other reports your organization has produced?

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APPENDIX B: EMPIRICAL INVESTIGATIONS INTO THE EFFECTS OF PUBLIC REPORTING

LOOKING FOR EVIDENCE OF QUALITY IMPROVEMENT

Study	Setting	Research Question	Methods	Impact
Lindenauer, et al. (2007) ¹ .	613 hospitals across the US, 207 of which simultaneously participated in a pay-for-performance program.	What effect does pay-for-performance and public reporting have on quality improvement between hospitals in the pay-for-performance group and those in the control group?	<u>Public Report:</u> Hospitals voluntarily reported information on 10 individual and 4 composite quality measures. <u>Evaluation Data:</u> Multivariable modeling analysis (adjusted) over a 2-year period based on the above indicators.	<ul style="list-style-type: none"> Pay-per-performance hospitals showed statistically significant greater improvement than control hospitals in 7 of 10 performance measures and all 4 composite measures.
Castle, et al. (2007) ² .	Nursing homes included in the 'Nursing Home Compare' (NHC) national report card in the US.	What improvements in quality of care, over a one year period, are associated with competition and excess demand for publicly profiled nursing homes?	<u>Public Report:</u> NHC which is a national initiative including 14 quality measures. <u>Evaluation Data:</u> Quality measure scores collected from 2003 and 2004 NHC report. Facility characteristics and market area data collected from the federally mandated On-line Survey Certification and Recording system (OSCAR).	<ul style="list-style-type: none"> Overall, small net improvements in quality of care were evident in the time between the 2003 and 2004 NHC reports. <u>Consumer Choice:</u> <ul style="list-style-type: none"> Nursing homes in competitive markets are more likely to show improvement on quality measures.
Guru, et al. (2006) ³ .	Institutions in Ontario performing coronary artery bypass graft surgery.	Does public reporting of mortality outcomes impact quality of care in addition to reporting privately?	<u>Public Report:</u> Mortality rates for institutions in Ontario performing CABG surgery. <u>Evaluation Data:</u> Clinical and administrative data were used to assess mortality rates before private reporting to institutions (1991-1993), after private reporting (1994-1998), and again after the reports were made public (1999-2001).	<ul style="list-style-type: none"> The risk-adjusted mortality rate dropped significantly between the no reporting period and when the reports were distributed privately. No additional impact was observed after the reports were made public.

Barr, et al. (2006) ⁴ .	13 hospitals in Rhode Island.	What changes are observed in quality improvement initiatives before and after the release of a public report?	<p><u>Public Report</u>: Patient satisfaction survey administered to adult patients who had an overnight stay in hospital – reporting on the hospitals.</p> <p><u>Evaluation Data</u>: Key informant interviews using semi-structured survey; 13 hospitals.</p>	<ul style="list-style-type: none"> Intensity of QI activities varied among the hospitals Data from survey used to target new QI initiatives, evaluate performance and monitor progress.
Mannion, et al. (2005) ⁵ .	6 hospital trusts across the UK.	What are the impacts of the NHS star performance ratings?	<p><u>Public Report</u>: National star rating system maintained by the National Health Service.</p> <p><u>Evaluation Data</u>: Multiple case study design involving interviews with 8-12 key informants from each trust.</p>	<ul style="list-style-type: none"> Information from reports used by some managers Consequences of the public report were identified: distortion of clinical priorities, intimidation, erosion of public trust and difficulty for low-ranked institutions in attracting high-quality staff.
Hibbard, et al. (2005) ⁶ .	115 hospitals in Wisconsin: 24 hospitals that were included in the quality public report; remaining hospitals randomly assigned to one of two groups - one received a private report, one received no report (in 2003).	What effect does public reporting have on the hospital performance in the areas reported on, changes in market share and the recall of the report by members of the public?	<p><u>Public Report</u>: Report contained 5 indicators of patient safety, derived from the Wisconsin Bureau of Health Information.</p> <p><u>Evaluation Data</u>: Performance data collected 2 years later, changes in market share represented by discharges, and phone interviews with members of the public.</p>	<ul style="list-style-type: none"> Hospitals reported on publicly and privately showed statistically significant improvement in quality performance compared to control group; greater improvements observed in the publicly reported group. A small proportion of consumers were able to recall the report 2 years later. <p><i>Consumer Choice:</i></p> <ul style="list-style-type: none"> No observed change in market share.

Hibbard, et al. (2003) ⁷ .	115 hospitals in Wisconsin: 24 hospitals that were included in the quality public report; remaining hospitals randomly assigned to one of two groups - one received a private report, one received no report.	What new quality improvement initiatives have started in these hospitals, in response to public reporting?	<p><u>Public Report:</u> Report contained 5 indicators of patient safety, derived from the Wisconsin Bureau of Health Information.</p> <p><u>Evaluation Data:</u> Survey was sent out to CEOs and directors in each of the 115 hospitals.</p>	<ul style="list-style-type: none"> • More quality improvement initiatives observed in the hospitals reported on publicly than the other groups; initiatives were related to areas that were reported on. • Private report hospitals had more initiatives than the hospitals which received no report.
Peterson, et al. (1998) ⁸ .	Providers profiled in the New York State cardiac bypass surgery mortality report.	What effect does provider profiling for cardiac bypass surgery have on access and outcomes for elderly patients?	<p><u>Public Report:</u> New York State provider level profiling of cardiac bypass surgery mortality rates (since 1989).</p> <p><u>Evaluation Data:</u> Trends in out-of-state surgeries (patients 65 and older) and trends in surgical outcomes in NY compared to the rest of the US between 1987 and 1992. Data came from the Health Care Financing Administration.</p>	<ul style="list-style-type: none"> • Elderly patients' likelihood of receiving surgery increased and mortality rates dropped further than the national average over the time period examined. The researchers were able to find statistically significant results for some procedures. • No evidence found that provider profiling had negative impact on access or outcomes for elderly patients.

LOOKING FOR EVIDENCE OF CONSUMER CHOICE

Study	Setting	Research Question	Methods	Impact
Romano and Zhou, (2004) ⁹ .	Performance outlier hospitals in New York and California.	Do outlier hospitals identified by the public report experience changes in volume?	<p><u>Public Report:</u> New York – report on coronary bypass surgery (CABG) mortality. California – report on acute myocardial infarction (AMI) mortality and postdissection complications.</p> <p><u>Evaluation Data:</u> New York – discharge abstracts collected from the Statewide Planning and Research Cooperative System. California – discharge abstracts collected from the California Discharge Data Set.</p>	<ul style="list-style-type: none"> New York – low mortality outliers experienced an statistically significant increase in CABG volume – in the first month post-publication; high-mortality outliers experienced a significant decrease in CABG volume within the second month post-publication. California – there was no significant change observed in volume of AMI patients. Low-complication outliers for postdissection experienced a slight increase.
Schneider and Epstein, (1998) ¹⁰ .	Providers and hospitals that provide CABG surgery in Pennsylvania.	What is the awareness and use of the statewide report by the public?	<p><u>Public Report:</u> Statewide report on CABG mortality rates for all cardiac surgeons and hospitals in Pennsylvania.</p> <p><u>Evaluation Data:</u> Telephone survey of 1140 cardiac surgery patients.</p>	<ul style="list-style-type: none"> Minimal use of survey – 1% of respondents knew the correct rating of their surgeon and indicated that it impacted their decision of provider.
Mukamel and Mushlin, (1998) ¹¹ .	Providers profiled in the New York State cardiac bypass surgery mortality report.	What impact does public reporting have on the market share of providers in the report?	<p><u>Public Report:</u> New York State provider level profiling of cardiac bypass surgery mortality rates.</p> <p><u>Evaluation Data:</u> Information from the report was linked with Medicare claims submissions from 1990-1993.</p>	<ul style="list-style-type: none"> Hospitals and physicians with better outcomes experienced a statistically insignificant increase in market share and higher rates of growth in charges for cardiac bypass surgery.

Hibbard et al. (1997) ¹² .	Survey conducted in California, New York State, Pennsylvania and Cleveland, Ohio.	How do large employers use performance information in purchasing health care coverage?	<p><u>Public Report:</u> Clinical outcomes reports from hospitals, HEDIS health plan reports and patient satisfaction data.</p> <p><u>Evaluation Data:</u> Interviews with 33 purchasers responsible for 1.8 million covered lives.</p>	<ul style="list-style-type: none"> Purchasers are not always aware of clinical outcomes data and available information does not meet their decision-making needs.
Hibbard and Week, (1989) ¹³ .	658 state employees and 717 Medicare enrollees in Oregon; each divided into an experimental and control group.	What is the effect of giving patients information on fees charged by local physicians for common procedures?	<p><u>Public Report:</u> Members of the experimental group received information on fees charged by local physicians, along with a report on the range of fees.</p> <p><u>Evaluation Data:</u> Face-to-face interviews with informants, and follow-up phone call 1 and 2 years later, as well as each patients complete health insurance record.</p>	<ul style="list-style-type: none"> Increased awareness in the state employee group, however, the experimental intervention did not lead to a reduction in health care expenditures. Lack of information on quality of care was noted by respondents as a missing component of the cost report.

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APPENDIX C: PUBLIC REPORTING PROGRAMS IN CANADA AND INTERNATIONALLY

The examples contained in the following table are not an exhaustive list of reporting activities going on in Canada. The intent of this table is to give a general overview of the types of reporting that go on within Canada and internationally. More detail on each of these reports can be found on their respective websites, or by contacting the organizations responsible for the report. Many of these organizations produce more reports than what are listed here on the topic of quality of health care.

Reporting Agency	Report	Objective*	Audience*	Content	Product and Distribution	Impact/Evaluation of Report
Canada						
Canadian Institute for Health Information ¹	Health Indicators	Quality Improvement	Managers and Policy Makers	45 indicators of health care quality reported provincially.	Lengthy report available on the web and paper copies can be ordered. Data can be downloaded into customized reports or presented graphically. Ongoing since 2000.	No formal evaluation materials were found on the web site. Some evidence of impact provided within the report about how it is being used. Other evaluative information contained in related documents.
Canadian Institute for Health Information ²	Health Care in Canada	Quality Improvement	Managers and Policy Makers	Information on outcomes of care, health care expenditures and health professionals for each province.	Lengthy report available on the web and paper copies can be ordered. Ongoing since 2000.	No formal evaluation materials were found on the web site. Some evidence of impact provided within the report about how it is being used. Other evaluative information contained in related documents.

Health Canada ³	Healthy Canadians - A Federal Report on Comparable Health Indicators 2006	Accountability	Public	Information on national population health statistics for 21 indicators. Also contains information on system organization.	Lengthy document found on the web, linkable to larger technical documents. No information on distribution of the report was available on the web site.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Health Council of Canada ⁴	Why Health Care Renewal Matters: Lessons From Diabetes	Accountability	Public and Policy makers	National and provincial data on diabetes prevalence (total of 17 indicators), current Canadian quality improvement efforts, and a rationale for why focusing on diabetes care will have a significant impact on improving population health.	Lengthy report available on the web. Paper copies widely distributed across Canada, primarily to policy makers.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

Government of British Columbia, Act Now BC ⁵	Measuring Our Success: Baseline Document 2006	Accountability	Public, Managers and Policy Makers	Health statistics for the province, health regions and smaller communities on birth rate, obesity, fruit/vegetable consumption, physical activity and tobacco use as they relate to the prevalence of chronic illness.	Lengthy report available on the web. No information on how this report was distributed.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
British Columbia Ministry of Health ⁶	Surgical Wait Times	Accountability	Public	Number of patients waiting for surgery, median wait time and/or number of cases completed within a 3-month timeframe for 19 broad categories of surgeries.	Regularly updated web-based report that provides information on the selected surgery. No information provided on how this report was distributed other than via the web site.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

Health Quality Council of Alberta ⁷	Health Report to Albertans – Playing it Safe: You and Your Medication	Quality Improvement and Accountability	Public, Providers and Managers	Information about medication risks, how to read medication labels, and a checklist to help track medication use.	12-page report available on the web. Paper copies were distributed, though no details available on the website regarding distribution strategy.	No evidence of impact found on the site. There is an evaluation form attached to the report to solicit feedback from readers on content, usefulness and topics for future reports.
Health Quality Council (SK) ⁸	HQC has reported on quality of care for: Asthma, post-AMI, diabetes, drug prescribing in long-term care facilities and community-dwelling seniors, patient experience in acute care, and breast cancer care wait times	Accountability and Quality Improvement	Public, Providers, Managers and Policy Makers	Series of indicators for each report (from 6-15). Most were accompanied by a companion quality improvement report with information on ideas for improvement in that topic area.	Reports available on the web. Many reports had a 2-6 page summary version as well as a full report. Paper copies were made available to health care practitioners and managers through regulatory bodies. Web site materials are also promoted through a number of email list serves.	No evidence of impact found on the site. No formal evaluation was found on the site.

Saskatchewan Health ⁹	Saskatchewan Surgical Care Network	Accountability	Public	Information on wait times and number of providers for 11 different areas in 13 different health regions. There is also information for patients on how they will move through the system, what to expect and what to ask providers.	Regularly updated web-based report that can be searched by specialty and geographical location. No information on how report was distributed.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Ontario Health Quality Council ¹⁰	QMonitor	Accountability and Quality Improvement	Public and Policy Makers	Information on the province as a whole and on health regions for a range of topics including access, safety, chronic illness, equity, primary health care, resources, population health and quality improvement strategies.	Report was distributed in paper copy across the province and is available on the web. There is a 96-page full report, a 12-page summary and a 4-page brief. Report developed after extensive consultation with the audience. Ongoing since 2006.	No evidence of impact found on the web site. Evaluation form on the net for the report, focusing on the reports ease of use, suggestions for improvement, and ideas for future topics.

Ontario Ministry of Health and Long-term Care ¹¹	Ontario Wait Times	Accountability and Consumer Choice	Public and Providers	Public report contains information on wait times in 5 different surgical areas. Users can search by geographical location and hospital. Information on what to ask providers, and what a wait time is. Provider report gives more detailed information.	Regularly updated web-based report that allows the user to select the information that is relevant to them. No information on how report was distributed.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Cancer Care Ontario ¹²	Cancer System Quality Index	Quality Improvement	Public, Providers, Managers and Policy Makers	Comprehensive list of online sources covering prevention, access, outcomes, best practices, efficiency and measurement of quality improvement.	Web-based resource that allows users to access information on a number of issues, ranging from prevention to end-of-life.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

Cardiac Care Network and Institute for Clinical Evaluative Sciences ¹³	Report on Coronary Artery Bypass Surgery in Ontario	Quality Improvement	Public, Providers and Managers.	Information for 11 cardiac surgery centers in Ontario on crude, expected and risk-adjusted mortality rates.	Lengthy report is available on the web. No information on how report was distributed Ongoing since 1999.	The public report has had no effect on quality improvement, compared to the privately released report which has. No formal evaluation materials were found on the web site.
Hospital Report Research Collaborative ¹⁴	Ontario Hospital Report	Accountability and Quality Improvement	Public, Providers, Managers and Policy Makers	Information for sets of indicators related to acute care, emergency department care, complex continuing care, rehabilitation and mental health.	Series of reports available on the web. No information on how the report was distributed. Ongoing since 1998.	No formal evaluation materials were found on the web site. Some evidence of impact provided within some of the reports concerning how they are being used.
Government of New Brunswick ¹⁵	The New Brunswick Health Care Report Card	Accountability	Public	The report contains information on health care renewal, long-term vision and system performance (based on 29 indicators).	Report available on the web. No information on how report was distributed. Ongoing since 2003.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

* Explicitly stated or inferred from materials reviewed.

Reporting Agency	Report	Objective*	Audience*	Content	Product and Distribution	Impact/Evaluation
European Union Health Consumer Powerhouse ¹⁶	Euro Health Consumer Index	Quality Improvement	Public, Providers, Managers, Purchasers and Policy Makers	26 countries that are part of the EU ranked according to 27 index indicators.	40-page report available on the web and a 1-page report presenting overall country ranking, as well as their score from 1-3 on each indicator. No information on how report was distributed. First report of an ongoing reporting program.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

* Explicitly stated or inferred from materials reviewed.

Reporting Agency	Report	Objective*	Audience*	Content	Product and Distribution	Impact/Evaluation
National Health Service ¹⁷	Choosing Your Hospital	Consumer Choice and Quality Improvement	Public	Hospitals ranked based on 28 indicators of patient satisfaction and quality of care.	Regularly updated web-based report searchable by geographical location. Compare up to five hospitals at one time. No information on how report was distributed.	No evidence of impact found on the site. Evaluation survey linked to the site asking about ease of use and content.
	20. Dr Foster ¹⁸	Quality Improvement and Consumer Choice	Public, Providers and Managers	Hospitals are given scores on lists of indicators depending on what services the hospital offers.	Regularly updated web-based data base. Users can search by hospital, and view hospital scores. Users can search for specialists or maternity centers by location and view their profiles.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

* Explicitly stated or inferred from materials reviewed.

Reporting Agency	Report	Objective*	Audience*	Content	Product and Distribution	Impact/Evaluation
United States						
The Commonwealth Fund ¹⁹	State Scorecard	Accountability and Quality Improvement	Public, Providers, Managers and Policy Makers	There are four sets of indicators around the categories of: Access, Quality, Avoidable Hospital Use and Costs, and Healthy Lives. Hospital results for quality of care indicators related to heart attack, heart failure, pneumonia, and surgical infection prevention. Hospitals provide data voluntarily. Also provides hospital checklist and patients' rights information.	Web-based report that allows users to compare states by rank on each set of indicators. No information on how report was distributed.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Centers for Medicare and Medicaid Services ²⁰	Hospital Compare	Consumer Choice	Public, Providers, and Managers		Web-based data base, updated quarterly. Users can search by hospital name and location.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Centers for Medicare and Medicaid Services ²¹	Nursing Home Compare	Accountability and Consumer Choice	Public, Providers, and Managers	Characteristics, quality indicators, inspection results, and nursing staff information from nursing homes that are Medicare or Medicaid certified	Web-based data base. Quality data updated quarterly, inspection results updated monthly. Users can search by nursing home name and location	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

Centers for Medicare and Medicaid Services ²²	Home Health Compare	Accountability and Consumer Choice	Public, Providers, and Managers	Characteristics and quality indicators from home health agencies that are Medicare or Medicaid certified.	Web-based data base, routinely updated. Users can search by home health agency name and location	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Agency for Healthcare Research and Quality (AHRQ) ²³	National Health Care Quality Report (US)	Quality Improvement and Accountability	Managers and Policy Makers	211 indicators, distilled into a core set of 42 indicators, focusing on effectiveness, patient safety, timeliness, and patient centeredness. Report provides national data and a breakdown by state with comparisons.	Lengthy and comprehensive web-based report, with paper copies available on request. Ongoing since 2003.	The report notes improvement over the life of the program in some areas, and deterioration in others, based on the indicators. Online survey about the web-based report that users are prompted to fill out. Evaluates content, ease of use, whether it met the needs of the user and what those needs are.

New York State Department of Health ²⁴	New York State Cardiac Surgery Outcomes Reports	Quality Improvement and Consumer Choice	Public, Providers, Managers and Purchasers.	Information on treatment and prevention of cardiovascular diseases, statewide information on prevalence, and mortality rates by hospital and individual surgeon for coronary artery bypass graft surgery and angioplasty.	Series of lengthy PDF reports available on the web, with paper copies available on request. Uses numerical figures to identify quality of care for each measure. No information on how report was distributed. Ongoing since 1989.	No formal evaluation materials were found on the web site. Impact: Progress is noted in both clinical outcomes and also in population risk factors within reports such as a reduction in smoking and improved diets.
Pennsylvania Health Care Cost Containment Council ²⁵	Cardiac Surgery in Pennsylvania	Quality Improvement and Consumer Choice	Public, Providers, Purchasers and Policy Makers.	Population statistics for the state on cardiovascular disease, prevention and treatment. Also shows mortality and readmission rates, length of stay and cost for hospital and individual surgeon.	Web-based report has a feature that allows users to select specific hospitals or surgeons. Indicates quality of care using better than average, average and below average visual cues. No information on how report was distributed. Ongoing since 2000.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

State of California's Office of the Patient Advocate ²⁶	Healthcare Quality Report Card	Consumer Choice	Public	Evaluates HMOs and medical groups against indicators and patient satisfaction for care related to: asthma, diabetes, cancer, heart care, maternity, mental health and STDs.	Web-based report allows users to see the quality of care offered by HMOs and medical groups throughout the state. Uses star rating system (1-4) and bar graphs. Paper copy available upon request. No information on how report was distributed.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.
Minnesota Department of Human Services ²⁷	Nursing Home Report Card	Consumer Choice	Public	Measures 7 indicators for state homes: quality of life (patient survey), Minnesota quality indicators (aggregate of 23 measures of quality of care), hours of direct care, staff retention, temporary staffing use, proportion of single rooms, and state inspection results.	Web-based report allows users to select homes within a user specified radius of their zip code, or based on the users three most important quality indicators. Scores, ranging from 1 to 5 stars for each indicator, for each home, are compared to the state average.	No formal evaluation materials were found on the web site. No evidence of impact found on the web site.

California Healthcare Foundation ²⁸	Rating Hospital Quality in California	Consumer Choice and Quality Improvement	Public, Providers, Managers, Purchasers and Policy Makers	Information on hospitals related to patient safety and experience in seven broad areas with seven or more indicators for each area. Also has a number of other resources and links to other sites.	Regularly updated web-based data base searchable by location, hospital and medical condition.	No evidence of impact found on the site. Online survey evaluating usability and content of the site.
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* Explicitly stated or inferred from materials reviewed.

Reporting Agency	Report	Objective*	Audience*	Content	Product and Distribution	Impact/Evaluation
Australia						
Australian Institute of Health and Welfare ²⁹	Australia's Health	Accountability and Quality Improvement	Public, Providers, Managers, and Policy Makers	Patterns of health and illness, determinants of health, the supply and use of health services, and health services expenditure.	Paper report available on the web, produced every two years. No information on how report was distributed.	No evidence of impact found on the site.
New South Wales Health ³⁰	Hospital Information	Accountability and Consumer Choice	Public	Information on what to expect when you go to a hospital, questions to ask, and performance measures around triage times, wait times, surgery and cancer care.	Regularly updated web-based data base searchable by location, hospital, provider and medical condition.	No evidence of impact found on the site.

* Explicitly stated or inferred from materials reviewed.

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