
 North American
Partners In Anesthesia



October 25, 2013

**Evaluating
Efficiency &
Quality of
Anesthesia
Services**



So, You Think Your
Anesthesia Services Are
Good?

**GREAT, BUT HOW DO YOU
REALLY KNOW?**



**FABER
COLLEGE**

KNOWLEDGE IS GOOD
•1963•





Agenda

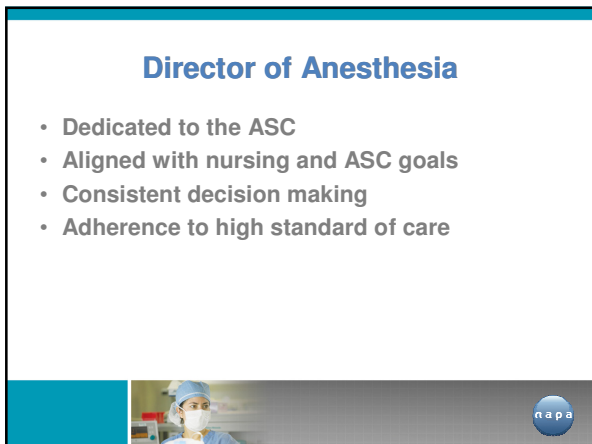
- Leadership
- Efficiency
- Quality Assurance
- Patient Satisfaction
- Monitoring Results
- Questions






Leadership





Director of Anesthesia

- Dedicated to the ASC
- Aligned with nursing and ASC goals
- Consistent decision making
- Adherence to high standard of care



Regular Meetings

- Assures all staff are aligned and “on the same page”
- Sharing relevant information on all aspects of operation and patient care
- Allows input from all members of the ASC
- Helps build cohesiveness and solidarity



Policies and Procedures

- Assures consistent and high quality patient service
- Safety standards
- Turnover and efficiency
- Patient satisfaction



Interaction with Staff

- Professionalism
- Approachability
- Respect
- Consistent presence for stability of the ASC



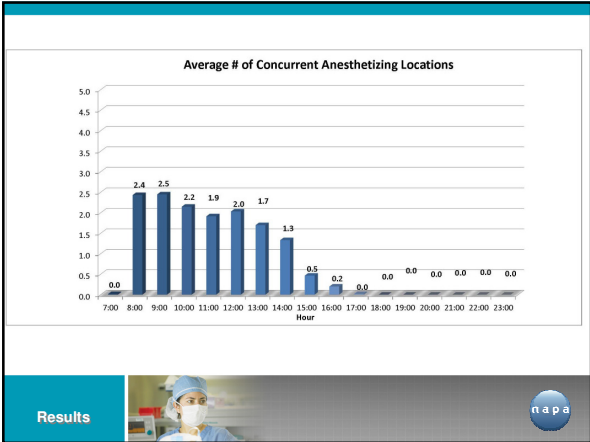
Efficiency

Staffing

- Staffing plan should take into account all locations and the number of ORs to cover each day
- Most efficient staffing model should be in place
- Delicate balance between efficiency and quality of patient care

Anesthetizing Locations

North American Patients in Anesthesia
 2010
 Number of Anesthetizing Locations
 Source: ASA, ASAQIP (2010)



Staffing Model

SAMPLE ASC Staffing Model

Location	MD	CRNA
Room 1	1	1
Room 2	1	2
Room 3	3	3
Room 4	4	4
Room 5	2	5
Endo Staff	8	6
Endo Staff	3	9
Vacation Coverage		
MD	4	7
CRNA	4	7

Vacation Analysis						
Type	# of FTE	of Week	Need	Available	Variance	
MD	4	6	24	52	28	
CRNA	7	6	42	52	10	
Total	11	6	66	104	38	

Assumptions	
MDs	9 Weeks vacation
CRNAs	6 Weeks vacation

Results

- ### First Case Start Times
- Department of anesthesia must lead this effort
 - Collaboration with surgeons and nurses
 - Data must be collected and distributed
 - Appropriate process modification
 - Measurement of feedback-modified outputs
- Results**

OR Efficiency

- The anesthesia and nursing departments together must enforce first case start times
- Appropriate ambulatory anesthetic techniques must be used
- Efficient OR turnover times must be a goal
- PACU flow can be improved with the appropriate anesthetic protocols



Turnover Times

- Data must be collected and reviewed
- Anesthesia department can facilitate
- Collaboration with surgeons
- Nursing and ASC staff need to support effective changes



Patient Transit Times

- Appropriate anesthetic techniques
- Preemptive analgesia
- PONV protocols
- Postoperative pain control



Contain Ancillary Costs

- Purchasing power
- Minimize drug wastage
- Appropriate care and use of equipment
- Analyze equipment costs (reusable versus single-use)





Quality Assurance

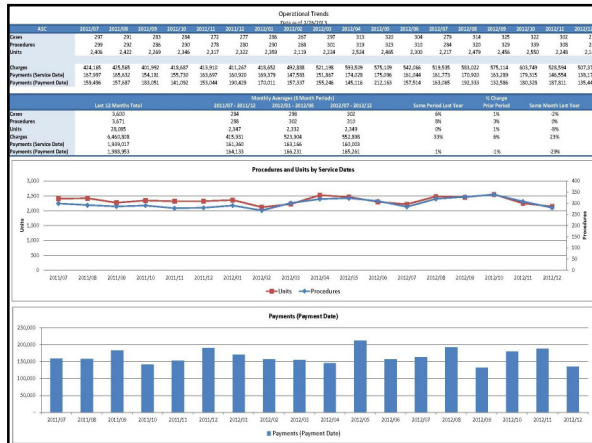
- Identify metrics by which the quality of service delivered can be reported and evaluated
- Must have reliable data collection
- System must be in place to use data to improve quality of care



Data Collection

- The anesthesia department can be a significant resource for QA data collection
- Types of cases, OR times, PACU stays, incidence of PONV, and overall OR efficiency can be tracked
- Efficiency and OR usage can be reviewed on an ongoing basis to effectively manage an ASC's overall productivity





Quality Indicators

- Perioperative outcomes
- Patient PACU experience
- Postoperative nausea and vomiting
- Postoperative pain
- Antibiotic timeliness
- DOS cancellation rate



Measure Complications

- Don't be afraid of identifying complications
- To make changes, you need to be able to reliably measure the event
- Information from these measures can then be used to institute a corrective course of action



Patient Satisfaction



Patient Satisfaction

- Patient satisfaction is directly tied to an ASC's success
- The patient's experience begins with PST and continues through the postoperative period
- Understanding the department of anesthesia's role in each step is key to success



Anesthesia and ASC Success

- Overall patient satisfaction is a key factor to success
- Patient's "likely to recommend" or "use facility again" scores are reliable indicators for an ASC's success
- Surgeons who view patient care as "high quality" are more likely to continue use of the facility



Satisfaction Measurements

- Postoperative phone calls
- Pain control
- Nausea vomit rate (PONV and PDNV)
- Overall experience



Role of Anesthesia in Patient Satisfaction

- Supervision and administration of PST
- Preemptive analgesia protocols
- PONV protocols
- Ambulatory anesthetic techniques
- Anticipation of postoperative pain requirements
- Effective and efficient use of the PACU



Monitoring Results

Mean Pain Scale

Fig 1. Example of the distribution of individual assessment patient reported pain scores within a single anesthesia department which includes a broad range of surgical procedure types. 95% confidence intervals for the mean pain scores and the overall sample level mean are displayed. The sample level mean score was 1.58 and an 11 point rating scale ranges from 0 to 10 where 0 is no pain. Variation in mean scores is attributable to case mix differences between individual anesthetists. In addition to a range of process and patient-related factors in the healthcare facility, anesthetic-related pain scores are generated during preparation of patients who come to the A.

Patient PACU Temperature

Fig 2. Statistical process control chart (P chart) plotting the weekly proportion of patients arriving in PACU with temperature below the recommended 36 C. Aggregating the data over the full duration of the timeline suggests that overall, 5% of patients arrive in recovery cold. This is a good representation of the performance of perioperative warming processes, however, which process control charts reveal. In reality, the reliability of the process varies over time as a function of routine fluctuation and significant special causes. Evidence of special causes may be effectively tracked by violation of control chart rules associated with data points which fall beyond control limits, which contribute to statistically significant trends or shifts in the process over time. Interpretation of the chart requires that the control chart data points represent such violations that warrant further investigation to either correct detrimental effects of underlying work or driving sustained improvement.

Cybernetic Feedback Loop

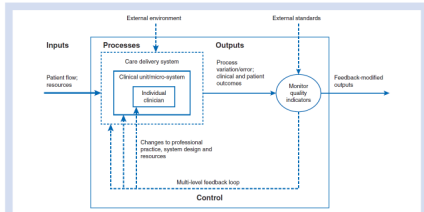


Fig 1. The healthcare system as a basic cybernetic feedback loop based upon monitoring quality indicators. Information concerning outputs from the current system is fed back to an earlier stage to modify processes in order to achieve enhanced future performance. Feedback may target multiple levels of the system: the organization, the clinical unit, and/or the individual clinician within the clinical unit, the specific information requirements of each end-user group being different.





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