



Franklin Dexter M.D., Ph.D.

Director, Division of Management Consulting
Professor, Departments of Anesthesia and
Health Management & Policy
University of Iowa College of Medicine
Iowa City, Iowa 52242-1009
Tel (mobile) 319-621-6360
E-mail Franklin-Dexter@UIowa.edu
Consulting & CME www.FranklinDexter.net

Anesthesia Group Management

The management science relevant to anesthesia groups has become very sophisticated over the past decade. References describing what is known about anesthesia group management are available in the comprehensive bibliography of articles at our web site: www.FranklinDexter.net

Optimizing daily, afternoon, evening, and weekend OR, obstetrical, and satellite case staffing

The objective of anesthesia staffing analyses can be to increase anesthesiologists' and nurse anesthetists' productivity and to reduce costs by optimizing daily, afternoon, evening, and weekend OR, obstetrical, and satellite case staffing. That way, a group can increase the number of patients they can provide with safe care, given the available number of anesthesiologists and nurse anesthetists. In addition, a group can decide whether to hire another anesthesiologist or nurse anesthetist based on a sound analysis, rather than vague impressions of current and future workload.

I often work by phone calls and e-mail with someone in your organization with access to your anesthesia billing data, anesthesia information management system data, or OR information system data. I send an Excel file into which your data can be imported. Then, I perform four analyses:

- Anesthesia staffing for late afternoons and evenings to maximize productivity or minimize staffing costs (e.g., 1 team working 3 to 11 PM and 2 teams on-call to stay late if necessary)
 - Analysis includes a comparison of this staffing solution to that obtained using the traditional, albeit inaccurate, approach of staffing for the mean number of cases at each time of day
- Anesthesia staffing for weekends and holidays to maximize productivity or minimize staffing costs, while managing your risk of being unable to provide prompt patient care
 - Analysis includes an assessment of the combination of staff on-call from home versus on-call in-house in order to minimize staffing costs

[Click here](#) for a lecture describing some of the analyses. [Click here](#) for a sample Acrobat (PDF) report from OR data. Training decision-makers in interpreting and implementing the reports can be done during a web conference. The University typically charges \$3750 for these analyses.

I can assess your group's staffing every six months. The University of Iowa's usual charge is \$2750 for each such on-going analysis. Outsourcing analysis assures that the most advanced scientifically sound methodologies are being applied on a timely and on-going basis so that your group keeps its costs as low as possible. Internal analysts do not need to purchase the software, maintain the software, retain skills in using it even though it may only be twice a year, nor follow the scientific literature to update their knowledge. Training in interpreting the results of the analyses is updated each period during the web conference.

If an on-site visit is preferred, [click here](#) and go to page 3 for some typical schedules and charges.

Appropriate subsidy to anesthesia group because ORs are not allocated and cases are not scheduled to maximize OR efficiency, and/or because cases are longer than average

At some hospitals, determination of OR block allocation and case scheduling is based not on maximizing OR efficiency, but rather on tradition and surgeon convenience. As a result, the anesthesia group incurs additional labor costs. When negotiating financial support from a hospital, medical school, or multi-specialty medical practice, the anesthesia group is often challenged to justify the support necessary to offset these additional labor costs. This can be done using the anesthesia

group's billing data and/or the OR information systems data. The University's charge is typically \$4,250. For details, [click here](#) and view the first page. The listed assessments of turnover times, bias in case duration estimates, etc., are important to evaluate the sensitivity of estimates of fair (reasonable) support on decision-making processes that can be changed over several months.

[Click here](#) for a sample Acrobat (PDF) report that shows the analyses performed. Typically confidential financial data from the anesthesia group are *not used*, just national survey data.

All of the analyses described on the first page of this document are performed as part of the work, specifically anesthesia staffing for OR cases in the late afternoons, weekends, and holidays.

When the appropriate institutional support is being calculated by a hospital using its OR information system data, there is often also value in estimating the expected financial return per hour of time contracted for with the anesthesia group. [Click here](#) for that "block time" (profitability) analysis.

Staffing and patient scheduling in your preoperative clinic

Pre-anesthesia evaluation clinics often have very long patient waiting times. There are three complementary approaches to reducing those waiting times ([click here](#) for a paper):

- Optimize staffing and patient scheduling in your preoperative clinic to reduce waiting times
- Effectively choose which patients need to be seen in the clinic
- Reduce service time in the preoperative clinic

Not only can such work be done on-site, but also by a series of web conferences to teach nurses, analysts, anesthesiologists, etc., in the latest scientific methods to improve clinic flow.

Reducing hospital's anesthesia costs

Cost reduction is often addressed as part of consultations focusing on one of the preceding topics:

- Implement phase I PACU bypass and other "fast-tracking" protocols
- Compare induction times, emergence times, and drug costs among anesthesia providers, while quantifying their impacts on hospital costs and surgeons' schedules
- Implement clinical pathways for anesthetic plans for different surgical procedures, to improve surgeon satisfaction, OR efficiency, and supervising anesthesiologists' convenience
- Implement practice guidelines and programs for reducing anesthesia drug costs

[Click here](#) for a relevant lecture. One day on-site is good for exploring opportunities for cost savings.

Non-operating room (non-OR) "satellite" allocation, staffing, and case scheduling

Non-OR staffing and case scheduling needs to be addressed differently from OR scheduling:

Dexter F, Macario A, Cowen DS. Staffing and case scheduling for anesthesia in geographically dispersed locations outside of operating rooms. *Current Opinion in Anaesthesiology* 19: 453-458, 2006

The appropriate methods of case duration prediction also are different:

Dexter F, Yue JC, Dow AJ. Predicting anesthesia times for diagnostic and interventional radiological procedures. *Anesthesia and Analgesia* 102:1491-1500, 2006

Furthermore, usually an enterprise-wide scheduling system needs to be used in addition to or instead of an OR information system. Consequently, calculations need to be performed separately from that for OR cases (e.g., see www.CaseDuration.com and [click here](#) for a paper).

To assist facilities, usually I work with three individuals on-site to assist them in learning and implementing the science, a clinician, a scheduler, and a systems programmer. Because implementation characteristically is done slowly over at least six months, work is done by e-mail and web conferences. The time required usually is 40 hours, for which the University charges \$8000.