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Surgery and Trauma Care Providers' Perception of the Impact of Dual-Practice Employment on Quality of Care Provided in an Andean Country

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Abstract

Background—Dual practice, simultaneous employment by healthcare workers in the public and private sector, is pervasive worldwide. Although an estimated 30% of the global burden of disease is surgical, the implications of dual practice on surgical care are not well studied.

Methods—We conducted anonymous in-depth individual interviews on trauma quality improvement practices with healthcare providers who participate in the care of the injured at ten large hospitals in Peru's capital city, Lima. A grounded theory approach to qualitative data analysis was employed to identify salient themes.

Results—Fifty interviews were conducted. A group of themes that emerged related to the perceived negative and positive impacts of dual practice on the quality of surgical care. Participants asserted that the majority of physicians in Lima working in the public sector also worked in the private sector. Dual practice has negative impacts on physicians' time, the quality of care in the public sector, and surgical education. Dual practice positively affects patient care by allowing physicians to acquire management and quality improvement skills and providing incentives for research and academic productivity. In addition, dual practice provides opportunities for clinical innovations and raises the economic status of the physician.

Conclusions—Surgeons in Peru report that dual practice negatively impacts patient care by creating time and human resource conflicts. Participants assert that these conflicts widen the gap in quality of care between rich and poor. This practice warrants redirection through national-level

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regulation of physician schedules and reorganization of public investment in health via physician remuneration.

Introduction

An estimated 4.8 billion people in low and middle income countries (LMICs) do not have access to safe, timely, and affordable surgical care.(1) Global efforts are underway to research, devise, and implement strategies to close this gap and integrate surgical access into efforts to achieve universal health coverage.(2,3) An appreciation of the need to increase and optimally allocate human resources for health is fundamental to these strategies.(4)

Dual practice, simultaneous employment by health care workers in both the public and private sectors, is a widespread practice globally. In high income countries, such as the United Kingdom of Great Britain and Northern Ireland, as many as 60% of National Health Service hospital physicians also work in private practice.(5) In LMICs the practice is also prevalent; greater than 40% of physicians in Zimbabwe, Sri Lanka, Jamaica, and Chad report dual practice.(6)

The impact of dual practice on resource-constrained health systems is the subject of ongoing debate. Dual practice is perceived by some as a practical means of retaining a country's skilled healthcare workers when the public sector does not provide competitive remuneration.(7) Others warn that dual practice has the potential to divert resources from the public sector, slow progress toward universal health coverage, and widen the gap in quality between the care provided by the public and private sectors.(8) This concern is reflected by the WHO's assertion that regulation of the private sector, and in particular, dual practice, is the first step towards achieving universal healthcare.(9) However, empirical data regarding impact of dual practice on health systems are scarce.(7,10)

Although an estimated 30% of the global burden of disease is surgical, the implications of dual practice for surgical care have not been well studied.(11) This manuscript reflects the results of part of a broader, mixed methods study on surgical and trauma quality improvement (QI) programs in Latin America. The study was conducted in conjunction with a program that included the formation of a committee on QI in the Peruvian Surgical Society and the implementation of a training course on trauma QI. For this study, we evaluated providers' perceptions of the impact of dual practice on the quality of care provided in Lima, Peru.

Materials and Methods

Setting

In Andean Latin America, an estimated 60% of the population is without access to timely and affordable surgical care.(1) An estimated 57% of urban Peruvian physicians work in both the public and private sectors.(12) Qualitative data from Peru suggest that dual practice is unregulated and its high rates are driven primarily by personal financial motives, in the context of an oversaturated urban medical service market.(13)

The health system in Peru includes: ministry of health institutions, referred to as “public,” which are the most affordable healthcare option in Lima; ministry of labor institutions, termed “social security,” which are generally better-resourced and offer services to individuals whose employers have paid into the system; institutions managed by and for the armed forces; and private institutions.

Study design and theoretical framework

This cross-sectional, descriptive study was approved by the University of Washington and the Universidad Peruana Cayetano Heredia ethical committees. A grounded theory approach was employed to allow for exploration and expansion of emergent themes.(14)

Sampling, recruitment, and data collection

We conducted anonymous in-depth individual interviews with healthcare providers who participate in the care of the injured at ten public, social security, or armed forces hospitals in the capital city, Lima. Hospitals were identified by local authors and key informants from the national surgical society as the centers that provide the majority of trauma care in Lima. We employed purposive and snowball sampling through identifying key informants at each hospital and conducting interviews with these informants and their subsequent referrals. Snowball sampling is a type of chain-referral sampling that uses a small pool of initial informants to nominate other individuals who fit the study eligibility criteria. It is often employed in research where the target population is difficult to reach.(15) LNL initially approached and interviewed key informants in-person and then recruited additional participants on site during hospital visits. All interviews were conducted in a private location and informed consent was obtained prior to initiation. Data collection was continued until at least one interview had been conducted at each of the ten hospitals and theoretical saturation, or a redundancy of information, was achieved.

Data management and analysis

Interviews were conducted in Spanish by LNL and three research assistants with bilingual fluency and post-graduate educations. Interviews were conducted using a semi-structured interview guide on the broad topic of trauma QI practices, with open exploration of themes to elaborate when novel topics arose (Supplement 1). The interviews were not recorded for participant comfort and candor. LNL took hand-written notes during the interviews and the assistant used a laptop computer to take notes. After the interview, the transcripts were consolidated and edited for clarity and completeness. Transcripts were coded in ATLAS.ti 7 (Berlin, Scientific Software Development GmbH) through simultaneous data collection and analysis.

A grounded theory analytical approach was employed to allow for exploration and expansion of themes previously identified in the literature and informed by the authors' experiences.(16) Open coding allowed for identification of the primary theme—impact of the private sector on public sector patient care quality; this topic was not included in the initial interview guide but arose organically during the interviews. Coding for concept development allowed for the elaboration of this theme. Finally, transcripts were analyzed to

include structural codes to attribute quotes to demographic and professional characteristics like age and leadership position.

Memos and network diagrams were utilized to create the analysis codebook, record insights and areas for further exploration, and provide visual organization of themes. The network diagram was continually revised to include emerging codes and was used as a communication tool between coders to guide codebook development. Initially, the codebook and network diagram were developed through collaboration between LNL and AKF, who independently coded the data and then reviewed codes for ten transcripts to refine the codebook. They then coded the remainder of the data, and LNL added new codes as they emerged.

Results

Fifty qualitative individual interviews of surgeons and emergency medicine physicians were conducted at ten hospitals. A median of four interviews were conducted at each hospital.

Physicians' descriptions of the status of, and motivation for, dual practice in Lima, Peru

Participants reported that either “all” or “almost all” doctors who work at public or social security hospitals are dually employed. In rare cases, one individual might have up to four positions of employment in the private sector. Participants reported that employment in the private sector was dependent on personal connections, international certifications (such as Advanced Trauma Life Support), and clinical skills. One surgeon stated:

The doctor who does not work elsewhere is because he does not have the ability, but it is the goal for everyone. ...

Participants unanimously reported income supplementation to be the primary incentive for private sector employment. One surgeon attested:

Ideally, you only work in your hospital with your five senses [focused and not fatigued], but that definitely does not happen because we only make \$1,300 monthly.

When asked why a physician would choose to work in the public sector, participants' responses included a desire for greater case volume, greater clinical case diversity, the opportunity to serve poor populations, and the prestige that comes from an affiliation with a large academic institution. However, these incentives were not adequate for every doctor, as described by one resident:

If the private clinic gives me the quantity of patients where I can have the same number as I could at a big hospital, then I would [no longer work in the public hospital]. In some years, I would accumulate the [private] patients and only work there.

Negative impact of dual practice on public sector

Time constraints—Participants indicated that often the care of patients in the public sector is compromised as a result of time-constraints arising from dual practice. For

example, if a surgeon is in a hurry to finish an operation in a public hospital in order to get to their private practice, they will choose a shorter surgical option, although there are options that would lead to better outcomes, but would take longer. This practice was recognized as not ideal, but was perceived as inevitable given the consequences of being late to clinic. Due to the large pay differential between the public and private sectors, performing even small procedures on private patients could earn a surgeon the equivalent of a quarter of a month's salary, which they would lose if they were late to clinic. When asked how this situation might be remedied, one surgeon stated:

There is no solution. It is such a big theme and serious issue that there is no way to fix it unless there is a direct order from the government palace.

One surgeon-in-training described how dual practice impacted surgeons' fundamental perception of their responsibility to their patients, with regard to pre- and post-operative care and clinical continuity:

... the surgeon shouldn't just operate – they have to follow-up the patients. The majority come and operate, and the residents do the rest of the follow-up. The attendings only do [follow-up] indirectly – they ask or they call you.

This quotation also suggests that time constraints can result in compromised fulfillment of teaching duties, with some attendings substituting bedside teaching for remote check-ins.

Additionally, time constraints resulting from dual practice were also described as hindering physician participation in research and QI activities. Lack of continuity, and thus lack of provider knowledge of a patient's hospital course, was reported to limit the quality of discussion at morbidity and mortality conferences. Moreover, physicians' designated administrative and academic time at the public hospitals was not used for QI programs or teaching, it provided them an opportunity to leave early to go to the private clinic. As broadly stated by one surgeon:

... And on average, a physician leaves at eight in the morning to work and returns home at eight at night. The doctor is tired. What is it that they sacrifice? They sacrifice the academic part.

Such fatigue was frequently cited as being detrimental to patient care. Physicians work at several institutions without coordinated scheduling, often resulting in overnight call shifts preceding long operative days.

The priority is the job that requires you more and pays you more, but when you come [to the public hospital] you are already exhausted. Sometimes the presence and energy are not complete.

Unequal provision of quality care—Participants described scenarios in which dual practice was perceived to directly exacerbate the gap in quality of care between public and private institutions; this frequently manifested in clinical compromises made due to time constraints, where physicians prioritized the higher-paying employment, as described previously. The contrast between productivity incentives experienced in the private and public sectors was also described as a demotivating factor for excellence in the public sector:

In the private sector, you get bonuses for your work. In the public sector, this doesn't exist. Whether you work well, or the same as everyone, there is no change. So all choose to work less.

Narrowed surgical expertise and resident education—The future of surgical expertise in Peru is also being shaped by the current private-public sector paradigm. As described by one senior surgeon from the public system, there are no financial incentives to learn about complicated procedures:

... As residents, we were interested in watching the big operations and procedures. Now surgeons try to train themselves in the things that provide them easy work—they care about learning how to deal with appendices, gallbladders, and hernias.

The remuneration for complex surgical procedures is reportedly similar to that provided for a simple surgical procedure. Participants reported that the private sector selectively provides care to the lowest risk patients, with the lowest risk surgeries, exposing themselves to the least financial vulnerability and setting themselves up for the greatest financial gain. Young surgeons thus seek proficiency in simple procedures, which pay well and require minimal follow-up. The high-risk, complicated, and thus costly, problems are left to be managed at public institutions, with lean compensation from patients and the state, and little interest from surgeons in training to learn the skills to perform them.

Positive impact of dual practice on quality of care provided in the public sector

Acquisition of management and QI skills—Some participants reported learning about QI skills in their private practice employment, and some even acknowledged the transfer of these skills to their public sector employment:

...I worked in [audits] in private clinics. I think it would take eight hours per week to manage the registries and the referred cases for review [at this public hospital] ... You could do it, easily, with the existing human resources.

Incentive for research productivity and academic advancement—One resident stated that presenting at conferences allows an individual to make more professional connections and thus be more likely to acquire a position in the private sector. Another physician reported private sector incentives for advanced education:

No, [you are not paid more if you have an advanced degree] at a public institution. But if you want to work at a private university, if you have a doctorate degree, there they would pay you a lot more.

Nonetheless, the predominant perspective was that the time constraints associated with dual practice were a more influential factor than these incentives, resulting in an overall negative impact of dual practice on research productivity.

Private practice income enabling pursuit of educational endeavors—Several surgeons told of international courses they had attended, or months they had spent rotating at hospitals around the world, in an effort to expand their surgical knowledge. These

opportunities were most frequently paid for out-of-pocket, which the surgeons reported would be impossible without supplemental income from private clinics.

Private sector as fertile ground for introduction of clinical innovations—Private clinic administrators prioritize purchasing state-of-the-art equipment and hiring subspecialists in order to retain market share among wealthy educated patients, who are aware of and demand these services. Surgeons who work at large private clinics thus have access to these resources, which may ultimately provide in-country training experiences that otherwise would not be available:

[In the public hospital] we have the possibility of practicing our techniques because we have patient [volume]. But we don't have all the equipment, and we don't have the possibility to do new things either. The things we've learned to try to innovate, we've learned [in private clinics].

Discussion

This cross-sectional, qualitative assessment of trauma QI in Peru yielded a discussion of the impact of dual practice on the quality of care provided in the public sector.

Our study did not reveal a concern previously described in the literature regarding one impact of dual practice: diversion of resources from the public to the private sector through direct provider referral of patients or through misappropriation of equipment or supplies. (7,10)(12) The absence of these behaviors in this study may be due to a real difference in practices, or to an unwillingness to volunteer this information. Our results are consistent with other reports of absenteeism and intensification of differences in quality of care.(7,17) In the current study, absenteeism was such a serious concern that fingerprint recognition devices were used at one hospital to track provider arrival and exit. Finally, our findings are consistent with health systems literature on vertical programs which describe one negative impact of parallel care delivery to be “distortions” by which better pay for certain healthcare tasks demotivates health workers to perform other key functions.(18)

This study reveals the unique implications of dual practice in a profession that is by nature time-bound: while a clinic visit can be rescheduled or even interrupted, operative procedures or hemorrhage control must be completed on the day they are begun. Existing national healthcare regulations should be modified to include prohibition of simultaneous scheduling of clinical or academic duties at more than one location, back-to-back scheduling that does not allow for travel time, and back-to-back call shifts without appropriate rest time. Physicians should be required to share their call schedule with each of their employers; as is, Peruvian law states that physicians must “rest” after an overnight call shift, but there are no mechanisms in place to ensure that this “rest” time is not spent in the operating room at a private clinic.(19,20) Regulation must be written and enforced with input from physician representatives. Furthermore, increasing public sector physician salary may allow physicians to decrease their clinical obligations in the private sector. While public investment in physician remuneration would come at short-term cost, further research is warranted on the long-term economic impacts. One way in which increasing physician salaries may prove to be ultimately cost-saving is if the gap in quality of care is narrowed and patients with

resources choose to pursue their low-risk, and thus potentially high-profit, procedures in the public sector.

This study has several limitations. First, this study was conducted in parallel with a larger trauma QI program that may have influenced the opinions of interview participants. Second, these data may reflect under-reporting of dual practice and its negative effects as participants may have been concerned with revealing activities that are discouraged by their employers. Third, snowball sampling, which was employed in part in this study, may result in over-sampling of certain subpopulations. Fourth, the interviewer's positionality as a foreigner, a young person, a surgical resident, and a non-native Spanish speaker likely influenced the participants' responses and the analysis of those responses. The potential for these factors to influence the validity of the results was mitigated by anonymity and confidentiality; the inclusion of Peruvian collaborators at all stages of study design, implementation, and analysis; by performing dual-coding of the data; and including direct quotes from participants in this manuscript.

As distinguished quality improvement expert Dr. Paul Batalden observed, "Every system is perfectly designed to get the results it gets."⁽²¹⁾ The existing levels of public sector physician remuneration and the lack of regulation of dual practice in Peru are inevitably associated with physician prioritization of private over public sector quality. Time constraints, demotivation of staff, and compromised resident education are all ways in which dual practice limits the quality of care provided in Peru. National-level regulation of dual practice, including specific mandates for transparency and schedule coordination, is essential. Although increased remuneration and enforcement of regulations requires economic investment, these investments will likely be cost-saving by helping to provide more effective and efficient patient care. Mixed methods research on the impact of this regulation and on the potential impact of improved physician salary from the perspectives of administrators, healthcare providers, and patients is urgently needed to guide the way for developing health systems. This research will yield the information needed to ensure that the scale-up of the density of surgical providers in LMIC as recommended by the Lancet Commission on Global Surgery considers the potential impacts of dual-practice.⁽²²⁾

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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