

Work Flow Control

Improving Healthcare Productivity,
Satisfaction, and Outcomes

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The beauty of flow™

What this talk is about ...

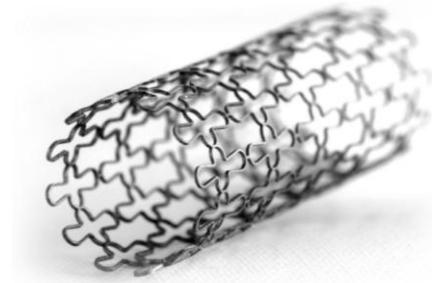
- ✓ Vastly improving healthcare efficiency

How we do it ...

- ✓ Through work flow control systems

Work flow control systems

- ✓ Provide real-time, actionable information directly to each individual across an organization to help continuously coordinate and direct their activities
- ✓ Fundamentally different than traditional IT focused on data entry and retrieval for after-the-fact measurement and management reporting



What makes them successful ...

- ✓ Four necessary components → sufficient only when highly integrated
 - ① Real-time tracking
 - ② Simplified input and transparent communications
 - ③ Dynamic rescheduling and facility coordination
 - ④ Jeopardy alerting and individual prioritization



Necessary → sufficient components

- ① Track in real-time occurrence of all critical events and status of all critical resources including people, places, and equipment
- ② Super-simplify end-user input and widely distribute information that is transparent and immediately actionable
- ③ Continuously modify master schedule to coordinate and optimize facility-wide productivity
- ④ Automatically alert appropriate personnel when immediate action is required to prevent delays

Historical precedence

What started as significant competitive advantage, became
necessity for survival



1960's – Continuous flow
manufacturing

1970's – General
manufacturing

1980's – Package
delivery



1990's –

Transportation



2000's – Financial/insurance
services

2010's –

Healthcare

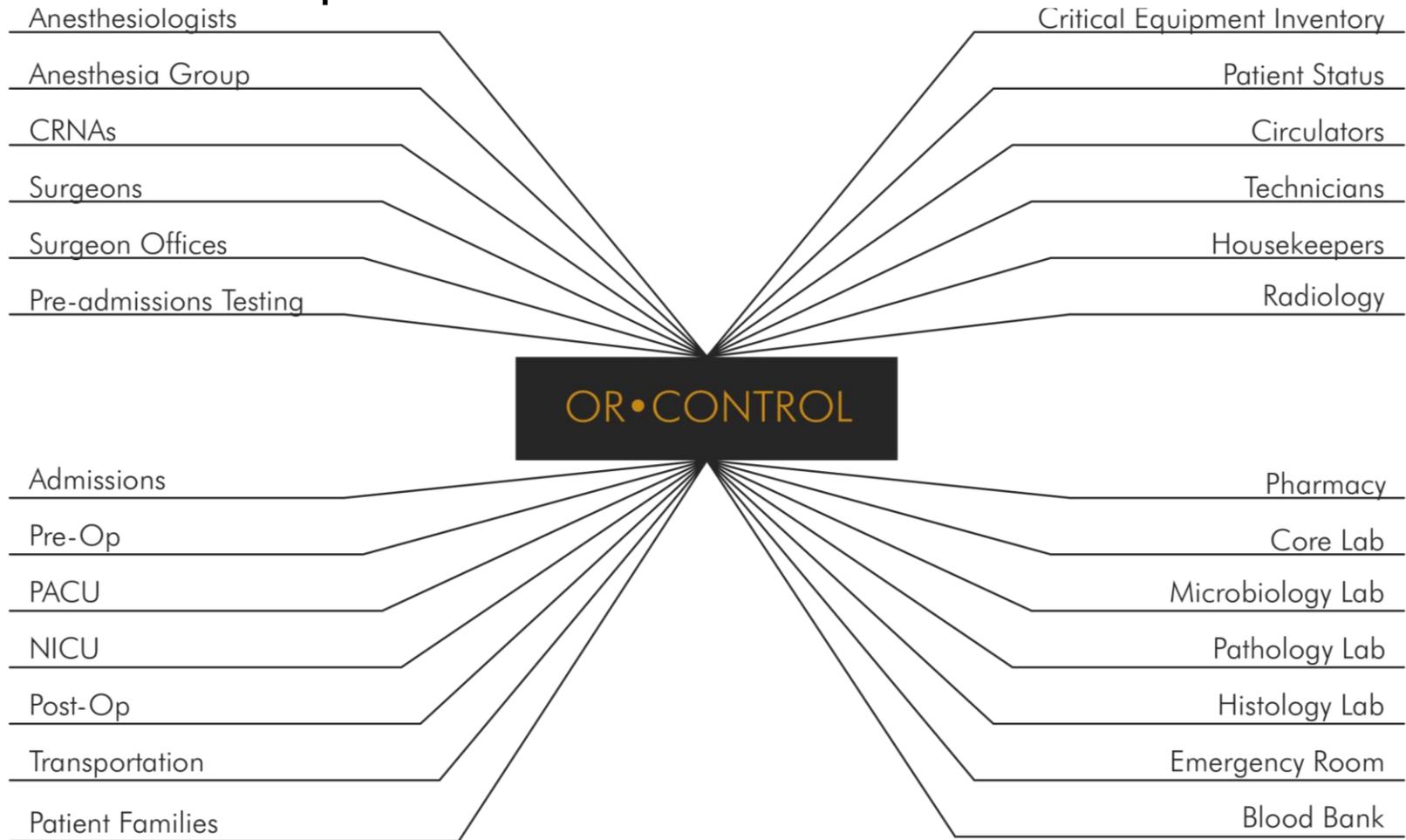


OR CONTROL system

- ✓ Uses real-time location system to automate tracking of critical events and activities
- ✓ Displays continuous, real-time status updates of procedures, patients, rooms, staff assignments, and critical equipment
- ✓ Automatically updates master schedules in real-time coordinating physicians and staff within and outside the facility
- ✓ Generates jeopardy alerts identifying the non-occurrence of critical events required to maintain on-time starts and efficient throughput

OR CONTROL scope

Real-time coordination across all necessary groups and departments



OR CONTROL real-time coordination

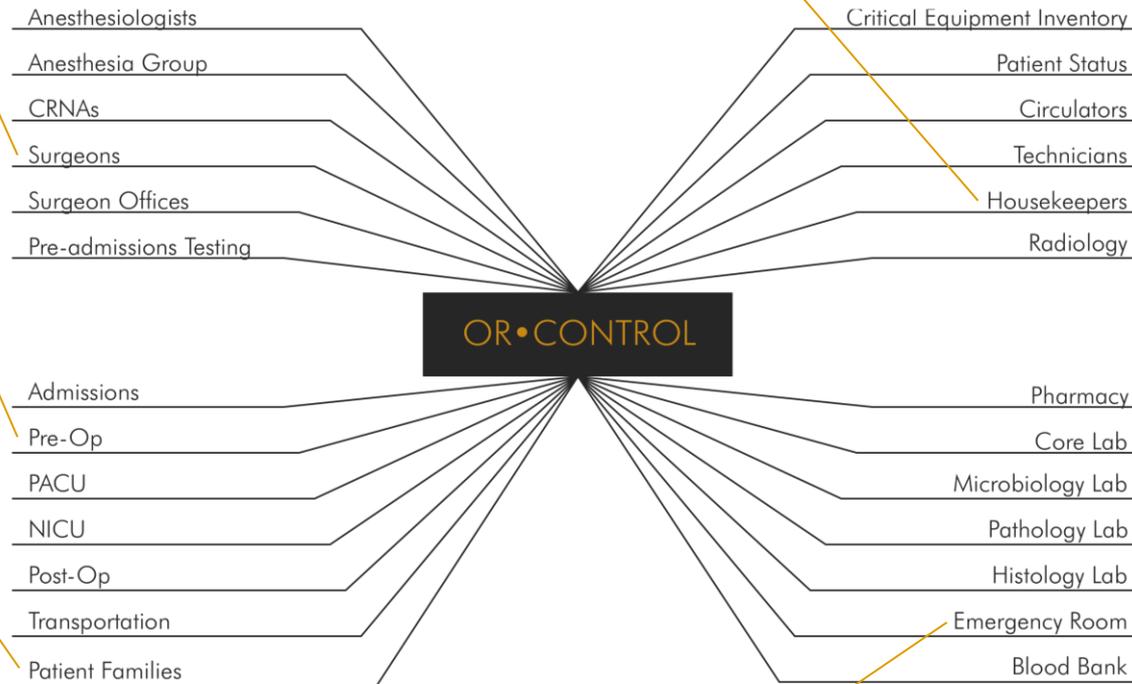
Surgeon receives ORC text that patient has wheeled into OR 4, she immediately proceeds to scrub up. Pre-op nurse consults ORC, sees next patient is now registered, she immediately proceeds to get patient. Family gets ORC page, their case is closing, they proceed to meet surgeon for consult.

Housekeeper consults ORC hall display, sees case in OR 6 is delayed, proceeds to help colleague turn OR 15 needed in 4 minutes

Time: 10:05:37 Pharmacy enters meds ready for OR 12 case, enters note asking for weight of patient for case in OR 9, pre-op nurse calls in weight

Path lab glances at ORC, sees case in OR 8 began at 9:53, expects tissue sample now

ER nurse schedules emergency add-on in ORC, ORC automatically notifies all parties and asks for acknowledgement of add-on



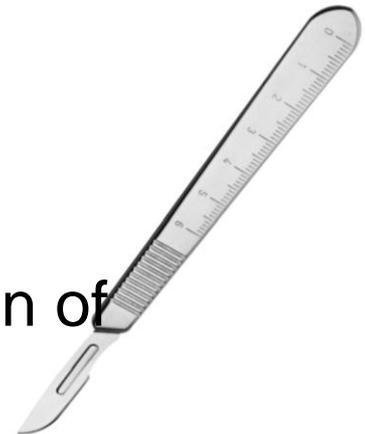
COO/CNO justification

- ✓ *OR CONTROL* documented operational benefits
 - ✧ On-time first start of the day – improved 28%
 - ✧ Patient wait times – reduced 35%
 - ✧ To-follow turn times – reduced 50%
 - ✧ Improved case throughput and reduction in overtime
 - ✧ Improved focus on patients even with 30% volume increase



CFO justification

- ✓ *OR CONTROL* – hard dollar business case
 - ✧ Documented ROI of over 350% in first three months
 - ✧ Improved case throughput, \$5,500 margin/case
 - ✧ Identification/collection of uncaptured revenue
 - ✧ Capital expenditure delay on expansion of facilities



CIO justification

- ✓ *OR CONTROL* – mitigating costs and risks
 - ✧ One-way interface with existing systems
 - ✧ Does not duplicate or alter existing clinical reporting
 - ✧ Requires minimal end-user training (similar to ATM)
 - ✧ Requires less than 80 total clinical staff hours to deploy
 - ✧ Requires less than 160 total IT staff hours to



Will healthcare transformation occur ...

- ✓ Overcoming inefficiency, improving quality
- ✓ Optimist / pessimist / possibilist
- ✓ It can be done (DCMC, MEDVAMC)
- ✓ Miniscule effort/resources needed compared to other healthcare initiatives