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Gaming, Accountability and Trust: DRGs and Activity-Based Funding in Norway

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Abstract: This paper examines a particular performance management instrument in Norway: DRGs used in conjunction with activity-based funding of hospitals. We ask whether this system creates opportunities for undesirable gaming practices, how accountability arrangements deal with gaming, and how trust and institutional logic may help to explain anomalies and their resolve. From an instrumental and cultural perspective, we examine six Norwegian cases of gaming and two governmental assessments of coding and activity-based funding. Current solutions do provide gaming opportunities, in a highly complex accountability setting. Accountability arrangements highlight tensions between trust and distrust, rather than resolving the balance between individual goals and collective norms.

Keywords: gaming, accountability, DRGs, performance management, trust

INTRODUCTION

In this paper, we investigate the track record of a particular performance management system in a specific setting: the Diagnosis Related Groups system (DRG) used in conjunction with activity-based funding (ABF) in the Norwegian hospital system. We are interested in three particular issues and ask the following research questions: Firstly, as the registration and coding of medical activity is connected to health economics and the funding of hospitals; do the DRG and activity-based funding systems create opportunities for actors to game the system? Secondly, when gaming *is* revealed, how is it dealt with in terms of accountability in the larger system of governance? Thirdly, we ask

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how malfunctioning of DRGs and accountability processes are connected to institutional logic and trust in the rather complex setting of Norwegian hospital governance.

We examine six individual cases that received media coverage in the period 2003–2012. The cases concern hospital officials accused of engaging in illegal, unethical or other questionable ways of gaming the DRG system in order to obtain some form of irregular benefit. We also assess performance audits by the Auditor General and a national revision of the system of coding practices carried out by the Directorate of Health and the regional health trusts. The inclusion of these is motivated by the need to understand the relative scale and scope of gaming and to illustrate the connection between narrow aspects of organizational behavior and the larger context of public accountability. In order to grasp the NPM twist in Norwegian hospital governance, we have selected cases and processes that occurred following the introduction of a number of reforms around the turn of the millennium, which included DRGs and activity-based funding as well as changes in hospital ownership, governance structure, and management.

Activity-based funding is a two-step scheme that builds on the Diagnosis Related Groups (DRG) system, an administrative tool developed to register, aggregate and handle information about hospital activity (Kimberly et al., 2008). The activity-based funding (ABF) scheme connects this data to funding: funding is based on DRG typologies that carry standardized pricing, thus relying on the coding and recording of performance. The money thus 'follows the patient' in a process aimed at facilitating patient mobility, increasing productivity, and improving cost efficiency, quality and transparency (Byrkjeflot and Torjesen, 2010; and Busse et al., 2011). DRGs are not only coupled to cash flows, however, but also function as performance assessments. Accruing DRG points is used as a measure of productivity (Fetter and Freeman, 1986), which is also an important function of the system in Norway (Løkeland, 2013). The system relies on two principles: that medical information is available and possible to process, and that the calculation of activity based funding actually reflects hospital expenditure. Thus, the basic assumption is that there is clear consistency between medical activity (diagnosis and treatment), the recording of this information in patient journals, the coding of information in the DRG system, and the calculation and allocation of funds. The term DRG has become synonymous with activity-based funding, although the distinction between them is useful in the Norwegian system, which combines activity-based funding with block grants allocated through political processes.

First, we present the methodological approach that underpins the study. Secondly, we introduce the Norwegian context, highlighting recent reforms and outlining the DRG/ABF system. Thirdly, we present our conceptual and theoretical approaches. The thesis is that DRGs and activity-based funding are examples of discretionary practice embedded in a political context. For

descriptive purposes, we address political, managerial, professional, legal and social forms of accountability. An instrumental and a cultural perspective are applied to illustrate how DRGs in practice create a mixed and complex system that encompasses different logics and hence may produce negative side-effects. The fourth part of the paper examines these side effects by focusing on individual cases of gaming and on accountability issues and discusses our findings with reference to our theoretical approach. The aim is to contribute to and expand on recent discussions of gaming and accountability by focusing on external incentives and internal motivations.

THE NORWEGIAN CONTEXT

Norwegian health care was previously characterized as a decentralized single-payer system relying on frame-based funding (Kokko et al., 1998; Byrkjeflot and Neby, 2008; and Jakobsen, 2009), with most hospitals under public ownership. This model produced constant budget deficits and repeated funding negotiations between hospitals, counties and the state. Thus, de-linear processes related to financing are not new to the Norwegian system; previous processes have been labeled as scape-goating, rematches and blame-games (Byrkjeflot and Neby, 2008). To remedy this, the 2002 hospital reform transferred ownership of hospitals from counties to the state, removing them from the regional democratic influence of the county assemblies. The reform introduced a decentralized enterprise model: The county-based hospitals were replaced with five regional health trusts (RHTs) with separate executive boards, owned by the Ministry of Health. Under their jurisdiction, approximately 250 single institutions were organized into 33 local health enterprises (LHEs) with their own executive boards. The reform thus suggested a simultaneous centralization and decentralization and a replication of private sector ideals (Lægreid et al., 2005; and Byrkjeflot and Neby, 2008). A key challenge has been to find the right balance between local autonomy and central government control, in other words to fulfill the government goal of centralizing policy and decentralizing delivery responsibility (Neby, 2009).

Nationwide activity-based funding and DRGs were introduced in 2001 after a few years of experimentation. This system is based on a combination of administrative tools: DRGs, which classify medical performance, are coupled with pre-calculated costs for each type of treatment, making medical performance the criteria for the allocation of funds. In the Norwegian tax-funded hospital system, the aim of DRG/ABF is threefold: to improve efficiency and contain costs (Magnussen, 1995), to stimulate and maintain productivity (Health Directorate, 2011), and to monitor performance (Løkeland, 2013). The shares of block grants versus activity-based funding have been debated in parliament in budget discussions, as the activity-based share of hospital funding has varied from about 15% to 60% of total operating expenses (not including cost of capital).

GAMING AND RULE-BENDING

Most healthcare systems face problems of incomplete and asymmetrical information, which implies that they are vulnerable to market failure and prone to abuse (Barr, 2004; and Rothstein, 2011). Incentive-based measures, such as ABF, typically establish rules for decision-making, information sharing and transaction. Rules leave room for interpretation, which is legitimate because the activities within the system are by nature ambiguous. This leeway however, also creates opportunities for actors to game the system (Morreim, 1991).

The literature provides several descriptions of how DRGs can be manipulated. Labels such as *DRG-creep*, *patient selection*, *upcoding*, *creaming* and *skimping* occur frequently in both international and Norwegian literature (see e.g., Donaldson and Magnusson, 1992; Mikkola et al., 2002; Morriem, 1991; Silverman and Skinner, 2004; Hafsteinsdottir and Siciliani, 2009; Martinussen and Hagen, 2009; and Cots et al., 2011). *DRG-creep* means patients are placed in higher-priced DRGs than their diagnoses warrant: The hospital receives more money per treatment than it should (Modell, 2004). Illegal DRG creep occurs when false diagnoses are intentionally registered to increase revenue (Kastberg and Siverbo, 2007). *Upcoding* is a practice where patients are reclassified into more lucrative categories (Culyer and Posnett, 1990). Such active cheating can in principle be of three different types (Hsia et al., 1988); mis-specification (the wrong diagnosis is applied), miscoding (reporting treatment that has not been conducted), and re-sequencing (changing the sequence of diagnoses or reporting a secondary diagnosis as the main diagnosis in cases when this would result in higher reimbursement).

DRG dumping refers to avoidance of high severity patients, where clinics give preference to easier cases and avoid costly or less profitable patient groups (Ellis, 1998). Other labels include *creaming* (over-provision of services to low severity patients), *skimping*, (under-provision of services to high severity patients) and *skimming* whereby high profit/low cost patients will be selected over patient groups yielding a lower profit per treatment. Activities that do not yield a net income tend to be given low priority (NOU, 2003, p.1).

Following this, the first question we ask is whether DRGs, in combination with activity-based funding, create such gaming opportunities for actors in the Norwegian setting.

ACCOUNTABILITY: RESOLVING THE PROBLEMS OF MANY EYES, MANY HANDS

Gaming attempts challenge the public ethos and undermine general expectations about, or norms of, due process. To regard DRGs merely as mechanisms to regulate payment is to underestimate both their effects and their actual uses, as they clearly impact performance. An organizational perspective that couples the role of organizational actors actually making the decisions and the larger governance system's responses is needed to expand on the literature on DRG

anomalies. Our suggestion is to combine the (DRG) gaming approach with perspectives on accountability and institutional trust.

A premise for democratic governance, following March and Olsen (1995) is that citizens can hold policy-makers accountable, and that policy-makers hold administrative actors in check. In reality, however, accountability takes a variety of shapes and directions, not least as structural and functional aspects of larger public sector systems are changed through reform initiatives. To grasp these varying aspects of accountability, we apply a scheme developed by Bovens (2007a and 2007b) that categorizes different forms of public accountability and builds on a rather narrow definition: Accountability is '. . . a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgments, and the actor may face consequences' (Bovens, 2007b, p.45). Accountability normally consists of three phases – the information phase, the debating phase and the sanction or judgment phase (Mulgan, 2003; and Bovens, 2007b).

Bovens (2007a and 2007b) claims that accountability is a form of ex post or retrospective scrutiny that encompasses two dimensions (Bovens et al., 2010): whether the accountability arrangements are able to *reveal and handle* mismanagement, and whether the arrangements have a *preventive* effect. Public organizations – the actors – face *'the problem of many eyes,'* meaning they are accountable to a number of different forums that apply different criteria for conduct. Similarly, accountability forums face *'the problem of many hands,'* or difficulties in deciding which actors to hold to account – whether these are individuals or organizations (Thompson, 1980). Determining who has contributed in what way to given processes is difficult, and equally so to pinpoint who can be held accountable for established practices.

Actors in public organizations thus face a range of complex considerations, which are related to different constellations of forums and issues at stake. When cases of malpractice or illegitimate actions surface – which they may do for a variety of reasons – resolving issues of accountability is thus an important part of any given system's ability to handle adverse events. In order to grasp the complexity of accountability relations and processes, we rely on a classificatory scheme that incorporates both the problem of many eyes and the problem of many hands: to whom is an actor accountable, and who is the accountable actor? Table 1 summarizes these distinctions, largely building on Bovens (2007b). The classifications are employed to structure the answer to our second research question: When gaming *is* revealed, how is it dealt with in terms of accountability?

THE PROBLEM OF INCENTIVES AND TRUST: INSTRUMENTAL AND CULTURAL PERSPECTIVES

For a contextual perspective that encompasses the role of organizational factors such as decision-making, norms and surroundings, we suggest distinguishing

Table 1

Classifications: Accountability Relations by Type of Forum and Actor

Accountability to Whom?					***Who is Accountable?***
Political	*Legal*	*Administrative*	*Professional*	*Social*	
External accountability to political forums, or representatives of such, i.e., voters, parliament, ministers, cabinet (Mulgan, 2003). Vertical relationship, based on formal delegation of democratic authority.	Accountability towards a judicial authority based on the rule of law. Definitions of accountability and responsibility are formally specified, and processes are external to the actor.	Accountability based on positions within a hierarchy, where a superior calls a subordinate to account for delegated duties (Day and Klein, 1987). Presupposes a clear separation of policy making and implementation (Wallis and Gregory, 2009).	Accountability towards peers, professional or disciplinary bodies that administer codes of conduct and steward professional standards. Marked by deference to expertise and technical knowledge (Romzek and Dubnik, 1987).	Accountability towards stakeholders in the larger social context, i.e., to 'the public, the media, interest groups (Malena et al., 2004). Processes are open, informal and typically horizontal (Schillemans, 2008).	Refers to the type of actor rather than the forum, and to the nature of their relationship. Actors may be: -individual -sub-unit -organization -system Relationship may be: -vertical -horizontal -diagonal

between classificatory accountability approaches and explanatory perspectives on organizational behavior. Accountability arrangements are typically introduced both to resolve issues where a certain level of distrust is characteristic, and to prevent such issues from arising. The level of trust in public institutions has generally been higher in Norway than in most other countries (Norris, 1999). Collectivist and egalitarian values, consensus-orientation, and low levels of internal conflict characterize the country's public sector. Relations between political and managerial executives have traditionally been trust-based, with few external or formal steering devices (Christensen and Peters, 1999). New Public Management reforms seem to contrast this situation, emphasizing external controls and clearer emphasis on management by objectives and results. A perspective on trust may contribute to expanding our understanding of gaming as a result of the incentives created by systems such as DRGs and activity-based funding.

Some argue that performance-management systems are based on an assumption that subordinate units cannot be trusted, because their main concern is to act in their own interests (Boston et al., 1996). Others argue that a certain level of mutual trust is necessary to put a performance management system into practice, due to the greater leeway and discretion given to the subordinate units (Christensen et al., 2006). Performance management systems assume flexibility, discretion, trust and managerial autonomy on the one hand, but also distrust, central control and accountability on the other hand (Lægreid et al., 2006).

Focusing on this tension, we apply a cultural and an instrumental perspective, based on two different institutional logics. The first is a perspective informed by traditional cultural elements, with high levels of mutual trust between local, regional, and central levels of the governance system. Actors operate according to a logic of appropriateness (March and Olsen, 1989), as they are subject to processes of norm-formation and internalization of common goals, values and missions. These ideas envisage a high degree of decentralization and local autonomy: The intention is to *let the managers manage*, the argument being that this will enhance cost-efficiency by discretionary use of allocated resources. Mutual trust and internal motivation by an organizational ethos is a central feature of and indeed a key precondition for autonomy. This model is in line with the traditional Norwegian model of transparency, cooperation and consensus (Christensen, 2005). From this perspective we would expect informal and internal professional accountability to peers to be primary but also horizontal social accountability and transparency to allow citizens and media to check on negative behavior.

In the second perspective, performance management models are based on distrust, technical-instrumental features and tight performance monitoring as actors operate on the basis of instrumental rationality, with a clear component of self-interest. One may argue that health enterprises pursue their own interests based on local rationality and institution-specific goals, which are not necessarily consistent with the overall goals of central government (Cyert and March, 1963). The idea thus becomes to *make the managers manage*: They need to be controlled

via formal contracts and monitoring, formal accountability mechanisms and assessments. Actors act in accordance with a logic of consequentiality, and it is negative consequences that restrain misbehavior. In such a low-trust scenario, performance management is based on external incentives, discipline and punishment (Pollitt, 2006) rather than internalized norms. From this perspective we would expect formal, external and vertical managerial and also political accountability relations to dominate.

The DRG system rests on two presuppositions: Firstly, that professionals follow the intentions of the system as a collective endeavor and that professional norms are appropriate for guiding their practice; secondly, that forums are prepared to take action if administrators or professionals use intricate strategies unfairly. DRGs combine trust in the professions with procedures to avoid negative side-effects, such as accountability arrangements for controlling cheating or gaming (Hood, 2002). Thus, there is an inbuilt tension between relying on trust and establishing controls based on distrust. Trust relations affect both goal acceptance and performance reporting between organizational units (Light, 2006).

In the present study, the two perspectives on trust provide an analytical bridge between what we know from the DRG gaming literature about different forms of accountability, and the organizational behavior that the investigated cases display. This analytical choice reflects our ambition to answer the third research question: Why DRG gaming occurs and how this is reflected in efforts taken to resolve such gaming. More operationally, we ask a) whether the level of trust and the nature of institutional logic are among the preconditions for undesirable behavior (such as DRG gaming), and b) whether the ways accountability arrangements are used reflect the role of such logic and its possible effects on trust. Together, these questions support the hypothesis that there may be a loose coupling of ideals and practice in the DRG system, particularly visible where traditional trust-based professional norms and values are confronted with technical-economic local logics which disregard how the hospital system as a whole functions (Christensen et al., 2006).

METHODS AND RESEARCH APPROACH

Our data consist of public documents from the government and the parliament (Storting), the Auditor General, the Ministry of Health, the Directorate of Health, and the health trusts and enterprises; press releases and information from their web sites; reports from various agencies and authorities; and extensive media coverage by national and regional newspapers and TV channels. We also draw on secondary literature dealing with DRGs and activity-based funding, performance management and reforms. Public documents were retrieved from public databases and archives, whereas media coverage was accessed mainly through the Retriever database, which covers most Norwegian news coverage in print and on the web. Searches for media articles and public documents

were mutually dependent and the document searches were based on actors, institutions and facts identified in media coverage. Document searches were used to refine and adjust the assessment of media coverage.

In assessing both types of sources, elements and terms from the analytical approaches to gaming, accountability and DRGs were consulted for structuring purposes. More precisely, and firstly, we conducted a number of searches based on a) generic search strings (e.g. [name of health enterprise] plus [DRG] plus [activity based funding], before b) including key terms from the research literature on DRGs (i.e., DRG creep, upcoding, etc). Secondly, search results were assessed based on the more specific classificatory categories drawn from the accountability literature (i.e., the five categories outlined above), actively applying these to structure the cases and to establish a reasonable understanding of the complexity of accountability relationships. Thirdly, the application of the instrumental and cultural perspectives on trust relies on the interpretive component that is at the heart of the notion of a perspective as such: By highlighting certain analytical premises from these perspectives in our assessment of the data, empirical phenomena are given an analytical value.

The period studied ranges from 2003 to 2012, covering the first decade after the 2002 hospital reform. The selection of this period is based on the 2002 creation of a system of semi-autonomous, state-owned trusts and enterprises replacing a county-based, traditional public administration system of hospital governance. In combination with DRGs (introduced nationwide in 2001), a different involvement of national politicians, management reforms and accompanying changes in accountability relationships, the hospital reform may be understood as a transition from the old public administration to New Public Management in the Norwegian hospital system (Neby, 2009). The six individual cases comprise the total universe of publicly known single cases revealed or discussed in the rather comprehensive media coverage in the ten-year period under study. The performance audits of the DRG system by the Auditor General (2003 and 2009) and the national revision of the system of coding practice by the Directorate of Health (2011) are the main general assessments of the system in the same period. We see the reports from the Auditor General as stages in a continuous process rather than single instances, offering a broader perspective important for the contextual understanding of the phenomena at hand.

EMPIRICAL FINDINGS: 'GAMERS' HELD ACCOUNTABLE

In the ***2003 Arendal coding scandal***, a leading newspaper (*Aftenposten*) ran a series of articles claiming that Arendal hospital was using a coding practice whereby more than 50% of all tonsillectomies had been coded as sleep apnea treatment over a period of at least two years, partly as additional diagnoses (at the time, tonsillectomies generated 6,000–8,000 NOK in revenue per treatment; sleep apnea treatment generated 36,000 NOK).[1] A physician employed by the hospital allegedly acted as a semi-external consultant, claiming a 10% commission of

extra funding obtained. The director for the regional enterprise accepted the alternative coding scheme for introduction to several hospitals in the regional enterprise, although this did not take place. The Minister of Health mounted an investigation conducted by the regional board and an external auditing firm. The investigation revealed that 48% of the investigated coding was false[2] and had yielded around 6.6 million NOK in additional revenue for Arendal hospital. Eventually, the local hospital manager, the clinic manager and the regional director resigned and the illegal surplus grants given to the hospital had to be paid back. This scandal was what triggered the initial efforts by the Auditor General to investigate coding practices. In terms of accountability, the ministry did explicitly note the link between the regional board's acknowledgement of the character of the events, their accountability towards the ministry, the Board of Health Supervision, the Norwegian patient registry and other forums external to the enterprise.[3]

The 2010 Asker and Bærum manipulation of patient records was also uncovered by the media, this time by the national newspaper *VG*.[4] A semi-systematic manipulation of patient records produced statistics favorable to the hospital, as waiting lines were shortened and treatments considered complete – thus influencing cash flow though incomplete coding, recording and reporting. However, patients did not receive follow-up treatment or relevant information on waiting times, which both had an impact on their health and affected their right to choose an external provider of services.[5] A central premise for the DRG and activity-based funding system as well as for waiting list management and for exercising choice of provider is that there is consistency between actual diagnosis and treatment, the recording of these in patient journals, and the subsequent coding in the DRG system – all of which were breached in this case. The problem persisted for a period of six years, and the investigation concluded that several lives had been lost as a consequence of the practice. Around 3,700 patient journals were opened and re-assessed as a consequence of the case. Several forums were engaged: the media, the Board of Health Supervision, the police and the local and regional enterprise boards. Sanctions included replacement of board members and managers, and a large fine issued by the police.

In ***the 2011 Lillehammer code cheating case*** a standing committee acting as advisor to the Ministry of Health on issues of activity-based financing uncovered a systematic wrongful coding practice at Lillehammer hospital.[6] In this case, minor injuries had been coded as multiple traumas. The committee stated that the code manipulation could not have been motivated by anything other than a desire to increase the enterprise's revenues. In statistics concerning hospital activity Lillehammer hospital was found to have an incredible success rate in the treatment of multiple traumas; so successful, in fact, that the number of treated traumas exceeded the likely number of such injuries in the hospital's catchment area. The local health enterprise stated that it would refund the extra revenue, but also added that the guidelines and regulations concerning coding and activity-based financing were unclear. A single individual was held

responsible for the practice, but the person in question remained an employee of the unit, although stripped of managerial responsibilities. An additional revision of coding practices in the Innlandet enterprise in 2011 estimated code-related, wrongly obtained revenue of almost 5 million NOK.[7]

The ***2011 Drammen code cheating case*** was uncovered by the national broadcasting corporation, NRK. Here, patients with same-day appointments in Drammen Hospital were being registered as overnight patients – even though they had not spent the night at the hospital. In effect, the coding practices led to increased expenditure for the state and increased revenue for the hospital, on false premises.[8] An interesting facet to this case is that the responsible manager was notified about the code cheating, but did not take action for six weeks. Finally, an employee leaked information about the practice to the regional health trust, which demanded a full investigation and filed the case with the police. The health enterprise openly admitted that Drammen hospital had wrongfully coded at least 1,500 patients over an extended period of time, which means that the fundamental facts of the case have been established. The enterprise board accepted a fine issued by the police; a formal judicial sanction was issued.

The 2012 Gjøvik waiting list gaming case revolved around patients being 'double-listed,' in the sense that they were removed from official waiting lists to internal, undisclosed lists within one of the psychiatric treatment facilities of the local enterprise. Union representatives reported that healthcare personnel felt pressured to engage in 'substantial trickery'.[9] The issue was considered a local problem, and resolved within the internal hierarchic chain of command of the enterprise. The essence of the case here resembles that of the 2010 Asker and Bærum case, in that both the nature and transparency of treatment performance was compromised, potentially influencing both patients' health and cash flows within the local Innlandet Sykehus enterprise. While avoiding breaches of waiting list guarantees, the hospital also avoided the extra costs associated with patients' right to alternative treatment in a different institution – which the hospital would have had to cover. The intention to save expenditure was criticized by the regional patient ombudsman and characterized as 'gambling, corruption and cheating' by a commentator.[10]

The 2012 Oslo University Hospital waiting list gaming case illustrates how creative coding was partially endorsed by managers in situations where inappropriate coding led to a circumvention of waiting lists that were financially negative for the hospital. An internal report from the regional health trust highlighted poor descriptions of administrative processes and routines, a lack of compliance with regulation and breaches in patient follow-ups. A union representative described the problem as being:

> . . . the result of the management culture having developed so that money and budgets become main concerns. When capacity is too low, economically motivated and creative methods are employed to keep waiting lists short.[11]

This case was also resolved internally and more or less defined as an issue of necessary quality improvement by involved forums.

In a newspaper commentary, a previous director of one of the Oslo university hospitals stated that 'The economic system that the politicians have introduced invites code cheating.'[12] He suggested that economic benefits were the main motivation for hospitals to break the rules, whether by gaming to increase revenue or by shortcuts intended to reduce costs. The cases we have investigated show that questions of recording and coding cannot be separated from questions of finance. Coding is not only intimately connected to the system that generates revenue for hospitals, but also to the administration of waiting lists – which in turn affects the hospitals' abilities to cut costs.

The performance audits by the Auditor General and ***the national revision of coding practices*** both represent broad initiatives from the central level. The 2002 performance audit revealed that many hospitals lacked information necessary for the systems to function adequately (Dokument no. 3:6 2001–2002). In 2003, the Auditor General submitted a report to parliament on efficiency in hospitals (Dokument no. 3:3 (2003–2004)) documenting a shift towards selecting more profitable surgery. The report found that hospitals tended to favor economic criteria over medical considerations. Both the minister and the Storting saw this as a clear systemic dysfunction. The Auditor General in 2009 concluded that there had been little improvement in coding practices between 2003 and 2008 (Dokument 3:2, 2009–2010), confirming that the regulation of coding was insufficient. In terms of accountability, the relationship between hospitals and the Auditor General is an indirect, two-step process that can be labeled diagonal accountability (Schillemans, 2008). The Auditor General acts on behalf of parliament.

Partly as a consequence of the negative impact of productivity incentives, the proportion of DRG-based funding had in the space of a few years shifted from 30 (1997 experiments) to 60 (2003) to 40 (2004) to 60 (2005) and back to 40 percent (2007) of total government hospital expenditure (NOU, 2003, p.1; and Kalseth et al., 2010). The government's argument was that activity-based funding stimulated productivity but reduced control over health service priorities and spending. Waiting times were reduced, but with a bias towards easily quantifiable treatments that involve predictable costs – at the expense of unpredictable and complex illnesses (Christensen et al., 2006). In 2010 the Directorate of Health, concerned about whether coding was influenced by economic considerations, initiated a national revision of coding practices. The directorate's report claimed:

> . . . the Directorate of Health has heard repeated allegations that health personnel are being pressured to code 'economically favorably' even though this violates medically correct coding (Health Directorate, 2011, p. 1).

Several previous reports had concluded that there was a significant amount of faulty coding; that the health enterprises' control of coding was insufficient;

that there was incoherence between patients' records and coding practices; and consequently that there was a risk that medical, economic and performance information was of poor quality. The final report, co-published by the four regional health trusts, however, ambiguously concluded that although the general risk of economically motivated deliberate coding fraud was low, the internal steering and control introduced to ensure correct coding practices was insufficient.[13]

The national revision utilized both information about individual cases of malpractice and a series of reports from different scrutiny bodies, including reports from SINTEF (an independent research organization), the Auditor General, and the Directorate of Health. This illustrates how a certain problem can be translated into a national context, and how fairly narrow and technical practices become broad political issues. The national revision basically focused on systemic shortcomings rather than on single cases of code cheating. A general argument in this report is that when the coherence between patient records, codes and financing is poor, the desired effects of the financial system are reduced, political decisions about hospital economics are based on false premises, and hospital service production statistics are compromised (Jørgenvåg and Hope, 2005).

To summarize and classify the findings from this complex set of cases and assessments requires a structured approach. In constructing Table 2 we relied on Bovens' (2007b) distinction between different types of accountability.

EXPLOITING BLIND SPOTS, CHALLENGING TRUST, COMPLEX ACCOUNTABILITY

Initially, we posed three main questions: Firstly, to what extent do DRGs and activity-based funding create gaming opportunities? Secondly, when gaming occurs, how is it dealt with in terms of accountability? And thirdly, what is the role of trust and institutional logic in understanding these cases?

Firstly, the cases studied do indeed illustrate that DRGs and activity-based funding create loopholes or leeway for undesirable organizational behavior. All six individual cases suggest that this is the case, and the assessments and revisions by the Auditor General and the Directorate of Health came to similar conclusions. The two general assessments show that whereas coding practices are assessed thoroughly, the idea of activity-based funding and DRGs, as such, is not. The substance of formal accountability processes is not the performance management system, but the flawed *practices* that the system allows: One interpretation of the DRG gaming, thus, is that it is perceived as an issue of implementation rather than as a substantial policy weakness.

An issue that mirrors this finding is the role of independent audits of DRG coding practices, which could perhaps have prevented some of these cases of malpractice. In principle, the Norwegian system includes a three-step system to ensure the quality of coding, where a) a counter-signature by a leading physician is required, b) coding controllers review coding on what is called 'the unit level' (e.g., hospital department or clinic), and c) central controls are performed

Table 2

The Cases: Accountability Relations by Case, Type of Forum and Actor

	Accountability to Whom?					***Who is Accountable?***
	Political	*Legal*	*Administrative*	*Professional*	*Social*	
Case 1: 2003 Arendal coding scandal	Minister, Storting, Auditor General		Regional and local boards		Media	Regional enterprise director, local enterprise manager, Executive board of regional enterprise Hierarchical, individual and collective
Case 2: 2010 Asker and Bærum patient record cheating		Police	Board of Health Supervision, regional and local board		Media	Local managers, local executive board Hierarchical, individual and collective
Case 3: 2011 Lillehammer code cheating			Advisory committee, regional and local boards	Peers	(Media – low media attention)	Hospital manager Individual
Case 4: 2011 Drammen code cheating		Police	Regional board	Whistle blowing	Media	Undecided

Table 2 (Continued)

	Accountability to Whom?					***Who is Accountable?***
	Political	*Legal*	*Administrative*	*Professional*	*Social*	
Case 5: 2012 Oslo waiting list gaming			Advisory committee, regional board		Media	Organizational, collective
Case 6: 2012 Gjøvik waiting list gaming			Local board		Media	Organizational
2002/03 and 2009 Performance audits	Storting, Minister		Auditor General			Organizational, collective
2010/2011 National revision			Auditor General, Directorate, regional and local boards	Researchers, peers		Organizational, collective

by forums external to the unit level in question (these forums may still be part of the enterprise's administrative organization). The 2011 central coding revision states that practices vary among health enterprises in all three revision steps, and that 'All in all, the health enterprises' efforts to steer and control coding practice is insufficient'.[14] Among the issues raised are lack of routine, an unclear balance between medical and economic considerations in revisions, and considerable variations even within single enterprises in the actual content of and procedures used for coding. A particular point worth mentioning is a tendency that coding yielding higher reimbursement for the hospital is less likely to be changed after revision than coding yielding low reimbursement. As internal revisions and audits are clearly lacking, the latitude for gaming is considerable.

This leads us to the second question: Because such regulatory blind spots do exist and audit arrangements are insufficient in dealing with flawed coding, the media frequently end up acting as forums when individual cases do surface. External administrative forms of accountability are common to all cases when they are revealed to the public. Differing combinations of internal and external accounts are demanded, whether from specific managers, boards at different levels, audit agencies, or politicians. There is considerable interplay between the different types of accountability in the six individual cases. In some cases, social accountability initiated by the media activates administrative, legal and political accountability processes (as in the Arendal coding scandal). In other cases, semi-independent external administrative bodies initiated administrative processes that instigated social or political accountability (as in the Oslo case). However, sustained attention to DRG/ABF problems through accountability measures (as with the general assessments taking place over several years) does not seem to have been enough to prevent gaming from occurring – even though sanctions are sometimes hard (as in the Asker and Bærum case and the Drammen case).

We also reveal a 'problem of many hands' (Thompson, 1980) regarding accountability relations in the hospital sector. Who the accountable actor is varies from case to case. In some cases the organization as a whole is held accountable, in other cases individual managers or officials are called to account. This reflects that senior and middle managers as well as executive boards are all actors and forums in a hierarchical chain of accountability. In contrast to the individual scandals the overall assessments by the Auditor General and the Directorate of Health tend to come to ambiguous conclusions regarding which actor should be held to account. Notwithstanding that, some of the more severe criticism raised by the national coding revision explicitly refers to problems handling the balance between individual and organizational actors in terms of the problem of many hands and the balance between internal and external forums in terms of the problem of many eyes. The cases paint a picture of accountability as a multi-dimensional concept, where horizontal, informal and voluntary accountability relations, as illustrated by the role of the mass media, supplement hierarchical and formal principal-agent accountability.

Information asymmetries are highly prevalent and make it difficult for principals to monitor and control actors' behavior. When judgment is passed and consequences occur, there is also variation between general policy adjustments, public condemnation of actors' behavior, or even the imposition of individual or organizational sanctions on actors. Sanctions are in some cases formal and legal, involving individuals being forced to resign and hospitals being fined, but in other cases more informal and soft. To elaborate, thirdly, on possible explanations, we asked what the role of institutional logic and trust may be within such a performance-oriented setting. We know that public officials may lose a sense of a unified public service and that increasing the distance between them and the political executive tends to reduce responsiveness and accountability (Lægreid, 2013). This ambiguity of accountability becomes especially clear when things go wrong (Gregory, 1998), which our study also shows: different and partly contradicting accountability relationships co-exist, producing dilemmas and tensions. Thus, the reoccurrence of these cases indicates that DRGs and accountability measures do not reduce complexity or ambiguity, but accentuate the inherent tensions. Most of the premises that guide administrative behavior however, seldom reach the attention of political executives and citizens. The accountability problem thus cannot be reduced to a technical pathology, but has to be seen in the wider context of political legitimacy.

This study indicates that the DRG system and activity-based funding involve dysfunctions. The problems of goal displacement and inappropriate reward systems are well known, in spite of the novel intentions of performance management (van Thiel and Leeuw, 2002; and Pollitt, 2013). Our analysis shows examples of several such features, including the negative collective effects of focusing on 'local rationality' in cheating on the system or seeking certain valuable patient groups, resulting in goal displacement and distorted priorities. Put differently, once actors learn which aspects of performance are measured, that information can be used for manipulation (Meyer and Gupta, 1994).

Hood and Bevan (2006) have identified three kinds of health-care managers based on different institutional logics of action: Firstly, there are the 'honest triers' who share regulators' objectives and do their best to meet the standards. These are typical representatives of trust-based systems, and compliance with standards can be seen as following a logic of appropriateness. Secondly, there are 'reactive gamers' who also share the objectives of the regulators, but try to game the system when they fail. This can be done by creative interpretation of coding rules, but also by data falsification in order to turn bad performance into successes on paper. This variant underlines the importance of appropriate action, but also emphasizes the adverse effects a combination of appropriateness and individual self-interest may have. Thirdly, there are 'rational maniacs' who pursue their own goals consistently, at times illegally, often running counter to the intentions of the health care system and who game the system in order to cover their tracks. Here, the actors' own self-interest is primary and central, disregarding preconceptions of appropriateness.

The individual coding cases might mainly be seen as examples of 'reactive gamers'. This may indicate that combining professional autonomy and discretionary reward systems is troublesome when professionally appropriate behavior is replaced by self-interested strategies that are blind to context. This indicates that the role of trust is also volatile and changing: when clear standards of appropriateness are challenged by systems based on incentives that have local rewards, trust-based governance is challenged and accountability becomes an issue of distrust – as was the case in the Asker and Bærum case. Added to this, managers in such systems might not necessarily confine themselves to complying passively with externally formulated rules, but can be more proactive in using various managerial tactics to develop and exploit organizational performance-management systems in biased ways (DiMaggio, 1988; Oliver, 1991; and Modell, 2004). Such risk-taking behavior can potentially undermine trust in the system (Hood et al., 2001).

Regarding the two perspectives on organizational logic, the high trust institutional model and the low trust instrumental model, our findings indicate combinations of the two rather than either/or practices (Pollitt, 2006). The reactive gamers in the Lillehammer case, for instance, seem to have actively engaged in creative coding practices in order to meet standards that are externally imposed. The leeway granted to Lillehammer hospital presupposed a high level of trust in coding practices, whereas the advisory committee found reasons not to believe that the trauma coding in question was legitimate. In practice, the discovery of coding flaws suggests an instrumental exploitation of the system (to the benefit of the hospital) based on an expectation that hospitals themselves were trusted to define coding practices, whereas the advisory committee's engagement signals a certain level of distrust from other governance levels.

The accountability relations activated are as expected from both the instrumental perspective (political and administrative accountability) and the institutional perspective (social and professional accountability). The low-trust instrumental model of discipline and control does not seem to be fully applied. The actions taken seem to be both adjustments of rules and procedures *and* punishment of individuals and organizations. The institutional trust-based model was not fully applied either, as several actors had a large amount of autonomy and flexibility in operating the system, but their discretion was not informed by a common understanding based on mutual trust relations. The cases illustrate the difficult balancing act between trust and distrust, between self-interest and appropriateness. The incentives created by activity-based funding challenge this balance, by creating practical opportunities for gaming. Thus if gaming is to be avoided external motivations in the form of incentives have to be supplemented with internal motivations in the form of organizational ethos and professional identities. Just to get the incentives right is probably not enough. Commitment and competence infused with a strong sense of public purpose are also needed (Ansell, 2011).The two models supplement each other,

combining the traditional cooperative and trust-based policy style and new performance-management techniques. The opportunities created by reforming the structural and functional arrangements through performance management schemes seem to challenge trust relations. Any system of accounts is a road map to cheating on them, to cite March (1981). Once measures have been developed to evaluate compliance or performance, they increase complexity, which invites manipulation.

This suggests that Norwegian hospital governance faces what is labeled second-order collective action problems (Ostrøm, 1998; and Rothstein, 2005). Although different actors may well understand that they would gain from eradicating gaming, they cannot trust other actors to do the same and lose the incentive to refrain from mismanagement. The only way to avoid this would be to establish institutions that would enable actors to trust each other to change their practice (Rothstein, 2011). If someone else is gaming the system, the potential benefit from acting on a basis of trust is downplayed; mutual expectations and behavior based on reciprocity are important. What one actor believes about the strategy of another does matter, which explains the reactive gaming we see in the cases studied. Actors who have lost trust in each other cannot easily produce the level of trust needed to enhance the collaboration needed to establish a common set of institutions, even if they all know they would benefit (Rothstein, 2005 and 2011). This social trap produces a strategic standoff, where uncertainty and distrust overrun appropriateness and a sense of the collective.

Our empirical cases demonstrate how difficult it is to design an incentive system based on self-interest that will effectively discipline all subordinates. In public bureaucracy, the cost of using incentives is likely to be high, concentrating on incentives that challenge trust and the very qualities in a relationship that makes the reform measure work (Miller, 1992; and Miller and Whitford, 2002). The challenge is to inspire cooperation, to bypass the actors' short-term interests, and to re-establish an understanding of shared values and norms that increase a sense of mutual trust (Ansell, 2011).

CONCLUSION

Gaming does occur in the Norwegian hospital system, and it does seem to be connected to the particular discretionary incentives created by DRGs and activity-based funding. It is not adequately resolved through processes of accountability, which have little preventive effect and enhance the tension between trust and distrust rather than resolving it. This raises the question of how such problems can – or should – be handled. Arguably, there are two main views on this. The first regards gaming as an implementation problem, attributable to lack of knowledge and experience, solvable through more education, training, control and a more sophisticated system. The second sees creative coding as a logical consequence of the system itself. According to this viewpoint, the problem is an inherent feature of the system associated with

the underlying policy theory. Thus, greater technical sophistication might not be enough to reduce dysfunctional behavior. Neither does a more sophisticated accountability regime. Generally, the DRG/ABF system assumes the culture of public service honesty as a given, but at the same time it builds on assumptions of distrust and self-interest. It seems that this combination of actor-specific self-interest and a certain trust-based collective component reflects the larger question of how incentives influence behavior and how the adverse effects of such actions are handled.

We have revealed a multiple accountability regime in which the different accountability mechanisms complement each other. In one sense, accountability has not decreased, but rather multiplied (Klenk and Pieper, 2012). A key challenge is how to handle such hybrid accountability relations as they are embedded in partly competing institutional logics. Multiple accountability may be appropriate for an increasingly pluralistic governance system, as accountability is about managing diverse and partly conflicting expectations (Romzek and Dubnick, 1987). Calling officials to account means inviting them to explain and justify their actions within a context of shared beliefs and values (March and Olsen, 1995; and Dubnick and Frederickssson, 2011), which implies a dialogue between officials and those to whom they are accountable. It seems that for performance management systems such as DRG/ABF to work, we must go beyond the instrumental flavor of accountability and the focus on principal-agent relations to include both a logic of appropriateness and accountability mechanisms that espouse intrinsic values such as integrity, democratic legitimacy, justice, fairness and public mission. As it is, the unresolved tension between trust and distrust, self-interest and collective norms contributes to gaming practices.

NOTES

1 Sources: Aftenposten, March 12, 2003: 'Sykehuset i Arendal hadde over halvparten av diagnosene: Tok mandlene, la til snorking og tjente 4 mill.' Aftenposten published altogether 33 printed articles on the case, in the period between March 2003 and January 2004, when the Auditor General decided on a tighter control of hospital funding. At one point, Aftenposten provided a methods report for their coverage of the case, which can be found here: http://www.skup.no/Metoderapporter/2003/2003-7_Helse_Sor-saken.pdf

2 Sources: Letters from Helse Sør RHF to the Ministry of Health and Care (March 24, 2003) and letter from the Ministry of Health to the board of Helse Sør (March 27, 2003).

3 Sources: Letters from the Ministry of Health and Care to Helse Sør RHF (March 14, 2003 and March 27, 2003).

4 Sources: The initial VG article on the case was published January 22, 2010 («Kan ha satt pasienter i livsfare. Sykehus innrømmer grov svikt»). VG covered this case (in print and online) through 75 articles during 2010. VG also provided a methods report, available here: http://www.skup.no/Metoderapporter/2010/17-Skandalesykehuset.pdf

5 Source: Preliminary orientation to the Storting by Minister of Health and Care Anne-Grethe Strøm-Erichsen, July 6, 2010.

6 Sources: VG, June 24, 2011: «Småskader kodet om til multitraumer ga mer penger. Sykehus tatt for kodejuks». The case was mainly covered by local/regional newpapers Oppland Arbeiderblad and GD.

7 Source: Sykehuset Innlandet, Internal note. «Beregning av uberettiget mottatt refusjon knyttet til T-kodebruk». September 16, 2011.
8 Source: NRK, November 17, 2011: «Drammen sykehus har jukset med 1500 pasientdiagnoser.» URL: http://www.nrk.no/ostafjells/buskerud/jukset-med-1500-diagnoser-i-drammen-1.7880528 The regional office for the national broadcasting corporation was the main media actor behind this story, although with less extensive coverage than was seen with the other cases.
9 Source: Oppland Arbeiderblad, September 28, 2012: 'DPS Gjøvik har ikke fulgt reglene.'
10 Source: Psychiatrist Leif Roar Falkum, TV2 News, September 26 and 27, 2012.
11 Union representative Åsmund Bredeli. Aftenposten, October 3, 2012, p. 8.
12 Commentary by Jomar Kuvås, «Remove Hospital Temptations»», VG, March 6, 2012, pp. 30-31.
13 Internrevisjonene i Helse Sør-Øst, Helse Vest, Helse Midt-Norge and Helse Nord (2011) «Nasjonal internrevisjon av medisinsk kodepraksis. Hovedrapport.» URL: http://www.helsedirektoratet.no/finansiering/medisinsk-koding-og-kodeverk/medisinsk-koding/Documents/nasjonal-internrevisjon-medisinsk-kodepraksis-oktober-2011.pdf
14 *Ibid*., p.8, authors' translation.

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