

A User's Manual for the Operative Performance Rating System (OPRS)

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Introduction

The Operative Performance Rating System includes a set of procedure-specific rating instruments and recommended methods for observing and judging single performances of nine operative procedures frequently performed by general surgeons(1) and by general surgery residents(2) in training. This users' manual also provides procedures for compiling sets of individual operative performances observations and judgments into generalized operative performance assessments that span a range of procedures and performances.

History

The Operative Performance Rating System (OPRS) has been developed and continuously refined by faculty members in the Department of Surgery at Southern Illinois University School of Medicine from 2000 until the present. Details about the development and refinement of the system are contained in a series of publications(3-9). Interested individuals are referred to these publications for more information. Critical information gleaned from this research will be addressed in the following sections of this User's Manual. While the recommendations are based on research involving use of the OPRS instruments, it may be reasonable to assume that many of those recommendations (e.g., number and type of observations needed to make stable decisions about current resident operative performance ability) may apply to other operative performance rating instruments as well.

Procedures Covered

The procedures covered are: laparoscopic cholecystectomy, laparoscopic inguinal herniorrhaphy, open inguinal herniorrhaphy, breast procedures for cancer, thyroidectomy, open colectomy, laparoscopic appendectomy, AV fistula and laparoscopic ventral hernia repair. Some procedures (e.g. excisional biopsy of skin lesions) are not included as we recommend that these be evaluated through skills laboratory activities that are included in the American College of Surgeons/Association of Program Directors in Surgery Skills Laboratory Curriculum(10)

Description of Operative Performance Rating Instruments

Each operative performance rating instrument includes four or five procedure-specific technical skill items (depending on the procedure). These procedure specific items have been refined based on research evidence regarding operative practices that lead to good and poor patient outcomes. Each instrument also includes four items, developed and validated at the University of Toronto(11), representing general operative performance competencies (instrument handling, respect for tissue, time and motion, flow of operation) pertinent to all operative performances. All procedure-specific and general items use 5-point Likert scales (1 = poor, 2 = fair, 3 = good, 4 = very good and 5 = excellent) with behavioral anchors at the 1, 3 and 5 positions. The fifth general item is an overall performance item designed to allow the expert observer to combine all observations of the performance elements and offer a weighted judgment of the overall performance again using a 5-point Likert scale,. The overall performance item has only one behavioral anchor at the four-position on the scale. Each instrument also includes an item regarding difficulty of the case, an item regarding the degree of

guidance provided by the attending surgeon and two items that allow establishment of the elapsed time between observation of the performance and filling out the operative performance rating form. The instruments are available for inspection and for downloading at [http://www.siumed.edu/surgery/surgical_education/op_evaluation.html. (Accessed on 12-5-2011)].

Recommendations for OPRS Instrument Use to Observe and Judge Operative Performances

The OPRS instruments are intended to be completed by expert surgeons while observing or immediately following observation of a surgical resident or practicing surgeon performing the operative procedure. We recommend that ratings completed more than 72 hours after observing the performance not be used as the clarity and detail of those performance ratings are compromised(7) and their accuracy is questioned.

Operative performance ratings are intended to reflect 1) technical skill, 2) forward planning and other intra-operative decision making, and 3) ability to direct the operative team. Therefore it is important that surgical trainees being rated be permitted as much independence as possible in performing the operation. For this reason we recommend that most ratings of surgical trainees be reserved for more senior residents (PGY3-5). Available research evidence indicates that attending surgeons generally provide a great deal of operative guidance and are not aware of the amount of guidance they provide (9). Raters should be encouraged to minimize the amount of guidance they provide to the resident being observed during the procedure consistent with the goal of assuring safety and optimizing the quality of care for the patient.

Optimal benefit will be derived if the expert judge completes the operative performance rating immediately after observing the performance and then discusses the performance with the surgical trainee using the completed rating as a guide for the discussion.

Recommendations for Using OPRS in a Surgical Residency Program

1. OPRS ratings are sufficiently stable within each residency training year so that judgments about operative performance can be made on an annual basis as is the convention for resident progress decisions generally(8).
2. Twenty observations of resident performance per year are enough to provide a stable estimate of operative performance if decisions are made on an annual basis. Since progress decisions need to be made before the end of the program year, this amounts to two observations per resident per month in the 10 months span from July through April which would allow for progress decisions to be made in May of each year(8). Achieving this goal in the Southern Illinois University general surgery residency program requires each full time faculty member to complete an average of two operative performance ratings per month. This requirement should generalize to other programs assuming the ratio of faculty to residents is similar in most residency programs. Faculty in larger residency programs may need to complete fewer operative performance ratings per month to achieve this goal. If progress decisions need to be made on a semi-annual basis for some reason (e.g. for residents who previously have been identified as having performance problems in this area), an average of 2.3 observations and ratings per month should be the goal for those residents.
3. An operative performance progress decision that combines observations across a variety of operative procedures is acceptable. Procedure is a relatively small contributor

to operative performance ratings (ranked sixth out of eight factors and accounting for only five percent of the variation in operative performance ratings). Exercising reasonable and customary care to assuring that each resident is observed and evaluated performing a full range of operative procedures should be sufficient to control for this source of score variation.

4. Considerable care must be taken to assure that residents are rated by many different attending surgeons. Rating idiosyncrasies of the rater are a major determinant of operative performance ratings. Stringency/lency of the rater accounts for three times more score variation than does resident operative performance ability(8). Arranging for at least 10 different expert raters to rate each resident in each year should control for these rating idiosyncrasies(6).
5. Attending surgeons must be encouraged to give the resident a great deal of independence in performing the operative procedure, making intra-operative decisions and leading the operative team if the operative performance rating is to provide a reasonable estimate of the resident's true operative performance ability(9). Participating programs should consider providing a rater training session for faculty covering this and other performance rating topics.

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