

**The
Strategy
Unit.**

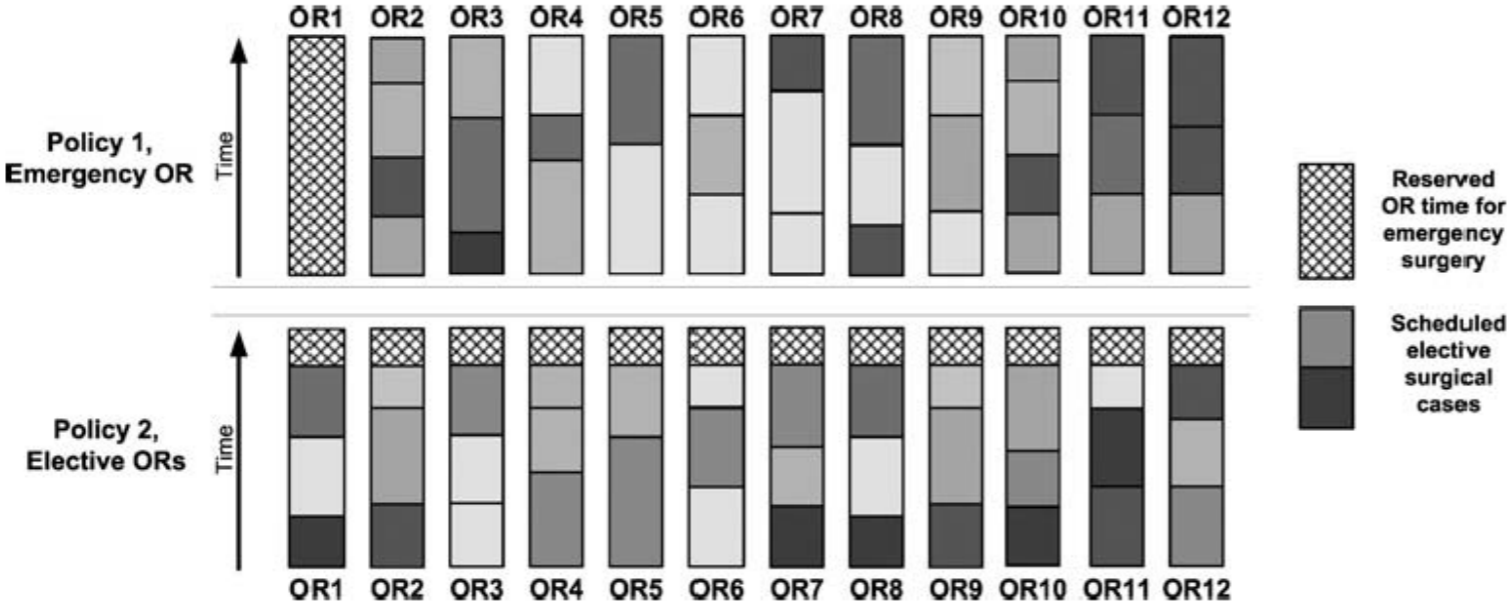
Dedicated emergency operating theatre



Midlands and Lancashire
Commissioning Support Unit

Background

- Two basic policies for reserving operating theatre (or room) for emergency patients
 - Dedicated emergency OR
 - Reserve capacity in all elective OR
- The IHI 2003 recommended a dedicated emergency OR



Separate or Interchangeable ORs for Emergency and Elective Surgeries

Wullink et al. (2007) compared two scenarios of reserving Operating Room (OR) time for emergency surgeries:

- 1) Having dedicated emergency ORs
- 2) Evenly reserving capacity in all elective ORs

They compared the two scenarios using Discrete Event Simulation (DES) models and considered 3 outcomes:

- 1) Waiting Time (for emergency surgery)
- 2) Staff Overtime
- 3) OR Utilisation

Results

Measure	Dedicated OR	Interchangeable
Waiting Time (emergency surgery)	74 minutes	8 minutes
Total overtime per day	10.6 hours	8.4 hours
Operating Room Utilisation	74%	77%

“Emergency patients are operated upon more efficiently in elective Operating Rooms instead of a dedicated Emergency OR. The results of this study led to closing of the Emergency OR in the Erasmus MC (Rotterdam, The Netherlands).”

Wullink et al. (2007)

Design stage learning and evaluation

Where possible, test ideas/plans/theories on the desktop

Discrete Event Simulation

Systems Dynamics

Statistical Models

Decision Analysis/Modelling

Literature

Plans should be designed to fail fast and safely

Reflections...



Share your insights...



Any key insights...



So what...
(any scope for application)



One wish...

References

- Wullink, G., et. al (2007). *Closing Emergency Operating Rooms Improves Efficiency*. [online] Available at: <https://link.springer.com/article/10.1007/s10916-007-9096-6> [Accessed 22 Jan. 2020].
- Kolker, A. (2012). *Healthcare Management Engineering: What Does This Fancy Term Really Mean?*. New York, NY: Alexander Kolker.

Separate or Interchangeable ORs for Emergency and Elective Surgeries

Kolker (2012) simulated two scenarios, one with separate Operating Rooms (ORs) for Emergency and Elective cases, one with “Pooled” ORs where surgery starts in the first available theatre. In both cases, Emergency cases present randomly (on average every 6 hours), whereas elective cases are scheduled every 2 hours from 7am to 5pm.

	Dedicated OR		Pooled OR	
	Elective	Emergency	Elective	Emergency
Number of performed surgeries	28-29	20-21	30	20-21
Average wait time, hours	2.6	0.45	0.15	0.18
Average numbers of patients in Queue	0.72	0.09	0.04	0.03
Average Weekly OR utilization	99%	35%	46%	