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Influences of organizational features of healthcare settings on clinical decision making: Qualitative results from a cross-national factorial experiment*

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Abstract

A proliferating literature documents cross-national variation in medical practice and seeks to explain observed differences in terms of the presence of certain kinds of healthcare systems, economic, and cultural differences between countries. Less is known about how providers themselves understand these influences and perceive them as relevant to their clinical work. Using qualitative data from a cross-national factorial experiment in the United States and United Kingdom, we analyze 244 primary care physicians' explanations of how organizational features of their respective healthcare settings influence the treatment decisions they made for a vignette patient, including affordability of care; within-system quality deficits; and constraints due to patient behavior. While many differences are attributed to financial constraints deriving from two very differently structured healthcare systems, in other ways they are reflections of cultural and historical expectations regarding medical care, or interactions between the two. Implications, including possible challenges to the implementation of universal care in the US, are discussed.

Keywords

health disparities; medical decision making; health policy; qualitative methods; US; UK

Studies of widespread medical practice variation have repeatedly found that between-country differences dwarf differences from other sources such as patient characteristics or physician attributes (Kramer, Newby, Chang, Simes, Van de Werf, Granger et al., 2003; McKinlay, Link, Arber, Marceau, O'Donnell, Adams et al., 2006; Weisz, Gusmano, & Rodwin, 2004). Many of these studies focus on the importance of socioeconomic status, economic inequality, and the presence or absence of state social programs to explain such differences (Beckfield, 2004; Kim, Kawachi, Hoorn, & Ezzati, 2008; Olafsdottir, 2007). A conclusion frequently drawn from some such analyses is that country differences, particularly those between the US and various European countries, are in large part a function of the presence or absence of nationalized healthcare. While these types of studies yield important information about aggregate patterning of social inequality in different types

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of nation states, less is known about the mechanisms by which state-level programs translate to individual-level health outcomes.

Studies focusing on such meso-level questions have found that a series of organizational, economic, and cultural factors accounts for some additional portion of observed practice variation. For example, reimbursement structures influence physician behavior, with fee-for-service payment resulting in more patient visits and greater continuity of care compared to salaried reimbursement (Gosden, Forland, Kristiansen, Sutton, Leese, Giuffrida et al., 2001). Similarly, Maissey et al. (2008) examined pay for performance reimbursement and find that non-incentivized activities receive less attention than their incentivized counterparts. Beyond payment structures, other types of organizational features have been shown to influence provider decision making, including issues such as time constraints, the presence of ancillary treatment staff (Lutfey, 2003), and the ways interaction among staff leads to contingent knowledge and “communities of practice” (Gabbay, le May, Jefferson, Webb, Lovelock, Powell et al., 2003). Within-system practice cultures, including physicians’ sense of autonomy and the business orientation of a practice, also affect provider’s diagnostic and treatment decisions (Egan & Jaye, 2009; Shackelton, Link, Marceau, & McKinlay, 2009; Waring, 2007). In a recent vignette-based survey of US physicians, Sirovich et al. (2008) found that variations in healthcare spending across regions of the US were strongly correlated with the tendency of local physicians to recommend discretionary interventions (as opposed to variations in adherence to clinical practice guidelines).

Beyond organizational and economic aspects of healthcare provision, additional work considers how different societal (beyond medical practice) cultures affect how conditions are medicalized, defined, and treated in various places. Bates et al. (1997) show how cultural values, beliefs, and standards resulted in different medical care in New England and Puerto Rico, with the former showing evidence of a strong biomedical mind-body dualism shared by providers and patients, while in the latter there was more emphasis on a shared view of mind-body integration. In her well-known work comparing medical culture in the United States, England, West Germany, and France, Payer (1988) argues, for example, that British tendencies to perform less medical action is less the result of “Draconian rationing placed upon them by the National Health Service” as commonly interpreted by Americans, but also a reflection of other aspects of British character, including having a “stiff upper lip” (1988:111). By comparison, the aggressiveness of American medical practice is a reflection of a Manifest Destiny mentality in which anything can be accomplished if only the natural environment can be conquered and controlled—that is, if the “virus in the machine” can be reigned in (1988: 127).

Together, this range of factors provides a complex tapestry of underlying reasons for observed differences in medical practice variation. Furthermore, the relative importance of these factors have importance beyond immediate questions of how to best standardize practice and improve quality of care, because assumptions about what is accomplished with universal coverage form a centerpiece of proliferating literature on US healthcare reform. Proponents argue that the benefits of this approach include continuity of insurance, cost-effectiveness through an emphasis on primary care (Mundinger, Thomas, Smolowitz, & Honig, 2004); increased access to care (Strumpf & Cubanski, 2005); reducing inequalities that arise from differential access to care; and cost-efficiency with a centralized single-payer system (Sarpel, Vladeck, Divino, & Klotman, 2008). As Mechanic (2002) notes, “It is increasingly recognized that quality of care is a property of health systems.” To this end, extensive work has focused on identifying best scientific practices, designing clinical practice guidelines for physicians to follow (stemming from the paradigm of evidence-based medicine), implementing financial incentives to motivate “high performance” decision

making, and developing standards for measuring how closely they adhere (including the emergence of publicly available, often web-based, hospital and clinic report cards).

Despite this accumulation of evidence, data are scant concerning providers' own senses of how organizational features of their practice environments influence their clinical actions. We extend the above lines of inquiry by using qualitative data to examine how organizational features of healthcare settings in the US and UK influence physicians' clinical decision making in primary care settings. We identify a range of reasons that shed light on previously observed aggregate associations between organizational features, healthcare spending, and clinical decision making, including some issues related directly to national health care but also others potentially related to cultural differences. By comparing physicians in the US and UK, we are able to identify similarities and differences in their decision making and the challenges faced under two different healthcare systems in two culturally distinct countries. Implications for sociology, health services, and health policy are discussed.

Data and Methods

A factorial experiment was used to simultaneously measure the effects of: (a) patient attributes (age, gender, race and socioeconomic status); (b) physician characteristics (gender and years of clinical experience); and (c) features of the healthcare system in three countries (United States, United Kingdom [UK], and Germany) on medical decision making for videotaped vignette presentations of two common medical problems, pre-diabetes and diagnosed diabetes with an emerging complication. A full factorial of $2^4 = 16$ combinations of patient age (35 vs. 65), gender, race (Black [in the US and UK] vs. White [in the US, UK, and Germany] vs. Hispanic [in the US only]) and socioeconomic status (SES) (lower vs. higher, depicted by current or former employment as a janitor or lawyer) were used for the video scenarios. One of the 16 combinations was shown to each physician for each medical problem (first, the pre-diabetes condition and second, the diabetes complication condition). In order to make cross-country comparisons using balanced data, the results presented here are based on a subset of the larger dataset restricted to black and white patients from the US and UK ($N=256$, 64 in each cell). While patient characteristics were an important component of the larger experiment, the present paper is focused on cross-national comparisons; in order to maintain adequate cell sizes for making such comparisons, we do not separately address patient attributes in this piece (see Lutfey et al 2008 for analyses of differences by patient characteristics).

To be eligible for selection, physicians had to: (a) have completed a medical residency program in either internal medicine or family practice (general practice in the UK); (b) actively provide primary care at least 50% of the time; (c) have relatively little (< 5 years) clinical experience or long (> 15 years) experience (since graduation from medical school in the US and since qualification as a general practitioner [GP] in the UK); and (d) work within the designated geographic area and have a medical degree from a recognized academic institution in the country of sampling. The full set of 384 interviews (16 pairs of vignettes x 2 physician genders x 2 physician levels of experience x 3 countries x 2 replications) were conducted over a period of 3 years in 2005-07. In the US, physicians were recruited from New York, New Jersey, and Pennsylvania. In the UK, physicians were recruited from Surrey and the West Midlands, meaning that our references to the UK healthcare system are specifically references to England. Each physician participant was provided a stipend of \$100 (or equivalent) to partially offset lost revenue and to acknowledge their participation.

After viewing each vignette, physicians were asked how they would treat the patient in terms of asking for additional information, performing physical examinations, ordering tests,

prescribing medications, giving lifestyle advice, and referring to other physicians. For the diagnosed vignette only, an additional open-ended think-aloud segment was used to explore physicians' thought processes during decision making. For this tape-recorded, semi-structured portion of the interview, the interviewers were provided with a one-page interview guide; they were instructed to cover 5 specific topics and provided with a range of probes to use if needed to guide discussion. Two of these topics are the focus of the present analysis. All physicians were asked, "Would you be able to treat this patient as you would like in terms of..." and probes included adequate time, appropriate support staff/referrals, adequate reimbursement, appropriate follow-ups, and types of medications/treatments. Second, all physicians were asked, "What are your biggest challenges/opportunities with patients like this?" with possible probes including how expectations would change if they had unlimited resources, and which additional resources would make the biggest difference for the patient and the physician. Interviews were transcribed in full and are the focus of the present analysis (12 audiotapes, 1 from the UK and 11 from the US, were excluded from analyses due to technical problems, N=244 transcripts).

To address external validity and concerns that physicians may behave differently with a videotaped patient under experimental conditions compared with real patients in an everyday clinical setting, we took five precautionary steps: (1) ensuring clinical authenticity of the videotape presentation by basing scripts on clinical experience and using professional actors/actresses; (2) asking physicians to compare the presentation of the patient in the vignette to patients they encounter in everyday practice (76% of the physicians in the US and UK sample thought the patient in the vignette was "very" or "reasonably" typical of their regular patients); (3) having physicians view the tapes in the context of their daily practice in between patient appointments; (4) specifically instructing physicians to view the patient as one of their own and to respond as they would typically in their practice; (5) encouraging the physicians to take notes during the vignette to mimic as closely as possible the process of collecting information and assembling a differential diagnosis. In a direct comparison of vignettes, standardized patients, and chart abstraction, Peabody and colleagues (Peabody, Luck, Glassman, Dresselhaus, & Lee, 2000) found that vignettes were a valid and comprehensive method for measuring quality of outpatient care. Additional studies comparing vignettes with standardized patients and other methods corroborate the result that vignettes are ecologically valid for studies of medical decision making (Dresselhaus, Peabody, Lee, Wang, & Luck, 2000; Veloski, Tai, Evans, & Nash, 2005).

We implemented a modified version of Strauss and Corbin's (1990) three step approach to coding and analysis (open coding, axial coding, and selective coding) to account for a team-based approach of multiple coders. During open coding, transcripts were reviewed line-by-line by SC and KL, core concepts were identified, and a preliminary coding scheme was developed and tested on a subset of the data. After coding for larger themes, detailed coding (axial and selective) was performed to identify sub-themes and relationships between codes. Coders were blind to all country, patient, and physician experimental factor assignments during this process. The qualitative software analysis program Atlas.ti was used to assist with the coding and management of the data. To address the challenges of inter-coder agreement, KL and SC separately coded the larger themes for the full dataset to ensure continuity within themes; regular transatlantic phone calls were held to discuss coding inconsistencies and code criteria.

RESULTS

Financial constraints

We hypothesized that the presence of universal healthcare coverage in the UK would alleviate some of the financial concerns faced by US physicians, and our results were

consistent with this expectation. In the UK, only 11 out of 127 physicians identifying direct financial constraints that would affect their clinical decision making for the patient in the vignette. These constraints generally included costs of prescriptions, so that with more funds they would be more likely to prescribe more expensive drugs rather than the ones that were most cost-effective. In contrast to the US system, where these costs generally fall to the patient, in the UK they largely fall to the healthcare system. While patients pay a standard fee regardless of the cost of the drug, physicians have prescribing budgets and feel a general sense of responsibility to keep NHS prescribing costs down.

Physicians in the UK mentioned additional technological items as helpful but unaffordable both within practices and for patients at home, including screening tools (digital camera for retinopathy or Doppler technology for neuropathy), “gadgets and software” for routine monitoring of glucose, and at-home blood pressure monitors. Under the NHS system, decisions about which treatments are possible to describe are made through the National Institute for Health and Clinical Excellence (NICE), based on evidence, value, quality-adjusted life years, and National Guidelines. At a local level, a Primary Care Trust defines which of the NICE-approved treatments it will fund, and these limitations constrain individual primary care physicians. Treatment decisions are then made based on physician discretion according to the needs of the patient and guidance from these external parameters. This standardization of clinical resources and patient insurance coverage is consistent with the minimal discussion of patient financial constraints among the UK physicians—costs are borne within the system rather than by individual patients.

By contrast, almost eight times as many US physicians mentioned financial constraints (85 out of 117 US physicians). However, their focus was on patients’ constraints rather than costs to the healthcare system. Based on the earlier discussion of US health policy emphasis, we might expect that most of those complaints would center on patients not having health insurance coverage. Rather, we found that US physicians identified a myriad of financial constraints patients would face that were relevant to clinical decision making, even when physicians assumed the patient was insured (insurance status was not explicitly identified in the vignette).

First, there is the matter of patients’ direct inability to afford some treatments and medications, even when they have insurance. For example, physicians described using older drugs—perceived by them as lower quality—because they are the ones covered by patients’ insurance formularies. Patients also experience lapses in their coverage, as with the “doughnut hole” in the Medicare prescription drug plan (“Plan D”), which provides people coverage up to a set dollar amount, then it lapses until they have reached a second threshold, and coverage resumes. This direct inability to pay can be compounded for patients who are on fixed incomes. Also, physicians may not accept low-paying HMO plans, so patients who technically have insurance are *de facto* uninsured in some contexts:

I work in more of an affluent area, and still over 50% of my affluent patients can’t afford it because they’re already on fixed incomes. (US physician, 193986)

Some [diabetes medications] are expensive and [insurance] coverage is an issue, so they might have prescription coverage but those medicines might not be covered, or they might just be too expensive because of their co-pay or their plan or they’ve Medicare and they fit the doughnut hole. So cost is an issue. (US physician, 187286)

There are additional challenges in the US with a lack of coverage for non-pharmaceutical costs such as glucose test strips, diabetes education, or treatment by ancillary specialists who help screen for emerging complications:

[Another problem is with] test strips not being covered by insurance and so they don't test as often as they would otherwise. (US physician, 194065)

The biggest deal we have here is inadequate coverage and no coverage and access to specialists like ophthalmology, podiatry. (US physician, 177374)

[T]hey really need a dietitian and if their insurance doesn't cover it, you're up a creek. (US physician, 152322)

The reduction of such variations in financial constraints is a central goal of universal coverage. In the UK, diabetes education and treatment for complications is free for patients at the point of delivery. Despite some variations in restrictions on the provision of prescriptions (including glucose test strips), universal coverage ensures that all patients have at least a minimum amount of coverage so that the above described discretionary behavior on the part of physicians has less immediate impact. However, US physicians' descriptions of their strategies for managing such differences in patients' ability to pay for care uncover additional facets of their discretionary behavior. These strategies require understanding, interpreting, and trying to induce desired patient behavior where possible, while also trying to press additional resources out of the healthcare system where possible. This interface between individual providers and a macro-level system is more nuanced than a simple story of unaffordability but also one of how individuals actively engage institutions.

Implications of unaffordability and physician responses—Physicians described how these financial constraints led directly to changes in patients' health behavior and, in turn, their own clinical decision making. For example, when patients have difficulty affording healthcare, they may choose to prioritize other costs or compromise by only taking a portion of the prescribed medications:

[T]he more pills they have to take, the more of a burden it is. And the more uncooperative they become. (US physician, 187642)

Patients don't take medications due to cost. They chose paying [the] electric bill over medications, or they take things every other day, or trade off different kinds of medications when they really need all of them. (US physician, 186397)

In this sense, financial problems have the potential to develop into utilization or adherence problems. Physicians described how, in some cases, patients can overcome affordability problems by dedicating extra time and effort to the issue, as in the case of taking the initiative in getting prescriptions filled after formularies change, but physicians reported sometimes not finding out until a patient's next visit that he was unable to fill a prescription as written.

Previous research has shown that decision making around diabetes treatment regimens is based in part on physicians' assessments of how effectively patients will follow those proscriptions (Lutfey & Freese, 2005). Following from the above problems, physicians described several ways that they try to help patients manage financial constraints in order to facilitate optimal treatment. Efforts to directly subsidize patients included providing them with free drug samples; having nurses provide educational handouts or informal diabetes education; or, in one case, a physician's wife demonstrating diabetes management skills such as insulin injections. Physicians underscored the organizational barrier was not one of wanting more salary, but of needing more funds to build up the systems allowing for better patient care:

I think it's nearly impossible in the year 2006 as a busy primary care provider to take good control of a diabetic unless you build systems that facilitate your care. If you think you're going to go in there and spend an hour doing a personal education

with a diabetic, you're not going to pay your light bill and you're going to be out of business real quick. (US physician, 185167)

Insurance reimbursement is just too skimpy to allow for running a business. (US physician, 185167)

These physicians describe as a regular feature of their work the use of creative and resourceful approaches to overcoming organizational barriers as they try to optimize patient outcomes while also maintaining the financial viability of their own practices. This work is more than a matter of a patient not being able to afford care and a physician being constrained by that. Rather, these multi-faceted approaches physicians describe point to a different locus for their efforts and a unique set of strategies than just grinding to a halt because the system does not pay for certain health services.

Administrative subsidy as discretionary clinical behavior—Beyond direct financial assistance, however, US physicians subsidized patient care with their time, staff, and administrative resources, and saw this process as directly related to the quality of care they were able to provide. For example, physicians repeatedly pointed to administrative costs entailed in getting authorization from insurance companies in order to provide treatment to patients. In order to be properly reimbursed, physicians need to spend time on paperwork to document and code the treatments they have already provided. In addition, this process often extends to spending time on the telephone to convince insurance companies to provide authorization for specific items:

It adds to the hassle of practicing medicine, and it diminishes the real reimbursement for care, because it creates time intensive work that we don't get reimbursed for. That's why there's 9 people working for 2 doctors. (US physician, 194469)

Physicians reported trying to recoup costs from expensive patients—those with intensive diabetes needs or with poorly reimbursed HMO insurance—by also seeing a balance of less intensive patients or those with more generous (generally fee-for-service) coverage. Still, physicians may be more willing to subsidize the efforts of “successful” patients than those who are less adherent, as described by this physician:

[T]here's not a specific reimbursement that we get for counseling...I try not to think about the reimbursement. I try to think about what I'm doing being right for the patient. But if it does get above and beyond what I can do in the amount of time that I have, that's when I start to do the referring out to other facilities. Especially if somebody's not doing a very good job, if they're really not getting anywhere. (US physician, 189331)

There is much discussion in the US about increasing healthcare costs being transferred onto patients and employers (as opposed to the state). However, these data show how those costs are also transferred onto doctors if they are going to pursue the treatment decisions they think are necessary for quality care. In a chronic care context where physicians identify a need for additional staffing to maintain needed contact with patients, this ongoing effort to procure more resources from insurance companies appears to be a battle of attrition, so that successful health outcomes may depend in large part on the capacity of physicians to push for resources. In this sense, physician decision making is a key mediator of financial access to care and health outcomes. These data reveal a dynamic, responsive, organizational environment that is not fully captured in health policy discussions focused on un- and underinsurance. To the contrary, the current US situation may be a formula for exacerbating disparities insofar as the lower SES patients may require more time, effort, and

administrative subsidy from physicians to accomplish same health outcomes as their higher SES counterparts.

Quality of care

Primary care emphasis—Most physicians in both countries expressed general satisfaction with available services within their respective healthcare systems. US physicians in particular, however, identified a series of barriers stemming from the distribution of resources and priorities, independent of patients' ability to afford care. Specifically, they expressed a need for additional nursing and educational staff, which would increase the number of hours that could be dedicated to diabetes care without relying exclusively on the physicians. Given the broad range of skills required for effective diabetes management, there was a need for staff to provide education about diet, exercise, and lifestyle changes, as well as technical aspects such as insulin injections and use of glucose monitors. With regular support, physicians felt patients could fine-tune their diabetes management skills:

I think [the patient in the vignette] would need a contact person that she could contact quite easily. And there's no way to get reimbursement for that, as far as I'm concerned. But I think if she had a contact person she would feel more comfortable bouncing issues off of them, maybe a staff member at the office or my nurses. (US physician, 186169)

For me the biggest difference is the education of patients and working with them and giving them ideas about diet and exercise and things they can do. Those things take a lot of time [and]...I don't have time for that. If we could have clinics that I could send and say I want you to go and see such and such at the clinic and spend an hour with them about all of these issues, that'd be great. (US physician, 140074)

By contrast, UK physicians were more likely to say that they already had access to primary nursing and educational staff, and could make referrals to secondary care when necessary—indeed, the UK system is already predicated on the sort of cost-efficiency and primary care emphasis that the US physicians were wishing for in their own system. However, when asked how unlimited resources might change their treatment of patients like the one in the vignette, their responses focused on *increased access* to the resources already in place, for both primary care and referrals to secondary care (e.g., a change in quantity of resources rather than quality identified in the US). Specifically, these included an ability to see patients more frequently in primary care (first quote) and decreased waiting times for secondary care (second quote):

[With unlimited resources,] I would offer him probably 3 times as many appointments as I would be able to offer with the number of patients that I look after. (UK physician, 214576)

Referring into secondary care, if I needed to, is fine. But, again, we are looking at 18-week waiting just for your first consultation and then possibly 20, if not more, weeks to start the investigation. So this woman could be waiting 6 months plus to find out whether she has got any blood vessel narrowing in her legs. So, I tend to find that this...profession of patients are starting to go a lot more private and seeking private consultations just to speed everything up rather than waiting on a waiting list for 6 months plus. (UK physician, 203143)

This emphasis on cost-effectiveness is a linchpin to NHS policy and follows closely from universal coverage as a strategy for managing large populations and optimizing their health outcomes. Universal coverage cannot occur in the absence of cost management, and this interdependent nature of access, cost, and quality suggests that the cost containment related frustrations experienced by the UK physicians could emerge for US physicians if universal

coverage is accomplished and costs are shifted from individual patients to being internal to the healthcare system.

Time constraints—Beyond the question of who would see patients, physicians on both sides of the Atlantic expressed frustration with the limited amount of time they have for treating patients given the time intensiveness of educating and motivating patient with diabetes:

There's not enough time. And the time you do spend or need to spend, no matter how properly you code and therefore bill the time that I spend, I don't get compensated as close to what should be allowed even with proper billing and coding for the amount of time that they need and actual time I have spent. (US physician, 144250)

I think there's never adequate time in primary care. (UK physician, 201187) Despite different emphases in their discussion of primary care and financial constraints, physicians from both the US and UK shared mutual concerns regarding time constraints and felt they could provide better care with more time allotted per patient.

Self-management and limited imposed by patients

While US physicians were relatively focused on patients' financial barriers to treatment, UK physicians were focused on patients themselves as a key barrier to quality care, with 95 physicians out of 244 interviewed mentioning the topic. In these comments, physicians underscored how critical patients are to successful diabetes management, a concern that is relevant to a range of chronic illnesses that are largely managed outside the medical system:

I think number one is the challenge is getting enough time to educate them on their long-term complications. The other challenge is getting them motivated to do things to lose weight. Diet, exercise. I think for some reason that people want a magic pill for everything (US physician, 172209)

Are you saying that by giving unlimited resources you could eventually motivate a patient, and I'm probably saying, probably not. No matter how many resources you have, if you've got somebody who's very, very poorly motivated, then you wouldn't make them well motivated (UK physician, 215782)

It depends on him really. It's really a partnership. (UK physician, 231546)

These concerns are particularly instructive as they shed light on problems that remain for UK physicians even after removing the primary two obstacles identified by US physicians—patient affordability and under-utilization of nursing and educational staff. Even with these barriers removed, UK physicians were faced with limitations in patient behavior as one of their primary barriers to accomplishing desired health outcomes.

Discussion

In this paper, we use qualitative think-aloud data from a cross-national video vignette factorial experiment to examine how physicians from the US and England describe the influences of organizational features of their respective healthcare settings on treatment decisions they made for a vignette patient. While extensive literature documents cross-national variation in medical practice and seeks to explain observed differences in terms of the presence of certain kinds of healthcare systems, less is known about how providers themselves understand these influences and perceive them as relevant to their clinical work. By analyzing and comparing transcripts from 244 cases, we found differences in three main areas: (1) affordability of care, (2) within-system quality deficits, and (3) constraints due to

patient behavior. These differences extend well beyond a simple conclusion that physicians in the UK—working under a single payer national healthcare system—are saddled with fewer financial constraints than their US counterparts. Rather, we see how financial constraints in the UK settings are subsumed by the organization, while in the US they take the form of uninsurance and patient inability to afford care. Especially in the US setting, physicians describe the creative and resourceful strategies they use to try to gain from the system the resources needed to bring the type of care to patients that the physicians seek. These differences are especially critical in the context of emerging US health reform, and we discuss some of the potential new challenges we may anticipate for the US based on some parts of the UK experience.

From the perspective of sociological research on clinical decision making and health disparities, the present analysis provides unique information about how physicians connect organizational features of their work settings to their treatment decisions for an individual vignette patient. While medical practice variation is a broad and active research field, most work in this area focuses on either institutional- or physician-level analyses, rarely bringing them together. Rather, there the assumption is often made that widely observed cross-national differences are purely a function of financial constraints. Our analysis reveals that while such constraints are an important component of the process, physicians are also actively engaged with their organizational settings to try to induce certain types of patient behavior and procure resources that are not formally supposed to be available. From an organizations and professions perspective, this multi-level, cross-national perspective underscore the dynamic nature of the healthcare systems and the ways that physicians are not simply passively responding to said system, but rather actively attempting to manipulate it for their own and their patients' gains. This result is important for thinking about the sources of variation and suggests that policy interventions designed to alleviate differences in diagnosis and management of cases may have limited success to the extent that they only address economic (and not social) aspects of the process.

For example, physicians' observations about how organizational features of their respective healthcare settings influence their clinical decisions highlight not only direct influences from healthcare systems, but also more subtle cultural differences between the countries, and expectations stemming from historical differences in healthcare and the profession of doctoring. While some of the US access problems identified in health policy literature would be improved with the implementation of universal healthcare, we are concerned that, without attention to the full range of influences indentified in these data, that unintended consequences could accompany such a change.

First, many of the basic uninsurance and related disparities problems discussed at the outset would clearly be improved by providing universal health coverage to all Americans. In addition, many of the within-system financial constraints identified by US physicians would be improved, including patients not being able to afford basic prescriptions, glucose testing equipment, referrals for prophylactic complications screening, or ancillary medical services such as diabetes education. Universal coverage would also minimize variations that arise from low SES circumstances such as patients trying to juggle discrete health expenses with fixed incomes, low incomes, or lapses in coverage as currently occurs in Medicare prescription coverage (often nicknamed "the doughnut hole" because there is a gap where coverage stops and does not resume until seniors have spent a certain additional amount out-of-pocket for their prescriptions).

Indeed, if Americans are mandated to purchase health insurance from private industry insurance agencies, the lack of affordability may shift from decisions about paying for an individual medication to a more basic inability to afford costly insurance that is required by

law. In this sense universal coverage (subsidized by the government for some low-income populations) would provide some safety net coverage, although not minimizing variations at the high end of the SES spectrum unless patients were prohibited from purchasing additional private insurance as they sometimes do in the UK.

However, physicians in our data mention a series of problems that persist in both countries despite differences in insurance coverage, implying that these challenges would not disappear (and could worsen) with increased access in the US system. While some aspects of healthcare in these countries grow from culturally- and economically-specific features of the two countries, there are other generic principles in healthcare policy that operate similarly across countries—specifically, economic trade-offs between increasing access and containing costs. To the extent that increased access to the system would necessitate increased emphasis on cost-effectiveness, US physicians' desire for increased reliance on nursing and diabetes educational staff would likely be met as there would be an increased focus on cost-effective primary care and prevention. At the same time, however, complaints about insufficient time would likely not be alleviated, and US patients and physicians could face shorter and less frequent appointments, longer wait-times, and more limited financial resources in the form of more standardized formularies and prescription budgets. Furthermore, ceiling effects due to limitations introduced by self-management and the role of patients in chronic illness management would not be changed, and US physicians could become more like UK physicians in considering that barrier at the fore of their concerns.

Furthermore, we question to what extent some of the differences observed between US and UK physicians are a function of cultural, political, and historical differences between the countries and how expectations may differ independently of actual resources available to the physicians. For example, in our qualitative data, many physicians from both countries complained about insufficient time for seeing patients. However, in the quantitative data from the broader experiment, when the same physician sample was asked about the amount of time allocated in their jobs for a first appointment with a new patient, UK physicians indicated they had only 10.7 minutes compared with US physicians reporting 30.2 minutes. The pattern held for time allocated for routine consultations (9.8 versus 17.2 minutes) and physical examinations (12.2 versus 34.0 minutes), with physicians from both countries reporting that they would like to have another 5 minutes with each new patient. More detailed quantitative analyses of these data show that US physicians report significantly more clinical and administrative autonomy than UK physicians (Siegrist, Shackelton, Link, Marceau, von dem Knesebeck, Bönnte et al., 2008). Furthermore, US physicians in this study were most likely to be in solo practice (34% versus 0.8% of UK physicians), while UK physicians were most likely to be in group practices of 4-10 doctors (76.4% versus 31.9% of US physicians); the organizational autonomy stemming from solo practice may reify cultural differences in which US physicians have greater expectations for making their own decisions.

If US physicians already express frustration that is similar in ways to UK physicians—despite having more resources—what would happen if the healthcare system in which those physicians worked was modified to be more cost-efficient? Drawing from Payer's (1998) analysis of the culture of medicine, would aggressive American approaches to the treatment of medical care make the US physicians less tolerant than UK physicians of a cost-efficient system?

Considered in this context, some of the problems facing the US healthcare system are related to changing healthcare structures in the last 20 years, including the emergence of managed care organizations, HMO backlash, and physicians' decreasing resources and autonomy in the past 20 years (e.g., the passing of an era McKinlay and Marceau refer to as the "golden

age of doctoring”) (2002). More broadly, Stevens (1995) and Quadagno (2004) have described the social and political forces that led to specific forms of organization of healthcare in the US and UK. The data in the present study corroborate the notion that the introduction of a universal system will not automatically override the political, historical, and economic contexts that moulded the organization and financing current systems. In other words, physicians’ culturally-bounded senses of their work and how the provision of healthcare should be do not disappear with the implementation of universal coverage. To the extent that barriers identified by US physicians are a function of loss of autonomy accompanying the general demise of fee-for- service care provision, the underlying dissatisfaction may actually be exacerbated with the adoption of a more cost-efficient system implied by universal coverage.

Conclusion

Whereas, perhaps unsurprisingly, UK family physicians identified few financial barriers to quality care, US physicians identified barriers in relation to uninsured patients, the vagaries of entitlement within insurance coverage, and underlying administrative and quality issues related to managing the system. However, the health policy dilemmas facing the US are not as simple as just stating that the US needs to change its insurance coverage or financial mechanism. It is also what the universal coverage would entitle a patient to receive—equality of treatment based on need—and accompanying quality and cost implications.

However, this study demonstrates that uninsurance is not the only problem with the current US system, and a full consideration of between-countries differences requires attention to not only state-level policies but also meso-level processes and cultural differences. First, the current situation in the US may actually be a formula for exacerbating disparities insofar as lower SES patients may require more time, personnel, or administrative subsidy from physicians to accomplish tight glucose control compared to their higher SES counterparts. This discretionary clinical behavior is beyond the purview of research focused on standardizing physician behavior and it remains unknown how this process would be affected by increased access. To the extent that US physicians are culturally accustomed to actively engaging the healthcare system to procure resources on behalf of disadvantaged patients, they may attempt to continue working this way even if universal coverage is implemented in the US. This culturally-based orientation to the system may hinder the implementation of universal coverage as it appears in the UK, or at least demand a cultural reorganization in addition to an economic one.

Second, our data underscore a potential ceiling effect on what can be accomplished organizationally or systemically with universal coverage, at least as applied to diabetes management and potentially other chronic conditions requiring significant self-management. Patient affordability problems that may be alleviated with universal coverage will likely be shifted internally to the healthcare system and therefore eventually manifest as the types of cost-containment constraints described by the UK physicians in our study.

Finally, by comparing physicians’ own explanations of their work with aggregate measures of the resources available to them, this study highlights how the challenge of reform is exacerbated by a complex social and historical environment wherein the US medical profession has undergone great reorganization in recent decades and observed patterns may be grounded in differential expectations—as seen in the example we discussed about how much time each group had to see patients. Taken together, these data point to a need for serious consideration not only of whether the US healthcare system can accommodate the increased volume of utilization that would result from universal access, but also the concrete cost and quality implications of restructuring access.

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