

'We don't like the rules and still we keep seeking new ones': The vicious circle of quality control in professional organizations Sarah Wadmann^{1,*}, Christina Holm-Petersen¹ and Charlotta Levay²

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ABSTRACT

Standardization, auditing, and performance measurement increasingly characterize the governance of professional organizations. In hospital services, this is expressed in a multiplication of quality assurance programmes, which may be characterized as technologies of quality control. Organizational research shows that the impact of such technologies is profound and often problematic. Even if rooted in professional expertise, they tend to evoke resistance and evasion among professionals. Drawing on Crozier's classic analysis of bureaucratic malfunctions and recent theory of professional hybridity and co-optation, this article brings forth a new aspect of professionals' encounter with managerial forms of governance, as manifested in a case study from the Danish hospital services. Despite scepticism, professional groups with differing status and interests can reinforce a burdensome system of governance with even more standards and intensified measuring, as they seek to use the technologies of quality control to manage uncertainties and enhance their standing in relation to other groups. Hence, professionals can find themselves caught in what we call a vicious circle of quality control. This dynamic, we propose, is essentially of a professional nature; it is through their very efforts to promote their distinctive aspirations that professionals may end up fuelling excessive measurement and detailed controls, thereby making their own work more difficult.

KEYWORDS: bureaucracy; professionalism; performance measurement; quality control; standardization

INTRODUCTION

Healthcare and other professional fields are marked by ever increasing standardization, auditing, and performance measurement. This is expressed in the multiplication of quality assurance programmes, performance indicators, accreditation schemes, public report cards and league tables seen in many countries from the 1980s onwards (Wadmann et al. 2013; Pflueger 2015; Levay 2016). The driving ambition is to control rampant costs and to address deficiencies in quality made visible through the very technologies used to address them (Shore and Wright 2000). While these techniques build on a long tradition of professional engagement in quality assurance (van de Bovenkamp et al. 2014), they represent an intensification of managerial control. Known since the 1990s as New Public Management (NPM) (Hood 1995) or the 'audit explosion' (Power 1994, 1997), this development continues under new headlines, such as 'value-based healthcare' (Porter 2010), which

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assigns a central role to quality outcome measures. The impact on professional organizations and professional work has been profound and often problematic. Professionals are charged with new tasks and responsibilities, and even if professional experts have a key role in defining standards, the intensified managerial control tends to set off resistance and avoidance from professionals (e.g. Bevan and Hood 2006; Espeland and Sauder 2007; McGivern and Ferlie 2007; van Wieringen et al. 2017).

Contributing to ongoing discussions and theorizations of professional responses to increasingly pervasive management technologies, we analyse a particular aspect of this encounter between professions and organization: when coping with performance measures and trying to use them to further their distinctive goals, professional groups with differing status and interests can be drawn into a vicious circle in which their strategies inadvertently drive an escalation of standards and measurement that ultimately complicate their own work. We demonstrate and explore this dynamic as it unfolds in the case of Danish hospital care, which is thoroughly pervaded by comprehensive standardization, auditing, and quality measurement.

We build upon and add to previous literature that challenges an over-simplified dichotomy between professionalism and managerialism (e.g. Bezes et al. 2012; Bezes 2016; Noordegraaf 2015; Andersson and Liff 2018) and on theory of strategically acting professional groups (Freidson 1970; Abbott 1988; Freidson 2001). More distinctively, we take up Bezes' (2016) suggestion to revisit sociologist Michel Crozier's classic analysis of expert power and control in bureaucracies to investigate ongoing struggles around managerial control in professional organizations. We start by developing this theoretical framework.

THEORETICAL FRAMEWORK: QUALITY CONTROL IN PROFESSIONAL ORGANIZATIONS

Quality control technologies reconfiguring professional work

Quality control in contemporary professional organizations embarks on a range of techniques that have different genealogies and impinge on professionals differently. Many, like clinical practice guidelines and quality registers, have a long legacy of interconnected standardization attempts of medical professionals and state organizations (Weisz et al. 2007). Others, like total quality management, accreditation, and care pathways, are essentially imports from other industries into healthcare (Wiener 2000; Martin et al. 2017). Fuelled by predominant NPM ideals, even techniques rooted in classical forms of professional self-regulation have been ingrained with managerial ambitions of demonstrably improved service provision. Hence, not merely offering quality but organizing for quality has become a central ingredient in professional work (Noordegraaf 2015: 188). In this article, we seek to understand how this whole ensemble of technologies which might be subsumed under the term 'quality control' interact in the everyday work of healthcare professionals.

While their descents differ, the various techniques of quality control have two things in common. First, they generate bureaucratic work procedures, in the sense that they foster standardization and request documentation of adherence to standards. This is not a problem in itself; bureaucracy is an idealtypical organisational configuration that safeguards principles, which are important in professional services, such as meritocracy and impartiality (Weber 1978; du Gay and Vikkelsø 2016; Pedersen 2018). However, bureaucracies can also develop serious malfunctions, largely due to power struggles (Crozier 1964). As organization scholars have observed with some irony, new forms of bureaucratic activities have developed which are 'even more rules based and process driven than the "traditional" forms of public bureaucracy that NPM was meant to supplant' (Hood and Peters 2004: 271), thus re-actualizing the problem of 'vicious bureaucratic circles' (Bezes 2016: 18). Second, as pointed out in the literature on governmentality, the kind of mundane technologies involved in quality control-classification, registration, measurement-may seem like neutral tools, but they carry wider programmatic ambitions, imply certain ways of knowing the world, and render people and objects governable at a distance (Miller and Rose 2008). Accreditations, audits, rankings, and the like do not simply evaluate a given reality but contribute to constituting the organizational problems they are meant to counter, such as practice

variation, which would not be discernible if not rendered visible through quantified analysis (Shore and Wright 2000).

Both of these aspects reconfigure professional autonomy and self-governance. In professional bureaucracies (Mintzberg 1979), professionals have traditionally controlled central sources of uncertainty thanks to their exclusive and indispensable expertise, giving them power and leverage in relation to other groups in the organization, including managers (Crozier 1964). Just like other contemporary management tools, quality control techniques that standardize professional work and make its processes and outcomes more transparent and predictable may reinforce managerial control over professional practitioners by 'reducing the "sources of uncertainty" they have to build and reproduce their power' (Bezes 2016: 17)—even in the case of technologies that are developed and administered by professional experts (Freidson 2001). Quality control devices may also have constitutive effects that go beyond the contingent powers in specific bureaucracies (Bezes 2016) by reconfiguring organizations and professional work. As collectivities and individual practitioners, professionals become increasingly oriented towards accounting for quality (Levay and Waks 2009). New organizations, organisational units, and groups of experts crop up to support the implementation of quality technologies (de Bruijn 2007; Pollitt 2013; Bezes 2016), creating new subgroups of professionals within hospital organizations, such as quality coordinators (Madsen 2015; Wallenburg et al. 2016).

Professional approaches to quality control: beyond binary opposition between professionalism and managerialism

While professionals are challenged by bureaucratic controls and quality control technologies, they are not passive victims of managerial power. In fact, the technologies draw heavily on medical expertise and since-long established forms of quality assurance developed by healthcare professionals (Weisz et al. 2007; van de Bovenkamp et al. 2014). What is more, professional groups tend to act strategically to maintain control over their own work and to defend their interests vis-à-vis other actors (Freidson 1970; Abbott 1988; Freidson 2001). Even within pure type bureaucracies, rules can never specify everything (Crozier 1964), and professional groups can mobilize considerable force in resisting rules-based control efforts, either through outright resistance or decoupling, whereby professionals fulfil the prescribed form-filling and routine-checking but continue their everyday work more or less as before (Kousgaard 2012; Numerato et al. 2012; van Wieringen et al. 2017). Much of the literature on professionals, quality control, and related managerial technologies is centred on an opposition between professionalism and managerialism (Numerato et al. 2012; Noordegraaf 2015), depicting professionals' attempts to resist or sideline managerialist intrusions. While this line of research highlights important aspects of contemporary developments in professional organizations, we need to move beyond binary opposition schemes to gain further insight (cf. Bezes et al. 2012; Bezes 2016).

Recent scholarship demonstrates the hybridity of current professionalism, with professionals acquiring managerial competencies and hybrid professionals balancing institutional logics (e.g. Kurunmäki 2004; Noordegraaf 2015; Blomgren and Waks 2015). More specifically, professionals can draw advantages from engaging with quality control techniques (Castel and Merle 2002; Levay and Waks 2009). As different professional groups tend to compete around tasks and jurisdictions, each group has an interest in clearly exhibiting the merits of its particular expertise (Abbott field of 1988: 44–53). Professionals may co-opt managerial techniques, discourses, and prescribed governing technologies, i.e. assimilate them into their own regular activities and use them to further their own objectives (Lozeau, Langley, and Denis 2002; Waring and Currie 2009; Numerato et al. 2012; Olakivi and Niska 2017; Andersson and Liff 2018). Managerial techniques co-opted by professional organizations in such a manner are essentially captured by the very organizational dynamics they were intended to change (Lozeau, Langley, and Denis 2002). Professionals may also engage more actively in adopting and developing new technologies in ways that actually affect their work practices, while retaining control over their application (Waring and Currie 2009) and crucial quality criteria, resulting in a form of 'soft autonomy' (Levay and Waks 2009). Such strategies of co-optation can help professionals to improve and legitimize their services in the face of external demands (Castel and Merle 2002; Levay and Waks 2009; Andersson and Liff 2018) or to reposition a professional group in a competitive environment (Robelet 2001; Castel 2009).

When considering responses of professionals to the various technologies of quality control, it is important to distinguish between professional groups with stronger or weaker positions in the system of professions (Abbott 1988) and more or less clout in the organizations in which they work (Bezes et al. 2012). Control technologies have diverse implications for different professional groups (Ackroyd 1996), and the introduction of new quality control technologies may influence intra- and interprofessional relationships in subtle but profound ways. In healthcare, several professional groups are essentially subordinate to the medical profession (Freidson 1970), which in turn consists of competing medical specialities with distinctive identities and domains of expertise (Halpern 1988). The past decades have seen a marked differentiation in medicine and other healthcare professions, with increasing stratification between ordinary practitioners, knowledge elites, and administrative elites of 'hybrid professionals' combining professional and managerial roles (Freidson 2001; Noordegraaf 2015). The literature on professionals co-opting managerial techniques is largely based on case studies where dominant groups such as physicians play a central role (e.g. Lozeau, Langley, and Denis 2002; Waring and Currie 2009; Andersson and Liff 2018). However, quality control may also provide openings for weaker professional groups. In a British context, Martin et al. (2013) demonstrated that quality monitoring systems provided nurses with new knowledge in the form of performance data that enabled them to challenge what they saw as unsafe behaviour of senior physicians. By allowing nurses access to a source of uncertainty otherwise controlled by physicians (cf. Crozier 1964), the technology of quality control became a resource for professional action that challenged existing professional power relations. Similarly, in a French context, less powerful medical specialists used accreditation to strengthen their position in the healthcare system (Robelet 2001), and

oncology practitioners used clinical guidelines to gain a certain independence from university elites (Castel 2009). Regarding quality control techniques, it is thus warranted not to take the professionalismmanagerialism opposition for granted, but rather, in line with a Crozierian perspective, 'investigate the variety of interactions that professionals engage in with other groups within the organisations' (Bezes 2016: 18).

In his seminal work on the problematic dynamics of bureaucratic organizations, Crozier (1964) observed that not just managers but also frontline workers responded to bureaucratic dysfunctions in ways that led to even more impersonal control and centralization. The struggle of frontline workers against centralization, Crozier noted, 'is not directed towards helping the organization to adapt better to the challenge of the environment, but rather towards safeguarding and developing the kind of rigidity that is protecting them' (Crozier 1964: 193). In a similar vein, as we will show, healthcare professionals confronted with excessive standardization and performance measuring may attempt to co-opt quality control technologies or use them to cope with demanding roles, but paradoxically end up fuelling a development of which they are otherwise sceptical.

RESEARCH SETTING AND METHODS

This article builds upon fieldwork conducted during a study of governance initiatives in the Danish hospital sector undertaken from June 2014 to March 2015 (Holm-Petersen, Wadmann, and Andersen 2015). Denmark is a small and relatively wealthy welfare state. Five regional authorities are politically and administratively responsible for organizing health service delivery, including the tax-funded hospital sector. As welfare state professionals (cf. Castro 1999), the Danish health professions have long been instrumental in shaping healthcare services. Physicians and to some extent nurses serve important functions as experts and policy advisors on all levels of the Danish welfare state, and as public employees, hospital-based healthcare professionals are firmly anchored in the public bureaucracy (Vallgårda 2013: 148). While representative of the broader trend of quality control, the Danish hospital sector constitutes an extreme and potentially paradigmatic case (Flyvbjerg 2006), given the

substantial volume of its databases, performance assessment schemes, and other technologies of quality control (cf. Pedersen 2018: 15). Denmark was recently highlighted as a 'pioneer' among OECD countries due to its 'extensive databases on the processes and outcomes of care' and 'many local clinical guidelines, national guidelines and standards' (OECD 2013: 11). In such a setting, it may be easier to identify mechanisms around intense quality control, which is favourable from a methodological point of view. Similarly, hospitals are relatively close to ideal-typical professional organizations in that they are pervaded by a multitude of professional groups and structural features following professional demarcations (Brock and Saks 2016), providing fertile ground for studying how technologies of quality control interact with professional dynamics. Moreover, the stakes related to quality control in hospitals are particularly high, since poor conduct can have serious health consequences for those in need of the services. This may accentuate dynamics that are also present in other professional fields, but less markedly so.

Data generation and analysis

Data were collected in two steps. Step one focused on the response of healthcare professionals and clinical department managers to technologies of quality control. Observations and interviews were undertaken in five hospital departments sampled to allow for exploration of potential differences across medical specialities and political-administrative regions. The hospital departments specialized in orthopaedic surgery, oncology, internal medicine, acute care, and neurology respectively, and each was located in one of the five Danish regions. After an introduction by the clinical department managers, two days of observation were undertaken in each department, with shadowing (Czarniawska 2008) of physicians and nurses during meetings, patient encounters, and documentation work. Together with numerous informal conversations with healthcare professionals, the observations provided the basis of 34 semistructured interviews. We interviewed 18 clinical department managers, 48 physicians, 50 nurses, and five sub-specialized nurses working as quality coordinators in the departments. Most interviews were conducted as group interviews (2-13 participants) lasting 60-90 minutes. The interviews focused on

the attitudes of informants towards specific quality control technologies, how the technologies influenced their daily work, and their attempts to deal with documentation requirements related to quality control. All interviews were recorded with the permission of informants, and detailed minutes were made based on the recordings. To increase reflexivity during the research process, we discussed observations and interviews immediately after they were conducted and wrote down our analytical reflections. This ensured that the knowledge gained informed the further research process so that common patterns and themes could be extracted.

In step two, we explored in more detail the origins of requirements for procedures and documentation that managers and healthcare professionals experienced, since several were not traceable to any formal regulation. We interviewed seven hospital managers to learn more about local policies and priorities in relation to quality control at the five hospitals. The hospital management typically consisted of a team of directors with medical, nursing, and economic expertise. In addition, we interviewed four quality managers about their experiences with the implementation of the quality control technologies. Furthermore, 10 semi-structured interviews were undertaken with 13 officers in the national and regional healthcare administrations, including two officers from the Danish accreditation institution for healthcare service providers, to learn about the historical background and the political-administrative context for the current system of quality control. Finally, we retrieved literature describing developments in hospital quality management in Denmark more generally and documents describing specific technologies of quality control.

Building on an abductive logic sensitive to inconsistencies and unexpected experiences, the analysis was performed in a dynamic interplay between the generation of empirical data and theoretically grounded understandings (cf. Timmermans and Tavory 2012). Struck by empirical observations of how healthcare professionals contributed to reinforce quality control technologies of which they were clearly sceptical, we reviewed the entire empirical material and extracted all passages pertaining to professionals' talk and actions in relation to such technologies. We analysed these passages in view of the literature on professionals' active role in shaping bureaucratic organizations, including studies of cooptation and the work of Crozier (1964). In this process, we became aware that the responses of different professional groups varied, which led us to focus the final analysis on how quality control technologies interacted with intra- and inter-professional relationships and to engage more directly with issues of power, uncertainty, and expertise.

Empirical context: quality control in Danish hospital care

Quality control in Danish hospitals has developed from quite autonomous professional self-regulation to more centralized, state-anchored regulation (Knudsen and Hansen 2008), like in other countries (e.g. van de Bovenkamp et al. 2014). Physicians have driven service improvements mainly through research activities and by setting up clinical registries as early as in the 1940s (Bauer 2014). Heralding a new era of centralized quality control, healthcare authorities launched the first national strategy for healthcare quality improvement in 1993. In the next decades, clinical registries were enrolled into the overall healthcare governance (Kousgaard 2012), along with new forms of quality control technologies translated from market arenas, such as user satisfaction surveys and accreditation (Knudsen and Hansen 2008). Inspired by healthcare quality movements in Great Britain and the USA, this development implied new transparency requirements and mandatory participation for all public organizations (Knudsen and Hansen 2008; Kousgaard 2012). New control technologies were introduced and influenced what counted as quality, with increasing focus on external scrutiny of organizational procedures and patient experience rather than clinical outcomes. Meanwhile, hospitals developed quality units populated with quality managers and dedicated quality staff, mainly recruited among nurses (Madsen 2015). According to a former chair of the medical association we interviewed, physicians 'left the implementation [of quality control] to nurses' and instead spent time on initiatives that directly impacted clinical quality.

Taken together, the many technologies of quality control have created a highly complex and resourcedemanding set of regulations, which has caused concern among professional groups and public debates about the need for 'debureaucratization' of hospital services. In 2012, the Danish Office of the Auditor General (2012) found that hospital staff were required to report data to 17 nationwide quality improvement initiatives, in addition to several initiatives launched by the regional healthcare administrations. In the departments we visited, it was not uncommon to be part of 10 special initiatives involving reporting of quality data, in addition to numerous regular reporting systems.

One of the most promoted and most discussed initiatives in recent years is the Danish Healthcare Quality Program (DDKM, Den Danske Kvalitetsmodel). This particular technology therefore figures prominently in the analysis. Decided by the national and regional healthcare authorities in 2002 and launched in 2009, DDKM is a national accreditation scheme that combines ongoing, internal quality monitoring with external scrutiny undertaken by the Danish accreditation institution for healthcare service providers (Institut for Kvalitet og Akkreditering i Sundhedsvæsenet, IKAS). The aim is to ensure accountability for quality through greater transparency and the opportunity to compare quality across hospitals, as well as stimulating the ability of healthcare organizations to monitor and continuously strengthen their quality (Ministry of Finance 2001; IKAS 2013). As is often the case in healthcare quality control (Levay 2016), DDKM builds primarily on process indicators requiring healthcare institutions to specify standard procedures and to monitor compliance, thus fostering standardization. The scheme is enforced through various means, including hierarchical control (state mandated participation), public transparency (publication of accreditation reports), internal market mechanisms (activity-based remuneration coupled with patients' free choice of hospitals) and, in some regions, direct economic incentives. As is also often the case with audit systems (Power 2004), the accreditation scheme has recently been discontinued following the political debate of 'debureaucratization' and been replaced by new quality control technologies that follow the same logic. At the time of this study, however, participation was mandatory for all publicly funded healthcare institutions.

As we now move to the empirical analysis, we will explore the professional dynamics that contributed to maintain and even exacerbate the prevailing system of quality control, despite growing awareness of its shortcomings in the hospital organizations. We start by demonstrating how professionals as well as managers expressed scepticism towards current quality control technologies, while also reflecting on their own role in creating and maintaining the bureaucratic demands they found frustrating. We then explore in more detail three distinct professional groups and their respective interactions with quality control technologies at different levels of the healthcare system: medical knowledge elites operating at field and hospital levels; nurses working in hospital wards, and nurses functioning as quality coordinators at hospital department level.

EMPIRICAL ANALYSIS

Scepticism and self-reflection

Nurses, physicians, and managers generally saw a need for quality control and welcomed the systematization and professionalization of this work, but they also expressed scepticism. Professionals typically called for more discretion to judge the relevance of particular standards for particular patients. Nurses in the emergency department, for instance, objected to a standard that required them to inform acutely ill patients about lifestyle-related risk factors. When dealing with demands they did not find meaningful, some professionals decoupled their work from the technologies of quality control in an act of 'civil disobedience' as one physician put it. While such acts of resistance were common in all departments, they did not take the form of organized resistance from professional groups or organizations. The key complaint expressed by professionals and managers alike was that the current system of quality control had become too immense and resource intensive. Similar to the findings of Hunt et al. (2017), senior nurses in this study complained that standards had become so numerous that they structured the patient encounters in ways that made little room for patients to set the agenda. Similarly, hospital and clinical department managers-including those who had driven the agenda of quality control-found that the good intensions had resulted in 'a completely over-dimensioned' complex of requirements and a 'lost overview', as one hospital director put it. At another hospital, a vice-director explained: 'It simply turns

into noise. There are so many indicators. Data noise, this is what the healthcare services suffer from.' Ironically, the ambition to foster greater transparency through still more detailed management information appeared to have clouded managers' vision. Even some quality managers and quality coordinators expressed scepticism. One quality manager explained that the accreditation rounds had contributed to a hierarchy of guidelines that she found to be of 'unsettling' dimensions. According to the quality manager, the biannual updating of the more than 4,000 guidelines at the hospital drained their resources.

According to hospital managers, external pressures instituted by the publication of rankings and ratings kept them spending resources on getting good measures. One hospital director likened the steady introduction of new quality standards and measures to 'a roundabout that just keeps spinning' and 'no one dares to jump off'. Another hospital director pondered: 'We need to be part of the development -whether we like the development or not. Not because we believe in it, but because we must.' In the experience of the director, the political agenda of quality control had become so encompassing that non-participation would be seen as being against 'development' and carry a risk of exclusion. More surprisingly, perhaps, managers and professionals also reflected on how their own responses to the quality control technologies contributed to create 'selfinflicted bureaucracy imposed by external demands', as a quality manager put it. During a group interview with nurses, for instance, they first criticized the introduction of still more quality standards as a devaluation of their professional competence, and then started to discuss among themselves their own contribution to this system of quality control. 'Suddenly, you're unable to do anything unless it's specified in the EPR [electronic patient record] or you've got a guideline or it's in the e-doc system', one of the nurses commented and noted that they themselves had started demanding more guidelines even for simple clinical procedures like temperature measurement or injections. 'We have to be careful that we don't lose our professional ability in all this', she commented. Another nurse contemplated: 'It's actually a paradox. We don't like the rules and still we keep seeking new ones.' Doctors also had self-critical reflections. For example, a physician in the acute care department known for his sharp criticism of current practices of quality control wanted to provide 'a fantastic example of bureaucracy' during an interview. He turned to the computer and retrieved a local patient pathway protocol of eight pages with links to around 50 pages of relevant guidelines—a protocol he had himself co-authored. He remarked that 'We fulfilled our task thoroughly, but the problem is that the task is meaningless', and asked ironically: 'Do you think a physician in residency training will read eight pages in an emergency situation?.' A hospital director summed up: 'We also contribute to creating our own bureaucracy [...] It's just the way it unfolds. And it's highly unfortunate.'

In the following, we explore how the proliferation of 'bureaucratic' demands unfolded when hospitals sought to deal with the technologies of quality control. First, we show how professional knowledge elites in the medical profession were in a position to co-opt technologies of quality control when involved in the development of quality standards at the field level. However, their engagement with the technologies interacted with intra-professional competition between medical specialties, and the concerted efforts fuelled a veritable proliferation of onerous quality measures. Second, we illustrate how rankand-file nurses relied on standards to cope with demanding roles and obtain a sense of security in their everyday work at the hospitals. Well aware that their professional practice would be judged against quality standards and guidelines, some nurses tended to demand still more specific standards to guide their conduct thereby instituting demands for further standardization. Third, we show how quality coordinators built a professional identity around quality work and strove to make their new domain valuable to the hospital organizations. As they sought to cope with the resistance of clinical colleagues and the vast volume of quality standards and measures, however, they contributed to fuel even more resistance-and more rules and standards.

Professional elites fuelling measurement to promote their domains

The medical field is characterized by profound specialization, creating subdivisions of professional groups with differing values and identities that compete for resources (Halpern 1988). Hence, it is important for competing professional groups to make their area of expertise visible and document its effectiveness vis-à-vis other specialties to ensure managerial goodwill and funding (cf. Abbott 1988). Taking pride in developing their field and demonstrating its importance, the senior physicians we encountered were well aware of the strategic importance of quality measurements. A chief physician, for example, spoke about quality measurement as an investment in the visibility of the department that would pay off as goodwill from hospital managers. In accordance with earlier accounts (e.g. Robelet 2001; Levay and Waks 2009), the physician indicated that quality control technologies could be used strategically by professional groups to strengthen their position and obtain advantages within the organization.

According to several informants, this dynamic was significant in the development of quality control technologies where professional knowledge elites were involved as experts. In the experience of regional healthcare officials long engaged in hospital quality management, the involvement of senior physicians in the development of quality control technologies easily developed into lengthy discussions within and among specialties about what constitutes best practice and how it can be measured. Echoing this experience, a quality manager explained how he found himself amidst 'a battle among people who all seek to define what is quality' and who 'all present well-founded arguments for why their particular perspective is good and right'. In a highly specialized field like medicine, this is hardly surprising, as professional knowledge elites are expected by authorities and managers to cultivate their respective domains of expertise and make them relevant to healthcare practice. However, according to the interviewed healthcare officials and hospital managers, the professional dynamics also had negative sideeffects as they contributed to create what they described as 'overly complex' management tools.

Asked for specific examples, several of the healthcare officials pointed to the development of the national accreditation scheme, DDKM. The overall framework of DDKM was modelled on international standards for accreditation systems. To develop the specific quality standards and measures, 300–400 healthcare professionals, divided into groups according to their expertise, were invited to define four quality standards and four indicators per standard (Knudsen 2008). However, officials at the accreditation institute soon realized that the number of standards and indicators proliferated, as each group was keen on making sure that their particular area was sufficiently covered. One of the officials noted: 'People wanted to do the best job possible. They were very devoted. But the more people you involve, the more they do.' When invited as experts to define the parameters of good care, the professional knowledge elites became involved and used the accreditation scheme as a platform for advancing their particular professional fields. Taken together, their devoted efforts contributed to create a highly comprehensive set of quality standards and indicators. When the first version of DDKM was sent out for consultation, it consisted of 116 quality standards and 890 indicators (Knudsen 2011). Some of the proposed indicators were far more demanding than suggested by the accreditation institute. An official from the accreditation institute explained: 'One of the most extreme examples was an indicator that required a yearly clinical audit of 30 patient records, and each record was to be evaluated based on 24 criteria.' After the hearing, the scheme was reduced to the 104 standards and 466 indicators published in the first edition in 2009. In a second edition published three years later, the number of standards and indicators was further reduced, but still the scheme was seen as too burdensome by most professionals and managers.

During the implementation of DDKM, professional dynamics also created situations that turned the usual picture of 'professionals' and 'bureaucrats' upside down. Officials at the accreditation institute explained that they sometimes experienced that professional knowledge elites pushed for stricter interpretation of quality standards than the officials found meaningful. One episode concerned a standard that required hospital staff to screen patients for undernutrition. According to the officials from the accreditation institute, clinicians concurrently complained about this standard arguing that the screening of all patients regardless of their nutritional status was a waste of time. Seeking to clarify what he saw as a misunderstanding, one of the officials explained at public meetings that 'the purpose [of the particular standard] was not to screen every patient for nutritional problems', only those at risk. Reacting to this interpretation, however, one of the senior physicians, who had contributed to define this quality standard, strictly corrected the official stating that nutritional screening of *all* patients was backed by 'solid evidence'. Claiming authority based on his expert knowledge, the physician argued for the importance of retaining high standards in this particular field. Through this demarcation, he contributed to retain a standard procedure and registration requirements that were valid in his particular perspective but did not appear meaningful to colleagues in other specialties.

While the case of DDKM was telling, it was not exceptional. Informants identified similar dynamics related to other technologies of quality control, such as clinical registries. The clinical registries were initially set up by research-active professionals dedicated to advancing knowledge in their particular field, but they have increasingly been funded and administered by public agencies and thus enrolled in the overall healthcare governance (Knudsen and Hansen 2008; Kousgaard 2012). At the time of writing, Danish hospitals continually reported quality data to more than 69 registries, some including up to 56 quality indicators. Most of the hospital directors interviewed advocated a reduction of indicators in the clinical registries but met resistance from professional knowledge elites. According to one director: 'A lot is being registered and only used occasionally or not at all. But the professionals don't want to give up [any of the measures].' Another hospital director explained that quality measures were sometimes used by knowledge elites to 'push colleagues that they think should be acting otherwise' indicating that quality measures were used by knowledge elites to demarcate their expertise and push forward their particular perspective on good performance.

In sum, it appears that senior members of the medical profession co-opted the governing technologies that had been introduced to enhance overall quality through external scrutiny and monitoring. Taking on a role as custodians of a cause that was important from their particular specialty-point of view, they used the technologies of quality control as an opportunity to make visible and spur good performance in their specific fields of expertise. While these professional ambitions were perfectly legitimate, since professional knowledge elites are expected to develop their respective specialisms, the co-optation yielded some unfortunate side-effects, both for the professionals themselves and the system as a whole. Taken together, all the dedicated efforts of the experts resulted in a vast complex of standards and registration requirements.

Nurses asking for standards to cope with insecurities

From knowledge elites in the medical profession, we now turn to rank-and-file members of the less powerful group of nurses. While the interviewed nurses often argued that quality standards cannot capture all aspects of good care, they also expressed the view that standard procedures can benefit patient care. Senior nurses typically appreciated standards bringing back the focus on classic caring virtues, like regular measurement of blood pressure, respiratory rate and other vital values. For less experienced nurses, standard procedures contributed to a sense of professional control. During an interview at the acute care department, for instance, a recently qualified nurse indicated that compliance with standards would assure her that she provided comprehensive care. Asked how she found the existing systems and culture of quality control to support the development of hospital quality, the nurse praised the efforts of quality coordinators to keep her attuned to documenting her care correctly because 'the registration [form] is designed to obtain truly comprehensive care. You can just follow the form'. Hence, following the standards laid down in the nursing record provided the nurse some guarantee that she was delivering high-quality care. Rather than standards being mere guidelines for good care, following the standards had come to constitute good care for this junior nurse, signalling the constitutive effects of quality control technologies.

Nurses had to navigate a work situation in which their professional behaviour could have profound implications for patients' health, and their professional conduct was subject to continuous assessment against standards of good care. In addition, we can assume, junior nurses had to cope with limited clinical experience and being at the bottom of the professional hierarchy (cf. Freidson 1970; Broom, Adams, and Tovey 2009). Against that backdrop, relying on standards for answers about what to do could constitute a self-protective coping strategy for junior professionals, as it helped them deal with feelings of insecurity (cf. Hinshelwood and Skogstad 2000). As they came to rely on external standards to feel confident about their work, it might have appeared unsafe to undertake professional work without clear instructions. Hence, they demanded guidelines even for simple clinical procedures. Moreover, adherence to standards was a way of 'covering your back', both junior and senior nurses explained, because professional judgment would always involve risks of wrong assessments and criticism; whether in the form of reproofs or actual complaint cases.

When seeking to cope with demanding professional roles and to protect themselves against criticism, adherence to standard procedures provided nurses with a sense of control and the ability to conduct their work independently. However, the reliance on standards also carried risks. Like in Martin et al.'s study of the English healthcare services (2013), clinical department managers and hospital directors in our study expressed concern that too heavy reliance on guidelines could supersede clinical reflection and spur task-oriented healthcare delivery. Indeed, when asked what they saw as the most pressing quality issue in the hospital services, several of the managers pointed to a need to stimulate the ability of professionals to think independently and reflect critically upon their work; a need to 'give back professional judgment to the clinicians', as a hospital director put it. This director, in particular, was alarmed by what she saw as highly dangerous consequences of 'unreflective rulefollowing' spurred by over-reliance on standards. Substantiating her claim, the director told of 'three terrible cases' of misconduct she had recently had to deal with. The cases involved junior nurses and junior physicians who 'had done what they were supposed to' according to the standards, but without reflecting critically on the situation. More specifically, the junior professionals had done the tests and checked the vital signs specified in clinical guidelines but missed other signs that the patient's condition had become unstable and therefore failed to take adequate action. Consequently, one of the patients died while the other two suffered serious health consequences. At

two other hospitals, managers told of similar but less serious cases in which compliance with standards was not followed by adequate clinical action. To the managers this signalled a paradox: the professionals did all the right things but 'forgot to see the patient'. Hence, the quality standards that were introduced to increase patient safety had also introduced new risks (cf. Pedersen 2018).

In sum, like the medical knowledge elites, rankand-file nurses found advantages of quality monitoring and standards, albeit in a quite different way. For them, compliance with standards became a way to obtain a sense of control and to wall-off potential criticism. To deal with insecurities and demanding professional roles, some of them even asked for more standards to guide their work. So, they used the technologies of quality control to cope with the challenges inherent in their relatively subordinate professional roles. In contrast to the medical knowledge elites, they were not in a position to gain any form of control over the governing technologies. Still, their distinctive use of the technologies in a sense transformed the technologies; the technologies became not just means of patient protection but also instruments of professional self-protection. However, it was a catch-22: when engaging with standards to protect themselves, nurses contributed to institute demands for more standards against which their work could be evaluated, without escaping the risk of malpractice claims.

Quality coordinators developing their professional speciality

We now turn to quality coordinators, a professional group that has emerged as a consequence of the quality control agenda. In Danish healthcare, quality control has been singled out as a special organizational task distinct from clinical work creating new career opportunities for nurses (Madsen 2015). Nurses working as quality coordinators at the hospitals were placed close to the clinical department managers and enjoyed certain privileges. Typically, they were exempted from clinical activities and worked regular office hours to concentrate fully on their duty of quality control. Doing their best to fill out this new professional role, the quality coordinators put pride in their work and strove to implement the many initiatives to the letter. However, even some of the quality coordinators expressed doubts about the current practices of quality control. For example, two experienced quality coordinators commented on what they saw as a worrying shift in the focus of quality control. In their experience, the gathering of quality data had become a goal in itself rather than a means of improving patient safety. 'Quality data and the way we work with data have become the pivotal point', one of them concluded.

While providing new professional opportunities, the role as quality coordinator was no easy one. For the quality coordinators, the resistance of their clinical colleagues turned into 'implementation problems'. Tellingly, when asked what she saw as the greatest quality challenges at the department, one quality coordinator answered without hesitation that it was 'to im*plement* new initiatives of quality control'. Developing this point, she told of time pressure and difficulties of 'following-up' on the many initiatives because her clinical colleagues did not always live up to their agreements. For example, she had 'spent a lot of energy' trying to convince her colleagues of the need to screen patients for lifestyle-related risk factors. Still, 'no-one really does it', the quality coordinator concluded. As subordinates, the quality coordinators had no control over the design of the quality standards or measurements they were expected to implement, nor the authority to enforce compliance. When encountering resistance from clinical colleagues, the quality coordinators responded in ways typical of professional groups. They reasserted the importance of their domain and defended its demarcations (cf. Abbott 1988), and stepped up their efforts to succeed with the implementation. Hence, quality coordinators sought to motivate reluctant colleagues by informing them about the importance of quality standards, communicating the results of quality measurements, setting up working groups and sometimes pushing for even more ambitious quality measures than formally required. For instance, a hospital director explained how the apparent inability of a given hospital department to meet some nationally defined quality targets had puzzled her for a while. Upon visiting the department, the director learned that a dedicated quality coordinator had chosen to raise the targets to motivate her colleagues to do their very best. At other times, the professional dedication of quality coordinators would turn into what physicians called 'quality policing', i.e. a strict enforcement of rules of procedure without due consideration of implications for patient outcomes. In the words of a leading physician: 'quality units tend to send out more and more regulations, and then spend resources on checking that their colleagues adhere to them instead of on helping the departments implement what matters most for patient treatment.' It was self-defeating; when quality coordinators sought to deal with resistance from clinical colleagues, they contributed to create even stricter practices of quality control, fostering more resistance.

Meanwhile, quality coordinators were urged from above to demonstrate good results and prove their value to the organization. Past experiences of failed accreditations or low rankings proved that the stakes were high; hospital reputation, political goodwill and job security were at risk. Particularly at two of the hospitals that had previously failed an accreditation, the risk of being singled out as a low-performing hospital created fear of failure and a culture of quality control focused on 'safeguarding against every conceivable situation', as one quality manager expressed it. According to this quality manager, these attempts of safeguarding had contributed to a proliferation of guidelines: the production of written guidelines can provide 'a sense of control', the quality manager explained, while also serving as a tangible proof of the productivity of the quality units. In some cases, it also led to the introduction of new procedures meant not merely to improve the safety of patients, but to safeguard the hospitals against criticism. In preparation of accreditation, a hospital director explained, an extra outpatient visit had been added to the existing presurgery procedures at his hospital-not for any clinical reason, the director stressed, but for the sake of safety. While the visit might be warranted in some cases, the director was concerned that the sheer risk of appraisal had led the quality unit to focus on a specific time limit defined by a quality standard rather than the purpose of the standard, namely to ensure the stability of the patient's condition prior to surgery. Hence, when striving to prove their value to the organization, the quality coordinators contributed to create practices of quality control that were so encompassing and resource demanding that they eventually spurred concern among hospital managers.

The vast volume of quality standards and other initiatives also posed a challenge to the quality coordinators themselves. Two quality coordinators explained that it became still more difficult to keep apace and remember which requirements were valid. Different quality control initiatives and new versions of existing initiatives replaced each other continuously, and some requirements were changed as national initiatives were translated into regional and local guidelines. This created basic doubts about which requirements were valid at given times, and about which ones that were mandatory or merely recommendations about best practice. During fieldwork, professionals would often refer to certain quality control requirements, and when we tried to trace the requirement to existing regulations, we realized that it stemmed from an outdated version. Hence, the sheer volume of prescripts became a source of uncertainty in itself. Seeking to cope with the multitude of changing requirements, some quality coordinators explained that they sometimes found it necessary to ask their colleagues to ignore exemptions and document all procedures for all patients simply to manage the burgeoning volume of quality standards and indicators. This message was easier for them to communicate and easier for their colleagues to remember, the quality coordinators explained. Ironically, in an attempt to cope with the uncertainties imposed by the volume of quality standards, the quality coordinators contributed to increase the requirements even more.

In sum, the relatively new professional sub-group of quality coordinators was actively engaged in developing quality control as a professional speciality. Acting out of a professional logic, they were dedicated to implementing systematic quality work and prove its value to the hospital organizations. This provided them with new career opportunities and the prospect of professional development. However, when seeking to cope with the challenges that came with the new professional role-including resistance of clinical colleagues, expectations of superiors and a multitude of changing requirements-the quality coordinators inadvertently created practices of quality control that were even stricter than formally required. Similar to physicians and nurses, they fuelled an escalation of standardization and performance measurement that complicated their own work.

DISCUSSION

Analysing professional and organizational responses to an encompassing system of quality control in the Danish hospital services, we have demonstrated how three professional groups that interpreted and approached quality control technologies in quite different ways all contributed to even more comprehensive documentation requirements, measurements and standard procedures. From a professions theory point of view, each group shows distinct characteristics. One group represents professional knowledge elites in the dominant profession of medicine, the other the relatively subordinate profession of nursing, while the third group represents a new professional subgroup of quality coordinators that grew out of nursing as a constitutive effect of quality control. All groups displayed some scepticism towards the current practices of quality control. At the same time, all groups, for various reasons, engaged actively in the creation and implementation of new quality control technologies and used them to serve their distinctive professional projects. Paradoxically, however, they ended up fuelling a development of which they were otherwise sceptical. The fact that responses from such different professional groups had similar effects suggests that the unfolding events are not simply idiosyncratic occurrences but rooted in more general aspects of professions and organizations. Proposing a parallel to Crozier's 'vicious circle of bureaucracy' (1964), in which managers and frontline workers responded to bureaucratic dysfunctions in ways that led to even more impersonal control and centralization, we characterize this as a vicious circle of quality control.

The new practices of quality control challenged traditional doctor-dominated ways of defining and organizing for quality and opened up new possibilities for other professional groups. The centralized quality control and its transparency requirements introduced new uncertainties to hospital organizations, most notably the risk of public shaming, which was starkly perceived by hospital directors. For the nursing profession, in particular, this became an opening for professional development. As quality coordinators, a subgroup of nurses became responsible for producing tangible evidence that allowed the organization to account for its quality

and thereby contain the new uncertainties. However, even if these nurses got new responsibilities and privileges, the role as quality coordinator was still a subordinate position. Quality coordinators were dependent on contributions from rankand-file nurses and physicians to fulfil their role, and they had no means to enforce compliance. Their efforts to motivate reluctant colleagues to comply and their attempts to handle the complexities of extensive reporting inherent in their new professional role evoked further resistance and reporting demands that made their own task even more difficult. Meanwhile, central uncertainties were still controlled by the medical profession, both in terms of patient treatment and in terms of defining quality criteria. Medical knowledge elites were engaged in the development of quality control technologies as clinical experts, and once enrolled in the process, they were in a position to co-opt the technologies meant to monitor them. This strategy, however, set off intra-professional competition between specialties and an escalation of standards as the medical specialists actively promoted detailed measures and procedures in their own respective domains of expertise. Finally, rank-and-file nurses were drawn into the vicious circle because of the uncertainties they faced as individual professionals. Well aware that the generation of quality standards and guidelines provided a basis for judgment of their professional conduct, nurses relied on standards to obtain a sense of security and to cope with complex work tasks and potential complaints from patients and superiors. Decision making in professional practice is in itself typically complicated by considerable uncertainty (e.g. Timmermans and Berg 2003: 142-65; Pedersen 2018), and if rules and standards are perceived as legitimate, they can provide some sense of certainty. But rules cannot everything. Uncertainties specify obviously remained in nurses' everyday clinical practice, which led some of them to demand still more specific standards to guide their conduct. The vicious circle of quality control in professional organizations, then, is characterized by a professional dynamic where different groups try to co-opt or otherwise use new quality control technologies to control sources of uncertainty or promote the relevance of

their specific expertise. In this process, intra- and inter-professional relations are both questioned and reconfirmed.

CONCLUSION

With this study, we have aimed to further the understanding of how professionals respond to and are affected by technologies of quality control in contemporary organizations. Showing how professional groups at the same time participate actively, act strategically, and undergo transformations, the analysis confirms previous research that challenges simplified oppositions between professionalism and managerialism. Adding to the previous literature on the hybridity of professional work (Kurunmäki 2004; Blomgren and Waks 2015; Noordegraaf 2015), on professionals' active participation in new forms of governance (Castel and Merle 2002; Levay and Waks 2009), and on their strategies of co-optation (Waring and Currie 2009; Olakivi and Niska 2017; Andersson and Liff 2018), the analysis demonstrates the unintended consequences that such responses may imply for professionals and organizations. We propose that professional engagement in quality control technologies can backfire and set off an escalation of standards and measures as professionals find themselves drawn into a vicious circle of quality control. Importantly, this is an essentially professional dynamic, since it occurs not despite but because of the efforts of professional groups to further their respective aspirations. When the professional dynamic of intra- and inter-professional competition and claims staking is set in motion around current control technologies and the uncertainties they create, professionals can exacerbate problematic aspects of the technologies of which they sought to take advantage.

In conclusion, the analysis suggests that professional groups facing extensive standardization and auditing can be drawn into a vicious circle of quality control. Attracted by the prospects of improving services and advancing their professional projects, professionals' engagement with contemporary technologies of quality control may contribute to fuel an escalation of control measures that makes their own work more difficult. The specific responses in our case may not be immediately generalizable to other groups of professionals in other fields and organizations, but given the ideal-typical character of hospitals as professional organizations, the underlying professional dynamics we demonstrate are potentially relevant to professions and organizations more generally.

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