

**Integrating the daily
management of acute
and elective patients**

The Ultimate Hospital Pass?



A Hospital Pass

Being set up to fail

- Intentionally or otherwise
- Initiating a process, without concern for the outcome
- Book and Hope
- Integrated Hospital Management is the goal
 - Lessons from Air NZ.

Background

- Whakatane Hospital House Surgeon 2 years
- Norfolk and Norwich Hospital, Anaesthetic SHO
- Rotorua Hospital, Anaesthetic Registrar
- Waikato Hospital, ICU and General Medicine
- Christchurch Hospital, Anaes Reg 2 years
- ICRC Hospital, Peshawar
- Royal Children's Hospital, Melbourne, 2 years
- King Edward Hospital, Durban, 2 years
- Christchurch Hospital, 2 years.
- Waikato Hospital 15+ years

Background and Interests

- B Sc, (Economics) U of Canterbury 1973
- MB ChB, U of Otago 1979
- FCANZA 1986
- MBA, U of Waikato 1996
- Coaching Qualifications
 - Sailing, Field Hockey
 - Differences between amateur sport and elite surgeons
- Avid Reader

Case Study

Mrs WE, age 74

- No current medical problems
- # NoF on the tennis court
- Admitted to WH, mid Friday am
- ORIF following Tuesday
- Post Op Collapse
- Died 48hrs later in ICU of a massive pulmonary embolus



Service and Quality Coordinators Goals

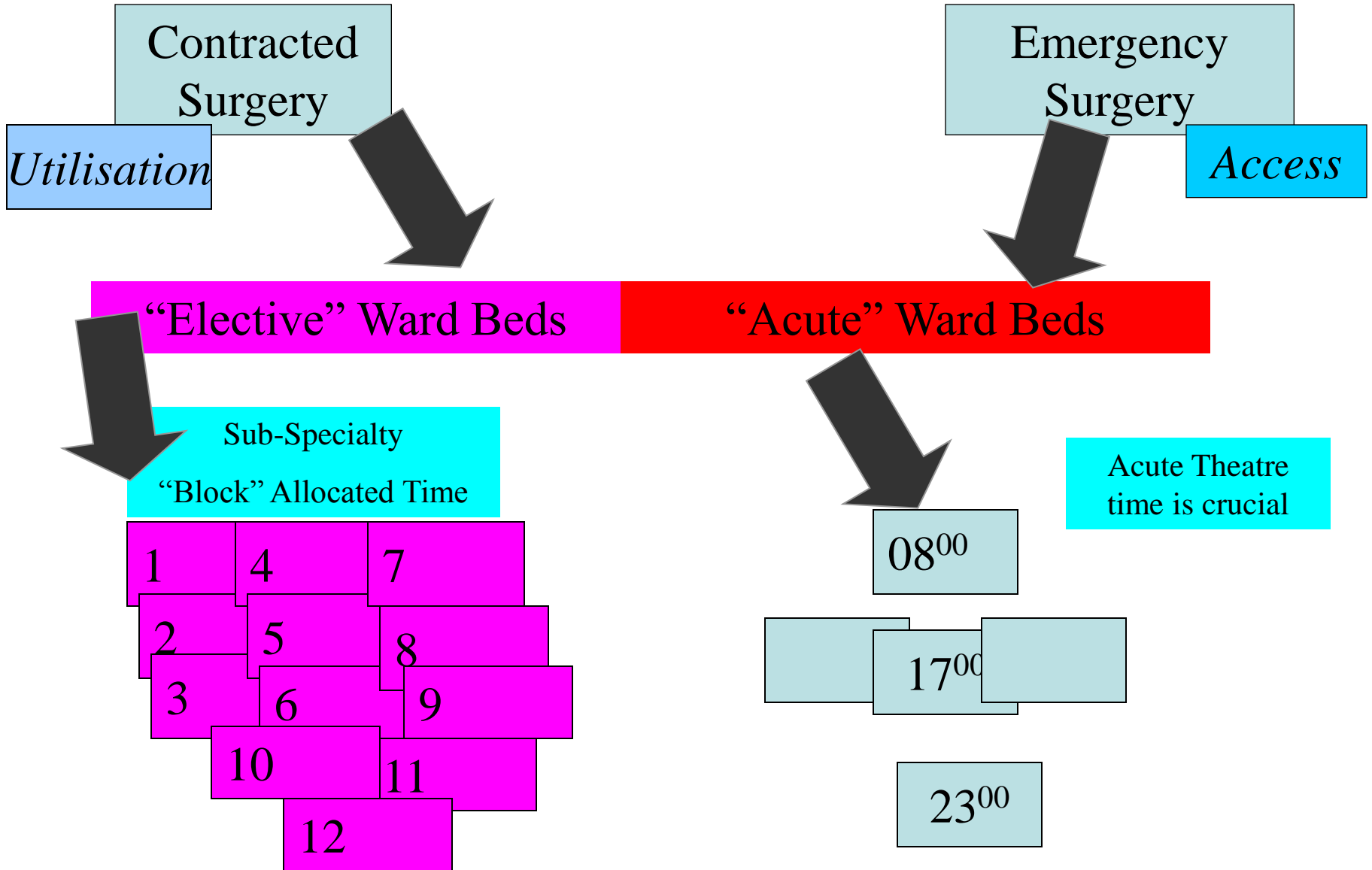
- Reduce patient falls
- Reduce medication errors
- Improve our hand hygiene practices
- Implement a safe patient care programme.
- Ensure that clinical audit is carried out in every clinical unit
- Set up the Health Waikato mortality committee to reduce avoidable mortality

What Business are we in?

- Acute Care
 - Sick and Injured of the Midland Region
 - RMO lead
- Elective Surgery on a “space available” basis
 - Dependent upon slicker acute processes
 - Take care of acutes and electives will take care of themselves.
 - Has a high priority politically
 - Lots of drivers to make more elective space available
 - SMO lead

Staff (Doctor) Centred Care

- Our ideal patient
 - Gets sick between 0800-1600
 - Has a simple condition
 - Can diagnosed and treated by junior medical staff
 - Doesn't require inputs from any other service.
 - Exception
 - Midland Regional Trauma Service (Specialist Lead)



ELECTIVES & ACUTES INTERACTION

Acute Surgical Care

Emergency
Surgery

Ward Bed

Demand Push (or Pull)

Acute Theatre
Allocation in key
to total
performance

08⁰⁰

17⁰⁰

23⁰⁰

Emergency Admissions
queue for in ward beds
for their spot in acute
operating theatres

ACUTES

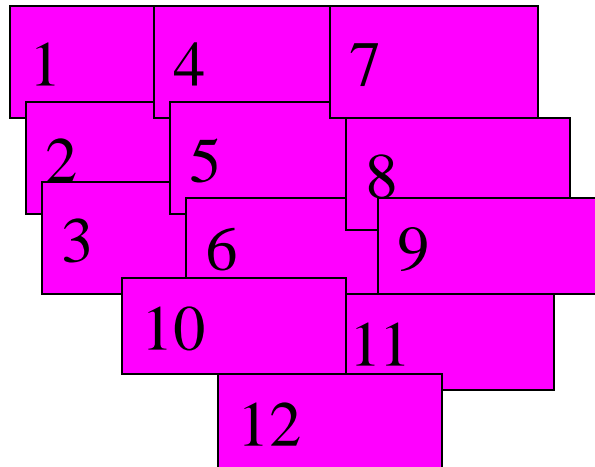
**Elective Surgical
Care**

Supply Pull

“Elective” Ward Beds

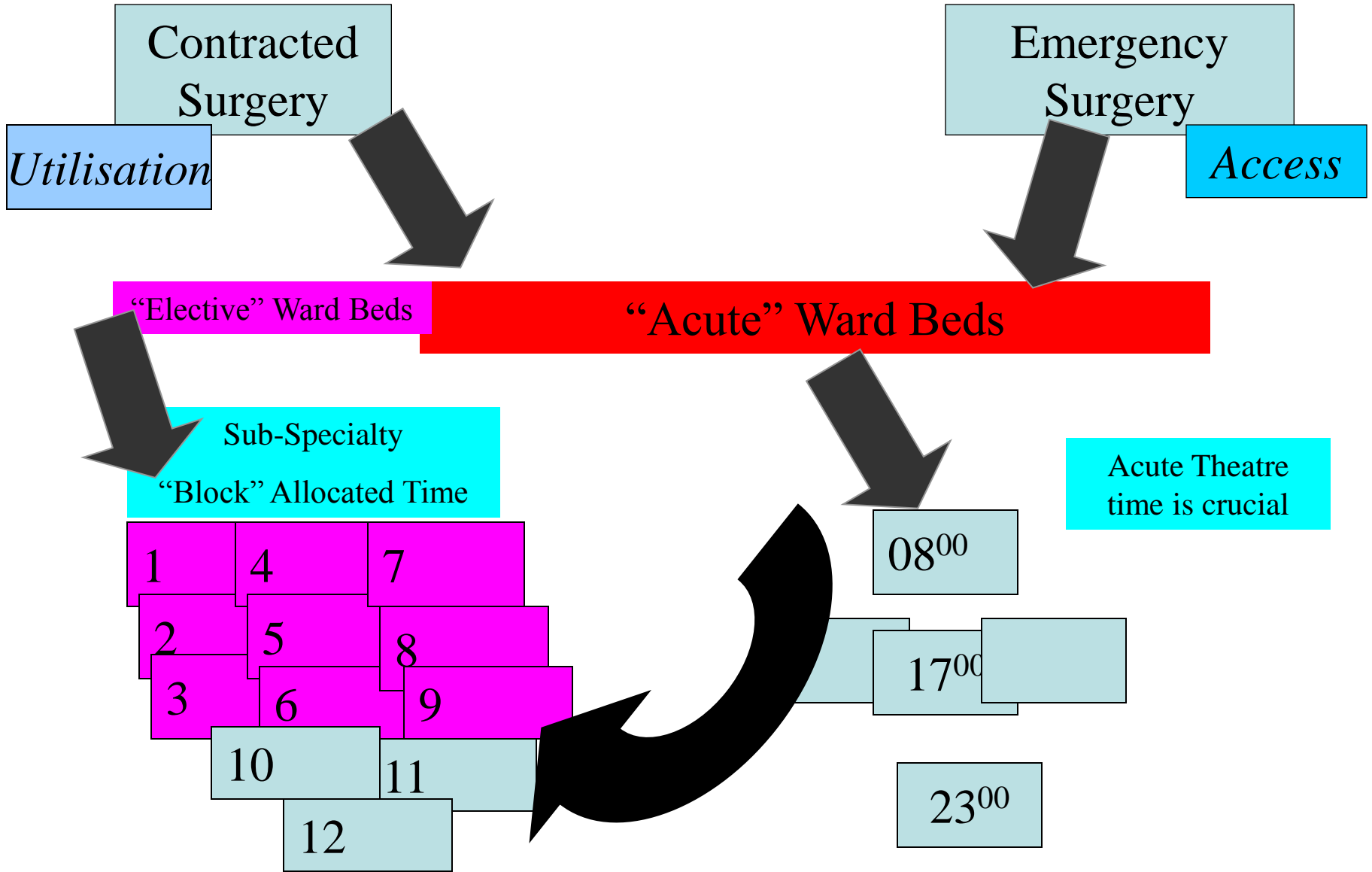
Sub-Specialty

“Block” Allocated Time

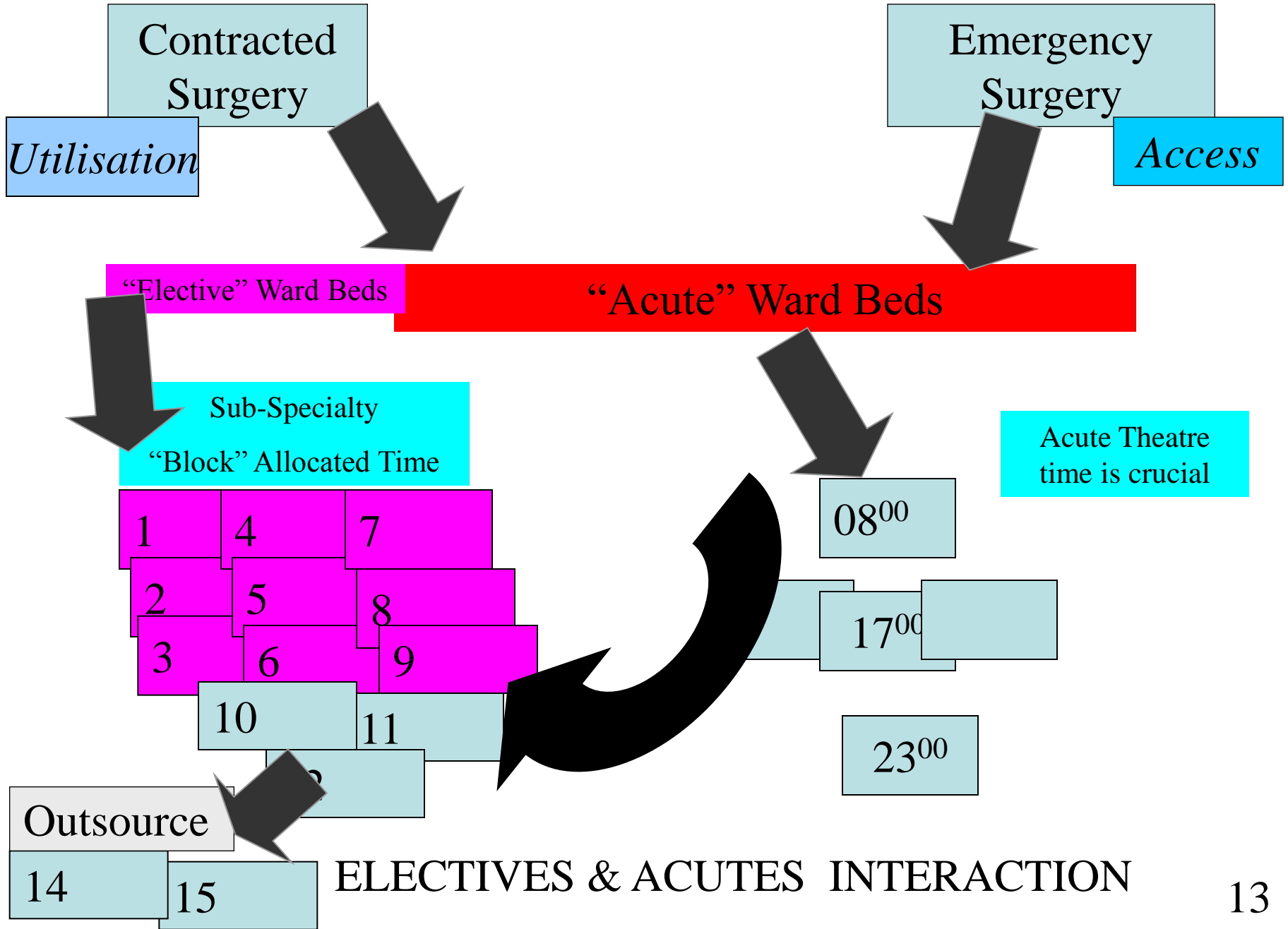


Individual specialties populate
theatre time allocated in the
Master Schedule

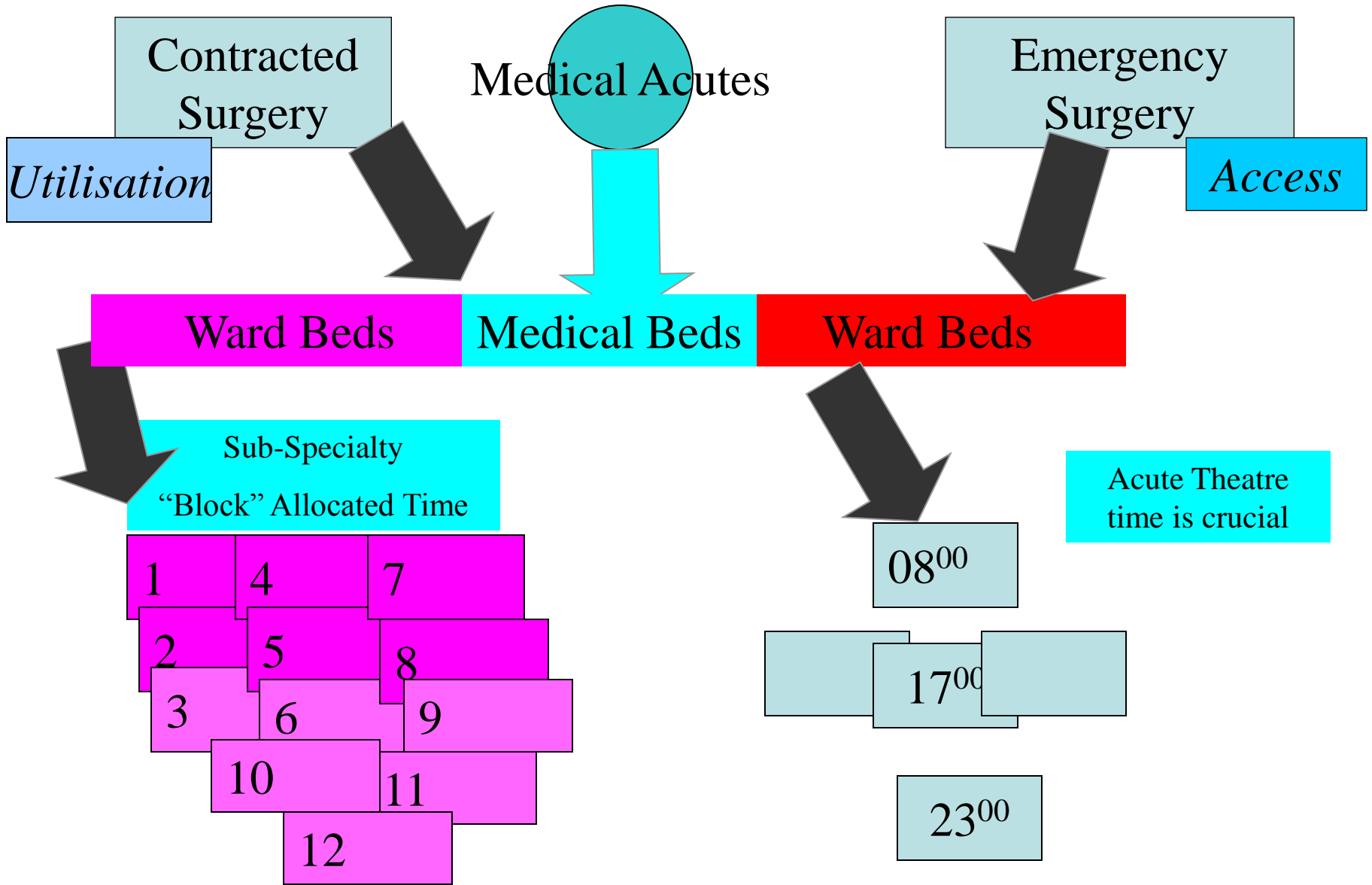
Elective Admissions have a
bed “footprint”



ELECTIVES & ACUTES INTERACTION



ELECTIVES & ACUTES INTERACTION



Acute Surgical Care

Emergency
Surgery

Ward Bed

Acute Capacity is Crucial

Acute Theatre
Allocation in key
to total
performance

Emergency Admissions
queue for in ward beds
for their spot in acute
operating theatres

08⁰⁰

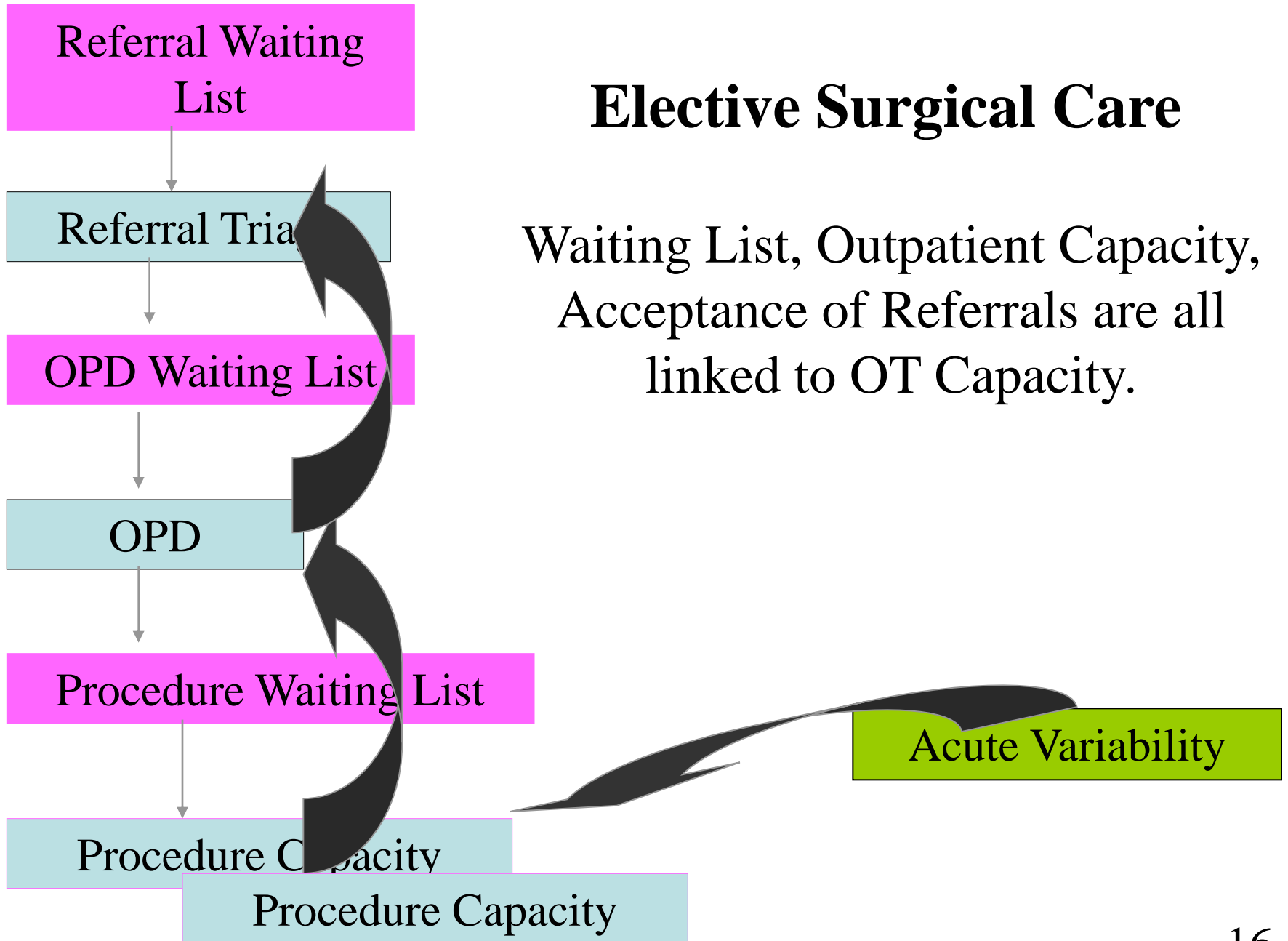
17⁰⁰

23⁰⁰

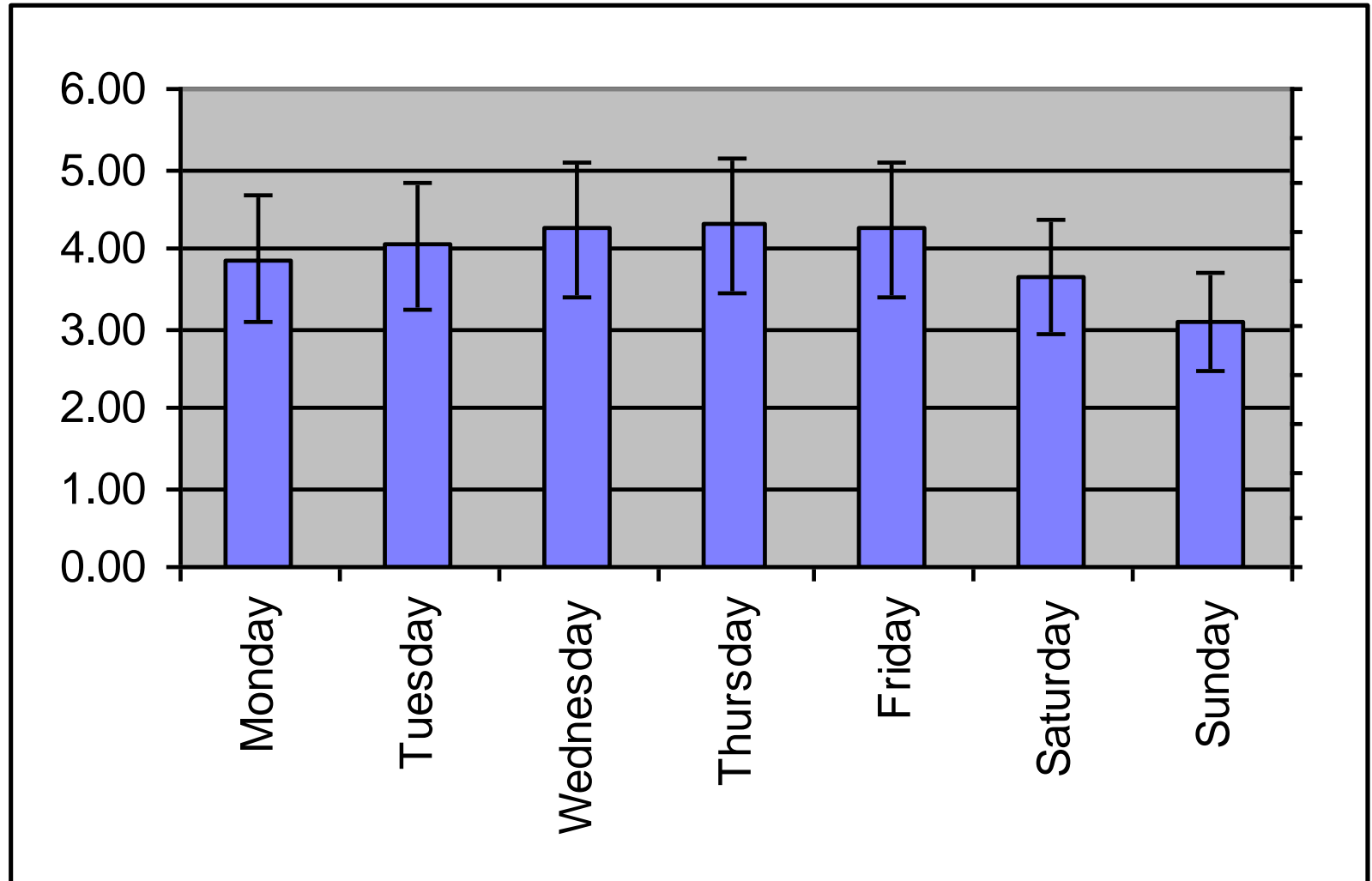
ACUTES

Elective Surgical Care

Waiting List, Outpatient Capacity, Acceptance of Referrals are all linked to OT Capacity.



Relative Operating Time per day



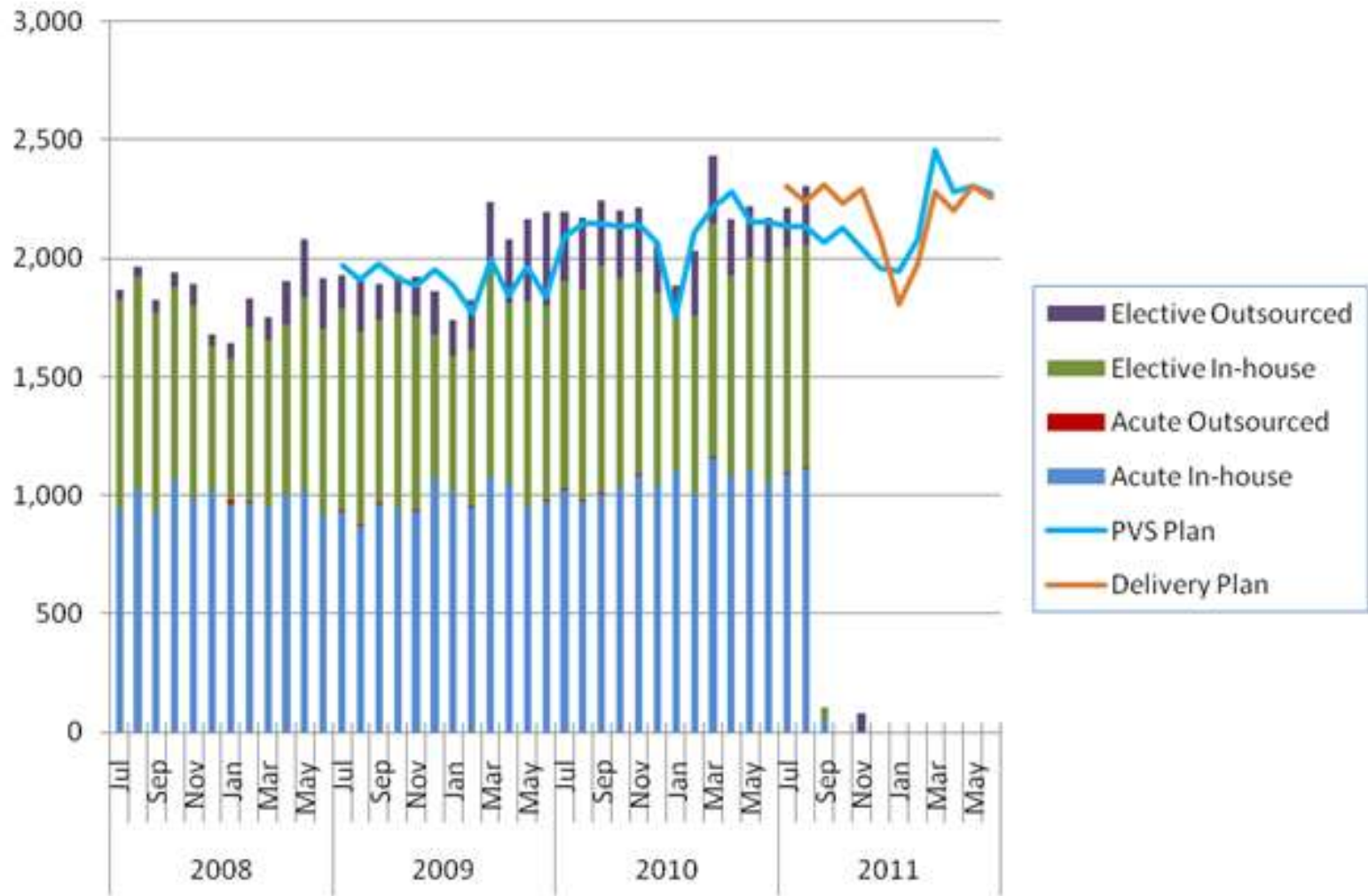
Acute OTs per week.							
	Mon	Tues	Wed	Thurs	Fri		
Week1	4	5	8	4	8	29	
Week2	4	5	5	7	8	29	
Week3	4	7	6	5	8	30	
Week4	4	4	6	7	5	26	
Av Sessions	4	5.25	5.75	5.75	6.75	28.5	
All Day Lists	2	2.6	2.6	2.6	3.5	15	

Additional time from short notice elective cancellations and evening acute OTs

Schedule Revision

- Dedicated all day acute theatres
 - Orthopaedics, General, Plastics
- Increased the numbers of all day lists
- Lean principles (5S)
 - Load Levelling
- Pole position patient each morning
 - Conflict with teaching and rounds
- Dedicated General Surgery Theatre
 - Competition from other cases
- Two Anaesthetists in acute OTs, with dedicated Nursing Staff Theatre
- Reducing evening downtime
- Structured proactive escalation process
 - Must anticipate the daily acute load
 - Demand peaks occur 1 in 4 days
 - Traffic light report
- Regular Nursing Co-ordinators
 - Seven days a week, 10hr days.

Surgical Discharges - Waikato Hospital

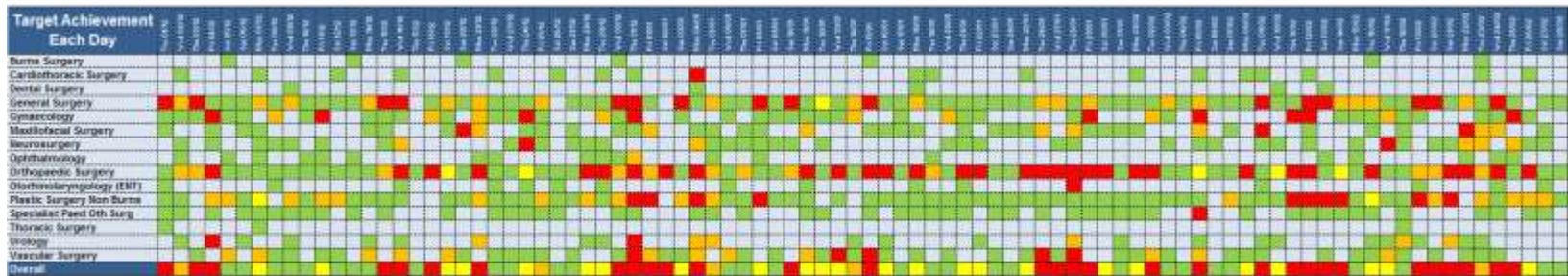


Performance of Waikato Hospital Against 24hr and 48hr Acute Theatre List Target

01 Dec 09 - 28 Feb 10

Target 1 - 80% of all patients to be operated on within 24 hours of being placed on the acute theatre list

Target 2 - 100% of all patients to be operated on within 48 hours of being placed on the acute theatre list



Colour Key

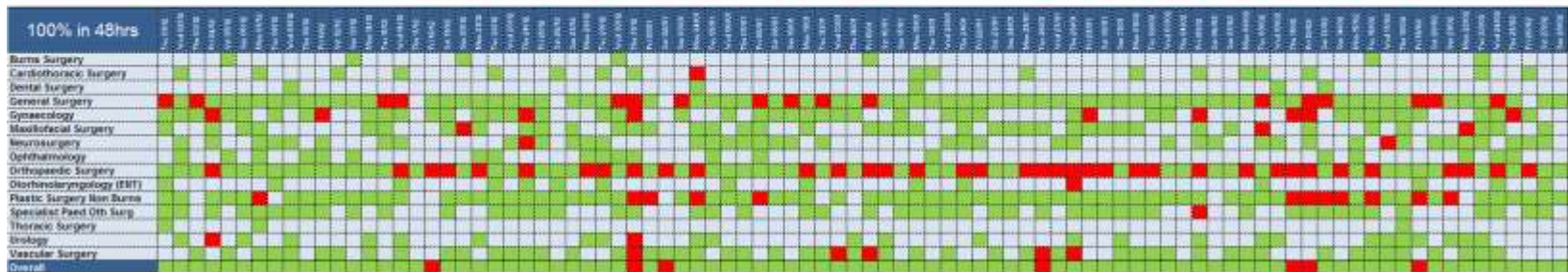
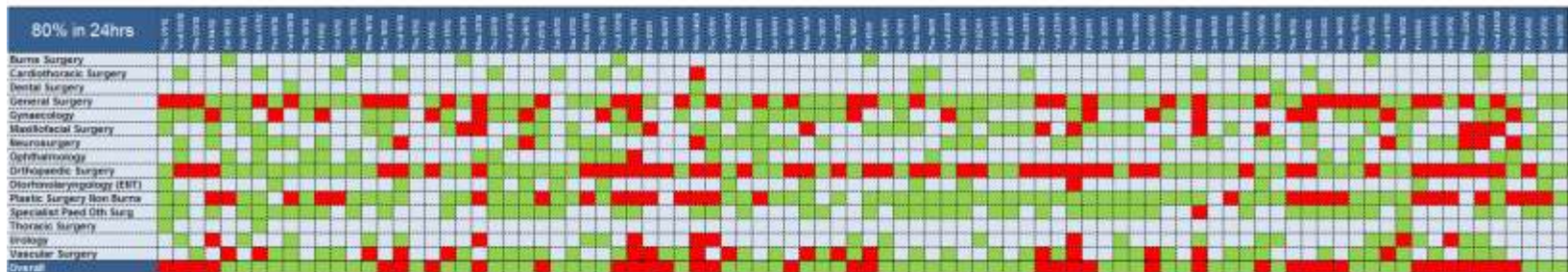
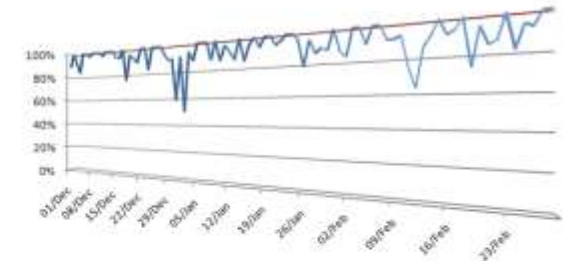
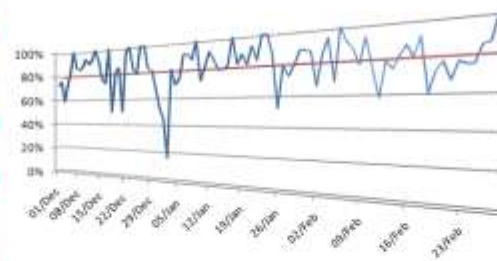
Green	Achieved 24hr and 48hr target
Yellow	Achieved 24hr but not 48hr target
Red	Did not achieve 24hr but did achieve 48hr target
Red	Did not achieve 24hr or 48hr target

24hr Target Performance Overall

48hr Target Performance Overall

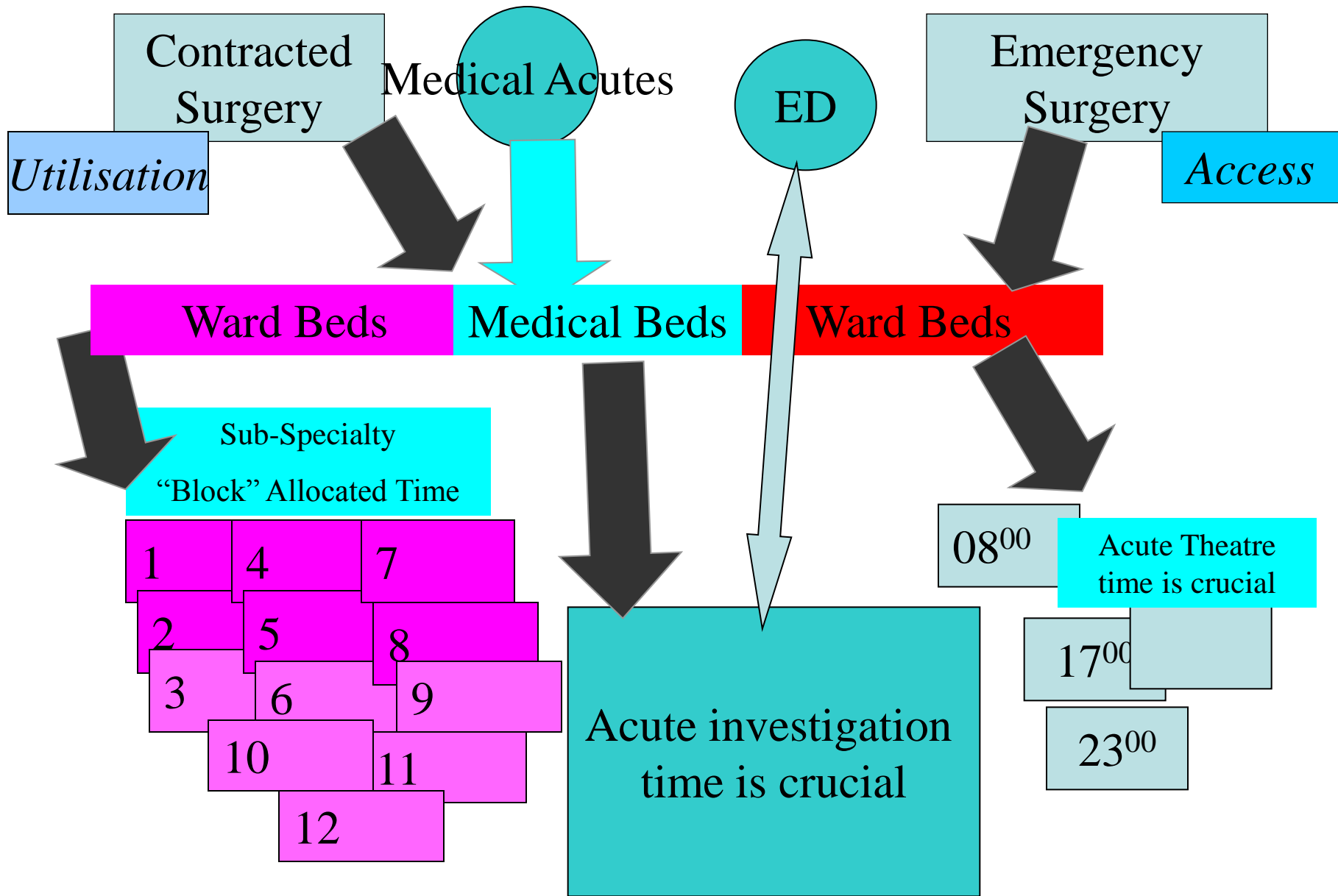
Currently neither acute theatre list target has been achieved

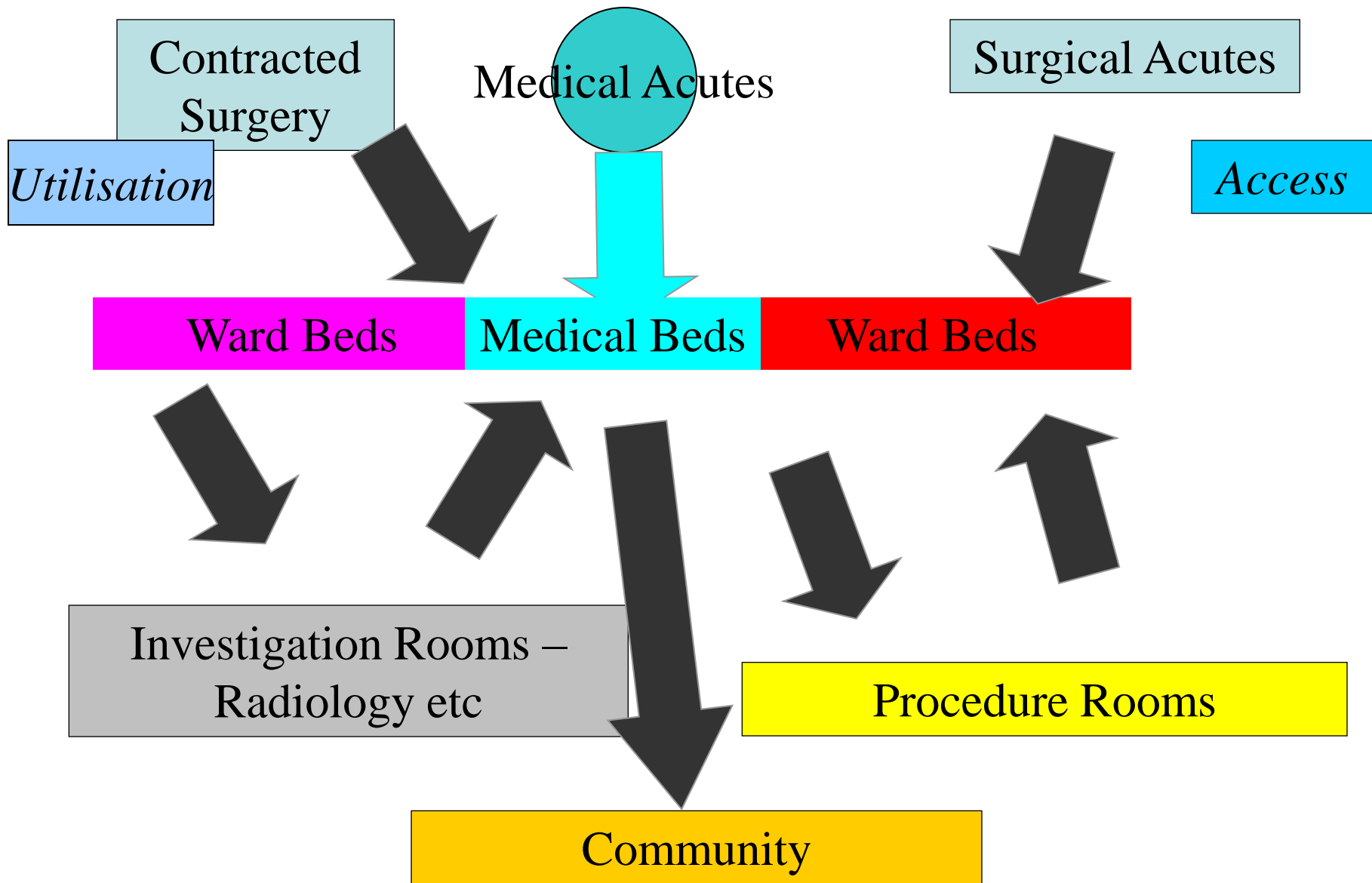
Year-to-Date Performance	# added to acute list	# operated on within 24hrs	% operated on within 24hrs	# operated on within 48hrs	% operated on within 48hrs
Burns Surgery	7	7	100%	7	100%
Cardiothoracic Surgery	25	24	96%	24	96%
Dental Surgery	5	5	100%	5	100%
General Surgery	308	304	99%	344	112%
Gynaecology	107	98	91%	98	91%
Maxillofacial Surgery	70	68	97%	67	96%
Neurosurgery	80	63	79%	68	85%
Ophthalmology	23	22	96%	23	100%
Orthopaedic Surgery	526	297	57%	486	92%
Otorhinolaryngology (ENT)	24	26	108%	26	108%
Plastic Surgery Non Burns	226	186	82%	211	93%
Specialist Paed Oth Surg	28	16	57%	17	61%
Thoracic Surgery	5	5	100%	5	100%
Urology	37	25	68%	32	87%
Vascular Surgery	88	68	77%	82	93%
Overall	1,648	1,370	83%	1,617	98%

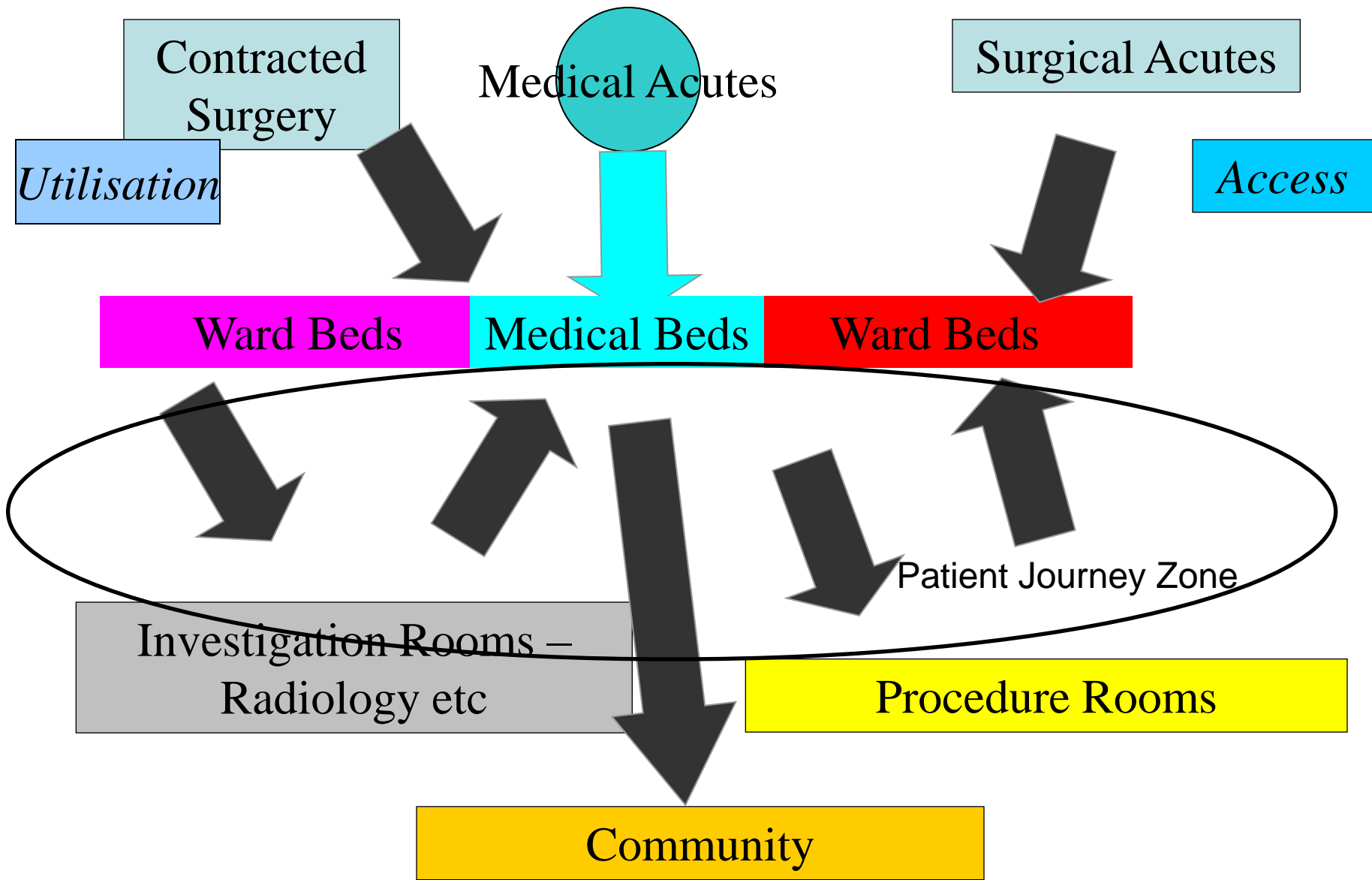


Currently neither acute theatre list target has been achieved

Year-to-Date Performance	# added to acute list	# operated on within 24hrs	% operated on within 24hrs	# operated on within 48hrs	% operated on within 48hrs
Burns Surgery	7	7	100%	7	100%
Cardiothoracic Surgery	25	24	96%	24	96%
Dental Surgery	5	5	100%	5	100%
General Surgery	369	284	77%	344	93%
Gynaecology	107	90	84%	98	92%
Maxillofacial Surgery	70	56	80%	67	96%
Neurosurgery	60	53	88%	58	97%
Ophthalmology	23	22	96%	23	100%
Orthopaedic Surgery	530	397	75%	466	88%
Otorhinolaryngology (ENT)	21	20	95%	20	95%
Plastic Surgery Non Burns	225	185	82%	211	94%
Specialist Paed Oth Surg	78	76	97%	77	99%
Thoracic Surgery	3	3	100%	3	100%
Urology	37	25	68%	32	86%
Vascular Surgery	88	69	78%	82	93%
Overall	1,648	1,316	80%	1,517	92%







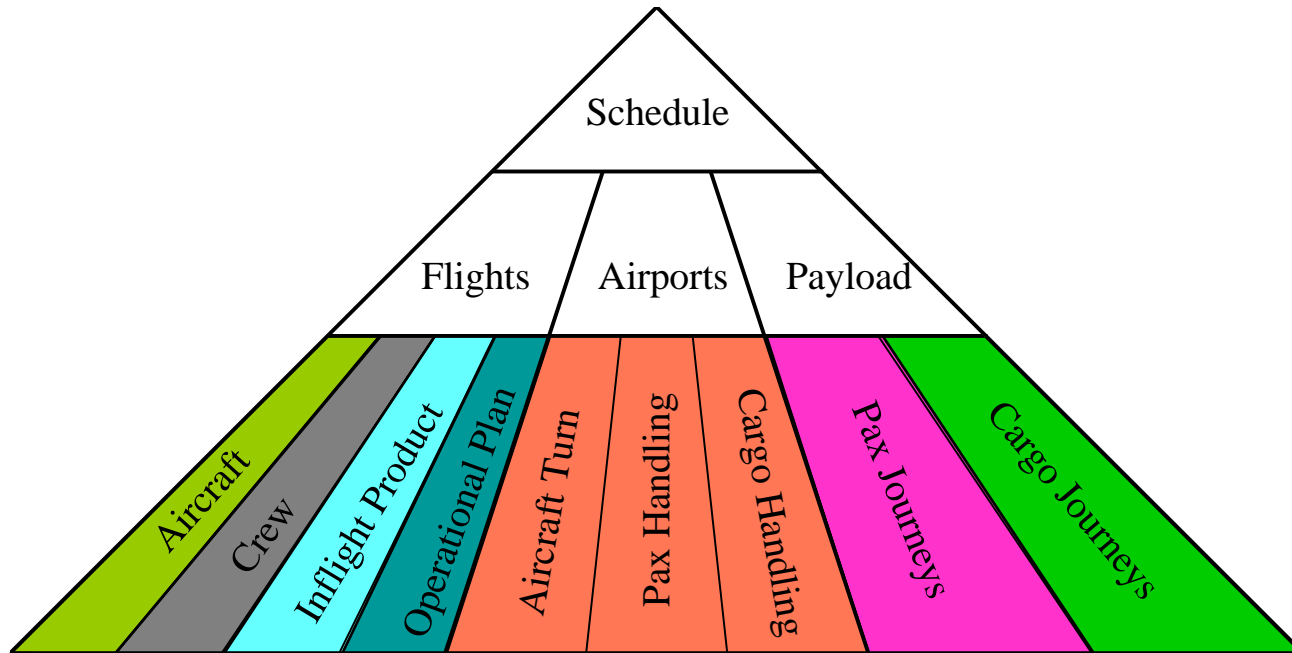
Managing the Total System

Air NZ Flight Operations Centre

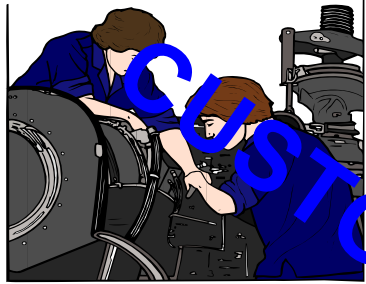
- Oversight of all daily operations
 - Today, Tomorrow, Yesterday
- Representation of all key resources
 - Finance
 - Airframe
 - Avionics
 - Passenger co-ordination
 - Crew support
 - Freight co-ordination etc
- Anticipating potential problems
 - Risks and their mitigation
 - Responding to unforeseeable problems
 - Triggers
- Maintaining the flow of goods and services



Air Enterprise – Integrated Operations



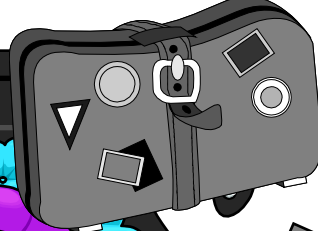
The Schedule is “King” – All of the airlines resources and plans are directed to delivery of the stated Schedule.



Engineering



Cargo



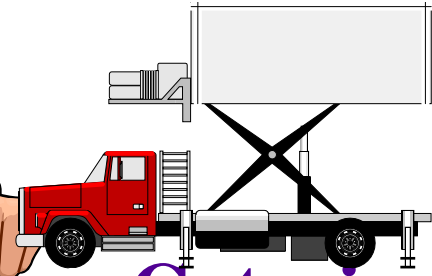
Check in



Logistics



Ramp



Catering



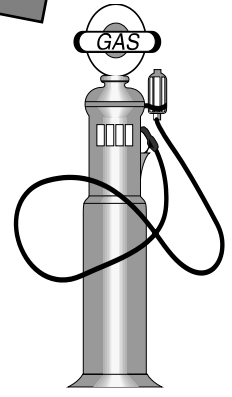
Flt
Despatch



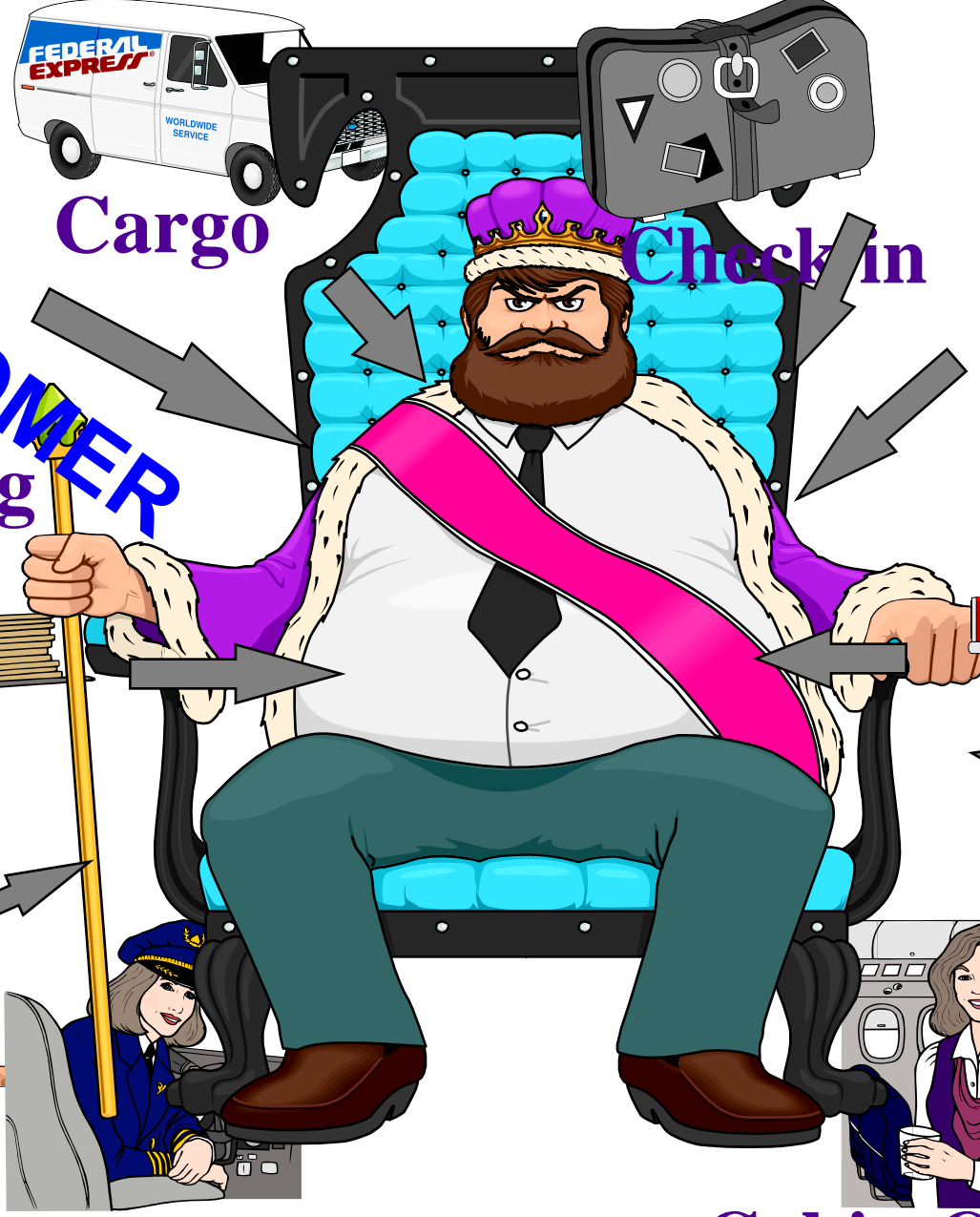
Pilots



Cabin Crew



Fuel



CUSTOMER

Contracted Surgery

Medical Acutes

Surgical Acutes

Utilisation

Access

Ward Beds

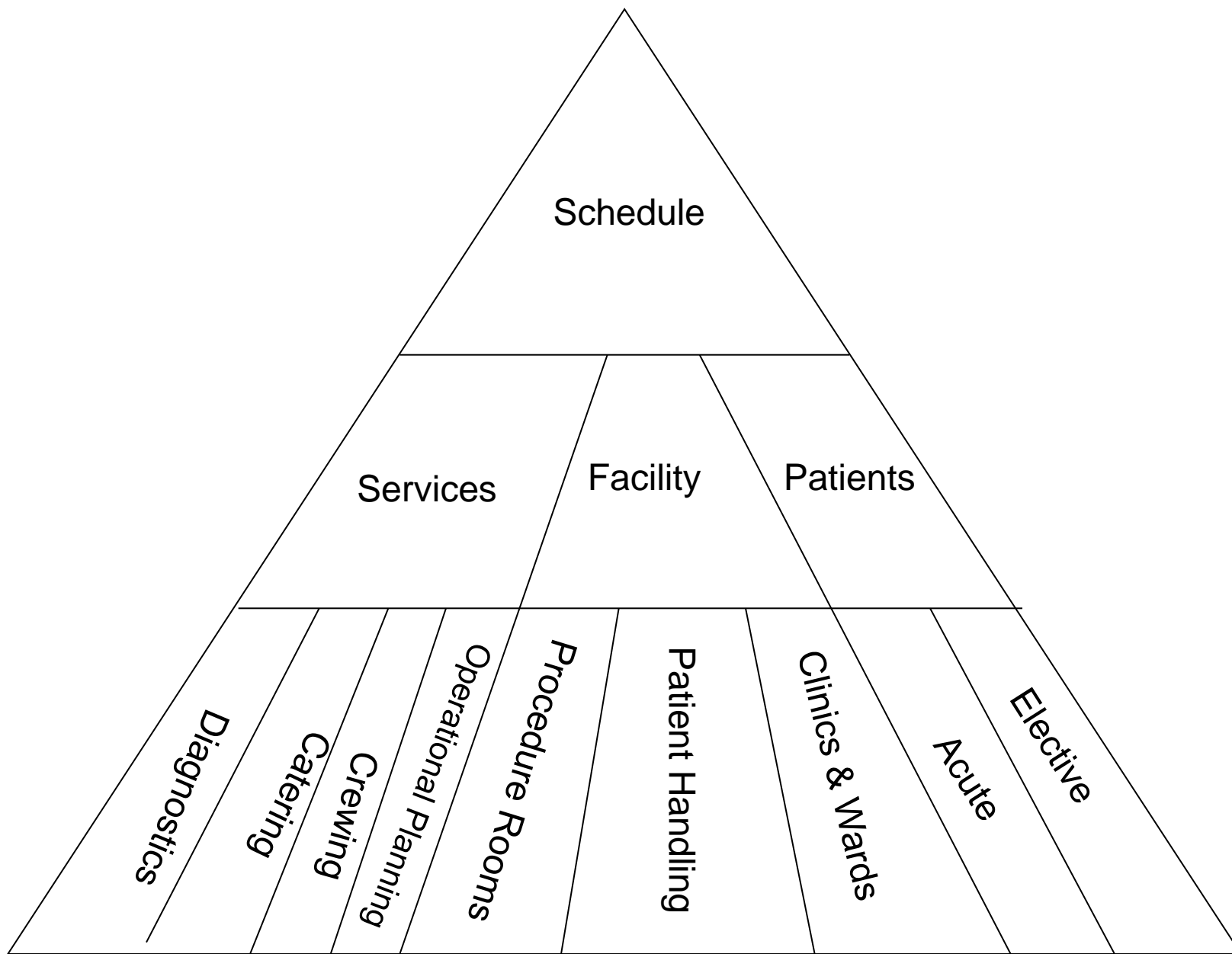
Medical Beds

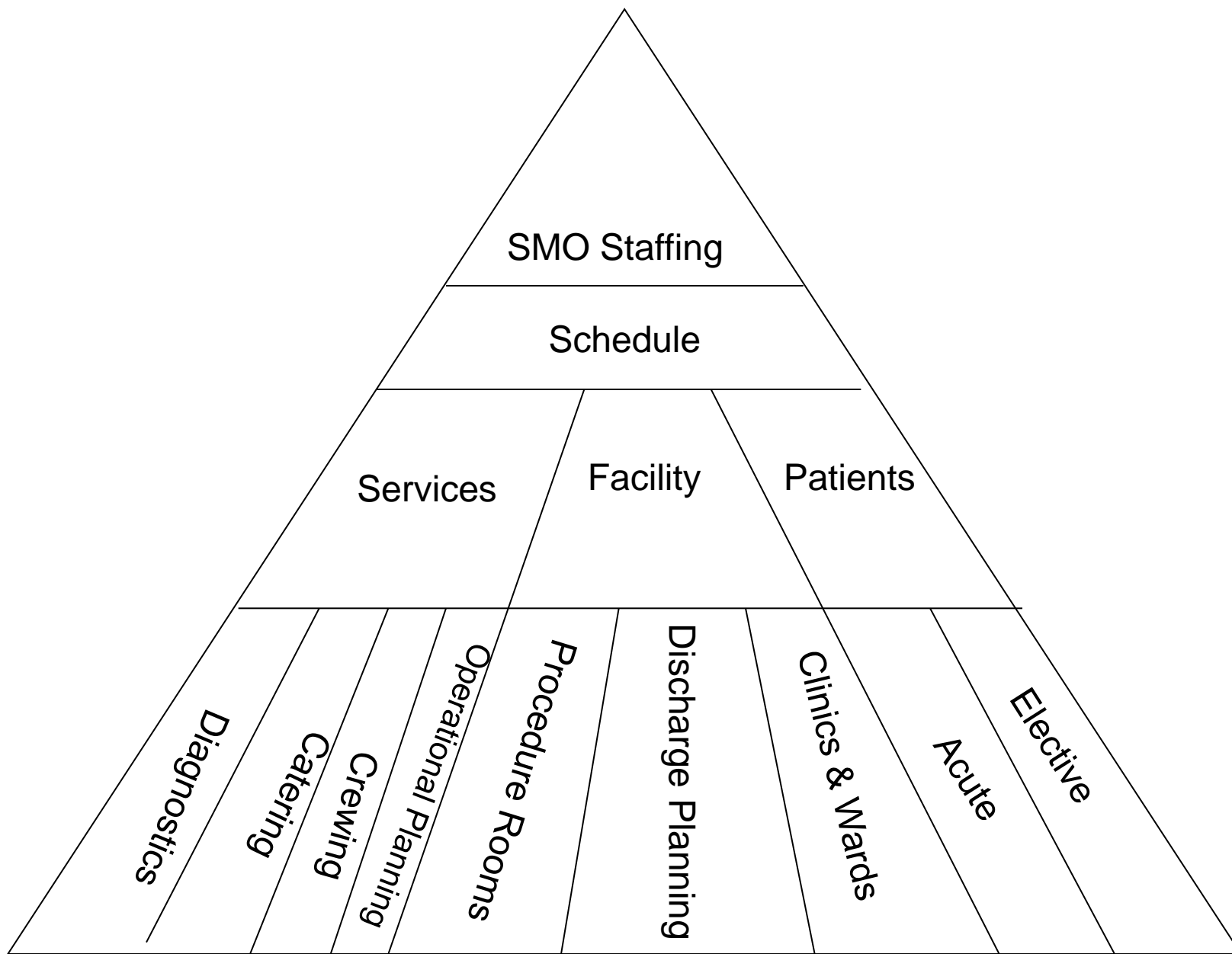
Ward Beds

Investigation Re
Radiolo

Zone

Optimizing the Patient Journey is not that useful a concept
Optimize the schedule instead.
If some journeys are placed at risk, more patients get to travel.





Who Works When?

SMO Staffing

Schedule

Services

Facility

Patients

Diagnostics

Catering

Crewing

Operational Planning

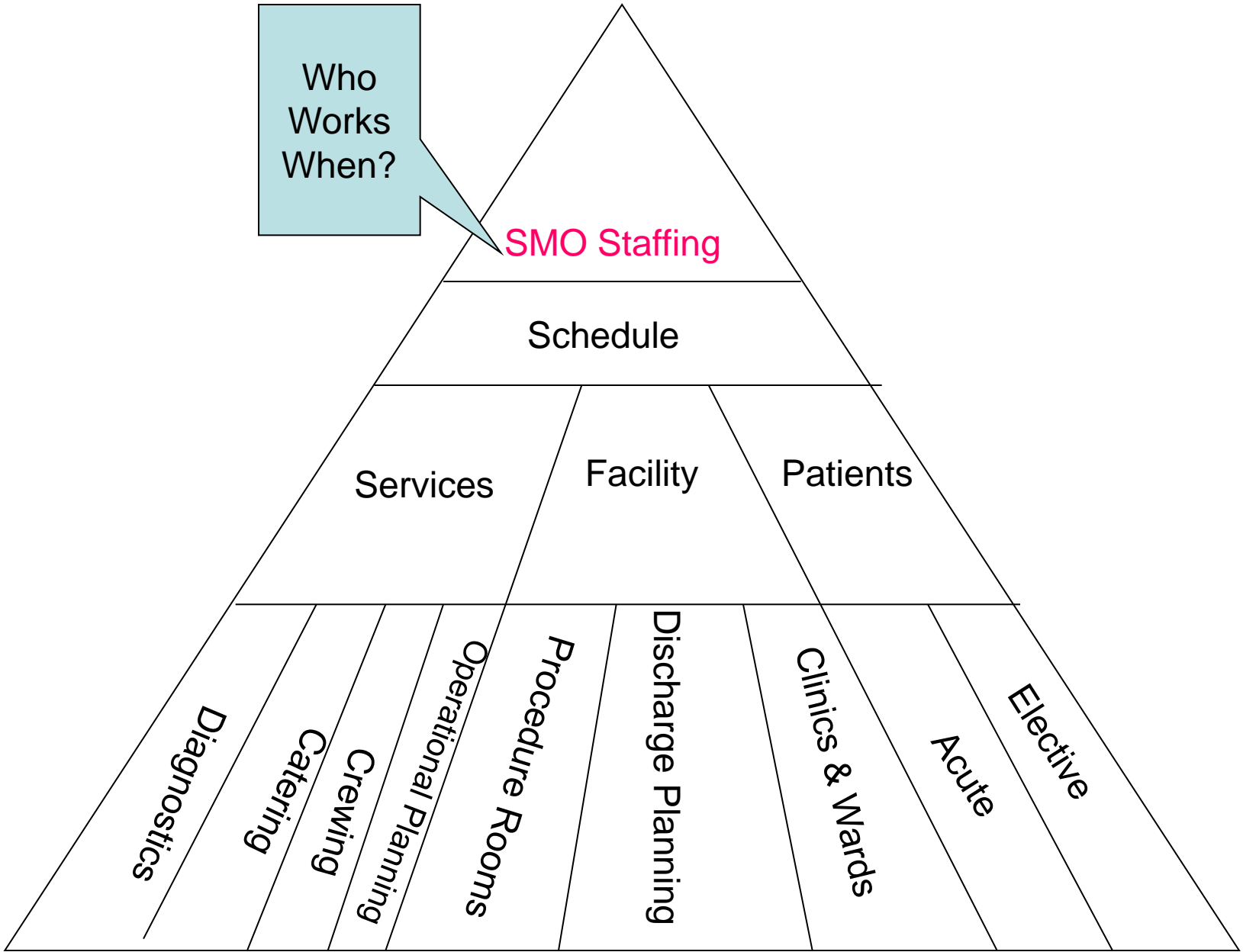
Procedure Rooms

Discharge Planning

Clinics & Wards

Acute

Elective



Who Works When?

SMO Staffing

Schedule

Services

Facility

Patients

Diagnostics

Catering

Crewing

Operational Planning

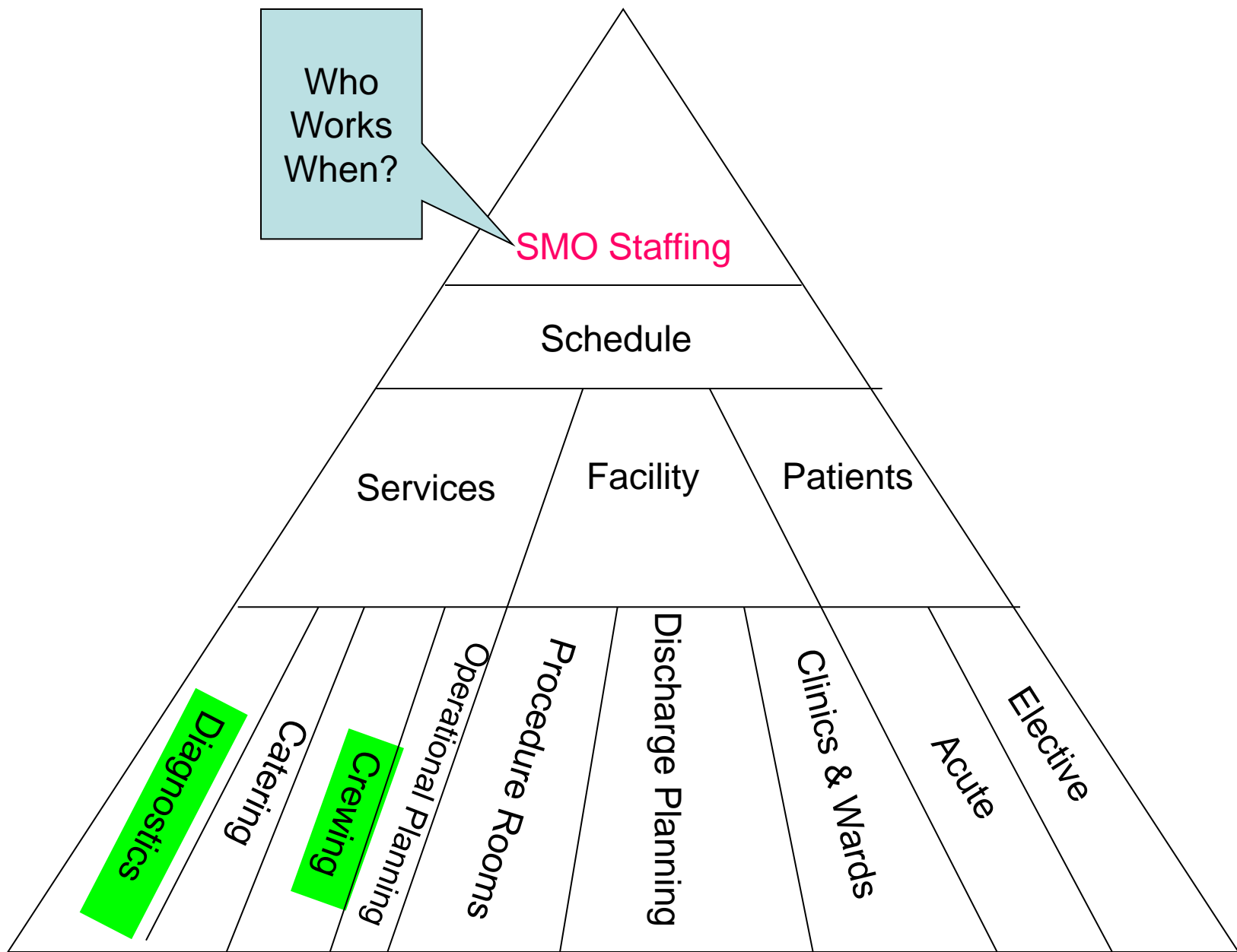
Procedure Rooms

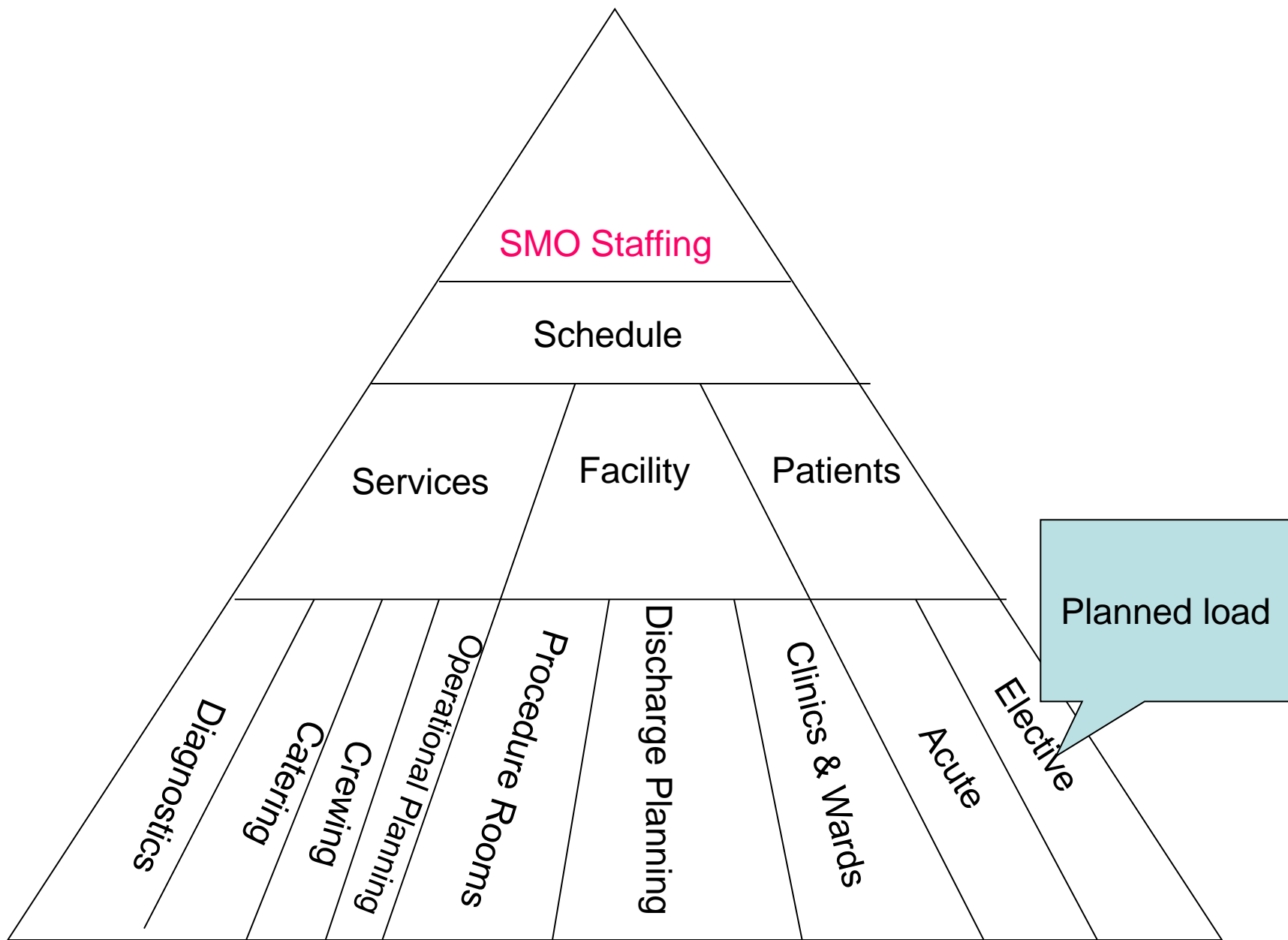
Discharge Planning

Clinics & Wards

Acute

Elective





SMO Staffing

Schedule

Services

Facility

Patients

Diagnostics

Catering

Crewing

Operational Planning

Procedure Rooms

Discharge Planning

Clinics & Wards

Acute

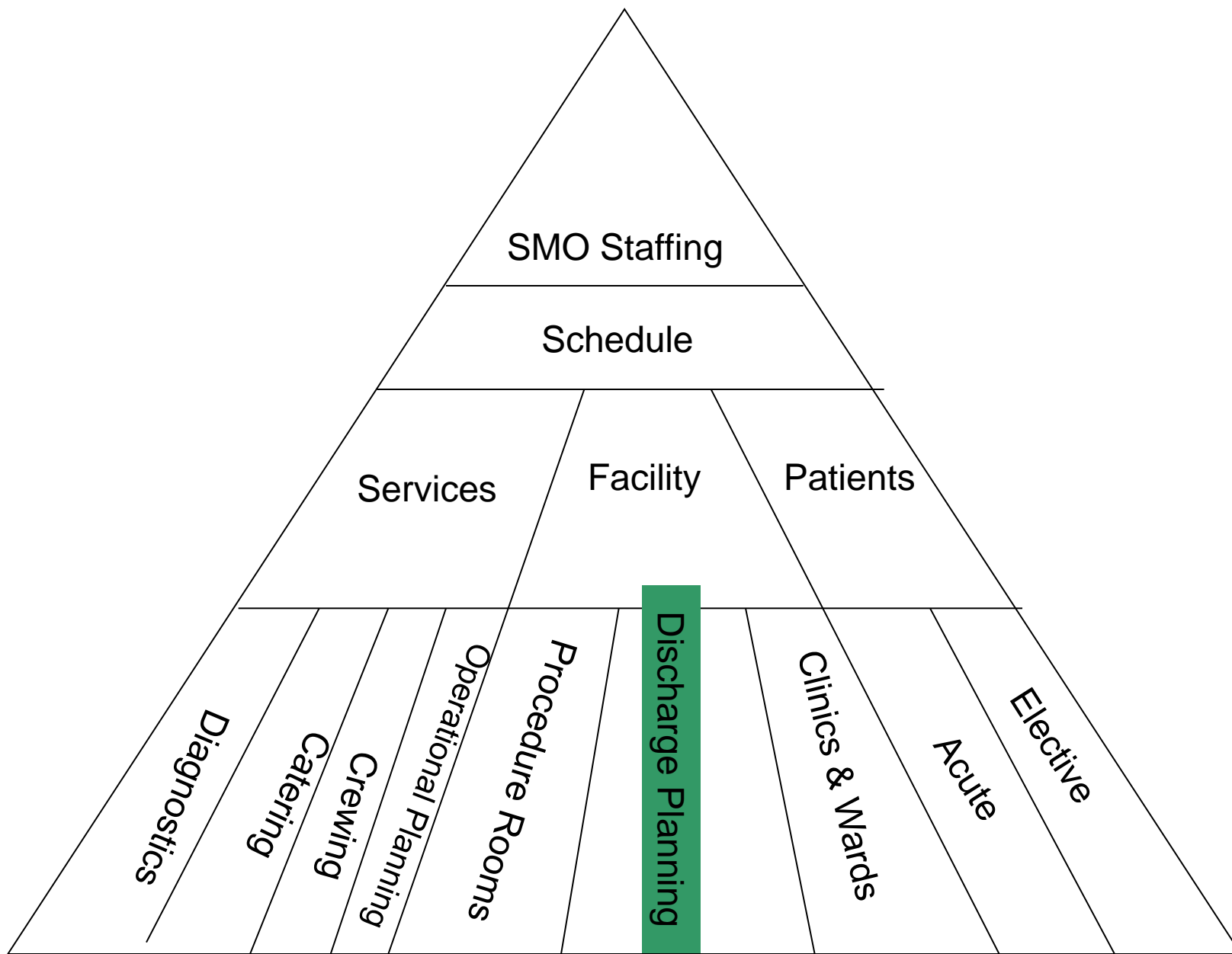
Elective

Planned load

Surgical **Schedule** Smoothing

“Whatever the other improvements you make, give me your elective surgical schedule and I will ruin them all”

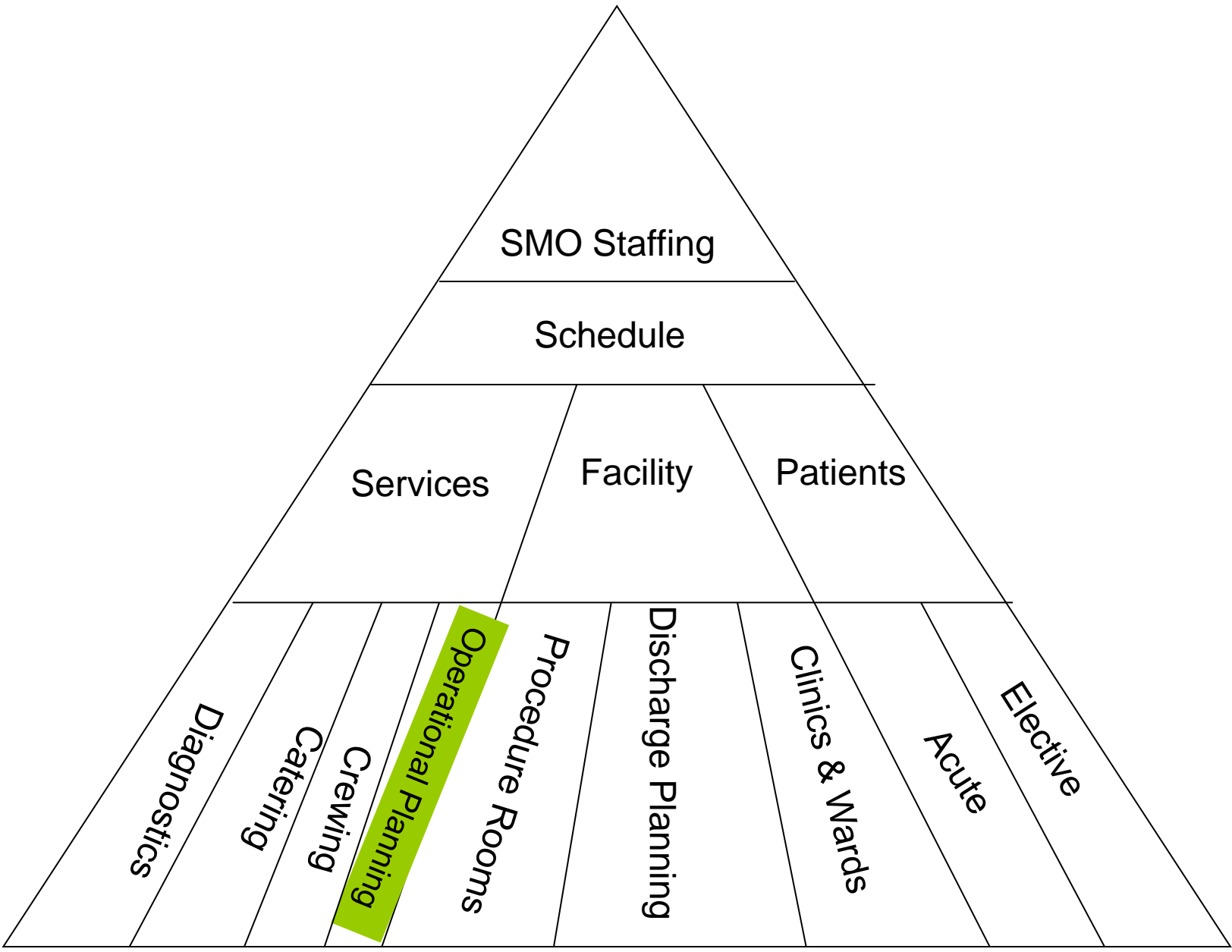
Eugene Litvak, OR Re-engineering Seminar, Boston, Sept 2008



Discharge Management and Planning

- Estimating Discharge Dates
 - Gives the “buffer period” during which all other conditions for discharge must be met
 - Should only be a “natural recovery” period
 - Outstanding investigations
 - “Community” placement needs.

Discharge - The threshold for doing the **next patient episode**



SMO Staffing

Schedule

Services

Facility

Patients

Diagnostics

Catering

Operational Planning

Procedure Rooms

Discharge Planning

Clinics & Wards

Acute

Elective

Future

- Managing Hospital in a integrated fashion
 - Can't optimize a complex organisation by focusing on individual parts
 - All we have done is integrate a part of the whole.
 - Air New Zealand Flight Operations Model
 - It can be done.

Conclusions

We still throw a lot of hospital passes

A part of the organization is better integrated

This is the coaching plan

But it is the individuals that play the game!

