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Hospitalist Scheduling: how can a balance be reached?

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Introduction

Arguably, the most time consuming and complex issue facing a hospitalist leader and his or her group is scheduling. Designing a schedule that satisfies every member's request for holiday and CME time and at the same time meets the coverage requirements of the hospital (all the while maintaining a measure of equity and justice amongst the group members and avoiding resentment) surely is the most challenging part of running a hospitalist group.

How do you ensure that all group members do the same number of weekends and night call shifts? How do you accommodate various group members' (at times conflicting) requests for holidays and CME vacations? How do you design a process for conflict resolution that is equitable and supports collegiality among the group?

In Part 1of our series on scheduling, we present an overview of some of the important issues that need to be considered for an optimal Hospitalist scheduling system. We also describe the scheduling system in two well established hospitals that illustrate the issues raised in this white paper. In Part 2, we address the mechanics of a balanced scheduling system.

The Fundamentals

Before we focus on the details of a functional scheduling system in Part 2, it is important to discuss some of the larger fundamental issues that affect hospitalist scheduling. These include: continuity of care, work-life balance, coverage requirements and "closed vs. open" hospitalist group models.

Continuity of care

One of the important issues that any group has to clarify is the importance of continuity of patient care for the group members. Hospital medicine by its nature introduces a significant degree of discontinuity compared to the traditional model of inpatient care. Indeed, this has been cited as one of the major drawbacks of the hospitalist model[i]. Traditionally, the primary care providers (who in Canada are primarily family physicians (FP) and general practitioners (GP)) have provided care for their patients through all stages of illness. They admitted and looked after their own patients in the hospital, and followed them up after discharge. Indeed, for some family physicians, inpatient care delivery was a way for them to increase their patient pool by taking on hospitalized patients who did not have a community family physician. For many patients who

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did not have a family doctor, this was their entry point into a GP's practice. This continuity of care is one of the pillars of family medicine as defined by the College of Family Physicians of Canada[ii].

The hospitalist model has changed all that. By separating office practice from inpatient care, it has resulted in a discontinuity in a patient's illness trajectory. Often times, the admitting hospitalist has never seen the patient before and is oblivious to their prior psychological, medical and social background. Lack of proper communication mechanisms (such as an integrated electronic medical record system) only exacerbates this problem. And when patients are discharged from the hospital and back to the care of their community physicians, the primary care givers are not informed of their patients' hospital course and interventions. Indeed, research has shown that dictated discharge summaries (which are essentially the only tools of communication between the physicians involved in patient's care between the hospital and community) are only available to primary doctors in 15% of cases[iii].

And there is more. Even during a single hospital admission, a patient is usually looked after by multiple hospital-based physicians. Often time, the admitting doctor may continue to look after the patient for a period of time, but if the length of stay is prolonged, care is generally transferred to another hospitalist. On weekends, patients may see entirely new physicians, who transfer care back to the previous hospitalist or an entirely new one on the following Monday!

A hospitalist group trying to design a scheduling system should decide (in conjunction with the hospital administration) how important it is for them to maintain continuity during a patient's hospitalization. Are they willing to accept a certain degree of discontinuity and a certain number of patient hand offs (for example on weekends), or do they feel that hospitalized patients should be looked after by as few physicians as possible? This will have important implications (as described below).

Work-life balance

Another important issue that profoundly affects hospitalist scheduling is the issue of lifestyle. It has been postulated that some physicians may be attracted to hospital medicine because they believe it allows them to maintain a reasonable lifestyle[iv], by freeing them from the many administrative issues that they would have otherwise faced with if they had a community practice (such as overhead, staffing, sick leaves etc). They can take heart in knowing that once they take time off, other members of the group are there to take over their patients' care. They also know that a person is always available (even after hours) to attend to urgent developments.

Surveys in US and Canada also reveal that hospitalists are generally younger than the average community physicians with a higher percentage of female physicians[v]. While hard research is

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lacking, anecdotal evidence indicates that younger generations of doctors place a higher priority on lifestyle issues and are no longer willing to sacrifice their personal life and relationships for their work commitments.

Hospitalist groups must determine their position on the issue of work-life balance. A better lifestyle often means more holiday time or shorter rotations, which in turn means more discontinuity and more hand offs. Are hospitalists willing to sacrifice one for another?

Coverage requirements

Another important issue that hospital medicine groups (HMG) face is coverage requirements set forth in their contracts. Typically, hospitals require a 24/7/365 coverage model for inpatients, but the details of this arrangement are open to negotiations between the HMG and hospitals administrators.

In larger programs (such as academic hospitals, or tertiary care centers), hospitals ask for in-house coverage around the clock. In other words, they require that physicians be physically present in the hospital in order to admit patients through emergency departments (and thus maintain continuous patient flow and ER through put), as well as to attend to critically ill patents on the wards (in order to reduce ICU admissions or incidence of code blue calls). In some larger hospitals, 2 (or more) hospitalists are available every night for call coverage.

While the number of hospitalist required will vary between day time and after hours (which needs to be defined through mutual negotiation by the involved parties), and between weekdays and weekends, around the clock in-house coverage has important implications on the work-life balance of the HMG members.

On the other hand, in many smaller community hospitals, the requirement for physical presence in-house at all times does not exists. The HMG groups still provide 24/7 coverage, but this can be done through a pager from home after midnight (or another time point specified in contracts). The on call hospitalist is expected to respond to all pages in a timely manner, and if he or she deems necessary, to come in to the hospital to see a critically ill patient. Patients who may need admission from ED are held overnight (and under the care of the ER doctor) until a consultation request is made to the hospitalist in the following morning. This of course raises many questions: is it appropriate to hold patients in ER overnight until the hospitalist arrives in the morning? How does this affect ER wait times and throughput? How does this affect LOS and costs for the hospital? What if an already admitted patient becomes critically ill and requires immediate attention? What is the acceptable distance that a hospitalist should live from the hospital?

As can be seen, the type of coverage that is required from an HMG can at times come in conflict

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with the hospital's requirements of throughput and efficiency, and the hospitalists' requirements for a sustainable work-life balance. As such, this issue has important implication for the scheduling model.

Closed vs. open groups

Should a hospital medicine group be contained and self sufficient for providing the coverage required of them? Or can it draw on the services of other individuals who are not a member of the group, but work with it closely? Should a group allow part time physicians? Should the group hire nurse practitioners?

The answer to these questions obviously depends on many factors, such as the resources available to the HMG, and its relationship with other groups of physicians from the community. But this question illustrates another important factor in hospitalist scheduling: "contained (closed)" vs. "open" HMG model.

Many groups adopt a "closed" model, where all the coverage and services are provided by the members of the HMG. No other physician/practitioner from outside the group is involved in the provision of care. This of course raises the question of part time vs. full time practitioners within the group. It also raises the issue of including non-physician health care providers (such as physician assistants (PA) and nurse practitioners (NP)) in the hospital medicine group.

The sudden growth of hospitalism, and the fact that it is a relatively new field in medicine, has resulted in a significant shortage of hospitalists. As such, recruitment and retention of qualified physicians has become a major issue[vi]. In order to entice and attract candidates, many groups offer part-time hospitalist positions. HMGs must decide whether the increased staffing that results from incorporating part-timers is worth the increased complexity that arises from this approach in terms of scheduling mechanics (time off requests, call equity and tracking of all this).

Other groups include non-physician practitioners, such as physician assistants and nurse practitioners. While this can alleviate man-power shortage, the scope of practice needs to be clearly defined. Additionally, the sources for income for such allied practitioners also needs to be clarified, as some hospitals may provide such practitioners to the group, while others may have to employ them directly. The resulting complexity surrounding accountability, malpractice coverage and compensation need to be fully considered before the HMG decides to employ non-physicians.

Another model that some HMG groups adopt is that of an "open" system, whereby services of physicians or practitioners not formally part of the HMG are used to supplement the group's

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manpower. At times, this strategy is used to merely fill in gaps in the schedule, but some groups use this strategy in a much more systematic way. In one example, one Hospitalist group uses community family physicians routinely for after-hour call coverage. These "physicians-in-support" help provide night time and overnight coverage. The group is able to maintain a "healthy" call schedule, while the community physicians can still maintain their connections with the hospital and continue to "keep their feet wet". This strategy can also be used for weekend coverage. In some programs, "week-end rounders" are employed routinely. These physicians are not formal members of the HMG, but provide significant relief for the HMG members by reducing the number weekend they are required to work.

The success of adoption of an "open" model relies on the ability of the HMG to attract interest from other physicians groups, and maintaining strong and collegial relationships with such groups. Issues around compensation, administrative support, accountability and malpractice, and the role of non-members in the HMG's decision making processes need to be clarified.

Case studies

In order to illustrate how the issues discussed in this paper affect hospitalist scheduling, we describe the systems adopted by two successful Canadian hospitalist programs.

Peter Lougheed Centre Hospitalist Model

The Peter Lougheed Centre (PLC) hospitalist program in Calgary, Alberta, is one of the older programs in Canada. It was established in 1998[vii], and has enjoyed a tremendous growth since then. It currently employs only full time equivalent hospitalists, providing around the clock in-house coverage. The hospital is a teaching academic centre affiliated with University of Calgary Faculty of Medicine.

In this program, physicians work on rotations that typically last 7-10 days, followed by a period of time off. The day is also broken into 12 hour shifts for ER and night call purposes. The rotations start mid-week, and the hospitalist starts by doing a few shifts of either overnight call or day time admissions. This way, the hospitalist is able to build an initial pool of patients that she will continue to follow for the rest of her rotation. After the "intake" shifts are over, she will continue to round daily on the admitted patients. Half way through the rotation, she will also take over care of any patients that have been admitted by another hospitalist whose rotation is now over and is starting his time off period. Those "left over" patients will be transferred to the care of the current hospitalist. She will continue to look after her pool of patients, and if by the end of her rotation, there are still some that have not been discharged, she will transfer care to another

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hospitalist who has just started his rotation a few days prior. For the weekends, some of the hospitalists whose rotation spans the weekend will round on their patients, while some "outside" physicians (called "weekend rounders") help supplement the force required to round on all the patients and provide ER coverage. For night coverage, there are always two in-house physicians, one of whom is responsible for ER admissions, and the other covers the inpatient wards.

The PLC model places a strong importance on continuity of care and strives to minimize the number of hand offs. Unlike some other programs, the same hospitalist admitting patients continues to follow their course in hospital until discharge. The length of the rotations is such that most people will be discharged before the hospitalist goes off service.

Another feature of the PLC system is 24-hour in-house coverage. Since the group is responsible for the majority of patients admitted to PLC, two persons are required to provide enough coverage overnight. During the day, one person is assigned to doing ER admissions while other members of the group are rounding on their patients and address any emergencies on the wards. This type of coverage however puts pressure on the work-life balance of the hospitalists, and indeed there have been some staff changes as a result of this exhaustive coverage.

In order to provide a better work-life balance, the PLC group has evolved into an "open" system by introducing the weekend rounders. While this has introduced and element of discontinuity of care (a highly regarded pillar of the PLC group), it has helped reduce the number of weekends that group members are required to work. It also may become a recruiting pool for the group as it can draw upon the rounders when staff changes occur.

Lakeridge Health Oshawa Hospital

Lakeridge Health Corporation (LHC) is a multi-site organization a short distance east of the Greater Toronto Area. It is comprised of four hospitals in the Durham region. The three smaller sites (in Whitby, Bowmanville and Port Perry) are small community hospitals with limited diagnostic and subspecialty support that rely on the community family physicians for inpatient care. Lakeridge Health Oshawa (LHO) however is a relatively large, 300-bed community hospital with a well established hospitalist program and an attached Cancer Care Center. The hospitalist group was started in 2001, and is comprised of 16 full time physicians. They provide care to medical, oncology and rehab patients, are involved in surgical and psychiatry co-management, and also provide care to well new born babies. They also run an outpatient oncology clinic. It is the second largest group in Ontario.

The program is broadly divided into three "streams": acute medicine, rehab (which also includes co-management of orthopedic patients) and oncology. The schedule is broken into three 16-week cycles, with a 4th cycle that spans the Christmas/New year period. Hospitalists are assigned to a

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stream for each cycle, and throughout this time, rotate through various wards aggregated under each stream. When the cycle is over, they move on to another stream. This way, each hospitalist gets to rotate through all the wards and services during the year, resulting in more variety and better job satisfaction.

Each week, 9 hospitalists start the week by rounding on patients on wards to which they are assigned to. They may work Monday to Friday for few consecutive weeks, until such time when they request a holiday for CME or vacation, or have to work a weekend. On the weekend, 4 hospitalists provide care and share the weekend call, and also provide call coverage for the subsequent week. These four are not assigned to any ward duties for the duration of the week that follows their weekend work, and are only responsible for overnight coverage. Call starts at 4 pm, and the physician is expected to be present in the hospital for ER admissions and ward coverage until around midnight. After that, the hospitalist may go home and be available for the rest of the night via his/her pager, only coming in if a patient deteriorates on the ward and requires physician assessment. Patients requiring admission from ER are held there over night until assessed the next day by an admitting service (comprised of 4 internists who are not part of the hospitalist group). These internists do all the admissions from ER during the week day.

The LHO group's scheduling model has some similarities to the PLC model. They are both "open" models and rely on physicians outside of the group to provide some aspect of acre (in PLC, weekend coverage, and at LHO, daytime admissions from ER). However, unlike the PLC model, the LHO model puts more emphasis on the work-life balance by ensuring that the overnight on call hospitalist has no ward duties (at PLC, the hospitalist doing an overnight call still has to come in the next day to look after his/her patients). The trade off is patient care continuity, as at LHO, the admitting physicians and the one looking after the patient on the ward are different, and patients may be rounded on over the weekends by yet other physicians.

Another difference is in-house call coverage. Unlike PLC, the LHO group allows for "home call". This means that patients may have to wait in ER over night before they can be assessed for admission, but ensures a better lifestyle for the hospitalists.

Conclusion

As illustrated by the examples provided, hospitalist scheduling can be very complex and takes up a large part of any hospitalist leader's time and energy. A leader needs to balance varying competing interests in order to provide a scheduling system that is acceptable to all the players: hospitalists, ER physicians, administrators and patients. No single recipe can be prescribed, and the scheduling system that ultimately emerges in a program will likely be very different from the ones we have described here.

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