What would motivate doctors into leadership and management roles? New survey evidence from Denmark

Agnes Bäker[*], Mickael Bech[±], Jaason Geerts[§], Susanne Maigaard Axelsen[+], Henrik Ullum[i] Marie P. Krabbe[§], Amanda H. Goodall**

Abstract

Purpose:

Calls for doctors to enter management are louder as the benefits of medical leadership become clearer. But supply is not meeting demand. This study asks doctors: what might encourage you to go into leadership, and what do you see as the disincentives? The same was asked about leadership training. First, the paper attempts to understand doctors' motivation to lead, specifically, to explore the job characteristics that might act as incentives and disincentives. Second, the study points to organisational obstacles that further shrink the medical leadership pipeline.

Method:

Doctors were surveyed through the Organization of Danish Medical Societies. Our key variables included: 1) willingness to take on a management or leadership position; 2) the incentives to go into leadership or management; 3) disincentives to do so; and 4) incentives for participating in leadership training. Our sample includes 3534 doctors (17% response rate).

Findings:

Nearly 70% of doctors said that they would consider leadership or management positions. Overwhelmingly, the main incentive reported was to have a positive impact. Doctors are put off by fears of extra administration, longer hours, burnout, lack of resources, and by organisational cultures resistant to change. But they are fully aware of their need for leadership training.

Practical implications:

Health systems should adapt to reflect the motivations of their potential medical leaders, especially the best talent, who may not be the first to apply for management positions. It is also essential they offer leadership training. These findings, that aid succession planning, are especially important as more is known about the influence of medical leaders on organisational outcomes, and at a time of high reported stress, burnout, and staff recruitment and retention challenges.

[*]Department of Business Administration, University of Zurich; [±] Crown Prince Frederiks' Center for Public Leadership, Department of Political Science, Aarhus University;[§] LEADS Canada, Ontario, & Cass Business School, City, University of London; [+]Department of Gynaecology and Obstetrics Aarhus University Hospital [§]Organization of Danish Medical Societies (LVS), Copenhagen; [i]Department of Clinical Medicine, University of Copenhagen; **Corresponding author, Cass Business School, City, University of London & IZA Bonn Amanda.Goodall.1@city.ac.uk.

Introduction

Appeals for doctors to enter into leadership and management[1] have become louder, as the evidence pointing to the benefits becomes clearer. A growing number of studies show that clinical leadership is associated with better organisational and patient outcomes [1-5]. Despite calls to action, a common complaint is that the supply of medical leaders is not matching the demand; doctors have demonstrated a reluctance to leave their clinical work for department headships or C-Suite responsibilities. Key reasons include: commitment to medical practice or research, the challenging and siloed nature of health care, increased work pressure and fear of burnout, individualised career advancement that regards clinical and/or academic skills over leadership competence and collective progress, few leadership training opportunities, and a general fear of "going to the dark side" [6-14].

When doctors move into leadership positions, they also experience conflict within the hybrid identity of professional *and* manager [15-17]. A recent report by the Danish Commission on Leadership and Management (DCLM) highlights the benefits to the performance of public managers when they have a strong leadership identity. The DCLM found that among all public managers, doctors are the least likely to associate with their identity as a leader [18].

Our study surveyed doctors in Denmark to try to understand their attitudes about being a leader or manager. We investigated whether they would consider taking a management position, and if not, why. Further, we assessed doctors' motivation to undertake leadership training – a helpful precursor in the process, which is known to have a positive impact on leadership ability and patient outcomes [19]. The aim of the paper was twofold. First, it attempts to understand doctors' motivation to lead, specifically, to explore the job characteristics that might act as incentives and disincentives. Second, the study points to potential organisational impediments, factors that may further reduce the pipeline of medical leaders.

This study, which we believe is the first of its kind, shows that doctors' willingness to go into management is higher than expected, as is their desire to participate in leadership training. Doctors report several job characteristics, summarised below, that would encourage them into leadership and management, as well as those that discourage them. Finally, in the paper we

[1] Please note we use management and leadership interchangeably or in tandem because the questions in the survey ask about both when trying to capture the full range of roles.

suggest that the low supply of medical leaders globally may partially result from a failure of health organisations to fully understand the motivations of their doctors.

Methods

The Organization of Danish Medical Societies (LVS) invited its 21,000 medical members to complete an on-line survey questionnaire (using Qualtrics). The initial e-mail was sent on December 11th, 2018, with reminder e-mails sent on December 19th, 2018 and January 3rd, 2019. Respondents were told only that the survey concerned their life as a doctor in the Danish health system; there was no mention of leadership or management. Answers to the survey were fully anonymous and could not be traced back to individual participants.

We collected the demographic variables of age, gender, clinical specialty and job position (see Table 1 for descriptive statistics). Our key variables included: 1) willingness to take on a management or leadership position; 2) the incentives for going into leadership or management; 3) disincentives to do so; and 4) incentives for participating in leadership training. We elicited the incentives and disincentives via lists of possible job characteristics (many identified via a small pilot study[2]) that were presented to respondents in randomised order; participants could tick *as many as applied to them*. Willingness to take on a leadership position was assessed with the question, "Would you ever consider taking a management or leadership position in your career?" Respondents selected one of the following seven options: 1) Yes; 2) Yes and I am currently in one; 3) Yes and I was previously in one; 4) No; 5) No and I am currently in one; 6) No and I was previously in one; 7) Other. The full wording of the questions and response options are presented in the notes for the figures in the results section (Figures 1 – 3).

Our study uses fully-completed surveys only. The main results are presented in figures. In the appendix, we include three tables that break the results down by respondents' clinical position (e.g. registrar/intern, consultant, head of unit). This allows for a greater depth of understanding at the different career levels. The analyses are conducted in Stata 14.2.

Results

Our final sample contains 3,534 observations (doctors), a response rate of 17%. which is common in social science studies.

[2] A small pilot study was run with 60 European cardiologists. Data collected from them regarding incentives and disincentives were used to inform the design of this study's questionnaire.

Of significance, given the evidence and growing calls for doctors to step-up into leadership [1-5], we find that 69% (n=2,446) of participants replied positively when asked whether they would consider taking a management or leadership position in their career. Interestingly, more than half (n=1,548) had not had a prior position. This is a much higher percentage than expected and might signal a turning point in attitudes.

Figure 1 presents a summary of the job characteristics and incentives that doctors report could positively motivate them to consider saying 'yes' to a leadership or management position. The main reason reported, by considerable margin, is the possibility of having a positive impact (true for 75% of respondents). This seems an important finding: that most doctors want to go into management and leadership to make a difference. However, extrinsic factors are not completely absent; earning more money was the third most common response (37%). Arguably, the extra pay is compensation for deviating professionals away from their first love of being a clinician. This also raises an interesting challenge: for example, in many health care systems, including fee-for-services models, taking on more administrative duties often involves a *decrease* in pay for physicians.

Being prepared for management by undertaking leadership training was viewed as important by 42% of doctors who responded, the second most common reason. This is unsurprising, since few doctors receive any formal leadership training [20]. Duty and a feeling of obligation ranked fourth (35%), while a quarter (24%) of respondents indicated that they would consider a leadership position if they were able to job-share. Twenty-two per cent of doctors would consider moving into a management role to prevent someone inappropriate from taking it, and approximately the same number would consider it if they were freed from other responsibilities (e.g. admin). In Table A1 in the appendix, we present findings by clinical position.

Figure 2 presents the job characteristics and *dis*incentives that put doctors off going into leadership and management. The three most commonly-reported disincentives are that it would take focus away from their clinical work and relationships with patients (51%), increase administration and require attending more meetings (49%), and that work hours would lengthen, which would also cause more stress (48%). Perceiving a lack of resources to support them in the role appears also to be a concern (39%), and this may directly equate with the most common reason *for* taking on a management position – to have a positive impact. Burnout, or

fear of, was reported by over a third (36%), and being in an organisation with a culture that is not conducive to change was identified by a quarter of reporting doctors. The remaining four most common concerns largely represent personal factors, such as involving conflicts with, and having to manage, difficult colleagues (23%), doctors' feeling that they lack leadership skills (20%), inadequate additional pay (20%), and not being senior enough or having adequate previous experience (17%). Table A2 in the appendix presents respondents' leadership disincentives by job position.

Unsurprisingly, possibly, doctors expressed a need to feel that they are adequately prepared for management. Undertaking leadership training was the second most common response when doctors were asked what job characteristics would incentivise them into a leader or manager role (Figure 1). It is therefore helpful to try to understand doctors' motivations with regards to doing this type of training. Our sample were asked, "If your institution, or head of department, wanted you to take a leadership training programme, what incentives might motivate you to take one?" Figure 3 presents this information.

The overwhelming majority of respondents stated that personal development is their key motive (73%). This seems positive, as it signals an awareness about the need to develop themselves in a way that is, arguably, somewhat unrelated to their clinical or research work. Second is an increase in salary (36%); this is followed by the more likely possibility of receiving extra time in lieu for clinical and/or research work (27%). Twenty-two per cent suggested a reduction in other responsibilities (e.g. administration, teaching) and the opportunity to receive credit towards a formal certificate or degree (21%). Finally, there is some incentive if leadership training is viewed positively towards doctors' promotion (19%) or annual review (8%). This also raises questions about what combination of formal and informal leadership development is optimal to prepare doctors for different positions and career stages. Table A3 in the appendix presents these results by job position.

Conclusion

A substantial proportion of Danish doctors, nearly 70%, report that they would consider taking a management or leadership position. This sits in contrast with the public perception of doctors shying away from taking these roles [10]. It points to the likelihood that they are not stepping forward because the conditions attached to these positions are viewed as unattractive. The aim of our study, therefore, was to start to understand doctors' motivation to lead, specifically, to

explore the job characteristics that might act as incentives and disincentives. In addition, we asked doctors what would encourage them to participate in a leadership training programme.

Three-quarters of our sample report that the dominant characteristic that would encourage them to say 'yes' to leadership and management is the possibility of having a positive impact, which confirms findings from previous qualitative studies [18]. The chance to make a difference is very important to them, which raises questions about how possible it would be for these potential leaders to make improvements clinically, and more broadly across organisations and health care systems. This desire to influence somewhat conflicts with the often-reported disincentives of becoming overwhelmed by administration and meetings, having inadequate resources, fearing burnout, and, particularly, a lack of belief in the organisation's willingness to change.

The study's response rate was 17% which is within the norms for voluntary surveys in the social sciences[3]. However, as with all surveys there may be concerns about the generalisability of the findings and non-responses. Caution was applied in the invitation email to avoid any mention of leadership or management, thus minimising the appeal to those who may have been interested.

Many of the identified motivational factors should be interesting to HR managers. For example, the use of pay and conditions. Increased remuneration might compensate doctors both for doing work considered less interesting, and for the loss of clinical hours and accrued expertise that would likely raise a clinician's value (and fees). Respondents also suggest that a job-share might be appealing. Our findings indicate that simply asking doctors what would incentivise them to consider leadership and management roles can reveal useful information, instead of making assumptions that those who do not actively seek promotion have no interest. Importantly, the best candidates may not be those who chase promotion into management; instead these quiet potentials may require more careful succession planning. Also, understanding these job characteristics can contribute to strategies that will also ease the challenging transition from clinical expert to medical leader [17].

[3] Government surveys may have a higher response rate and surveys that pay a fee-for-response, such as Amazon Turk.

Health mangers may want to consider respondents' attitudes towards their workload. Burnout has become more common even before extra managerial responsibilities are placed on staff [21]. How, therefore, can organisations adapt their systems and bureaucracy to lessen the administrative burden, a fear expressed by nearly 50% of responding doctors. It would be beneficial if systems could be made less onerous, or employers could include a promise to provide administrative support.

Encouragingly, doctors recognise the need to be trained in leadership and management. Forty per cent of respondents saw training as a pre-requisite and an incentive. Personal development was the overwhelming motive, by over 70%, for doctors to undertake leadership training. This signals self-awareness of the need to develop themselves prior to going into management. It is unlikely that this response would have scored so highly 50 years ago. Leadership and management education have become much more available to clinicians [19], however, these results may encourage HR managers, organisational development professionals, and medical schools to further promote this type of training. Of added interest to health managers are the supplementary tables A1-3 in the appendix, which present the results across job position. These tables facilitate deeper analysis about the motivations of doctors at different career levels.

This study, which we believe is the first of its kind, starts a process of thinking. Our sample of 3,534 Danish doctors offers a snap-shot reflection about attitudes towards entering leadership and management. We hope these findings are helpful to health managers and policymakers in preparing their medical leadership pipeline. This seems especially important at a time when health systems are suffering from the pressures of clinical shortages and burnout [21], as well as escalating costs and tightening budgets [22].

Too often, senior executives expect that those who work for them will adjust to fit organisational demands; in the case of health care, many expect that doctors should heed to the calls to enter leadership and management. We suggest that an alternative approach is necessary to increase the supply of willing and capable leaders and managers; it begins by simply asking doctors with high leadership potential under what conditions they would be prepared to take on these roles. Arguably, it is time for health systems to adapt in a way that reflects the incentives and motivations of their staff. After all, "If the mountain will not come to Mohammed, Mohammed must go to the mountain."

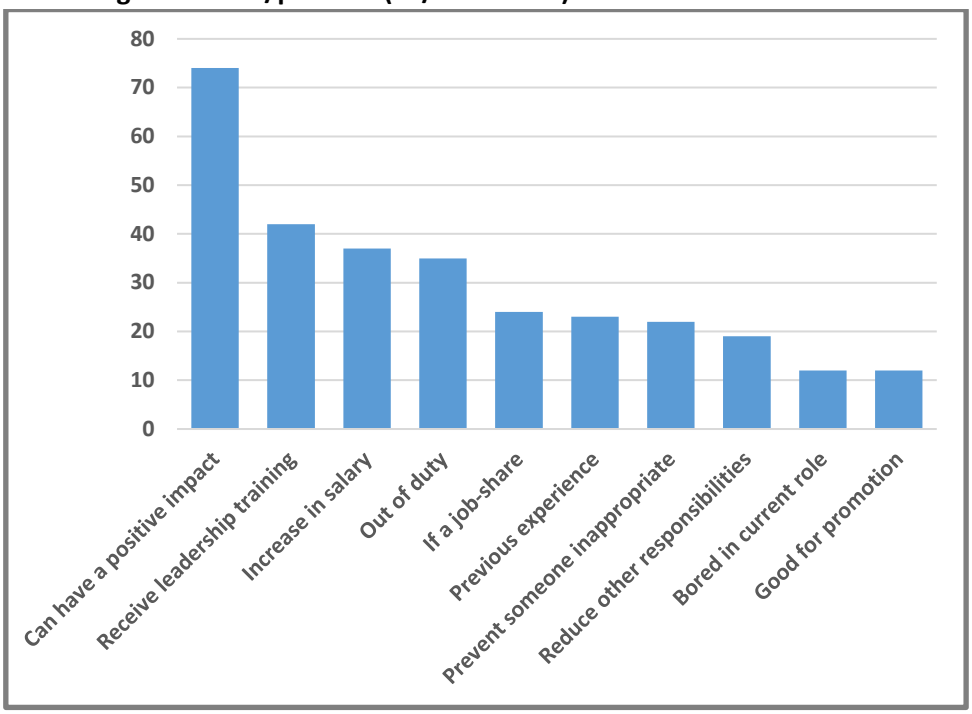
Table 1: Descriptive statistics for the respondents

	Mean	Std. dev.	N		
Age	49.22	10.98	3,534		
	N	**Proportion**			
Females	1,760	49.8%			
Position					
Intern/registrar	797	22.6%			
Consultant (low)	420	11.9%			
Consultant (high)	1,260	35.7%			
Head of Unit	202	5.7%			
Executive Director	30	0.9%			
GP (employee)	70	2.0%			
GP (owner)	755	21.4%			
Specialty	**N**	**Proportion**	**Specialty**	**N**	**Proportion**
Anesthesiology	309	8.7%	Internal medicine: Nephrology	45	1.3%
Acute medicine	45	1.3%	Internal medicine: Rheumatology	68	1.9%
Urology	56	1.6%	Vascular Surgery	30	0.9%
Gynecology and obstetrics	180	5.1%	Clinical biochemistry	22	0.6%
Pediatrics	155	4.4%	Clinical pharmacology	11	0.3%
Psychiatric	190	5.4%	Clinical physiology and nuclear medicine	28	0.8%
Surgery	126	3.6%	Clinical genetics	22	0.6%
Family medicine	702	19.9%	Clinical immunology	11	0.3%

Occupational and environmental medicine	18	0.5%	Clinical micro biology	23	0.7%
Child- and adolescent psychiatry	76	2.2%	Clinical oncology	70	2.0%
Dermatology and venereology	43	1.2%	Neurosurgery	25	0.7%
Diagnostic radiology	106	3.0%	Ophthalmology	87	2.5%
Internal medicine: Endocrinology	72	2.0%	Orthopaedic surgery	211	6.0%
Internal medicine: Gastroenterology and hepatology	62	1.8%	Oto-Rhino-Laryngology	110	3.1%
Internal medicine: Geriatrics	59	1.7%	Pathology	60	1.7%
Internal medicine: Haematology	39	1.1%	Plastic surgery	36	1.0%
Internal medicine: Infectious disease	52	1.7%	Forensic Medicine	2	0.06%
Internal medicine: Cardiology	133	3.8%	Public health medicine	25	0.7%
Internal medicine: Pulmonary	52	1.5%	Cardiothoracic surgery	19	0.5%
			Other	45	1.3%

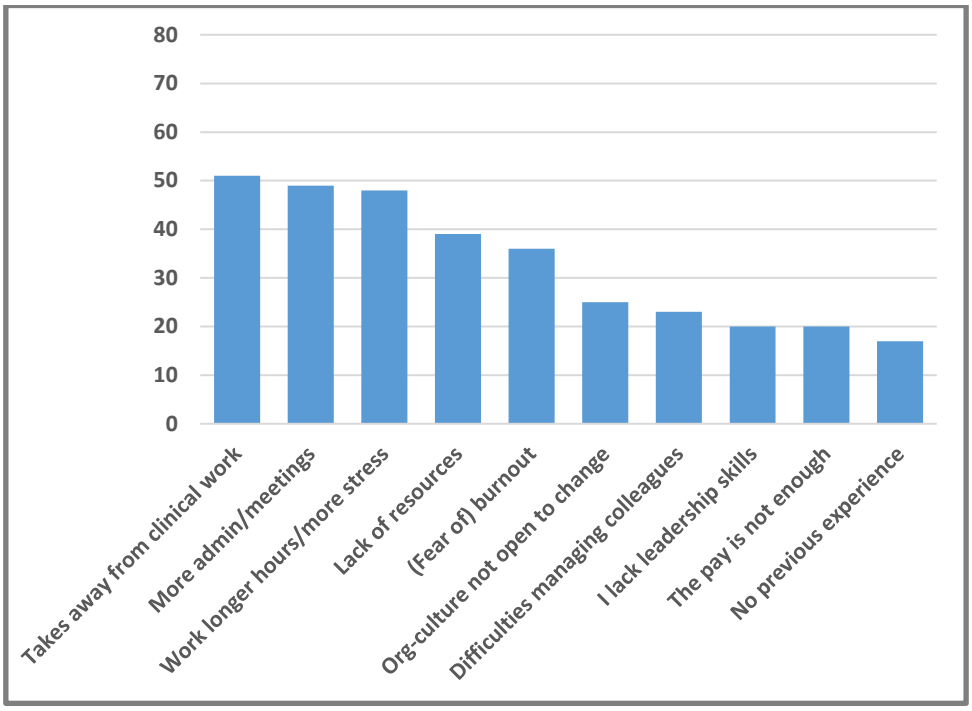
Note: Interns are the Danish "Læge i KBU-uddannelse / Læge i introduktionsstilling", "Regis" refers to registrars (Læge i hoveduddannelsesforløb), "Cons (low)" refers to consultants with limited management responsibilities (Speciallæge ansat som afdelingslæge), "Cons (high)" refers to consultants with high management responsibilities (Speciallæge ansat som overlæge), Head of Unit captures the Danish "Ledende overlæge / klinikchef", "Exec Director" stands for executive director, chief medical officer (Lægelig direktør/cheflæge). Finally, "GP (empl)" refers to those doctors who work at s.o. else's private general practice (Praktiserende speciallæge (almen- eller andre) som ikke ejer egen klinik), whereas "GP (owner)" refers to those who own their general practice (Praktiserende speciallæge (almen- eller andre) som ejer egen klinik).

Figure 1: Job characteristics and incentives that might lead doctors to say 'yes' to taking on a leadership or management role/position (10/12 choices)



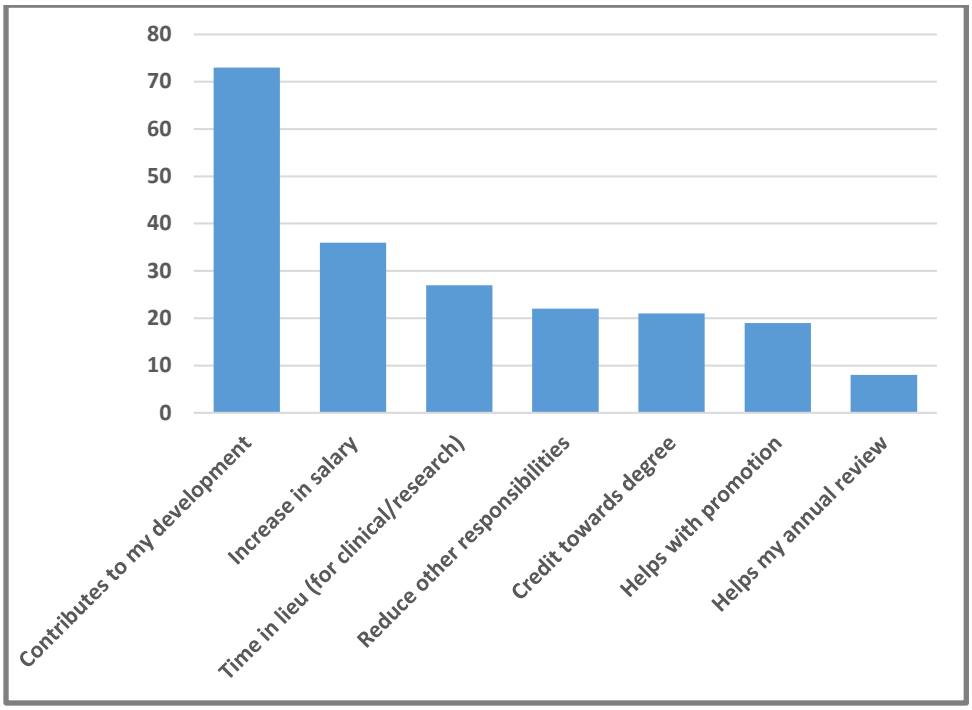
Note: N=3,534. Questions were randomised in the survey. The exact and full questions asked were: «A senior clinician manager has asked you to take on a leadership role/position (e.g. team leader, head of department, medical director). What incentives might motivate you to consider this position? (Please tick all that apply) ». The full length of the categories are: « Reducing other responsibilities (clinical, teaching, research administration, etc)»; «An increase in salary»; «Viewed positively in my annual review»; «Viewed positively towards my promotion »; «A sense of duty/citizenship» «Sharing the role with another colleague»; «Have become bored with current role(s) »; «My clinical work has become less important to me»; «The opportunity to have a positive impact on the team, department, or organization»; «Preventing someone inappropriate from getting the job»; «My positive previous experiences in leadership roles/positions»;; «Being offered leadership training and support»; «Other (please specify)».

Figure 2: Job characteristics and *dis*incentives that doctors report would lead them to say 'no' to taking on a leadership or management role/position (10/16 choices)



Note: N=3,534. Questions were randomised in the survey. The exact and full questions asked were: «Why might you turn this leadership offer down- what are the disincentives? (Please tick all that apply) ». The full length of the categories are: «I do not enjoy the responsibility associated with such a position»; «It would take focus away from my clinical work/relationships with patients»; «It would take focus away from my research»; «It would take focus away from my teaching»; «It would mean more administrative work/more meetings»; «It would mean working longer hours / would be too stressful»; «It would involve conflicts with and having to manage difficult colleagues»; «I am not senior enough or do not have enough experience»; «I do not have suitable leadership skills or experience»; «Existence of colleagues who are better suited to the role»; «There are not enough resources to support this role»; «I feel that the culture of my organization is not conducive to change»; «Burnout or fear of burnout»; «The pay is not enough»; «It will not help me progress in my career»; «My negative previous experiences in leadership roles/positions».

Figure 3: Job characteristics and incentives that doctors report may motivate them to take a leadership training programme (7/7 choices)



Note: N=3,534. Questions were randomised in the survey. The full length of the question is: «If your institution, or head of department, wanted you to take a leadership training programme, what incentives might motivate you to take one? (Please tick all that apply) ». The full length of the question options are: «Reducing other responsibilities (clinical, teaching, administration, etc) »; «Salary increase»; «Personal development»; «Viewed positively in my annual review»; «Viewed positively towards my promotion»; «Extra time for clinical/research work (training hours in lieu) »; «Receiving credit towards a formal certificate or degree».

References

1. Goodall, A.H. 2011. Physician-leaders and hospital performance: Is there an association? Social Science & Medicine, 73(4): p. 535-539.
2. Sarto F & Veronesi G. 2016. Clinical leadership and hospital performance: assessing the evidence base. BMC Health Services Research, 16(2): 169.
3. Tasi, M. C., Keswani, A., & Bozic, K. J. 2017. Does physician leadership affect hospital quality, operational efficiency, and financial performance? Health Care Management Review, 44(3):256-262.
4. Colla, C.H., Lewis, V.A., Shortell, S.M. & Fisher E.S. 2014. First national survey of ACOs finds that physicians are playing strong leadership and ownership roles. Health Affairs, 33(6): 964-71.
5. Goodall, A. H., Stoller, J. S. & Bäker, A. 2016. Why the best hospitals are managed by doctors? Harvard Business Review (digital).
6. Stoller, J. K. 2009. Developing physician-leaders: a call to action. Journal of General Internal Medicine, 24(7), 876–878. https://doi.org/10.1007/s11606-009-1007-8
7. Stoller, J. K. 2009. Developing physician-leaders: need and rationale. Journal of Health Administration Education, 25:307–28.
8. Lega, F., & Sartirana, M. 2016. Making doctors manage… but how? Recent developments in the Italian NHS. BMC Health Services Research, 16(S2), 170.
9. Goodall, A. H. & Stoller, J. S. 2017. The future of clinical leadership: evidence for physician leadership and the educational pathway for new leaders. BMJ Leader http://dx.doi.org/10.1136/leader-2017-000010
10. Thornton, J. 2019. "Doctors need to step up"— why are there still so few medical chief executives in the NHS? British Medical Journal, 4341(June), 10–13. https://doi.org/10.1136/bmj.l4341
11. Møller Pedersen, K., Bech, M. & Vrangbæk, K. 2011. The Danish health care system: An analysis of the strengths, weaknesses, opportunities and threats. The Consensus Report. Copenhagen Consensus Center.
12. Lemaire, J. B. & Wallace, J. E. 2017. Burnout among doctors. British Medical Journal (Online). DOI:10.1136/bmj.j3360
13. Spurgeon, P., Clark, J. & Ham, C. 2011. Medical leadership: From the dark side to centre stage. London: Radcliffe Publishing.

14. Schultz, L.R. 2016. *Lægelig ledelse: Hvordan bliver der rift om opgaven nu og i fremtiden?* Region Midtjylland: Aarhus.
15. Montgomery, K. 2001. Physician executives: The evolution and impact of a hybrid professional. Advances in Health Care Management Vol. 2. Bradford: Emerald Group Publishing.
16. McGivern, G., Currie, G., Ferlie, E., Fitzgerald, L. & Waring, J., 2015. Hybrid manager-professionals' identity work: The maintenance and hybridization of medical professionalism in managerial contexts. Public Administration, 93(2), 412–432.
17. Andersson, T. 2015. The medical leadership challenge in healthcare is an identity challenge. Leadership in Health Services, 28(2): p. 83-99.
18. Commission, D.L.a.M., 2018. Put citizens first. Leadership and management in the public sector with focus on operational development. Danish Leadership and Management Commission: Copenhagen.
19. Geerts, J. & Goodall, A. H. 2019. Evidence-based leadership development for physicians: A systematic literature review. Under review.
20. Ireri, S., Walshe, K., Benson, L., & Mwanthi, M. A. 2011. A qualitative and quantitative study of medical leadership and management: Experiences, competencies, and development needs of doctor managers in the United Kingdom. Journal of Management & Marketing in Healthcare, 4(1), 16–29.
21. Fischer Pedersen, A., Maar Andersen, C., Olesen, F. & Vedsted, P. 2013. Risk of burnout in Danish GPs and exploration of factors associated with development of burnout: A two-wave panel study. International Journal of Family Medicine, article ID 603713. https://doi.org/10.1155/2013/603713.
22. Stoller, J. K. 2018. Developing physician leaders: A perspective on rationale, current experience, and needs. Chest, 154(1), 16–20.

Appendix (on-line supplementary material)

Table A1: Job characteristics and incentives that doctors report might motivate them to take a leadership or management role by their clinical position

	Intern/ Registrar	Consultant (low)	Consultant (high)	Head of Unit	Exec Director	GP (empl)	GP (owner)
If my other responsibilities are reduced	27.1%	20.7%	17.0%	8.4%	13.3%	25.7%	16.3%
If my salary is increased	50.4%	41.9%	33.5%	29.2%	23.3%	40.0%	26.2%
If it helps my annual performance review	9.3%	8.1%	4.4%	4.5%	10.0%	2.9%	2.9%
If it helps my chances of promotion	19.7%	22.4%	8.3%	10.4%	16.7%	14.3%	3.8%
Out of a sense of duty	33.8%	34.8%	40.5%	43.1%	26.7%	27.1%	27.3%
If I can job-share the role	28.9%	24.3%	22.2%	12.9%	10.0%	28.6%	22.9%
If I become bored with my current role	15.9%	12.6%	10.4%	13.4%	6.7%	15.7%	9.3%
If my clinical work has become less important to me	9.2%	6.7%	6.4%	8.9%	6.7%	4.3%	7.0%
If I can make a positive impact	83.8%	81.0%	74.1%	88.1%	86.7%	70.0%	57.8%
To prevent someone inappropriate from getting the job	23.8%	25.0%	26.5%	24.3%	6.7%	17.1%	11.9%
My own previous management experience	19.5%	15.0%	21.6%	49.0%	53.3%	15.7%	24.0%
If I receive leadership training	64.9%	56.0%	33.0%	30.2%	30.0%	42.9%	29.9%
N	797	420	1,260	202	30	70	755

Note: N=3,534. The exact and full questions asked were: «A senior clinician manager has asked you to take on a leadership role/position (e.g. team leader, head of department, medical director). What incentives might motivate you to consider this position? (Please tick all that apply) ». The full length of the categories are: «The opportunity to have a positive impact on the team, department, or organization»; «Being offered leadership training and support»; «An increase in salary»; «A sense of duty/citizenship»; «Sharing the role with another colleague»; «My positive previous experiences in leadership roles/positions»; «Preventing someone inappropriate from getting the job»; «Reducing other responsibilities (clinical, teaching, research administration, etc)»; «Have become bored with current role(s)»; «Viewed positively towards my promotion»; «My clinical work has become less important to me»; «Viewed positively in my annual review».

Table A2: Job characteristics and *dis*incentives that doctors report would lead them to say 'no' to taking on a leadership or management role by their clinical position

	Intern/ Registrar	Consultant (low)	Consultant (high)	Head of Unit	Exec Director	GP (empl)	GP (owner)
I would not enjoy the responsibility	17.6%	19.5%	15.7%	3.5%	6.7%	24.3%	10.6%
It would take focus away from my clinical work	55.7%	58.1%	56.9%	33.2%	23.3%	48.6%	39.6%
It would take focus away from my research	19.2%	14.8%	17.8%	10.4%	13.3%	4.3%	2.9%
It would take focus away from my teaching	8.5%	5.7%	7.8%	2.0%	3.3%	2.9%	4.0%
It would give me more administration and meetings	49.6%	54.1%	54.8%	30.2%	23.3%	55.7%	39.3%
I would work longer hours and be more stressed	59.4%	54.1%	46.0%	32.2%	26.7%	54.3%	40.3%
I may have conflicts and have to manage difficult colleagues	30.0%	26.9%	22.9%	13.4%	10.0%	20.0%	14.4%
I do not have enough experience	53.6%	29.3%	2.6%	1.5%	0.0%	8.6%	1.7%
I do not have suitable leadership skills	34.3%	30.2%	16.8%	3.5%	6.7%	18.6%	10.5%
There are other colleagues who are better suited to the role	22.6%	20.0%	13.5%	10.4%	0.0%	7.1%	11.5%
There are not enough resources to support the role	41.9%	38.8%	42.7%	43.6%	30.0%	30.0%	28.7%
The organisation culture is not conducive to change	31.2%	29.1%	29.8%	16.8%	20.0%	21.4%	11.3%
(Fear of) burnout	49.2%	37.4%	32.6%	25.3%	23.3%	40.0%	29.4%
The pay is not enough	19.1%	18.1%	23.6%	24.3%	30.0%	15.7%	15.9%
It is not helpful for career	5.9%	6.4%	6.8%	5.0%	3.3%	2.9%	5.0%
I had a negative previous experience	4.3%	4.8%	13.4%	9.4%	10.0%	12.9%	5.2%

Note: The exact and full questions asked were: «Why might you turn this leadership offer down- what are the disincentives? (Please tick all that apply)». The full length of the categories are: «I do not enjoy the responsibility associated with such a position»; «It would take focus away from my clinical work/relationships with patients»; «It would take focus away from my research»; «It would take focus

away from my teaching»; «It would mean more administrative work/more meetings»; «It would mean working longer hours / would be too stressful»; «It would involve conflicts with and having to manage difficult colleagues»; «I am not senior enough or do not have enough experience»; «I do not have suitable leadership skills or experience»; «Existence of colleagues who are better suited to the role»; «There are not enough resources to support this role»; «I feel that the culture of my organization is not conducive to change»; «Burnout or fear of burnout»; «The pay is not enough»; «It will not help me progress in my career»; «My negative previous experiences in leadership roles/positions».

Table A3: Job characteristics that doctors report may motivate them to take a leadership training programme by their clinical position

	Intern/ Registrar	Consultant (low)	Consultant (high)	Head of Unit	Exec Director	GP (empl)	GP (owner)
If my other responsibilities are reduced	29.1%	21.2%	20.5%	12.4%	6.7%	18.6%	23.1%
If my salary is increased	47.9%	41.9%	33.3%	26.2%	23.3%	35.7%	26.4%
If it contributes to my personal development	80.3%	79.5%	71.1%	84.2%	66.7%	75.7%	65.3%
If it helps my annual performance review	9.8%	8.8%	7.9%	6.9%	6.7%	7.1%	4.2%
If it helps my chances of promotion	30.0%	33.1%	15.2%	21.8%	26.7%	12.9%	7.0%
If I have extra time for clinical/research work (in lieu)	40.5%	29.3%	26.8%	9.4%	10.0%	21.4%	19.2%
If I receive credit towards a formal certificate or degree	34.4%	29.1%	17.7%	17.8%	23.3%	15.7%	8.7%
N	797	420	1,260	202	30	70	755

Note: The full length of the question is: «If your institution, or head of department, wanted you to take a leadership training programme, what incentives might motivate you to take one? (Please tick all that apply)». The full length of the quesstion options are: «Reducing other responsibilities (clinical, teaching, administration, etc)»; «Salary increase»; «Personal development»; «Viewed positively in my annual review»; «Viewed positively towards my promotion»; «Extra time for clinical/research work (training hours in lieu)»; «Receiving credit towards a formal certificate or degree».