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Adoption of regulatory compliance programmes across United States healthcare organizations: a view of institutional disobedience

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The growing acceptance of evidence-based decision-support systems in healthcare organizations has resulted in recognition of information accuracy as a key area of organizational management. In the United States, rigid data mandates related to information management have met with some resistance from healthcare provider groups, who have traditionally found little relevance between personalized healthcare practice and accurate information. Variation in management practice poses quality problems in such an environment, since it precludes comparisons across larger markets or areas, a critical component of evidence-based quality assessments. In this study, a national census of health information managers was employed to provide a benchmark of the degree of such variation, examining how proper billing compliance practices vary across organization types as well as market area indicators. Findings here suggest that managers continue to ignore, to some extent, regulatory compliance standards, despite nationwide laws that mandate adoption of uniform compliance practices and programmes. The level of adoption of compliance management in this study varied significantly across practice characteristics and areas, suggesting the existence of barriers to cross-market comparative performance assessment.

Introduction

Where recent regulatory mandates call for uniform adoption of compliance management practices, do managers nevertheless vary in their adoption behaviours? If so, how does adoption vary nationwide, relative to institutional and environmental influences?

The growing acceptance of evidence-based medicine in US healthcare, combined with the availability of sophisticated decision-support data at the organizational level, has led to speculation regarding the use of such resources by providers (Devos *et al.*, 2002; Sicotte and Kane, 1993). In the US, medical providers appear to maintain a culture of 'competitive autonomy' seldom seen in the healthcare systems of most industrialized nations. This might discourage the sharing of information

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across organizations or markets. As such, a key barrier to utilization of data resources is reliance on compiled administrative claims data as a foundation for evidence-based systems. While automated systems are being designed to employ a growing array of data quality-control measures, there has been little examination into adherence to regulatory practices in the control and maintenance of data. Before providers can integrate evidence into service delivery, however, they must first develop a degree of trust in their data.

Using a theory of value structure and content, Devos *et al.* (2002) developed a potentially useful model for such a context, outlining relationships of people's trust in institutions to their value priorities. Their model suggests that the level of trust in various institutions correlates positively with values that stress stability, protection and preservation of traditional practices, and negatively with values that emphasize independent thought and action and favour change. Groups that arise from defined religious or political affiliations tend to exhibit contrasting value priorities on the same bipolar dimension. Such differences in value priorities could account for the fact that religious individuals and right-wing supporters expressed more trust in institutions than non-religious individuals and left-wing supporters (Devos *et al.*, 2002).

In healthcare settings, it could also be the case that while institutions contribute to maintaining social order and stability in society, they also seek to restrain the freedom of individual autonomy. Healthcare providers historically have shown willingness to abide by the myriad of rules, laws and policies imposed upon their profession. As they are subjected to a growing degree of regulatory and ethical complexity, however, such restriction might seem unreasonable or overreaching. In such instances, its been suggested that professionals will in fact rebel against what they perceive to be industry-wide unfairness. Its been shown, for example, that providers will act to protect colleagues from punishment for misbehaviour or error in all but the most dangerous of circumstances. Further, there is some evidence that they will exhibit rebellious behaviour where it is done for a 'good cause', such as manipulating patient information to help with payment problems. While well meaning in purpose, such actions often have the unintended consequence of corrupting the reliability of resulting evidence-based data resources. (Bloche, 2000; Gellerman, 1984; Wilmshurst, 2002).

Within isolated organizations, the misreporting of data generally affects local, entity-specific performance. As evidence is aggregated across markets, large areas or countries, such inaccuracy can have a cumulative effect. In small-sample outcomes data especially, this effect has the potential for significant harm. Whereas historically, the misrepresentation of data has affected only financial outcomes for the healthcare industry as a whole, the multiplied effects of primary patient data error is increasingly likely to have a real and dramatic effect on documented clinical outcomes (Fox *et al.*, 1993). Such environmental evolution suggests that, in an era of comprehensive evidence-based performance assessment, we find a corresponding need for comprehensive evidence assessment (Rivers *et al.*, 2002; Lin and Wan, 2001).

Confounding this influence in US healthcare is the multiplicity of influences that, at times, serve to hinder effective regulatory management. As for-profit healthcare continues to be plagued by reimbursement fraud and abuse, a growing array of regulatory measures have been imposed to discourage such practices. The amended US Federal False Claims Act (1986) for example, invokes multiple damages and penalties against providers as a way to counter perceptions of lax enforcement and oversight (31 U.S.C., Section 3729–3733). Although Government enforcement entities have initiated several high-profile prosecutions against large multi-provider corporations, it remains to be seen whether such measures can counteract deeply ingrained or institutionalized behaviours that have evolved over years or even decades (Prophet, 1998).

To date, governmental efforts to curb healthcare overpayments have included a series of nationwide investigations of provider organizations. These national initiatives, as implemented by the US Department of Justice (DOJ), have been widely criticized by the healthcare community. Many hospitals have alleged that they have been unfairly targeted and that Government investigators have been overzealous in their application of regulations, often classifying minor administrative errors as intentional fraud (Scanlon, 1999).

Are investigations always justified? A study dealing with abusive fraud investigations was issued by the General Accounting Office (GAO), and suggested that enforcement agents

were selectively conducting unfair fraud investigations on hospitals. It detailed a number of shortcomings in the DOJ's monitoring of US attorneys' offices, suggesting the department was doing a 'superficial' job of ensuring US attorneys were following the rules for fraud investigations. Such allegations of arbitrary selection for investigation have led many to suggest that prosecutors routinely abuse their power in order to obtain higher conviction or settlement rates (Scanlon, 1999). In such cases, healthcare organizations could develop the perception that such unfairness might justify or at least mitigate disobedience of laws and regulations (American Hospital Association, 1997).

Overall, the practices of data misreporting, fraud, and honest error all have the same outcome: the continued existence of low-quality medical evidence. Where individual provider decisions were once based on the accumulated personal knowledge of that provider, indicia of data reliability were straightforward and reliable; personal knowledge inherently carries known origins and a degree of reliability. In an evidence-dependent environment, however, decisions become influenced by accumulated, system-based data. Shared data raises the question of shared responsibility, however, as other healthcare professionals come to rely on a given provider's supplied information. Whether individual providers in fact have a duty to ensure ANY level of data quality remains largely unexamined in U.S. healthcare (Dimaggio and Powell, 1983; Sicotte and Kane, 1993).

The organization of individuals into groups is a phenomenon that pervades virtually every aspect of modern society. Behavioural characteristics observed in interactions between members of an organization are often found to be no different than behaviour outside of organizations. Many would argue, in fact, that organizations as a collective whole are the definition of society. Within a given organizational setting, however, there are behaviour-influencing factors not observed in the extra-organizational environment. These include both the explicit, overt influence the organizational structure is designed to invoke, as well as the implicit, covert and often-unintentional influence the organizational structure creates (Sicotte *et al.*, 1998; Steers, 1984).

One purpose of organizational structure is to provide a mechanism through which authority can be formally organized and communicated to members. It also serves as a pathway through which information, both formal and informal, can be transmitted to various parts of the organization (Davis, 1977). This structure, however, regardless of its use, is much more than a simple framework; it is a set of relationships. By examining changes in organizational structure, then, we can at times observe the corresponding changes in these relationships and the influence, if any, they have on regulatory obedience within the organization (Deal and Kennedy, 1982; Smith, 2000).

One of the major challenges facing health services management is the measurement of various aspects of organizational performance. This challenge is exacerbated by a reluctance of many healthcare organizations to share data because of a fear of competitor access to data. Even where objective, reliable and valid measures of organizational performance are available, typically they are available only in aggregate form, rather than for individual organizations. In response to these constraints, some have used subjective measures of performance often based on the perception of key stakeholders (Granovetter, 1985; McCracken *et al.*, 2001).

Likewise, in determining levels of adherence to regulatory guidelines, defining the scope of influence of peers and colleagues is often a challenge. While professionals are expected to be loyal members of organizations, they are also influenced, to varying degrees, by members of their defined profession. While peer groups are not typically bounded by traditional organizational limits, they do often act as a unified group. In some cases, members might in fact identify more closely with those outside the organization, rather than with their geographically closer colleagues. Such a division of loyalties could serve to confound determination of boundary-crossing influences, especially when management relates to broader, contextual dimensions of organizational compliance. Even when viewed from a perspective of 'open' organizations, traditional methods of analysis may be too limited in scope to identify hidden, industry-wide subcultures that might act in concert or in conflict with specific organizational goals. Such links have seldom been examined at a national level, especially in newly emerged information-driven environments (Emery and Trist, 1973; Scott, 1998; White *et al.*, 1976).

Across the healthcare industry, there is some precedent for the examination of factors outside

of the defined organizational setting (Scott, 1998). The inclusion of boundary-spanning influences or variations of institutional mediation effects, however, within the implementation and management of healthcare regulatory guidelines, has received little attention, especially on a national level.

Given the dual or multiple loyalties inherent in healthcare management, it becomes clear that, at times, an examination of industry-sanctioned but organizationally disapproved behaviour might serve to better define an 'institutional disobedience' that can explain practices and polices which can appear to be inconsistent with traditional organizational analysis.

The emergence of evidence-based medicine suggests the requirement for consideration of such environmental or contextual forces, including boundary-spanning or cross-market activities, and should encompass small area management issues as well (Agency for Healthcare Research and Quality, 2001; Wennberg, 1997). Before this can be defined, however, there is a need for consistent wide-area compliance management practices.

One possible reason that cross-industry behaviour is difficult to define relative to context and compliance management is that, at least when based on industry-wide comparisons, there is inconsistent evaluation of management practice, which precludes consistent comparative benchmarks (Benson *et al.*, 1991). Where possible, the inclusion of comparative, institution-wide variation better defines the relationships among context, organizations and management outcomes. The need becomes apparent then for studies that provide, through national assessments, initial benchmarks unaccounted for in previous research, related to area and practice setting variation in regulatory compliance management (Duncan, 1972; Freidlander and Pickle, 1968).

While recognizing that corresponding issue-specific professional group influences exist, past inquiry into health services compliance behaviour has not, on a nationwide level, provided a cross-area view of factors that act across organizational boundaries. If adherence to regulatory guidelines is defined by context influences, managers need access to such large area or institution-wide benchmark assessments that can serve as reference points for performance assessment.

Research questions

This analysis seeks to provide an initial, nationwide assessment of the prevalence of wide-area compliance management variation that health information manager's report, distinguishing the extent to which organizations adhere to government-mandated guidelines, and how management practices vary nationwide. In an environment of increasingly stringent government and industry-wide mandates for uniform management, such variation has significant implications for healthcare assessment at both a national and regional level. Our central question on this issue is whether organizations have developed federally mandated compliance programmes and, if non-uniform adoption occurs, which organizational and environmental characteristics are likely to be associated with non-compliance.

Data and methodology

Data from a nationwide survey of healthcare information managers, the AHA Annual Survey, the US census, Interstudy publications, state and regional health service departments, and *The Market Statistics Report* were used to examine the organizational and environmental characteristics of compliance in a variety of healthcare settings. A comparison of selected compliance characteristics was made across practice settings, geographic areas and selected healthcare demographic characteristics.

The survey, completed in May of 1999, included measures of adoption of compliance intervention measures, and further identified key geographic and practice setting indicators. Overall, this study was a response to the need of the healthcare industry for more timely and frequent practice information in the field of health information management No comprehensive study of this kind has been available in the past. The goal of this undertaking was to establish a source of practical, comparative information that can be used in both strategic planning and day-to-day practice. This project was designed to allow ready access to ideas and innovations that other professionals have used in solving management and technology problems common to many organizations.

This study was designed to provide periodic information on a range of information management topics, such as clinical coding,

reimbursement, compliance, health record computerization, and compliance management. In addition, a portion of the survey was devoted to collecting information on the professional issues facing practicing managers.

Sample design

The initial survey was initially fielded in June 1998, with follow-up assessments accomplished throughout May 1999. It was designed to provide representative information on the population of health information managers. The sample included respondents from a variety of practice settings and job titles and excluded students. The survey obtained data from 16 591 health information managers, with a 50.4% gross response rate.

Samples for surveys were selected from a database of certified health information managers provided by the Foundation for Record Education, and contained current and historical information on Registered Records Administrators (RRA)/Accredited Records Technicians (ART)-credentialed information professionals in the United States. The data included on the population surveyed were obtained primarily from membership renewal forms and from an annual member profile mailed to all active members. Preferred mailing address data were obtained from the member population from those members with changes in address or professional status. These changes may be signalled by input from periodic mailings or by other correspondence.

Questions for the main questionnaire were developed from a review of past surveys and focus group results. Questions in the survey were designed so that managers from a variety of practice settings and work roles were asked questions that were generally relevant to the profession overall.

Work settings captured in this study included the following:

- Hospitals and medical centres
- Group practices
- Ambulatory care clinics
- Managed care offices
- Long-term care and rehabilitation facilities
- Colleges and universities
- Consulting firms
- Government agencies
- Software product companies
- Pharmaceutical companies
- Self-employed Health Information Management professionals
- Other work settings

Topics were formulated and pre-tested by convened groups of practicing information managers to represent a broad range of activity areas. Questions that had not been used previously in any known surveys of health information professionals were pre-tested before the survey fielding to evaluate the wording and ordering of questions and to determine the ability of respondents to provide the desired information. While the lexicon of compliance management has evolved somewhat, at the time of the survey the term 'compliance' was recognised by 98.3% of respondents as referring to proper billing compliance, or the control of claims fraud.

Field procedures

Before the survey mailing, announcements were made through professional publications and meetings to inform members of the upcoming survey. A pre-printed questionnaire was mailed to all credentialed health information managers who had identifiable mailing addresses. An instruction letter accompanied the form and explained the purpose of the survey and instructions for completion. At the six-week point following the last wave of the initial mailing, a second mailing was sent to those who had not responded. Follow-up on specific issues identified after the second mailing was accomplished as a series of more focused studies, reported elsewhere (Lorence *et al.*, 2002).

The questionnaires were processed by an independent testing and research firm National Computer Systems of Minneapolis, which processed forms weekly over the length of the study. Region-specific response rates were tracked to ensure that the mailings were received in a timely manner.

Strict adherence to confidentiality standards was maintained in this study. Data were entered via a computerized scanning system and released only in aggregate form, without individual respondents identified within the reported results.

In addition, a number of data quality-control measures were employed to provide the cleanest possible data. A detailed review was made of all sample response dispositions, both pending and final, on a weekly basis. From this evaluation, the time schedule was reviewed and necessary recommendations were made to

Table 1 *Organizational adoption of compliance programme*

	Total (A)
Base: those responding	100%
Yes	52.9
No	47.1

the contractor to enable the survey to be completed during the allotted field period.

As part of the post-survey programme review, the design and methodology were examined to identify areas needing improvement. After data entry was complete, an evaluation was made of the impact of survey and item non-response rates and various potential methods for adjusting results to correct for non-response. Preliminary findings from the survey were summarized for analysis and are reported elsewhere (Lorence, 1999).

In the process of collecting demographic and practice setting information on health information managers, they were queried on compliance management practices. At a period where model compliance guidance and related publicity were at a peak, respondents in this study were asked whether their organizations had developed a compliance programme. Responses were categorized and cross-tabulated with key demographic variables. Resulting means were tested using a two-sample *t*-test, assuming unequal variance, with alpha at 0.05 (see Tables 1–9).

Results

Overall, only a small majority of respondents (52.9%) report having adopted compliance programmes.

Some urban influence was exhibited here regarding propensity to implement compliance programmes. Larger towns and small metropolitan areas were the most likely to have adopted compliance programmes.

Compliance programme adoption varied across selected demographic and market characteristics. Respondents in organizations with 1–10% HMO enrollees (54%) were more likely to have developed a compliance programme than organizations with over 30% HMO enrollees (51%).

A slight majority of organizations with managed care expenditures of US$1–125 and were more likely to have developed a compliance programme (55%), and were significantly less likely to adopt, compared to organizations with expenditures of U$126–150 (51%).

A slightly higher percentage of hospital setting respondents (63%) have developed a compliance programme, compared with the 'other' practice setting respondents (62%), and were significantly different from hospital setting respondents (37%) regarding development of a compliance programme.

Managers (58%) were more likely to report their organizations had developed a compliance programme, and were significantly from non-manager respondents (49%).

South central (60%) organizations were the most likely to report compliance programme adoption. This region was significantly different from all other regions (ranging from 46% to 53%), regarding adoption of a compliance programme. For those organizations that have not developed a compliance programme, New England (54%) respondents were significantly more likely to have failed to adopt a compliance programme.

Organizations that have developed a compliance programme and gone through a corporate merger (59%) were also significantly higher adopters, compared to those that have not merged (50%).

Table 2 *Organizational adoption of compliance programme, by population size*

	Non-metropolitan			Metropolitan		
	Total (A)	<25 000 (B)	25 000–49.9 000 (C)	<250 000 (D)	250 000–1 million (E)	>1 million (F)
Base: those responding	100%	100%	100%	100%	100%	100%
Yes	52.9*	51.3*	55.3	53.2*	52.9*	52.1*
No	47.1*	48.7*	44.7	46.8*	47.1*	47.9*

**Signifies column mean differed significantly from 25–49.9 K (column C) at $P < 0.05$.*

Table 3 *Organizational adoption of compliance programme, by HMO enrollment*

	Percentage HMO enrollees			
	1–10% (G)	11–20% (H)	21–30% (I)	Over 30% (J)
Base: those responding	100%	100%	100%	100%
Yes	54.2*	53.0*	52.0	51.4
No	45.8*	47.0*	48.0	48.6

**Signifies column mean differed significantly from over 30% (column J) at $P < 0.05$.*

Discussion

In this study we find significant non-adoption of proper billing compliance programmes across the US, despite widespread publicity of mandates, guidance and prosecution risk. As seen here, only a slight majority of respondents indicated that they have adopted a compliance programme within their organizations, despite national requirements that suggest the need for standardized, universal programme compliance.

Compliance programme adoption, where it existed, was seen on a fairly uniform basis across population centres, with slightly higher adoption rates in more developed managed-care markets. Organizations with higher inpatient visits had slightly higher adoption of compliance programmes, as expected from their size. Possibly an outcome of greater organizational resources, it nonetheless suggests that larger is slightly better, at least when looking for the existence of compliance programmes.

Of interest here was the fact that a significant majority of organizations have not adopted a full-time compliance officer, again in the face of published model compliance guidelines suggesting the need for such a position. Anecdotal evidence suggests that insufficient budget allocation may explain at least part of the existence of non-adoption. Alternatively, variation in influence across practice settings and demographic characteristics further suggests that regulatory influence is not consistently applied. Such influences vary less than proportionately with the risk of prosecution, suggesting it is perceived as being significantly risky only in specific contexts. Given a uniform, federal fraud regulation environment, the perceived risk of penalties are modified to some extent by local conditions. Optimization forces, therefore, vary across settings.

Organizations in larger metropolitan areas were slightly more likely to report having full-time compliance officers, although the trend was not remarkable. Noteworthy here is that the risk of fraud detection and prosecution appears to be outweighed, in some cases, by the expense and inconvenience of instituting a compliance programme. Despite more stringent regulatory oversight, rigorous campaigns of public awareness, and highly visible prosecutorial initiatives, many organizations still do not see the threat of government penalties as significant enough to warrant implementation of a compliance management programme.

Likewise, despite widespread perceptions that managed-care pressures promote upcoding and non-compliance in billing practices, there was little variation across the managed care penetration areas regarding adoption of full-time officers.

Of interest here also was a significant difference in compliance management preferences

Table 4 *Organizational adoption of compliance programme, by patient visit*

	Hospital inpatient visits				Hospital outpatient visits			
	1–10 500 (K)	10 501–30 000 (L)	30 100–98 000 (M)	Over 98 000 (N)	1–10 500 (O)	10 501–30 000 (P)	30 100–98 000 (Q)	Over 98 000 (R)
Base: those responding	100%	100%	100%	100%	100%	100%	100%	100%
Yes	53.2	53.6	52.9	51.8	52.9	53.7	54.2	51.8
No	46.8	46.4	47.1	48.2	47.1	46.3	45.8	48.2

Table 5 *Organizational adoption of compliance programme, by managed-care penetration*

	Managed-care expenditures		
	0–125 (T)	126–150 (U)	Over 150 (V)
Base: those responding	100%	100%	100%
Yes	55.0*	50.9*	53.2
No	45.0*	49.1*	46.8

**Signifies column mean differed significantly from over US$150 (column V) at $P < 0.05$.*

between hospitals and outpatient clinics. Across the healthcare industry, both settings invariably are subject to regulatory adherence, but to different degrees, with outpatient settings relatively less likely to adopt compliance programmes. The adoption of compliance therefore varies and is dependent to some extent on organization type. While both settings perceive the accomplishment of some degree of regulatory compliance, the existence of significant variance here nevertheless suggests that such practices may be of little use for comparative patient data analysis when conducted across different practice types, regardless of uniform national requirements.

Perhaps of greater impact here is the existence of area and regional variation in compliance management practices. New England respondents were relatively least likely to implement compliance; south central respondents, in comparison, were most likely to adopt such a practice. While this could be the result of market differences or local expertise, it demonstrates that system-based quality management practices do not occur uniformly across geographic regions. This again makes the comparison of medical data across such areas difficult, if users of claims information are differentially predisposed to infer different degrees of quality from claims data.

Table 6 *Organizational adoption of compliance programme, by practice setting*

	Hospital (B)	Clinic (C)	Other (D)
Base: those responding	100%	100%	100%
Yes	63.3	38.5*	38.3*
No	36.7	61.5*	61.7*

**Signifies column mean differed significantly from Hospitals (column B) at $P < 0.05$.*

Table 7 *Organizational adoption of compliance programme, by management level*

	Manager (E)	Other (F)
Base: those responding	100%	100%
Yes	57.8	48.9*
No	42.2	51.1*

**Signifies column mean differed significantly from Managers (column E) at $P < 0.05$.*

Variation in compliance management adoption across regional settings suggests regulatory obedience is not consistently applied in the U.S. As was evident in assessment of organizational setting variation, in an (assumed) uniform regulatory environment we find that the perceived risk of penalties is modified, to some extent, by regional conditions.

We find that variation existed in the implementation of compliance management across a number of healthcare organizational settings. The overall low adoption rates, combined with significant variation across geographic regions and key organizational variables, suggests that the use of billing and related claims data in medical decision making must be undertaken with caution.

As dictated by regulatory language and model guidelines, compliance management practices are not subject to a great degree of discretion. Regulations are, by nature, consistent in their application and mandated in their implementation. So why do organizations continue to assume the risk of non-compliance behaviour, even after publication and dissemination of standards and model programmes? It may be the growing problem of fraud in healthcare reimbursement, toward which the Federal Government has implemented a series of model compliance programmes, has, to some extent, become an accepted practice in the healthcare reimbursement process. It may be that compliance with regulatory measures is being publicly supported, but where enforcement or guidelines themselves are seen as unfair, there may be covert non-compliance within specific organizations. Where such beliefs are adopted by a critical mass of managers, the entire professional core group might rationalize their behaviour as 'professionally consistent'.

Table 8 *Organizational adoption of compliance programme, by region*

	New England (G)	Mid-Atlantic (H)	E NO Central (I)	W NO Central (J)	SO Atlantic (K)	E SO Central (L)	W SO Central (M)	Mountain (N)	Pacific (O)
Base: those responding	100%	100%	100%	100%	100%	100%	100%	100%	100%
Yes	45.7*	48.8*	48.8*	52.6*	52.4*	60.1	60.0	50.0*	51.2*
No	54.3*	51.3*	51.2*	47.4*	47.6*	39.9	40.0	50.0*	48.8*

**Signifies column mean differed significantly from E. South Central (column L) at $P < 0.05$. E, east; W, west; NO, north; SO, south.*

Table 9 *Organizational adoption of compliance programme, by merger status*

	Merger (P)	No merger (Q)
Base: those responding	100%	100%
Yes	59.1	49.7*
No	40.9	50.3*

**Signifies column mean differed significantly from Mergers (column P) at $P < 0.05$.*

As seen in this study, potentially greater influence comes not only from within the provider organization, but occurs across external, industry-wide boundaries as well.

The broader implication for managers is that when outcomes or other decision-support data are compared across states or regions, measures must be undertaken to ensure that any confounding influences arising from the quality of the source data itself are not perceived as actual variance in clinical performance.

The variation in adoption of data in healthcare organizations in an emerging data-driven healthcare system further suggests that payers, provider organizations and employers now face the very real possibility that they will be required to maintain information on their systems that may not be of sufficient quality to be used in comparative analysis.

At more local and regional levels, variations in data-quality assessment might lead to gross inefficiencies and significant cost issues under an evidence-based healthcare system, since any comprehensive measure of data quality is incomplete without accounting for such variation.

As outlined here, despite industry requirements and Government regulations mandating greater efficiency through consistent compliance management, such measures vary significantly across practice settings and regions; compliance intervention likewise varies significantly across these measures, and inconsistently across regions. Comparisons here suggest the possibility of significant differences in claims data even after adjusting for the actual costs of services in each market. Ultimately, claims data quality assessment needs an extra-organizational component to be meaningful.

Results here further highlight the often-overlooked role of institutional forces in a seemingly autonomous environment. Professional groups often suggest they are different to some extent than most other societal collectives, often

because of the perceived importance of their professional duties.

It has been argued that, with the recognition that healthcare is shifting away from provider-specific decision making and toward evidence-based teams, the study of individual autonomy in organizations through examination of internal structure fell into disfavour as being too authority-based and rigid. Recently, however, re-examination of structural questions has occurred, although from very different perspectives. It is now widely accepted that structure is an organizational dimension that can be manipulated and has direct effects on problem-solving (Davis, 1977; Sicotte *et al.*, 1998). Organizational changes are fairly easy for managers to implement, so structural dimensions become doubly important, since they constrain and thereby influence behaviour and are likewise readily manipulated. Yet there is an important limiting factor in current structural approaches. The structure of an organization makes some things possible, but it does not guarantee that they will happen. When we open up peer-to-peer networks that communicate regulatory compliance behaviour, the structure will permit people to do things they could not do in an extensive hierarchy. It does not guarantee that they will do them (Elden and Taylor, 1983).

Other factors are influencing the way we look at structural problems. There has been some research, for example, in exploring the problems of professional roles in organizations, and conflicts between role requirements. There is an emphasis on more sophisticated ways of specifying professional duties aside from the traditional job description, and we have begun to understand the conditions under which particular professional behaviours, even conflicting ones, can be important and useful (Katz and Kahn, 1976). Thus, for example, the idea of the 'linking-pin' role has been proposed, which identifies a liaison role between groups in organizations, a notion that has been useful to many managers. It does not try to describe professional duties in such a way as to make it mutually exclusive of someone else's job, thus avoiding overlapping of duties. Rather, it recognises the interdependency of many positions with others and includes these overlaps (Gellerman, 1984). Aside from this, its utility as a facilitator and source of new information has been well-demonstrated (Granovetter, 1985).

The relationship between inter-organizational and industry-wide information transfer and professional behaviours within the organization has also come to be recognised as important to organizational functioning. We are beginning to realise that if responsibilities are contiguous with one another in certain ways, the people who perform these activities are apt to establish relationships with one another and form groupings that they would not otherwise form (Rivers, 2002). So, proximity between actors may have as much influence on work relationships as does the hierarchical structure (Emery and Trist, 1973).

Regardless of the conceptual framework employed, the management implications are clear: as claims data quality becomes increasingly determined by comparisons with broader, aggregated industry data, as is the case in evidence-based healthcare, there is a corresponding need for assessment of quality across a number of levels, including the broader data environment. We suggest here that inconsistent compliance management practices, in an evidence-based context, are a significant barrier to such a complete quality view.

Conclusion

Despite the shortcomings and limitations inherent in the traditional organizational assessment, we cannot determine its true value without considering its counterbalancing contributions to broader, institutional functioning. Examination of organizations simplifies many problems of communication and control. It is, on the surface, a logical structure for handling the many levels of decision making that occur across healthcare. So, despite all the difficulties that are a consequence of an organizational perspective, there is not sufficient reason for abandoning it, especially since no good substitute is available. A more likely outcome will be a differentiating and separating of different levels of the organization's influence, with the parts at times in close contact with each other, and at times being closer to the extra-organizational environment. This incremental, differentiation of structure and influence has not been applied to examination of health services management issues in great detail. When quality is defined by context influences, large area assessments are needed as benchmarks to complement organization-specific measures.

The level at which we examine compliance behaviour might likewise be as important as the incidence of disobedient or non-compliant acts. Where inconsistent compliance adoption patterns occur, comparative assessments become meaningless. Providers and regulators have achieved some consensus regarding indicators of effectiveness of compliance programme and differentiation of intentional versus innocent non-compliance of regulatory requirements. Despite disagreements about the appropriateness of enforcement activities, the provider community and those charged with ensuring compliance overtly hold that healthcare providers should follow regulatory rules, and that compliance programmes often can help providers do so. Compliance policy, however, must go beyond symbolic adherence to guidelines in order to effectively eliminate the risk of prosecution.

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