American College of Medical Practice Executives
Managing Hospitalist Patient Surge

FOCUS PAPER

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Managing Hospitalist Patient Surge

Introduction

Managing provider workload and patient demand is a difficult task that every practice manager will face. Hospitalist programs are especially at risk when managing patient surge and extreme variance in the daily demand and workload. There are many factors beyond management control and many times, hospitalists are the last critical option for the patient. Providers working in the hospital setting do not have the option to reschedule or send the patient to an alternative treatment venue. Hospitalist must manage the patients care irrespective of time constraints.

When staffing is not matched to meet the demand of the practice and the patients it serves, the impact is felt across the continuum of the care delivery system. There are many issues created by a poorly matched staffing model for the patients and the hospitalist; quality of care, patient safety, provider productivity, provider satisfaction, increased length of stay, increased cost and risk of burnout.

The focus of this paper is to examine the opportunities available to mitigate and address patient surges, and to suggest a proactive method that reduces practice risk. This will be further discussed through the case study, highlighting one medical practice executive’s experience and decision process to surge planning and management.

Method

The research methodology used in this paper included both qualitative and quantitative data, along with literature research from formal association programs, expert papers and online articles focused on topics addressing provider demand, workload, and seasonal planning and schedule management. In addition, there were a collection of personal interviews from expert and seasoned medical directors, analytic specialists, administrators and medical practice executives working on similar issues.
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A survey of medical practice executives relating to management of surge planning was conducted utilizing four relevant and active MGMA Assemblies; Financial Management Network, Hospital Affiliated Practice, Hospitalist Network and Business of Care Delivery.

**Statement of the Problem**

The Director of Operations was assigned to manage a new hospitalist medicine program for a 122 bed acute care facility. The Director of Operations was not involved in the contracting discussion and was required to manage the contract based on the terms agreed upon. Due to the facilities position on the contract regarding Stark compliance, the facility was prohibited from amending the contractually agreed upon subsidy during the first year. With the contract providing a subsidy supported to offset provider cost, any increases in cost were to be absorbed by the group. During the contracting process with the group, a static schedule with a set number of hours was established to provide care for the planned inpatient census. The scheduled patient ratio was planned at 18:1. Workload for the hospitalist also included the providers supporting the Intensive Care Unit during the evenings, weekends and holidays.

The hospitalist medicine team was also responsible to admit surgical patients and consult as requested. Due to hospital bylaws and the support required for the Intensive Care Unit team, use of an Advance Practice Provider was not allowed.

The average planned patient ratio of 18:1 would result in an estimated twenty-two (22) encounters per day, per provider. The Director of Operations initial discussion with the new medical director determined that while this was a busy practice, the numbers were manageable given the patient population the hospital serves; however there was little room to absorb added patient demand.
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During the winter months, defined by the facility as December thru May, volume surged compared to the summer months resulting in a 67% increase in patient census. This seasonality experienced at the facility moved the total average patient census for the group from forty-eight (48) patients in the summer to eighty-one (81) patients in the winter. The group sporadically responded by increasing the provider workload and the number of patients assigned to the provider each day. Providers, at times, would also extend hours and unscheduled hours were added to manage the demand. This resulted in an increase cost with shift bonuses paid to providers and a loss of revenue due to the team not being able to see all patients daily. The group also started to use locum providers to help limit provider burnout due to the hours and demand the surge placed on them. Patient Length of Stay increased an average of .97 days during high surge periods. The current process was unsustainable for the providers and costly for the group and facility.

The Director of Operations and program Medical Director met with the operations team and key stakeholders to review the current metrics and concerns with the program. Key stakeholders were identified to include: the providers, hospital administration, case management and nursing leadership. Initial discussion with the work team confirmed that the facility experienced significant and predictable surge that would begin in January, according to providers that were familiar with the facility and it would continue till late spring due to the influx of snowbirds during the winter. The surge is also impacted by the seasonal flu and related respiratory illness.

The current staffing plan presented numerous risks to the team. Among the noted risks were patient safety, a greater number of and extended Emergency Department patient holds, increased length of stay, mismanaged discharges which resulted in an increase in readmissions, provider exhaustion and burnout, and unreasonable expectations with patient demand. The Hospital Chief Executive Officer expressed concern over the group’s ability to manage the patient demand and care as outlined in the contract and requested a plan that was proactive in nature be
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developed to address the issue. The group’s contract coverage plan allowed thirty-six (36) hours of
day coverage with three (3) providers during the day; working twelve (12) hours and one (1) night
provider working a twelve (12) hour shift, for a total of forty-eight (48) provider hours. Assuming
the 18:1 ratio, the team was overstaffed in the summer months and significantly understaff in the
winter months. The Director of Operations and Medical Director were directed to develop options
that improved patient throughput, supported patient safety yet remain economically viable and
report back to the team at the next monthly operations meeting. To understand a full scope of the
issues, critical success factors and program outline, a current state mapping was completed using
lean method concepts.

Alternative Options

The first solution considered by the group was to keep the current process of bringing in
provider ad hoc and as demand required with no change to current staffing or advance planning.
The provider team would continue to try and manage the patient census and get ad hoc back up to
support the demand. A summary analysis of the impact to the team was outlined in an impact review
noted below:

Pros

- No change to current schedule
- No need to add staff or recruit more providers
- Simple patient division and easy to manage

Cons

- Risk to patients/patient safety
- Financial cost with loss of income with documentation and billing issues
- Possible loss of contract due to not meeting facility needs
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- Increase LOS
- Decrease in patient satisfaction
- Increase ED hold hours and increase ED LOS
- Increase provider burnout
- Possible increase in patient fragmentation rate
- Inefficient discharge and communication leading to higher readmissions rates

Review of the team staffing plan indicated that while it was compliant with the contract, it did lead to significant variation in provider and patient demand. It also did nothing to address the demand and complaints from the group, that the workload in the peak months was unsustainable at the current pace.

Current cost to the program with thirty-six (36) hours of day coverage at the provider rate of $130.00 per hour would result in $1,708,200.00 in staffing cost. However, with the current process of calling in providers, paying extra shifts and shift bonuses to cover the demand, the group was seeing an average cost from $26,000.00 to $40,000.00 a month to cover the demand. It was estimated that with six (6) months high demand, the group could face an annual increase in staffing cost of $156,000.00 to $240,000.00, with no true ability to capture all possible patient revenue due to the excessive burden placed on the provider’s time.

The second option the team considered was capping the provider daily patient work load to a maximum of eighteen (18) patients. While this option would provide a manageable and planned work load for the providers, it would require the facility to divert patients to another facility across town. A summary analysis of the impact to the team was outlined in an impact review noted below:
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Pro

- Easy to manage for group
- No increase to provider work load
- No change to staffing plan
- No increase in length of stay
- Limited provider burnout with provider work load maintained at eighteen (18) patients per twelve (12) hours shift hour

Con

- Loss of revenue for both facility and Hospitalist Medicine team
- Negative impact to patient satisfaction
- Possible divert situation for facility
- Negative impact to local EMS team
- Damage to the Hospitals reputation in the community and not being able to care for patients
- ED hold hours increase with managing transfers out
- Group reputation with other providers and facility staff
- Risk to retain contract with facility
- Possible EMTALA and patient safety issues

Similar to option one, the staffing would remain consistent and the demand would be manageable. The analysis indicated that the team could possibly see a loss in the number of patients assigned to the program due to the capping volume requirements suggested. Estimates showed a possible loss of 27 (twenty-seven) patients per day during the peak season and in low month, have excess capacity of 6 (six) patients in slower months. Review of the contract did show that it was
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compliant with staffing but not with the spirit and intent of supporting the patient demand or the facilities plan for growth.

The third option considered was developing a staffing model that allowed predictability with demand using historical seasonal data, similar to retail and food service models. The current staffing analysis showed that providers were overstaffed in some months and understaffed in others. By allocating time to match the anticipated demand, staffing cost could be conserved in some areas and expanded in others. This would allow the team to maintain a manageable workload while maintaining financial viability. A summary analysis of the impact to the team was outlined in an impact review noted below:

Pros

- Reduce provider burnout
- Proactive schedule in place to manage surge based on historical seasonal trending
- Ability to budget and plan with proper trending
- Increase revenue and more accurate documentation
- Increase patient and provider satisfaction
- Good patient care coordination
- Reduction with readmissions
- Maintain provider work load close to 18 patients per 12 hour shift

Cons

- Higher degree of difficulty to manage and plan
- Schedule is best guess based on historical data and requires continued review and planning
- Adjustments to provider contracts and increased recruiting
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A review of the staffing plan based on seasonal demand showed an increase of 2087 added provider hours over the course of a year. The increase staffing cost to the program would be $271,310.00 not offset by current contract subsidy support. It was expected the group would see an increase in patient collections $92,500.00.

Option Selected

While all options discussed had both pros and cons that supported each selection, the team opted to work with the third option, developing a predictive staffing model to meet the demand and manage patient care, reduce provider burnout and limit financial risk.

When considering option one, it did allow for the providers to work extra shifts to help support demand, however the team felt it was reactive in nature, both for patient care and the providers. Many providers noted significant burn out with the call in process and some providers started to demand bonuses to work the shifts. Compared to option two, the entire burden was pushed to the facility to deal with the issue. While some argued that due to contracting terminology, it was the facility’s issue, the team felt that it was worth the effort to manage this in the first year of a three year agreement with a reduced profit margin, rather than lose the entire contract. The added patient volume could help offset some of the staffing cost if captured properly. The third option provided the team with some manageable staffing predictability to provider schedule, demand and cost planning, which hit the three critical factors identified during the process. With a planned 18 patients per 12 hour shift, the providers felt all patients would receive the appropriate care and physician engagement they deserved. This would also allow for proper patient charting and proper charge capture, which would both positivity impact financial performance.

To develop a predictive staffing model, the team used a seasonal index to predict demand. A seasonal index is calculated for a particular period within the seasonal cycle divided by the
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average of all seasonal cycles. For statistical significance, the group took a three year snapshot of the facility patient census to calculate demand.

To obtain the index number, data points for the months reported are added and divided by the total number of months reported. 2254/36 equaled an index number of 62.61. This is the average census and for the purpose of this exercise, the index number used to support the index variance calculation. To obtain the index variance, divide the month average by the index number. Any deviation of a plus or minus 5% showed a shift in demand and need for increase or decrease in staffing. Initial review of the demand shift showed variance from 0.76 to a high month of 1.30.

Using the data provided in the seasonal review, the team established a new planning schedule. The goal was to identify the high months, as well as opportunity to reduce staffing in lower months. The total hours required to adequately staff the group would be 15,227 day shift hours per year compared to 13,140 in the original staffing model; a net difference of an additional 2087 hours of coverage. By reducing the hours in the summer months to meet demand, the team was able to reduce 528 hours and a $68,640.00 in staffing cost. Since managing provider demand and limiting burnout was a critical factor to the success of the program, the team worked to maintain an average of 18 patients per 12 hour day shift.
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**Demand Staffing**

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To validate the option selected, a side by side staffing and cost comparison was conducted.

While it was noted that it would appear the option of static staffing was best financially, it did assume that all patient would be seen, charted and charged appropriately. This assumption, in discussion with the provider team, was not valid. It pushed the demand well over the 18 patients per 12 hours shift and many providers felt that they would have to pick and choose which patients to see and who could wait a day.

### Staff and Cost Comparisons

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The team conducted a risk assessment and outlined the following areas to manage during the process: possible medical errors, increased readmissions, reduced patient satisfaction, loss of reputation both for facility and providers in the community and impact across the facility services lines. As noted previously, the patient to provider ratio, if maintained, would provide a safe environment and address the issues noted. If the providers were able to maintain a manageable work load, the other risk factors would also be mitigated.

Once the team had a clear understanding of the schedule demand, a review of provider contracts was conducted. The current agreements did not allow providers to reduce the number of hours worked each month without a loss in benefits for the providers. Some providers were not willing to reduce the number of hours worked each month; therefore after feedback and discussion with the group, three base contracts were developed to address these issues.

The first agreement was a continued fulltime agreement, since the team would still need a base to the group. This would be considered the A Team and they would have limited variance with their contracts and would work weekend and holiday shifts.

The second agreement type was called a variance contract and considered the B Team. This group would be expected to work a specific number of shifts over the course of the year; however there would be months where they would see a work a higher or lower number of shifts and they would not see a reduction in benefits. With the goal to limit burnout, in the surge months, this group would support the day team as an admitting provider and work no more than three (3) days in a row.

A third agreement was developed to support permanent part-time providers to the team. This group would provide a certain number of shifts during the surge season, with the months outlined in their agreements. This team would not be eligible for full benefits.
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The Medical Director worked with the provider team to develop a schedule that was built on four (4), thirteen (13) week blocks for the year, and published 90 (ninety) days in advance. By providing the providers the schedule in advance, they were able to work around family commitments, plan for vacation and education events. This process supported reduction in burnout and providers maintaining a better work life balance. Once the new schedule and contracts for the providers were updated, a go live date was set and the schedule was implemented. Due to having to add staff and change agreements, the entire process took four (4) months to complete.

The final outcome allowed the team to have staffing in place to meet demand. While not perfect, the majority of the day and shift workload was manageable for the providers. Provider retention and satisfaction was high compared to the first six (6) months of the contract, and long term, the group retained the contract, and remained budget positive. Patient satisfaction improved with a reported five-star rating for provider communication at month six (6). Audits indicated that all patients were seen each day, properly documented for proper charge and reimbursement, and readmission and length of stay were in alignment with facility goals. Provider retention and recruitment also improved, with limited provider turnover after the initial contract update and change. The site was fully recruited at thirteen months (13), and the majority of the part-time and locum providers joined the permanent team.

Lessons Learned

It should be noted that during the initial contract development and sales process, the team should make sure to understand the demand for a program, including seasonality. While many programs can be budgeted and sold at an average monthly number, it does not always show the true demand. Using the variance demand tool will show if there is a significant swing in patient demand from month to month and if alternative staffing should be considered and allowances made to meet the demand. The complete demand assessment prior will also support shifts with subsidy support and maintain Stark compliance.
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While use of lean process can seem overwhelming, the use of the current and future state mapping is critical to helping groups move through any change process. Clearly understanding the current position of the issues and the desired end state will support groups moving through change and support with making key decision.

Identification of the critical success factors allowed the team to have a decision tree to bounce back too during tough discussions. Knowing the common reference points and what was critical to the group’s success supported the in team developing a plan that met those needs. This was the ‘gut-check” for the team when decisions and team opinions were split.

It is imperative during the process not to underscore the importance of managing and understanding provider burnout. While this topic is more extensive, it should be noted that recent studies found that nearly 44% of hospitalists reported they were emotionally exhausted, and 42.3% were experiencing depersonalization. Nearly one-tenth of hospitalists, 9.2%, admitted to feelings of suicide ideation during the previous 12 months. (White, 2015).

Provider burnout also impacts retention and turnover. It is noted in many management manuals that the cost to replace an employee is anywhere from two (2) to three (3) times their annual salary. Around 29% of hospitalists are concerned with burnout with their current positions and state that they would likely leave their current practice within two (2) years, and 13% said they were definitely leaving. (White, 2015). The top three (3) reasons why hospitalists weren’t happy: loss of autonomy and control over content of clinical work, unreasonable quantity of work and pace and regulatory and professional liability concerns. Open discussion with the Medical Director and the provider team allowed the providers to manage and have a part in their work demand, which helped improve their work satisfaction. It was important to the Medical Director that his team felt they had a voice and more important, that they were heard. Knowing that the medical and
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administrative team placed this high on the priority list also improved the administrative team relationships and supported an effective retention strategy.

A survey was conducted from member of the Medical Group Management Association, with sixty-three (63) respondents to gauge awareness and opportunities to managing surge. 41.27% of the respondents were either hospitalist’s teams or internal medicine and family practice that cover their patient panel while admitted to the hospital. 50.82% reported having high patient surges. The survey further worked to define what was considered a surge. 12.90% consider a surge a change in volume between 1-10%, while 52.23% of respondents defined that as an increase between 11-15%. 20.97% of the members surveyed thought that number was anything greater than 16% increase in patient volume. The remaining respondents did not have a definition. What was also of interest is that 54.84% of the respondents did not have a surge plan in place. The survey did not find a clear process to manage surge.

Managing demand or patient surge is something every practice executive will face. Understanding and defining demand specific to your practice needs will support long term growth and management of practice resources. Demand variance staff planning is used in retail, food service and hospitality. With modification specific to healthcare, the tool can add in length of stay and admitting rates to determine the demand and need. Practice managers should be open to looking at various industries to help determine and find new ways to manage current issues.
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Reference List


