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LETTER TO THE EDITOR

Central Coordination: Answer to the Admission Bottleneck

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Most hospital medicine admissions come from the emergency department (ED); however, the volume and frequency vary widely and are unpredictable. The admission plan is arguably the most intellectually demanding hospitalist task. This must be handled in overcrowded EDs, which face pressure to reduce patient stays and wait times. Most large community hospital medicine services have 1 physician taking daytime admissions, and this creates the admission bottleneck. A single hospitalist becomes overloaded with a large influx of admissions. Many groups back up the admitting hospitalist with rounding physicians. However, constraints of rounding, pressure to "tough it out", and the cumbersome process of paging a colleague during an influx of admissions limit the utility. We developed an innovative strategy for managing this bottleneck that we have termed *central coordination*.

We successfully implemented central coordination in 3 community hospitals. Although each facility had a slightly different structure, all had 1 physician carrying an admission pager that was the source of all hospital admissions. After implementation, instead of the admission pager being called, ED calls were sent to a nonphysician coordinator who assigned the admission to one of the hospitalists. The coordinator was instructed to assign new admissions sequentially until he came to the end of the list and then start again with the first hospitalist. The hospitalists subsequently discussed the case directly with the ED physician. We excluded physicians from this role because the coordinator must have a broad view of how the entire team is operating to direct the workflow optimally. For example, on mornings when there are no hospital beds, the coordinator holds off on assigning new admissions until beds are free.

Matching a new admission to a new physician shortens the ED stay by eliminating the wait for a hospitalist finishing with other patients. We measured the time from admission request to its completion at the first facility. The average was 143 minutes (n = 494 admissions) before implementation and 113 minutes (n = 571 admissions) afterward. These data used historical controls and were diluted by data from night admissions not subject to central coordination. The finding was compelling, however, particularly because quality care was the goal, not ED throughput. The effect was sustained over subsequent months. We believe that a team of 4 or more daytime hospitalists benefits from central coordination.

Central coordination creates a better balance between the demands of ED admissions and hospital rounding, like a taxi dispatcher managing calls for many drivers. Prior to central coordination, an influx of admissions would take the on-call hospitalist away from hospital rounding for prolonged periods of time, and this would delay discharges and other floor work. We observed improved hospitalist satisfaction as well. The overload of the on-call day was replaced with a smaller, dispersed, more manageable admission load everyday. At the third facility, the admission pager had long been called the bad beeper. After central coordination, use of the phrase stopped spontaneously. Prior to central coordination, the admission pager contributed to physician turnover. All 3 facilities had improved retention after implementation, and we believe that central coordination contributed significantly.

Other groups address the admission bottleneck by separating admitting and rounding.[1] This has the advantage of not inconveniencing the rounding physicians with admissions but does nothing for the bottleneck when 1 hospitalist has multiple admissions. The queue, or the time that the patient spends waiting, is dependent on 3 things: the arrival frequency, the process time, and the number of servers. A dedicated admitting physician may debatably have a small impact on the process time, but other variables are unaffected. No system can affect the arrival frequency. However, with central coordination, the queue essentially becomes the process time because the number of servers is matched to the arrival frequency.

The separation of rounding and admitting creates redundant labor because the rounding physician must learn what the admitting physician knew the day before, and the admitting physician's knowledge is wasted on day 2. Other problems with increased hand-offs include decreased patient satisfaction and increased errors. Finally, a dedicated admitting physician often has few or no admissions in the morning, a time when he could be facilitating discharges. When the typical rush of afternoon admissions comes, the lone admitting physician is inadequate as the dedicated rounding physicians wind down and head home. With central coordination, hospitalists are freed to round and facilitate discharges in the morning when admissions are low and are readily mobilized in the afternoon when they are high.

We recommend other large hospitalist services consider implementing central coordination and monitoring ED throughput, hospital utilization, and physician satisfaction closely to validate our subjective experiences; historical design with preintervention and postintervention measurements would be most practical.

Reference

1. Butcher L. Should you split your service into rounders and admitters? *Todays Hospitalist*. 2007:20–30.

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