For urgent and emergent cases, which one goes to the OR first?

When several patients needing urgent or emergent surgery arrive at a hospital simultaneously, who decides which case goes to the OR first? For true emergencies, the decision is generally straightforward, with the patient rushed into the first available room. But in many other situations, the decision is not as clear: Should the patient with an open fracture go first? Should it be the patient with an ectopic pregnancy or perhaps the patient with an intestinal obstruction? Does the most senior surgeon get the first available OR slot? Should the decision be made on the basis of first-come, first-served? Or maybe the most assertive surgeon gets his or her case in first?

Often, the decision falls to the anesthesiologist of the day in the OR. But no matter who makes the decision, the competition between surgeons and arguments with anesthesiologists cause frustration. At times, patients end up waiting for surgery longer than is clinically optimal.

Ideally, the decision should be based on an objective measure that reflects the clinical needs of the patient and gives surgeons, anesthesiologists, and OR staff a predictable and fair system for prioritizing cases.

Using a classification system for urgent surgery, such as the one described in this article, also is the first step toward improving the flow of patients through the organization. Because the OR is the hub of inpatient flow, streamlining flow through the OR will also improve flow through the organization.

A classification system

Wellstar Kennestone Hospital, a 600-bed hospital in Marietta, Georgia, working with Press Ganey, developed an innovative approach to this problem. As part of an initiative to improve patient flow through the OR, the surgical services committee, composed of respected surgeons and anesthesiologists representing different services, developed criteria for classifying all emergent and urgent cases based on the medical needs of the patient. The classification system was then used to determine the order in which cases were taken into the OR. It created a system that was fair, predictable, and based on clinically defined criteria. The clinical urgency system was used with other patient flow improvement initiatives, including designating separate ORs for these add-on cases.

Before the classification system was developed, there were no time limits for urgent/emergent cases at scheduling, and add-on cases were taken in the order posted unless they were true life- or limb-threatening emergencies.

Case categories

The surgical services committee decided to use 5 categories to classify urgent and emergent cases. Time limits were set for each category, defining
the maximum time that should pass between when a case was posted and when the patient was taken into the OR (sidebar). Each specialty reviewed its common procedures and placed them in the category in which they would most commonly fall.

**How the classifications work**

Once the categories were developed and accepted by the surgeons, they began to use them to specify the urgency of add-on cases as they posted them. The system works in the following way:

When a surgeon posts a case, he or she classifies it using the A-E categories based on the needs of the patient. The appropriateness of the classification is never questioned at the time the case is posted but may be reviewed by the committee retrospectively. The order in which add-on urgent/emergent cases are then scheduled into the OR is based on the urgency of the case and the amount of time since the case was posted. If 2 cases within the same category arrive close together, they are taken first-come, first-served. As time passes and the time limit approaches, cases are escalated to the highest category to ensure the patient is taken care of in the appropriate time frame.

The surgeon booking the case is responsible for categorizing the case based on knowledge of the clinical needs of the patient. For example, a surgeon can call an appendicitis case a ‘B’ case if he thinks the patient’s condition warrants surgery within 2 hours, even though most appendicitis cases are usually considered to be in the D (within 8 hours) category. At the time of booking, no one can question the surgeon on this decision because it is assumed he or she is the one with the most accurate assessment of the situation.

**Monitoring compliance**

Like any system, this one can be manipulated, and oversight is necessary.

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### Urgent categories and case examples

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Waiting time limit</th>
<th>Examples</th>
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<tbody>
<tr>
<td>A</td>
<td>Acute life-and-death emergencies</td>
<td>30–60 minutes</td>
<td>Massive bleeding and airway emergencies</td>
</tr>
<tr>
<td>B</td>
<td>Emergent but not immediately life threatening</td>
<td>&lt; 2 hours</td>
<td>Acute spinal cord compression, bladder rupture, ectopic pregnancy</td>
</tr>
<tr>
<td>C</td>
<td>Urgent cases</td>
<td>&lt; 4 hours</td>
<td>Asymptomatic foreign body, appendicitis with sepsis/rapid progression, biliary obstruction, open fracture</td>
</tr>
<tr>
<td>D</td>
<td>Semi-urgent cases</td>
<td>&lt; 8 hours</td>
<td>Appendicitis, closed reduction of fracture, empyema</td>
</tr>
<tr>
<td>E</td>
<td>Nonurgent cases</td>
<td>&lt; 24 hours</td>
<td>Facial nerve decompression, femoral neck fractures, mastoidectomy</td>
</tr>
</tbody>
</table>
to maintain consistency and monitor compliance with the urgency categories. At WellStar Kennestone Hospital, the surgical services committee took on this role. Each month, the committee reviewed all ‘A’ cases and any other cases where the appropriateness of the urgency classification was questioned by another surgeon, anesthesiologist, or surgical staff. If further review appeared necessary, a member of the committee talked with the surgeon in question. If systematic or frequent problems occurred, the surgeon would be asked to appear before the committee to discuss the cases. This peer review system is critical to maintain accurate categorization and to avoid gaming of the system. The review can also lead to revisions to the category guidelines over time.

**Waiting times decline**

With the implementation of this approach to scheduling urgent/emergent cases, waiting times for these cases declined by 18% overall. For urgent and semi-urgent cases—types of cases that typically get delayed—the decreases in waiting time were even more dramatic, with waiting times decreasing 77% for C cases (maximum wait 4 hours) and 33% for D cases (maximum wait 8 hours). In addition, E (nonurgent same day) cases no longer got pushed into nighttime hours (11 pm to 7 am) because there was more time during the day to get these cases completed. The number of staff needed at night was reduced because the staff had to care only for more urgent cases.

The surgeons were pleased that their patients were getting into the OR more quickly. Surgeons, anesthesiologists, and OR staff appreciated the transparency of the system.
“Since we are able to get critical cases done more quickly,” said an anesthesiologist, “we end up with less of a backlog during the day and no longer find ourselves doing hip fractures at midnight.”

To determine the capacity necessary to accommodate add-on cases, a queuing analysis was done to determine how much staffed capacity was needed for these cases. The queuing analysis was key to ensuring that the urgent/emergent cases would have appropriate access to the OR, but elective cases could proceed without bumping or delays. This was accomplished without building new OR space.

The block schedule was revised to minimize gaps during the day and was built based on utilization and the patient’s destination unit, reducing peaks and valleys in the day-to-day surgical schedule.

Success factors

The use of a consistent clinically based system for prioritizing add-on cases can solve the difficult problem of “who gets in first.” These features are key to the system’s continuing success:

- surgeon involvement in all phases of the project
- dedicated ORs for urgent/emergent cases
- clear urgency categories developed and adopted by surgeons in all specialties
- peer review of cases by the surgical oversight committee to ensure consistency and monitor compliance.

As surgeons, anesthesiologists, and staff become familiar with this system, they come to appreciate its transparency, fairness, and predictability. Most importantly, it leads to improvements in patient care while decreasing long days and stress for providers.

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