

1. INTRODUCTION

1.1 Background

This review presents the results of a systematic examination of the peer reviewed literature published over the last two decades relating to doctors in executive management. The literature was identified using a systematic search strategy followed by content analysis of references that met specified inclusion criteria. Abstracts and citations, for the primary studies identified using the outlined search strategy, are provided at the end of the review. The review focuses on the performance of doctors in positions of executive management in the USA, UK, Europe, Australia and New Zealand.

2. METHOD

2.1 Overview of method and research question

The literature review was undertaken in order to ascertain what is known about doctors in executive management, primarily within hospital systems in specified OECD health systems. The following research questions framed the review:

- a. Does a physician background improve the organizational and leadership performance of health care executives?
- b. Do physicians make better healthcare managers than non-physicians?

2.2 Review process

The review process is illustrated in Figure 1. Steps 2, 3 and 4 are still in progress, with completion expected in Jan 2011.

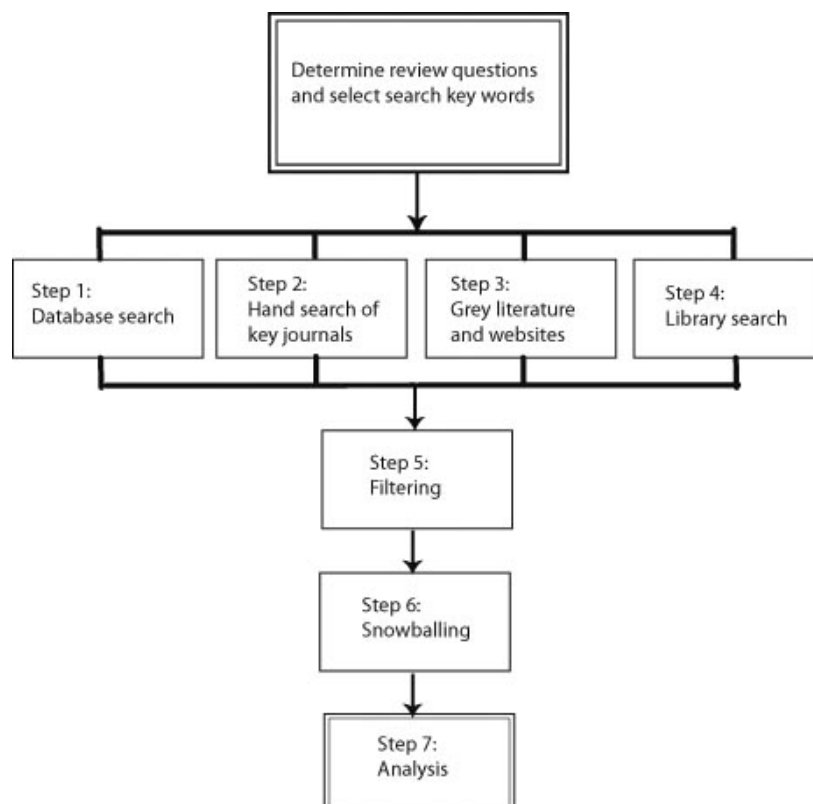


Figure 1: Review process

2.3 Search strategies

Medline and Embase databases were systematically searched, between Nov and Dec 2010, to look for published literature relating to doctors in executive management. The search terms used in this exploration of the literature databases are listed in Table 1. The search was limited to English language articles published from 1990 to present day. Hand-search of journals, grey literature search and UNSW library search will be completed in phase 2 of the review. The journals that will be hand-searched to look for literature not captured in the database searches include *Physician Executive*, *Journal of Healthcare Management*, *Journal of Management in Medicine*, *Journal of Health Organization and Management* and *Healthcare Executive*.

2.4 Search Findings

References indicated by an asterisk (*) in Table 1 were downloaded into an Endnote X4 database, and duplicates removed. The total number of references remaining was 1323.

Medline	
Search terms	Hits
1. Executive\$ AND physician\$	2680
2. Health care executive\$ OR health facility administrator\$ OR hospital administrat\$	11069
3. medical manage\$ OR medical staff, hospital OR physician's role	25159
1. AND 2. AND 3.	36*
1. AND 2.	235*
1. AND 3.	401*
2. AND 3.	559*
Embase	
Search terms	Hits
1. (Executive\$ AND physician\$) OR administrative personnel	8133
2. Executive\$ AND physician\$	210*

* downloaded into Endnote X4

Table 1: Search findings for selected databases

2.5 Analysis

The abstracts and citations for all downloaded references were reviewed, and 133 papers were found to be potentially pertinent to the research questions. It was originally intended only to consider studies for inclusion in the review. However, the paucity of such material resulted in expansion of the criteria to include articles and opinion pieces. Inclusion criteria were that papers addressed the role or performance of doctors in middle to upper level management positions in healthcare, or that papers discussed the relevance of professional background to performance in general healthcare management. Of the 133 papers, 57 were not available online; 56 of these appeared to be articles, opinion pieces or letters to the editor published prior to 2000, and were therefore discarded. The remaining paper was a study obtained through an inter-library loan. The remaining 76 papers, and a further 15 potentially relevant papers uncovered via snowballing, were downloaded and saved. This resulted in a total of 92 papers that were obtained and reviewed in detail.

Of the 92 papers, 62 were categorized as articles or opinion pieces, and the remaining 30 were categorized as studies. Studies were subdivided into those primarily based on survey data, those primarily based on interview data, those primarily based on objective data, or reviews. The number of studies in each category is in Table 2.

Study category	Number
Studies based on objective data (one study included interview data ¹)	5
Studies based on interview data (two studies also included survey data ^{2,3})	6
Studies based on survey data	16
Reviews	3

Table 2: Study categories

The key topics embedded in these 30 studies was as expected. A wordle (word cloud) was created [http://www.wordle.net/show/wrdl/2906760/Physician_leadership].



Figure 2: Wordle of key terms

3. FINDINGS AND DISCUSSION

3.1 Quality and relevance of discovered material

The majority of uncovered material consisted of articles or opinion pieces. Articles generally related to the history of doctors in management roles, the potential future for doctors in management appointments, advice to aspiring executive physicians (or reminiscences of retiring executives on the subject), and opinion pieces on the pros and cons of employing doctors as managers. The opinion pieces tended to be stereotypical and evidence-free, with articles in favour of the concept (invariably written by those with medical qualifications) citing physicians' strengths in addressing patient outcomes, quality and safety issues, decision making, ability to specialize, and intelligence, and articles against citing doctors' lack of formal management training, and purported weaknesses in financial management, organizational strategy, organizational visioning, ability to generalize from medicine to management, and teamwork.

Of the studies, the majority of data were gathered via self-reported methods such as unvalidated, purpose-designed questionnaires, which are subject typically to the cultural biases of the respondents and not considered to be reliable methods for assessing personal performance^{4,5}. Many of the surveys illustrated the current state of play in regard to numbers of physicians currently in management, and their demographic characteristics, rather than providing information on the performance of those managers. Studies based on interview data, while also subject to biases of the interviewer and respondents, were more relevant to the study questions as they contained greater detail and explicated some of the prominent issues facing physician executives. The three reviews, in particular the review by Ham and Dickinson⁶, provided background reading on the historical and current employment of physicians in healthcare management in the US, UK, Denmark, Netherlands, Scandinavia, Australia and New Zealand. Of greatest value were the studies based on objective data.

However, there were only five of these studies uncovered by the search strategy. In all, only three studies provided evidence in relation to the performance of physician versus non-physician healthcare managers, one based on survey data⁷, and two based on objective comparison data^{8,9}.

3.2 Doctors in management roles - historical

Prior to the 1970s, hospitals were run by clinicians^{10,11} with administrators in a coordination rather than managerial or leadership role. As healthcare moved from a system where decisions were based on the personal professional experience of the consultant doctors, to a more “scientific-bureaucratic”¹² model of management, administrators were engaged to manage general business aspects of the healthcare system. While administrators managed the “paperwork”, doctors continued control the major decisions affecting patient care, including commitments of substantial resources. In the UK, release of the Griffiths Report¹³ in 1983 resulted in a new purchaser-provider model of healthcare, which gave the managers greater control over resources, and established the roles of medical director and clinical directors. While these roles were not considered attractive, doctors felt that they needed to take up these part time appointments in order to continue to have a voice in decisions affecting their work¹⁰. A similar pattern emerged in the US, when the introduction of managed care in the 1990s involved physicians moving from part time advisory roles into full time management in order to secure greater control over resource allocation and decision-making¹⁴. There appears to be a view, generally held by physicians, that the physician mindset is different to that of the general healthcare manager. The prevailing opinion in some quarters^{10,15-17} is that physicians are not suitable for executive management as they are conservative individualists rather than team players, and that they identify more with their professional responsibilities than their management role. There was no objective evidence found in the literature to support the validity of this view.

3.3 Doctors in management roles – present day

Today, doctors normally move through a three-step process of becoming a physician executive, beginning as a full time clinician, spending some time in a combination of clinical practice and management, and eventually moving on to full time administration. In a US survey of 300 managed care physicians (with a response rate of 80%), Bluestein¹⁸ found the average time to transit through the three steps was 4.3 years, with only 16% of clinicians making it through to full time management positions. Examining the issue from the perspective of those already in management, Hoff¹⁴ found that 50% of US physician executives no longer practiced medicine. The situation in the UK^{6,11} (and elsewhere^{1,6}) is somewhat different, with the majority of medical executives acting as “hybrid managers”, who continue to manage a clinical workload alongside their administrative responsibilities. Horsley et. al.¹⁹ found that 47% of UK consultants, for example, had management responsibility above and beyond managing their own service, patients and immediate staff (although only 18% were paid for this work).

Although it is recognized that “patterns of accommodation between medicine and management are more nation-specific than is frequently acknowledged”²⁰, the current model appears to be for physician executives to serve in partnerships with non-physician executives^{10,21}. Typical duties of the doctor manager include physician management, regulatory compliance, quality and patient safety, governance, and the role of a ‘go-between’ to facilitate communication between managers and practicing clinicians²²⁻²⁵. Physician executives appear to be more highly regarded in the US than in the UK, and the majority

appear to be satisfied with their job²⁶.

3.4 Doctors in management roles – future

It appears likely in the future, particularly in the US, that physician executives will move into CEO positions and assume full general managerial responsibility. There are an increasing number of US educational institutions offering dual MD/MBA degrees²⁷, and physicians are starting to gain acceptance as exemplary administrators of managed care institutions^{28 21}. The situation is more complex in the UK and Europe⁶, where, although doctors are increasingly encouraged to move into management, the positions on offer appear to be restricted to clinical and medical director roles. In addition, the culture in the UK and Europe appears to be less well-disposed to doctors relinquishing their clinical work²⁹.

3.5 Does a medical degree improve organizational or leadership performance?

In a comparative study in 1998, Shipper et. al. found no evidence to support the assumption that physician managers would be deficient in leadership skills⁸. The study examined the leadership skills and performance of 229 healthcare managers (21% physicians, 79% non-physicians), assessed by the managers themselves and their superiors. The only significant difference found between physician and non-physician managers was in 'standards of performance', where physicians were rated more highly.

In a 1995 survey of US physicians¹⁸, the majority did not experience problems adapting to the management role or the non-clinical culture. Contrary to some expectations, physician executives who continued to practice medicine did not experience conflict between their clinical and management roles¹⁸.

Physician involvement in governance has resulted in a greater uptake of CQI/TQM in hospitals³⁰, and a 1999 US-wide survey found that physicians on hospital health system boards and practicing physicians in management were both considered to be effective³¹.

3.6 Physician vs. non-physician managers

While there is a great deal of knowledge available on the roles and attitudes of physician managers, there appears to be little information available assessing their contribution to medical effectiveness or organizational performance³². Other than the study by Shipper et. al., the only two objective studies found to compare physician and non-physician performance were conducted in the US by Golden et. al.⁷ and by Schultz and Pal⁹. In 2000, Golden et. al. published a study comparing the decision making behaviour of 350 CFOs, CMOs, and physicians. They found that how an issue was interpreted had a greater influence on the final decision than whether the decision-maker was a physician or non-physician manager. The stereotypical expectation that doctors would represent the interests of clinicians and that non-clinician managers would represent the interests of the organization was not found to be supportable.

The most interesting study discovered in the literature search, and the only study to examine the quality and impact of strategic decisions made by healthcare executives, was the work of Schultz and Pal⁹. This 2004 study examined the relationship between educational background of 38 senior health care executives (20 with MBAs, 18 with medical background including MDs, RNs and LPNs), and the influence of their strategic decisions on the financial viability and quality of care of a hospital. The study was conducted using a personal computer based simulation of a hospital system. Although few executives (26%) managed to maintain financial viability of their organisation through the 20 year simulated life of their hypothetical

hospital, the only statistically significant finding that differentiated MDs from MBAs was that executives with a medical background used more quality of care information in their decision-making. There was no statistical significant difference in performance outcomes that could be attributed to educational background.

3.7 Limitations

Very little objective research data were uncovered to inform the research questions. This could be due to an inadequate or inappropriate search strategy, or it could be due to lack of published research in this area. In regard to the former, it was difficult to find suitable search terms to bring up relevant material, without generating an overwhelming quantity of data. While combining the search terms, as shown in Table 1, served to limit the discovered material to a quantity that was manageable within the scope of this review, it may have inadvertently eliminated relevant papers. Of concern, neither the primary database searches, nor snowballing, illuminated key works or identified seminal authors. In addition, some of the primary journals in this field – for example, *Physician Executive* – appear to have adopted a magazine, rather than an academic, format. This is evidenced by their journalistic style, inclusion of photographs and illustrations (including photographs of the authors), heavy reliance on opinion pieces, and general lack of author academic credentials.

4. CONCLUSION

In summary, very little hard evidence was uncovered in relation to whether physicians make better health care managers than non-physicians. In stark contrast to the bulk of opinion (of which there was a great deal), there was no evidence found of significant differences in organizational or leadership performance between physician and non-physician executives that could be attributed to their education, background or training.

5. SUMMARY OF STUDIES

1. ACHE. Research notes. The role and function of physician executives. *Healthcare Executive* 2003;18(1):38-9³³

Building effective physician-executive partnerships continues to be a major challenge in the healthcare field. One resource that healthcare organizations have relied upon is the physician executive, who often acts as a liaison between the clinical and the management staff. To further examine the role of the physician executive and its impact on the organization, ACHE recently surveyed 664 CEOs. Of those surveyed, 245 responded, for a response rate of 37 percent. The survey indicated strong CEO support for the physician executive role – only 8 percent of respondents agreed with the idea that it is a waste of resources to have highly trained physicians in management roles. Following are more results from the survey.

2. Berry K. Hospital-physician relationships: what's working, what's not working. *Health Care Strategic Management* 1999;17(3):18-20³¹

A new survey by McManis Associates shows that hospitals and health systems are moving toward shard hospital-doctor partnerships and away from physician employment arrangements and MSOs. McManis' Kate Berry writes about what's working and what's not.

3. Bluestein P. Physicians in transition. *Physician Executive* 1995;21(12):16-24¹⁸

The study of physicians as managed care executives has been relatively recent. Much of what was written in the past focused primarily on doctors who had taken hospital-based administrative positions, especially as medical directors or vice presidents of medical affairs.¹

But the '80s brought rising health care costs and the emergence of the "O's"--HMOs, PPOs, UROs, EPOs, PHOs, H2Os, and Uh-Ohs--in response. It also brought a growing number of physicians who traded their white coats and their particular "ologies" for the blue suits of executive management. I am convinced that it is important now, and will be increasingly important in the future, to better understand that transition. That belief led me to undertake, with the help and support of ACPE, the survey that is reported in this article. A questionnaire was sent in 1994 to a random sample of 300 managed care physician executive members of ACPE. Responses were returned by 225 members, a response rate of better than 80 percent. Twenty-five of the responses were not applicable, having been returned by physicians who had never made a transition from clinical careers. The remaining 230 responses form the basis for this report.

4. Bruce A, Hill S. Relationships between doctors and managers: the Scottish experience. *Journal of Management in Medicine* 1994;8(5):49-57¹⁰

Based upon empirical research conducted in 1993, attempts to illustrate the implications of efforts to bring doctors into management. It addresses in particular the role of key appointments such as the medical director and clinical directors and the perceptions of these roles. Doctors continue to demonstrate themselves to be reluctant managers and this continues to pose problems for the aspirations contained in Working for Patients. Crucial questions must be asked about whether management represents a productive use of doctors' time and whether the NHS can afford premium rates for largely inexperienced managers. Identifies changes that have taken place to date and indicates that doctors are, for the most part, still lukewarm about a career in medical management.

5. Buchanan D, Jordan S, Preston D, Smith A. Doctor in the process. The engagement of clinical directors in hospital management. *Journal of Management in Medicine* 1997;11(2-3):132-56¹¹

Aims to examine medical involvement in hospital management processes, and to consider the implications of current experience for the next generation of clinical directors. Doctors who move into a formal management role often find themselves unprepared for their new responsibilities. Research has thus concentrated on identifying the management competences which doctors lack, and with designing ways to remedy the deficit. Seeks to move beyond this deficit model by adopting a perspective which focuses on the engagement of doctors in the management process. Draws data from in-depth interviews with six clinical directors and 19 other members of the hospital management team at Leicester General Hospital NHS Trust (LGH). Content analysis of interviews suggest that the engagement of clinical directors in the hospital management process at this site can be described as reluctant, transient, service-driven, power-pulled and pressured. This negative portrayal of the role, however, must be set in the context of the "management expectation" held of clinical directors by other hospital managers and staff--an expectation that is not currently fulfilled.

6. Degeling P, Zhang K, Coyle B, Xu L, Meng Q, Qu J, et al. Clinicians and the governance of hospitals: a cross-cultural perspective on relations between profession and management. *Social Science & Medicine* 2006;63(3):757-75³⁴

This paper explores similarities and differences in the value stances of clinicians and hospital managers in Australia, England, New Zealand and China, and provides some new insights into how we theorise about the health profession and its relations with management. The paper draws on data derived from a closed-ended questionnaire administered to 2637 hospital-based medical, nursing and managerial staff. We examine variations between the countries in the value orientations of doctors, nurses and managers by considering their assessments of issues that are the focus of reform. In particular, we examine the ways in which the Chinese findings differ from those of the other countries. Whereas the results from the Commonwealth hospitals showed a marked division between clinicians and managers about issues that can affect clinical autonomy, this was not the case in the Chinese hospitals. The concluding discussion traces these differences to a number of cultural, organisational and policy-based factors. The implications of our findings on how we conceive the

relationship between professionals and organisations are then discussed, as are further lines of research.

7. Elina V, Juhani L, Tiina T-J, Kari M, Irma V, Mauri I, et al. Doctor-managers as decision makers in hospitals and health centres. *Journal of Health Organization & Management* 2006;20(2-3):85-94³⁵

PURPOSE: This paper describes factors influencing doctor-managers' decision making in specialised health care, health centres and at different levels of management. **DESIGN/METHODOLOGY/APPROACH:** Data were collected as part of a survey on physicians graduating in 1977-1991 as drawn from the register of the Finnish Medical Association. The study sample was formed by selecting all physicians born on odd days (n=4144) from the baseline group (n=8232). The category of doctor-managers comprised physicians reporting as their main occupation: principal or assistant principal physician of hospital, medical director or principal physician of health centre, senior ward physician of hospital, and health centre physician in charge of a population area. **FINDINGS:** Independent of gender, all doctor-managers responding to the survey reported that the most important base for decision making was personal professional experience. Position in organisation (first-line manager, principal physician) had no impact on the base of decision making. Doctor-managers in primary health care utilised knowledge on norms and knowledge available from their organisation in support of their decision making to a greater degree compared with doctor-managers in specialised health care. **RESEARCH IMPLICATIONS:** Evolution discourse from public administration is not yet receiving much response in Finnish doctor-managers' activities, instead, they still act as clinicians. **ORIGINALITY/VALUE:** Facing the growing challenges of the future, the paper shows that doctor-managers should reconstruct their orientation and to act more like managers.

8. Gatrell J, White T. Doctors and management--the development dilemma. *Journal of Management in Medicine* 1996;10(2):6-12²

Identifies managerial knowledge and skills from undergraduate to medical director level and considers the development of a core management training strategy and development programme, transferable on a national basis. Reports on a questionnaire survey plus in-depth interviews with doctors and senior managers divided between grades covering hospitals, general practices and public health services. Explains that the model evolved is a synthesis of managerial models set in the context of doctors' work. Concludes that doctors agreed that more support and training from their organizations would have been useful, and that managers were generally supportive of doctors becoming involved in management, although some harboured doubts about their willingness or the effects such moves would have on established management career structures. Contends that there appears to be a 30:70 split between doctors receptive to the concept of management and those against.

9. Golden B, Dukerich J, Fabian F. The Interpretation And Resolution Of Resource Allocation Issues In Professional Organizations: A Critical Examination Of The Professional Manager Dichotomy*. *Journal of Management Studies* 2000;37(8):1157-88⁷

Professional organizations have long been depicted as rife with conflict between professionals, who are assumed to represent the interests of their profession, and managers, who are assumed to represent the potentially competing interests of the organization. This study examines the validity of this assumption. Based on past research on both professional organizations and knowledge structure development, we predict that to the extent that professionals and managers conflict, they may do so because they interpret 'identical' issues differently. The results of a study of resource allocation decision preferences with 350 chief financial officers, chief medical officers, and physicians revealed strong support for our issue interpretation predictions, and virtually no support for the simple professional-manager dichotomy. Specifically, using structural equation modeling, we found that: (1) single resource allocation issues could be interpreted in multiple ways; (2) issue interpretations were strong predictors of decision preferences; (3) professionals and managers tended to interpret issues differently, although many of the differences were not consistent with past theorizing about professionals; (4) the interpretations and decision preferences of professionals who occupied

management positions were like those of other professionals but different from those of managers; and [b] decision maker status (i.e., professional and/or manager) was only modestly related to decision preference. Our findings suggest that the sources and manifestations of a professional-manager dichotomy are more complex than previously reported.

10. Gustafson RP, Schlosser JR. Who will lead? *Physician Executive* 1997;23(8):37-40¹⁶

A recent survey conducted by the UCLA Center for Health Services Management and the Physician Executive Practice of Heidrick & Struggles, an executive search firm, sheds light on the emerging physician executive's role. The goal of the research was to identify success factors as a means of evaluating and developing effective industry leaders. Respondents were asked to look at specific skills in relation to nine categories: Communication, leadership, interpersonal skills, self-motivation/management, organizational knowledge, organizational strategy, administrative skills, and thinking. Communication, leadership, and self-motivation/management emerged, in that order, as the three most important success factors for physician executives. An individual's general competencies, work styles, and ability to lead others through organizational restructuring defines his or her appropriateness for managerial positions in the health care industry.

11. Hoff T. The new breed. *Physician Executive* 1997;23 (8):31-36¹⁴

Structural changes within the health system--particularly in the organization and financing of services--have made new and different opportunities available to physicians interested in management. What types of physicians are currently going into management? How do they compare to others who have been in management for a longer period of time and to the "traditional" portrait of the physician executive? The author profiles the emerging, contemporary physician executive and explores the implications for the viability of the field of medical management as a whole.

12. Hoff TJ. Professional commitment among US physician executives in managed care. *Social Science and Medicine* 2000;50 (10):1433-44³⁶

This paper examines professional commitment among physician executives working in managed care settings in the United States. The rise of an 'administrative elite' in medicine is central to the notion that physicians preserve their professional dominance despite changes in their prestige, work and employment status. Implicit in the notion of Freidson's restructuring perspective, physician executives presumably remain dedicated to professional interests in their management roles. The findings of a national survey support this assumption. Physician executives maintain meaningful, stable levels of professional commitment over time in management and the organization. This commitment is positively related to work-related characteristics involving favorable perceptions of the management job and physical and mental 'connection' to the practice of medicine. Belief in one's ability to successfully deliver appropriate clinical care, however, moderates the positive association between involvement in the management job and professional commitment. The findings provide a rationale for the maintenance of professional loyalty among physicians in management rooted in the work-related perceptions and activities of the individual physician executive.

13. Hoff T, Mandell WJ. Exploring dual commitment among physician executives in managed care. *Journal of healthcare management/American College of Healthcare Executives* 2001;46(2):91³⁷

This study examines organizational and professional commitment among a national sample of physician executives employed in managed care settings. Data used for the analysis come from a national survey conducted through the American College of Physician Executive in 1996. The findings support the notion that physician executives can and do express simultaneous loyalty to organizational and professional interests. This dual commitment is related to other work attitudes that contribute to success in the management role. In addition, it appears that situational factors increase the chances for dual commitment. These factors derive from a favorable work environment that includes both organizational and professional

socialization in the management role. The results of the study are useful in specifying the training and socialization needs of physicians who wish to do management work. They also provide a rationale for collaboration between healthcare organizations and rank-and-file physicians aimed at cultivating physician executives who are credible leaders within the healthcare system.

14. Horsley S, Roberts E, Barwick D, Barrow S, Allen D. Recent trends, future needs: management training for consultants. *Journal of Management in Medicine* 1996;10(2):47-53¹⁹

Describes the results of a postal questionnaire survey of all 1,383 hospital consultants in the North Western Region of the UK in 1994; updating a similar survey conducted in 1987. In both surveys, consultants were asked to describe their current management role, management training received and any perceived future training needs. A series of open questions in the 1994 survey explored barriers and incentives to the take-up of management training. The results show that in 1994 more doctors were taking on greater management responsibility and from an earlier age. Consequently, the proportion of consultants expressing a need for management training had risen from 62 per cent in 1987 to 73 per cent in 1994. The most useful courses were local budgeting and business planning. However, many consultants described problems in accessing training. Concludes by highlighting policy implications arising from the surveys which will need to be addressed if consultants are to fulfil their management potential.

15. Kippist L, Fitzgerald A. Organisational professional conflict and hybrid clinician managers: the effects of dual roles in Australian health care organizations. *Journal of Health Organization & Management* 2009;23(6):642-55¹

PURPOSE: This article aims to examine tensions between hybrid clinician managers' professional values and health care organisations' management objectives. **DESIGN/METHODOLOGY/APPROACH:** Data are from interviews conducted with, and observation of, 14 managerial participants in a Cancer Therapy Unit set in a large teaching hospital in New South Wales, Australia, who participated in a Clinical Leadership Development Program. **FINDINGS:** The data indicate that there are tensions experienced by members of the health care organisation when a hybrid clinician manager appears to abandon the managerial role for the clinical role. The data also indicate that when a hybrid clinician manager takes on a managerial role other members of the health care organisation are required concomitantly to increase their clinical roles. **RESEARCH LIMITATIONS/IMPLICATIONS:** Although the research was represented by a small sample and was limited to one department of a health care organisation, it is possible that other members of health care organisations experience similar situations when they work with hybrid clinician managers. Other research supports the findings. Also, this paper reports on data that emerged from a research project that was evaluating a Clinical Leadership Development Program. The research was not specifically focused on organisational professional conflict in health care organisations. **PRACTICAL IMPLICATIONS:** This paper shows that the role of the hybrid clinician manager may not bring with it the organisational effectiveness that the role was perceived to have. Hybrid clinician managers abandoning their managerial role for their clinical role may mean that some managerial work is not done. Increasing the workload of other clinical members of the health care organisation may not be optimal for the health care organisation. **ORIGINALITY/VALUE:** Organisational professional conflict, as a result of hybridity and divergent managerial and clinical objectives, can cause conflict which affects other organisational members and this conflict may have implications for the efficiency of the health care organisation. The extension or duality of organisational professional conflict that causes interpersonal or group conflict in other members of the organisation, to the authors' knowledge, has not yet been researched.

16. Koska MT. MDs seek management positions. *Trustee* 1991;44(11):15³⁸

Hospital management positions will become a refuge in the coming years for primary care physicians seeking relief from the headaches of clinical practice. That's just one of many forecasts made by the 1,200 physicians who participated in the recent study *The Future of*

Healthcare: Physician and Hospital Relationships. The study was conducted by the consulting firm Arthur Andersen & Co., Chicago, and the American College of Healthcare Executives, Chicago. The survey consists of two rounds of questionnaires, allowing respondents to comment on the responses of fellow participants. Physicians, CEOs, trustees and third-party payers made up the panels. This is the third in a series of studies; similar research was conducted in 1984 and 1987.

17. Kusy M, Essex LN, Marr TJ. No longer a solo practice: how physician leaders lead. *Physician Executive* 1995;21(12):11-5³

The authors conducted a national study to determine the factors associated with the success of physician leaders. They utilized the Leadership Practices Inventory (LPI) and a demographic survey followed by individual interviews with respondents. Data analysis revealed several implications for the selection, training, management, and career development of physician leaders. The results suggest that: Physician leadership training should have a strong focus on the "human side" of management, including negotiation, organizational "politics," conflict resolution, team building, and motivation. Data management and finance should be a focus represented in the curriculum. Mentoring relationships should be developed as an aspiring physician leader pursues a career shift. Self assessment, including an analysis of style, strengths, best potential organizational fit, and specific areas of strength and weakness should be an integral part of the development of an aspiring physician leader. Screening mechanisms to ascertain a physician's motivation to move toward a full-time leadership role should be developed to ensure appropriate intent. To facilitate this implication, more effective assessment tools need to be developed.

18. Leviss J, Kremsdorf R, Mohaideen MF. The CMIO-A New Leader for Health Systems. *Journal of the American Medical Informatics Association* 2006;13 (5):573-78³⁹

Physician leadership is a critical success factor for health information technology initiatives, but best practices for structuring the role and skills required for such leadership remain undefined. The authors conducted structured interviews with five physician information technology leaders, or Chief Medical Information Officers (CMIOs), at health systems that broadly used health information technology. The study aimed to identify the individual skills and organizational structure necessary for a CMIO to be effective. The interviews found that the CMIOs had significant management experience prior to serving as a CMIO and were positioned and supported within each health system similar to other executive leaders; only one of the five CMIOs had formal informatics training. A review of the findings advocates for the CMIO to have a strong background and role as a physician executive supported by knowledge in informatics, as opposed to being a highly trained informaticist with secondary management expertise or support. 2006 J Am Med Inform Assoc.

19. Mo TO. Doctors as managers: moving towards general management? The case of unitary management reform in Norwegian hospitals. *Journal of Health Organization & Management* 2008;22(4):400-15²⁹

PURPOSE: The paper seeks to explore whether the development in department management in Norwegian hospitals after the unitary management reform in 2001 constitutes a development in the direction of general management.

DESIGN/METHODOLOGY/APPROACH: Interviews were conducted with ten managers from different levels in a large Norwegian university hospital in 2001-2002, as a unitary management model was implemented. **FINDINGS:** There is an emerging change of practice among the physician managers according to this study. The manager function is more explicit and takes a more general responsibility for the department and the professions. However, the managerial function is substantiated by conditions related to the professional field of knowledge, which gives legitimacy within a medical logic. Contact with the clinic is stressed as important, but it is possible to adjust both amount and content of a clinical engagement to the demands of the new manager position. This has both a symbolic and a practical significance, as it involves both legitimacy and identity issues. **PRACTICAL IMPLICATIONS:** The paper shows that the institutionalised medical understanding of management has a bearing on managerial reforms. Managerial changes need to relate to this if they are to have

consequences for the managerial roles and structures on department level in hospitals. ORIGINALITY/VALUE: The paper suggests that the future development of this role will depend on the way the collectivist and individualist aspects of responsibility are handled, as well as on the further development of managerial knowledge of physicians.

20. Osberg JS. Changes in positions of authority held by US physicians: a fresh look at existing data. *American Journal of Public Health* 1994;84(10):1573-5⁴⁰

Some experts contend that physicians have lost positions of authority in the past 40 years. Others argue the opposite, yet neither side bases its arguments on empirical data. This study examined longitudinal variables measuring authority positions held by physicians. Data on the relative position of physicians in medical schools show that medical doctors held 65.6% of the sampled positions in 1970 vs 72.8% in 1990. Yet, in the wider society and within the nonmedical school portion of the health sector, other data indicate that physicians occupy a smaller proportion of authority positions.

21. Pavett C, Lau A. Managerial work: The influence of hierarchical level and functional specialty. *Academy of Management Journal* 1983;26(1):170-77⁴¹

The picture of the manager as a reflective planner, organizer, leader, and controller recently has come under strong attack. In his description of managerial work, Mintzberg (1980) concluded that the manager's job can be described in terms of 10 roles within 3 areas – interpersonal, informational, and decisional – that are common to the work of all managers. Subsequent research has supported the generalizability of these role descriptions in public and private sector organizations and in lower and middle level managerial positions. The purpose of the present paper is to examine the influence of hierarchical level and functional specialty on managerial roles and required skills, knowledge, and abilities.

22. Schultz FC, Pal S. Who should lead a healthcare organization: MDs or MBAs? *Journal of Healthcare Management* 2004;49(2):103-16; discussion 16-7⁹

Debates often arise about who is best suited to manage a healthcare organization. Therefore, we argue that an examination of the ability of healthcare organizations' chief executive officers (CEOs) to make strategic decisions is warranted. Is the most appropriate leader the medically educated CEO, whose training in patient care allows him or her to be most cognizant of the quality-of-care needs of the organization? Or is it the managerially educated CEO, whose training makes him or her most aware of the organization's financial needs? This article presents a study involving senior managers from two integrated healthcare organizations. The study revealed that no significant differences exist between medically educated and managerially educated senior managers in their ability to make strategic decisions that maximize the net income or the quality of care of the healthcare organization. The debate that pits the "MDs" against the "MBAs" is misdirected. Characteristics other than educational degree appear to have a stronger influence on a CEO's ability to make successful strategic decisions. Therefore, candidates' educational background should not play such an important role in the processes for selecting CEOs.

23. Sherrill WW. Tolerance of ambiguity among MD/MBA students: implications for management potential. *The Journal of continuing education in the health professions* 2001;21 (2):117-22⁴²

BACKGROUND: Health care is increasingly characterized by uncertainty and turbulence. In an environment of rapid change, flexibility is critical to the success of managers and organizations. Future physician executives must also be open to change and must be able to deal with the uncertainties of management; they must be able to tolerate the ambiguity in management situations. METHOD: This study uses tolerance of ambiguity measures to analyze students at six medical schools offering dual-degree (MD/MBA) programs. Students enrolled in dual-degree programs were assessed and compared with a control group of traditional medical students. RESULTS: MD/MBA students exhibit a higher tolerance of ambiguity than traditional medical students. FINDINGS: As a characteristic associated with leadership ability, tolerance of ambiguity offers a potential indicator of future success as a

physician executive. As such, tolerance of ambiguity might be used for selective admissions to medical school and as an indicator of a student's potential to transition between clinical and management functions. As students match personality traits with career choices, those who serve their learning needs must anticipate differences across selected disciplines, roles, and responsibilities.

24. Shipper F, Pearson DA, Singer D. A study and comparative analysis of effective and ineffective leadership skills of physician and non-physician health care administrators. *Health Services Management Research* 1998;11(2):124-35⁸

This paper explores and compares, at both micro and macro levels, the leadership skills of effective and ineffective managers in a health care setting. In addition, it compares the leadership skills of physician and non-physician health care administrators at both levels. The results indicate that effective managers have significantly different leadership skill profiles than ineffective managers. Furthermore, effective managers have a more complete set of skills and are not as likely to rely on one type of skills as the ineffective managers. In addition, no substantial evidence was found to support prior assertions that physician administrators would be deficient in leadership skills.

25. Singleton RW. A behavioral profile of physician executives. *Physician Executive* 1994;20 (11):15-18⁴³

In late 1993, ACPE and Tyler & Company, a national health care executive and physician search firm based in Atlanta, Ga., jointly conducted a survey of physician executives to determine their most likely behavioral patterns. It is the first of a two-part survey that, when complete, will create a multifaceted profile of the "ideal" physician executive as seen through physician executives' eyes and through the eyes of hospital management. Questionnaires based on the DiSC method of behavioral analysis were mailed to 750 randomly selected members of ACPE. More than 170 responses were received. The survey results showed that the majority of physician executives have strong communications skills, are people-oriented, and are strong leaders. The majority of respondents are self-motivated and industrious and are driven by accomplishments. The second part of the survey, which will be conducted later this year, will poll hospital CEOs and boards of directors about their preferences for behavioral patterns in their executives. Comparisons and consistencies will be analyzed between the two surveys to develop a comprehensive profile of the "ideal" physician executive, and the results will be reported in *Physician Executive*.

26. Weiner B, Shortell S, Alexander J. Promoting clinical involvement in hospital quality improvement efforts: the effects of top management, board, and physician leadership. *Health Services Research* 1997;32(4):491³⁰

Study Question. An examination of the effects of top management, board, and physician leadership for quality on the extent of clinical involvement in hospital CQI/TQM efforts.

Data Sources. A sample of 2,193 acute care community hospitals, created by merging data from a 1989 national survey on hospital governance and a 1993 national survey on hospital quality improvement efforts.

Study Design. Hypotheses were tested using Heckman's two-stage modeling approach. Four dimensions of clinical involvement in CQI/TQM were examined: physician participation in formal QI training, physician participation in QI teams, clinical departments with formally organized QA/QI project teams, and clinical conditions and procedures for which quality of care data are used by formally organized QA/QI project teams. Leadership measures included CEO involvement in CQI/TQM, board quality monitoring, board activity in quality improvement, active staff physician involvement in governance, and physician-at-large involvement in governance. Relevant control variables were included in the analysis.

Principal Findings. Measures of top management leadership for quality and board leadership for quality showed significant, positive relationships with measures of clinical involvement in CQI/TQM. Active-staff physician involvement in governance showed positive, significant relationships with clinical involvement measures, while physician-at-large involvement in governance showed significant, negative relationships.

Conclusions. Study results suggest that leadership from the top promotes clinical involvement in CQI/TQM. Further, results indicate that leadership for quality in healthcare settings may issue from several sources, including managers, boards, and physician leaders.

27. Xu G, Paddock LE, O'Connor JP, Nash DB, Buehler ML, Bard M. Physician executives report high job satisfaction. Summary of findings from a survey of senior physician executives. *Physician Executive* 2001;27 (4):46-47²⁶

The role of the senior physician executive is well established in American hospitals and health systems. There is little research, however, on overall physician executive job satisfaction, their perceptions of their organizational role and job performance, or their views of the medical staffs with which they work. A recent survey of physician executives examined these and other areas. It found physician executives to be quite satisfied with their jobs. What follows is a summary of the findings. An article based on the survey will be featured in a future issue of *The Physician Executive*.

6. SUMMARIES OF REVIEWS

28. Ham C, Dickinson H. Engaging doctors in leadership: what we can learn from international experience and research evidence. *University of Birmingham* 2008⁶

Progress has been made in appointing doctors as medical directors and clinical directors but the effectiveness of these arrangements is variable. In some organisations there appears to be much greater potential for involving doctors in leading change; in others there are difficulties in developing medical leaders and supporting them to function effectively. Part of the explanation of these findings is the resourcing put into medical leadership and the limited recognition and rewards for doctors who take on leadership roles. Also important is the continuing influence of informal leaders and networks operating alongside formal management structures. Tribalism remains strongly ingrained in the NHS and staff who occupy hybrid roles, like doctors who go into leadership, face the challenge of bridging different cultures. The research evidence suggests that there is a link between the engagement of doctors in leadership and quality improvement. Quality improvement programmes that fail to engage doctors and that are not sensitive to the nature of medical work tend to have a limited impact. However, many factors influence the impact of quality improvement programmes besides the engagement of doctors and medical leadership. Medical leadership is therefore best seen as a necessary but not sufficient condition for quality improvement in health care. Among the countries we reviewed, Denmark stands out for its efforts to engage doctors in leadership roles and to provide training and support. In the United States, Kaiser Permanente is a good example of an integrated delivery system that has succeeded in involving a high proportion of doctors in leadership. In Kaiser Permanente, there is close alignment between the health plan and the medical group, and this contributes significantly to the levels of performance that are achieved. Change is led by doctors in a culture that has been characterised as one of commitment by physicians themselves to improve care rather than compliance with external requirements.

29. Kirkpatrick I, Jespersen PK, Dent M, Neogy I. Medicine and management in a comparative perspective: the case of Denmark and England. *Sociology of Health & Illness* 2009;31(5):642-58²⁰

In health systems around the world the current trend has been for doctors to increase their participation in management. This has been taken to imply a common process of re-stratification with new divisions emerging between medical elites and the rank and file. However, our understanding of this change remains limited and it is open to question just how far one can generalize. In this paper we investigate this matter drawing on path dependency theory and ideas from the sociology of professions. Focusing on public management reforms in the hospital sectors of two European countries - Denmark and England - we note similarities in the timing and objectives of reforms, but also differences in the response of the medical profession. While in both countries new hybrid clinical management roles have been created, this process has advanced much further and has been more strongly supported by the medical profession in Denmark than in England. These findings suggest that processes of

re-stratification are more path dependent than is frequently acknowledged. They also highlight the importance of national institutions that have shaped professional development and differences in the way reforms have been implemented in each country for explaining variation.

30. Ong BN, Schepers R. Comparative perspectives on doctors in management in the UK and The Netherlands. *Journal of Management in Medicine* 1998;12(6):378-90⁴⁴

The role of doctors in hospitals continues to change due to both external (policy) and internal (organisational change) pressures. Comparisons between The Netherlands and the UK highlight that several models of medical management are formulated and exist alongside each other, leading to more flexibility in the roles of both doctors and managers. In particular, the agendas concerning the quality of clinical care and cost-effectiveness are converging, emphasising the increasingly important role of medical managers.

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