Hospitals are composed of a multitude of specialty areas, each with its own particular skills and concerns. For example, the priorities of a nurse anesthetist may differ significantly from those of a clinician working in a psychiatric unit. Although the focus of each specialty is unique, the essential ingredients of a unit-based quality assurance (QA) program remain the same whatever the clinical setting. Such a decentralized approach, however, can create enormous anxiety if one feels unsure of exactly how to “do” quality assurance.

Certainly, a good grasp of the elements of the QA process, discussed in Part I of this series, is an excellent starting point. Because departmental plans should harmonize with the institution’s overall quality assurance efforts, a thorough knowledge of the current Joint Commission on Accreditation of Hospitals (JCAH) quality assurance guidelines is equally important.

**Current JCAH guidelines**

In 1979, JCAH mandated monitoring and evaluation of the quality and appropriateness of patient care activities. This effort relied extensively on problem-focused studies and, inadvertently, encouraged a “pro-
blem of the month" syndrome in which institutions either isolated only easily solvable problems for "resolution", or (halfway to Utopia) reported that there were "no problems." Quality assurance activities were increasingly characterized by sporadic monitoring which invariably singled out already identified problems. Unfortunately, this particular QA mechanism proved inadequate for coping with developing problems as they emerged.

Responding to the need for a more comprehensive approach to quality assurance, JCAH revised its QA policy in 1985 by recommending continuous monitoring and evaluation of all departmental activities. Advocating a more global approach to quality assurance than that provided by the problem-focused method, JCAH suggested facilities develop an ongoing monitoring system for reviewing the institution's entire scope of practice by focusing on key aspects of patient care designated as "critical indicators." Consequently, JCAH currently espouses a planned, organized monitoring system which explicitly identifies:

1. The critical indicators of major importance to the department.
2. Specific mechanisms for collecting data related to these indicators.
3. A realistic timetable for data collection.
4. The individual(s) responsible for data collection, review, and evaluation.

The Joint Commission favors a monitoring system which is planned and comprehensive. Each department must identify as critical indicators those aspects of patient care which adequately portray the entire range of its services. In addition to demonstrating breadth, critical indicators should pertain solely to clinical—rather than fiscal or administrative—issues. An anesthesia department may, for example, choose as its representative critical indicators the following: indications for the choice of anesthetic; completeness of the preoperative and postoperative evaluation; and prolongation of recovery room stay.

In addition, JCAH strongly recommends a monitoring system which is ongoing and continuous. Although data should be collected and evaluated on a routine basis, JCAH does not specify the frequency of these activities in the interest of institutional autonomy. It is, however, imperative that the time intervals and the critical indicators selected by an individual unit should depict as fully as possible the range of services provided by all practitioners within the department. Consider, for example, an anesthesia QA committee which receives a monthly report on the number of patients requiring re-intubation in the recovery room but postpones evaluating this information until the end of the year. Thus, although ongoing monitoring is present, the gravity of this particular indicator makes an annual evaluation enormously inadequate.

Developing a unit-based QA plan

Armed with the latest JCAH requirements and an appreciation of the steps in the QA cycle, one does not just rush in—checklist in hand—and begin monitoring. Successful quality assurance is a carefully planned process. This is especially important at the unit level where good organization can significantly enhance a group's commitment to the QA goal of guaranteed excellence. Where, though, to start? We have sketched a flow chart depicting our conception of a unit-based QA program (Figure 1).

1. Establish a QA committee: The initial step in designing a unit-based QA program is establishing a departmental QA committee and electing or appointing a chairperson. In an anesthesia department, members of the group should include: the staff representation (which may be rotated periodically) from both nurse and physician practitioners. Ultimately, both the composition of the committee and the number of members depend upon unit-level interest in quality assurance, as well as departmental size and staffing policies.

In lieu of a QA committee, some departments may find it preferable to select a QA coordinator who, with the support of the department chief, is responsible for the overall management of unit-level quality assurance activities.

2. Organize the committee: From its inception, the committee should have a clear sense of direction and well-delineated lines of authority. The committee's role and its specific functions should be decided. What, for example, is expected of the group by the department? What is expected of the group by the hospital quality assurance committee? Because meetings and reports are the essence of any committee, the group may find it helpful to set up a tentative schedule of: routine committee meetings; recurring reports; and, periodic committee meetings to provide QA feedback to department members, service chiefs, etc.

Besides attention to administrative detail, probably the real key to a successful unit-based QA committee is establishing a regular meeting time and adhering to it faithfully. This is potent evidence to those not on the committee that quality assurance is taken seriously by the department and, thus, may be instrumental in reaffirming each practitioner's ongoing commitment to excellence.

3. Develop a QA plan: After a QA committee has been formed, a written departmental plan (even though it is not yet required by JCAH) helps clarify the purpose, goals, and objectives of the program. Both pur-
pose and goals should be congruent with the department’s philosophy of practice. The purpose, usually a terse sentence or two, should be a concise statement of the committee’s mission. An example of purpose could be to promote optimal patient care by developing and implementing unit-level mechanisms to ensure the continuous monitoring and evaluation of anesthesia practice.

Goals are generally broad, rather loosely structured statements which serve as signposts in the overall QA plan. For example, one goal might be develop a clearly defined, well-organized method for monitoring key aspects of patient care in an effort to identify trends, actual/potential problems, or areas in need of improvement.

Objectives are derived from the program’s goals and relate to their eventual achievement. Consequently, objectives are written in specific, measurable terms and should be both pertinent and appropriate to the setting. Although goals are relatively fixed, objectives tend to be more fluid and, thus, should be reviewed at specified intervals to determine their continued relevancy to departmental practice. For example, the departmental objective “to implement peer review by July, 1986,” once achieved, would no longer be meaningful.

Because the program’s purpose, goals, and objectives serve as the critical springboard to launch the unit plan, these should be arrived at jointly by both the nurses and physicians within the department. The more widespread the consensus, the more committed the group will feel about the plan itself.

Besides being crucial in getting a unit-based program started, goals and objectives also provide a tangible basis for evaluating the overall effectiveness of departmental QA endeavors. An annual evaluation of the QA program itself should be incorporated into the department’s plan. This gives the committee a chance to reflect on the program as a whole and consider, for example, if last year’s critical indicators still remain as valid gauges of practice.

4. Select critical indicators: Probably the most arduous task in initiating a unit-based program is the painstaking formulation of the plan itself. Although the plan always reflects the department’s most pressing concerns (such as, optimal patient care, safe equipment, proper credentialling of practitioners), rarely is the exact mechanism for achieving the various goals and objectives spelled out. As a result, implementing the plan in a manner which most aptly suits departmental needs requires an imaginative meshing of the QA process with JCAH’s continuous monitoring and evaluation.

Presently, QA monitoring is based on critical

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**Figure 1**

Model: Unit-based QA plan

- Develop a QA plan
- Select critical indicators
- Monitor critical indicators according to plan
- Analyze monitoring data
- Implement corrective action
- Evaluate action taken

Provide information to QA/RM committee

Establish a QA committee

Organize QA committee

Development and implementation of a unit-based QA plan
indicators—those aspects of practice which have the greatest impact on care. The QA committee should select several critical indicators which, when taken as a whole, reflect the entire range of services within the department. Obviously, choosing these indicators is a value-laden process. For example, we view the incidence of postoperative atelectasis much more critically than the preference of individual practitioners for a Miller or Macintosh blade. This is largely because the professional values, which we have internalized over time, hold the postoperative course as a far more telling estimate of safe anesthetic practice than blade selection.

Just as personal, professional, institutional, and societal values are inextricably intertwined in the initial value identification step of the QA process so, too, is our selection of critical indicators in response to JCAH requirements driven by this same set of values. Thus, the choice of critical indicators is representative not only of the department's scope of practice but of its value system as well.

5. **Monitor critical indicators according to plan:** After critical indicators have been determined, actual monitoring strategies can be devised. For each indicator, the committee should specify: how often monitoring will occur; the methodology to be used for monitoring; and, the individual(s) responsible for monitoring. Clearly specifying this information seems essential for the success of any QA venture.

The frequency of QA monitoring, as indicated earlier, has been left to the discretion of the individuals responsible for quality assurance activities. Monitoring should, though, occur often enough to generate data which consistently provides a flavor for the department's scope of practice. To accomplish this, daily checking of some indicators (such as anesthesia machine functioning) may be needed, while other areas (completeness of the anesthetic record, for example) may require less frequent monitoring.

Monitoring methodology usually centers on structure, process, and outcome criteria which are designed in response to a specific indicator and accurately reflect accepted standards of practice. Although the formulation and selection of the criteria which will be used to measure quality is the responsibility of the QA committee, all members of the anesthesia department should be involved in the process. Encouraging staff to make a personal commitment to the criteria helps transform it from "theirs" to "ours."

**Structure criteria** address patient care materials. Anesthesia, possibly more than any other specialty, has an enormous array of "materials" which must be kept functional in order to optimize patient care. Structure criteria may be appropriate for critical indicators concerning equipment, credentialling, or staffing patterns.

**Process criteria** reflect what is being done by the care provider for the patient. If, for example, "the efficiency of a rapid sequence induction" is chosen as a critical indicator, observation of individual practitioners using appropriate process criteria may be the most expedient monitoring methodology.

**Outcome criteria** are used to evaluate the end result of care. For example, if "a positive response to the anesthesia experience" is a critical indicator, a patient satisfaction survey may be an excellent means of monitoring outcome.

Structure, process, and outcome criteria can be measured using a variety of tools. Some of the most commonly employed include:

- **Audit.** Retrospective, concurrent, and prospective record reviews are easy and effective means of assessing care. Concurrent auditing may be slightly more advantageous than retrospective review because staff receive immediate feedback on actual or potential problems and corrective action can be initiated at once. Rather than an actual record review, prospective auditing generally refers to case identification in which a topic is selected for study and then appropriate cases are recorded from a given time forward (an example of this would be a log of the next 30 failed subarachnoid blocks). After the cases are identified, actual care may be evaluated either concurrently or retrospectively.

- **Interview.** Structured, semi-structured, and unstructured interviewing can be used to elicit complex information such as patient satisfaction. Each type of interview had distinct advantages and disadvantages which should be carefully weighed before a methodology is decided upon. For example, if the QA committee were interested in determining if a specific premedication had any effect, the fixed responses of a structured interview may provide adequate information. If, however, the committee wished to ascertain how a patient felt about receiving premedication, a more unstructured approach would be necessary.

- **Questionnaire.** With a questionnaire or survey format, written information is obtained directly from the individual. The respondent can remain anonymous and is allowed more leisure in which to reply than with a verbal intervention. Prior to general use, a questionnaire should be pilot-tested to make sure the desired information is being elicited. In addition, because completion of a questionnaire is contingent on the initiative of the respondent, a follow-up mechanism may be needed in order to enhance compliance.

- **Direct observation.** This is one of the most valuable methods for monitoring the care provided. To
assure sound data, observers should be well-trained and thoroughly familiar with the monitoring instrument being used. Additionally, observers should periodically be required to demonstrate their continued competency with the tool by interrater reliability testing. Direct observation should be done frequently enough so that individuals become used to being watched, a tactic which helps minimize the well-known Hawthorne effect.

In addition to specifying monitoring frequency and methodology, the QA committee should indicate which individual or group of individuals will be responsible for assessing each critical indicator. This enhances organization of the unit-based effort and helps eliminate needless confusion.

6. Analyze monitoring data: Analysis and interpretation of monitoring data is crucial in order to make recommendations to improve the quality of care. The QA committee's data analysis should focus on overall departmental performance rather than the performance of an individual practitioner. Positive as well as negative results should be addressed in the analysis. For example, "regular departmental continuing education programs for anesthesia staff" was selected as a critical indicator and monitored by a retrospective audit of the unit's continuing education records. According to the audit findings, monthly inservices had indeed been held but, during the past six months, less than 50% of the staff had attended the programs. The most frequently cited reasons for missing the presentations were heavy workload and lack of interest in the topic.

7. Implement corrective action: A plan of corrective action should flow logically from the data analysis. In the example of the department with poor inservice attendance, a survey was conducted to determine what type of programs practitioners would find most helpful. Inservice scheduling was evaluated and the program was shifted to a time more convenient for a majority of the staff. Finally, the departmental continuing education committee elected to tape presentations for those unable to attend. Planning and implementing these actions was a combined effort which relied on the unit's QA committee, the departmental CE committee, and staff input. By involving as many department members in the change process as possible, the QA committee hoped to spark widespread commitment to the corrective measures.

8. Evaluate action taken: Unfortunately, corrective action alone does not assure problem resolution; thus, follow-up by the QA committee is essential to determine if the expected results have been achieved. At the facility with faltering program attendance, continuing education records were reviewed six months after the inservice procedures had been revamped. More than 90% of the department either attended the presentations or listened to them on tape. Both informal remarks by individual practitioners and the formal inservice critique tool indicated a much greater degree of satisfaction with program relevancy.

9. Provide information to hospital QA/Risk Management committee and feedback to staff: A final and easily overlooked step is documenting and reporting all quality assurance activities. Although the exact format for documentation remains the prerogative of the individual institution, reports should, according to JCAH, contain at a minimum the following: (1) a list of the critical indicators routinely monitored; (2) the standards or criteria used in the evaluation process; (3) a narrative summary which evaluates the data collected regarding specific critical indicators; and (4) a conclusion statement indicating either that the present level of care is appropriate or that actual or potential problems exist. When a problem is identified, additional documentation is required which describes the corrective actions taken and their subsequent evaluation.

The 1985 JCAH standards do not require a specific time frame for reporting of monitoring and evaluation activities nor do they specify who should receive reports. The department QA committee is, perhaps, the most astute judge of how frequently reports should be made in order to reflect the ongoing quality assurance activities and to prevent real or potential problems from going undetected for protracted periods of time.

Because departmental QA committees do not exist in isolation but rather function in tandem with a hospital's overall QA program, a reporting mechanism should be established which facilitates a free-flow of information between the unit and the next level in the institution's QA hierarchy. Integration, coordination, and communication among departments is equally vital in strengthening and invigorating an institution's efforts to guarantee excellence in all areas of patient care.

Peer review

One final ingredient which may enrich a unit-level QA program is peer review, defined as colleagues examining the goal-directed care of colleagues. The peer review process uses specific critical indicators of care to evaluate the quality of practice. Although the primary objective of peer review is improvement of patient care, numerous secondary benefits accrue for both the individual anesthetist and the work place. Peer review stimulates clinicians to reflect critically on their own practice as well as provides an avenue for identifying levels of competence. Peer review can also dramatically enhance departmental functioning by encouraging the
examination of the strengths and weaknesses of practitioners as a group.

Although peer review examines an individual's clinical knowledge and practice, the evaluation mechanism should be based on written, objective, and mutually acceptable standards rather than subjective criteria such as personality traits. No matter how unbiased the criteria may seem, however, the initial implementation of the peer review process can be perceived as an extremely threatening experience if it is not structured properly. We have identified three distinct phases commonly encountered when establishing a peer review program: familiarization, utilization, and internalization (Figure 2).

1. **Familiarization** occurs during the early stages of developing peer review and is characterized by growing trust and the incipient realization that performance, rather than human worth, is being evaluated. As colleagues become more comfortable with one another, they gradually begin the dispassionate formulation of a workable peer review mechanism. The staff may require assistance from peer review experts during this phase.

2. **Utilization** typically involves trial and error responses. Records are audited; patient care observations are made; and critiques are discussed in peer review conferences. During this phase, objectives are refined and rewritten. Colleagues become more open with each other and feel less threatened when critically evaluating their peers' work or being evaluated by their peers. Not only are deficits of practice identified during this phase but attributes congruent with excellence (quality) begin to emerge as well.

3. **Internalization** is marked by complete actualization of the entire peer review process. Colleagues feel at ease with peer review and with each other. Each can constructively criticize the work of another without fear of reprisal. Objectives are well-defined and form the central focus for all subsequent peer review conferences.

If a department of anesthesia adopts the unit-based QA concept, peer review often becomes a natural mechanism for peer evaluation. In anesthesia nursing, peer review should not be limited to a record review but should also incorporate an on-site observational period at which time hands-on practice is judged against specific, observable critical indicators. Results of both clinical observation and chart review should be discussed during the unit's peer review conferences.

Over the years, rapid technological changes have revolutionized the practice of anesthesia nursing as anesthetists' roles have expanded into highly complex specialty areas. If anesthetists are to function independently in their more extensive roles, they must not only develop a sense of responsibility for the results of their practice but they must also learn ways of demonstrating accountability for their practice. One of the most potent ways of doing this is by opening one's practice to a critical review by one's peers. By participating in peer review, anesthetists signal their willingness to assume full accountability for their practice and acknowledge the confidence placed in them by the public and by the legislators who have successfully engineered the passage of expanded state nurse practice acts.

**Summary**

Ultimately, unit-based quality assurance blends JCAH requirements with the elements of the quality assurance process. Thus, critical departmental indicators are selected based on identified values. Suitable criteria, derived from established standards of practice, are agreed upon and appropriate methodologies for monitoring and evaluating are chosen. Peer review may be deemed a desirable means of monitoring care by individual practitioners. After instruments are constructed and refined, data are collected and analyzed. If indicated, corrective action is taken and the results are evaluated.

Unit-based quality assurance, thus, mirrors the overall QA process by attempting (1) to replace individual interpretations of practice with standardization.
and (2) to replace haphazard assessment with scientific measurement. Still, however, the QA process retains an inherent flexibility which fosters innovation and creativity on the part of each individual practitioner.

Test Yourself

1. What distinguishes the 1985 JCAH QA standard from its 1979 predecessor?

2. What is the significance of critical indicators in a unit-based QA plan?

3. What is the function of goals and objectives in a department’s written QA plan?

4. What monitoring methodology is most appropriate for assessing attitudinal information?

5. What are some characteristics of the internalization phase of the peer review process?

(Answers appear on page 221.)

SUGGESTED READING


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