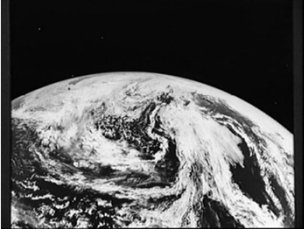


OR Management on Planet Earth

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Why are we here?

Why is this important?

Disclaimers

- None

Show of Hands please

- How many of you are in charge of an OR or Perioperative Business Unit?

Learning Objectives

1. The participant will learn current definition of OR terms (e.g., allocated block time)
2. The participant will learn the difference between long term and day-of-surgery decisions
3. The participant will learn a strategy for day of surgery decision making
4. We will discuss some common misconceptions in OR management

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- How many of you run the OR “board” or “desk” or “bridge” on a regular or occasional basis?
- How many of you work in an operating room?

A Personal Story

Why I get excited about OR Management

The problem, the journey and eventually some small successes

OR Management Headaches

Give me a list of common OR management headaches

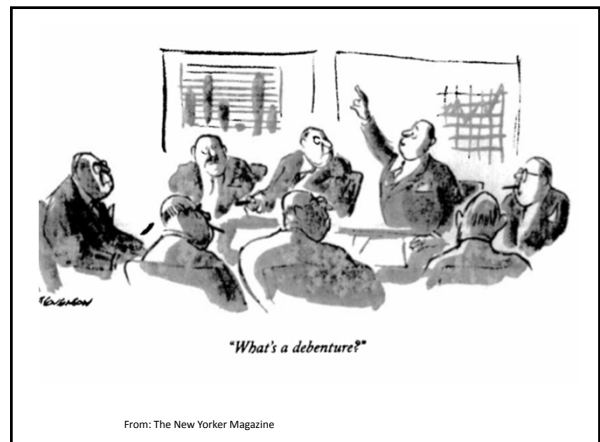
“I’ll start: Bad surgical time estimates”

Act 1

Some Definitions

Theory vs. Planet Earth

- What goes wrong in the real world?
 - Patients don’t show up or are late
 - Cases run late
 - Cancellations
 - Equipment failures
 - Politics



First a few Definitions

- OR Time: “wheels in –wheels out”

Urgent Cases

- Any case which cannot be delayed 72-hours or the patient may suffer avoidable morbidity

Surgical Service

- A group of surgeons who share allocated time.
Allocation of block time is by service not individual surgeon

Turnover Time

- The time between one patient departing the room and the next patient entering the room (“Wheels Out” to “Wheels In”).

Elective case

- Any case that is scheduled prior to the elective schedule closing, and which can safely wait that interval of time without sustaining increased morbidity.

Prolonged Turnovers

- Turnovers greater than or equal to >15 beyond average turnover with average calculated excluding turnovers greater than 90 minutes.

Workload

- Total hours of cases including turnovers
 - Only consider elective cases for block allocation

Over-Utilization OR Time

- OR workload – allocated time (or zero if this number is negative.)

Utilization

- Utilization – utilization is equal to the OR workload divided by the allocated OR time.

– Turnovers – include or don't include?

Abouleish et al, Inclusion of Turnover Time Does not Influence Identification of Surgical Services that Over- and Under-Utilize Allocated Block Time (Anesth Analg 2003; 96:813-8.

OR Efficiency

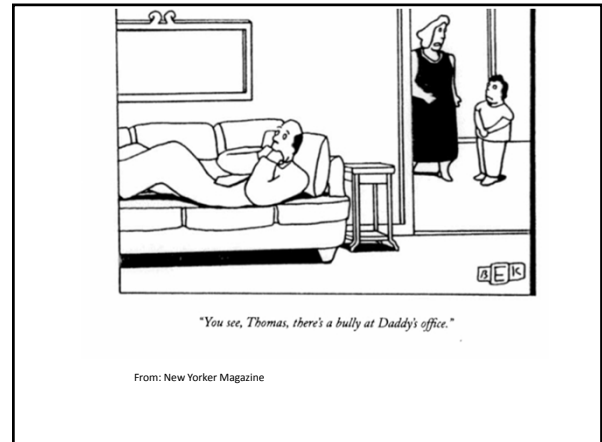
- Defined negatively
- OR Inefficiency = [(cost/hr underutilized) x (hrs underutilized)] + [(cost/hr overutilized) x (hrs overutilized)]
- **OR Efficiency is maximized when OR inefficiency is minimized.**

Under-Utilization

- Under-utilization is equal to the allocated OR time less the OR workload (or zero if the value is negative).

Act 2

The Dreaded OR Committee



OR Governance: Key Characteristics

- Manages
 - OR, PACU, OR scheduling, block time qualifications and allocation, monitors utilization
- Utilizes clearly defined data elements and consistent methodology
- Member qualifications:
 - Self interests second, understands the financial situation, politically astute, effective negotiator, active listener, act as champions, accept responsibility

Act 3

Block time allocation

OR Governance for Safety

OR Manager: 29(1) 2013

- Perioperative governing body
- Single path for surgical scheduling
- Pre-anesthesia testing with standardized protocols +/- hospitalists
- Document management for scheduling and PAT
- Excellence in Sterile processing
- Crew management
- WHO Checklist
- Daily Huddle, error reporting, just culture

Allocating Block time

- Strategic
- Tactical
- Operational

Strategic Decisions

- Decisions several years made several years in advance; these decisions may include long-term planning and expansion decisions.

Every OR Committee's Favorite
Statistic

UTILIZATION

Tactical Decisions

- Allocation decisions made up to one year in advance based upon estimated OR Workload regarding needed resources.

Don't use utilization alone to allocate
block time

- Utilization may be inflated
- Utilization varies by individual surgeons
- Differing case durations

Operational decisions

Short term (weeks and days)

**Why is utilization a poor method of
allocating block time?**

- Optimum utilization varies by subspecialties
- Increasing utilization can impair growth
 - E.g., ICU bottleneck
- Utilization and patient wait times
 - Introduction of new surgeon

More utilization Flaws

- High utilizations can reduce revenues
 - If too high wait times may increase
- High utilization does not equate to potential for growth
- Utilization poorly related to contribution margin
 - Two service may have equal utilization but one should get more time and the other stay the same or have it reduced.
- and variable costs

Day of Surgery Decisions

- Setting priorities
- The time is noon. Block time ends at 4PM
 - Two cases to be added on. One operating room is immediately available and another will be available in two hours.
 - The first case to be requested will last two hours and the surgeon and patient are ready now.
 - The second case to be added on can't start for one hour and will last 3 hours.

What is a better method?

Who goes first?

What are the rules to guide you?

Act 4

Decision Making on the Day of
Surgery

The Airport Exercise

example borrowed from Frank Dexter MD

- You work for company
- An important visitor is arriving today at 5PM
- Design some instructions detailing how to pick up the visitor from the airport

Some “solutions”

- Mary borrowed a sports car, drove 90 mph through rush hour but arrived in time to pick up visitor.
- Jimmy is afraid of terrorists so even though it was his task he never showed up
- Billy wants a latte so leaves an extra 2 hours for this
- Mary drives safely and directly to the airport but arrives at 10 AM and waits the entire day at the airport for the visitor

Ordered priorities for Airport Exercise

1. Safety
2. Show up (do not cancel)
3. Minimize the time arriving early
4. Minimize the time the visitor has to wait
5. Personal preference

Priorities do not change by personal preference

They are thought through in advance!

Ordered Priorities for Perioperative Services

1. Patient Safety
2. Open access to OR time on any **future** workday. No Cancellation of scheduled cases.
3. Maximize OR efficiency by minimizing hours of over-utilized OR time (Cases done outside of staffed, allocated time.)
4. Reduce patient waiting by minimizing tardiness for elective and urgent cases
5. Personal Satisfaction.

Now, order these correctly

- Personal preference
- Minimize minutes showing up early
- Safety
- Minimize minutes visitor has to wait
- Show up (do not cancel)!!

Back to our clinical Scenario.

Which surgeon goes first?

Additional day of surgery principles

- First come first served?
- Minimize % cases delayed or tardiness?
- Use bin packing

Back to Solving our Initial Problem

- Rearranged block times
- Set ordered Priorities
- Developed OR Governance Structure

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Results

- Created elective and non-elective blocks that mirrored actual use over a nine month period.
- No actual decrease in service block time.

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- Improved morale and reduced turnover

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- Reduced overtime through reduction in over-utilized time
- Improved morale and reduced turnover
- All this was achieved while absorbing significant volume increases.

What can we learn from turnover time analysis?

- Respect everyone's time
- How may uncover patient flow problems. Is your process linear or lean?
- Do you use raw or corrected turnover time? How do you investigate delays?
- Do surgeons perceive turnover as the time they leave the room?
- If we reduce turnovers can we better match block staffing?

One More Thing

A few thoughts on turnover time

Don't focus on turnover time!

- "Achieved reductions from baseline average turnover time less than 40 min result in only small reduction in staffing costs unless the cases are very short."
- "...there is a dichotomy between these results and the apparent importance attributed by surgeons and other clinicians to turnover times. Many OR committees are enamored of the topic."
– Dexter et al, *Use of Operating Room Information System Data to Predict the Impact of Reducing Turnover Times on Staffing Costs* (Anesth Analg 2003; 97: 1119-26)

Focus on turnovers is usually for the wrong reason

- Frequently cited by surgeons and administrators as indicative of efficiency of OR
- "we will do more cases and therefore make more money"
- That said, there is some value in exploring turnovers.



"I like to think of myself as a nice guy. Naturally, sometimes you have to step on a few faces."

From New Yorker Magazine