Optimisation in older surgical patients

Implementing Proactive care of Older People undergoing Surgery (POPS)

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POPS Proactive care of Older People who are undergoing Surgery

"Improving the care of older surgical patients through collaboration, education and research"

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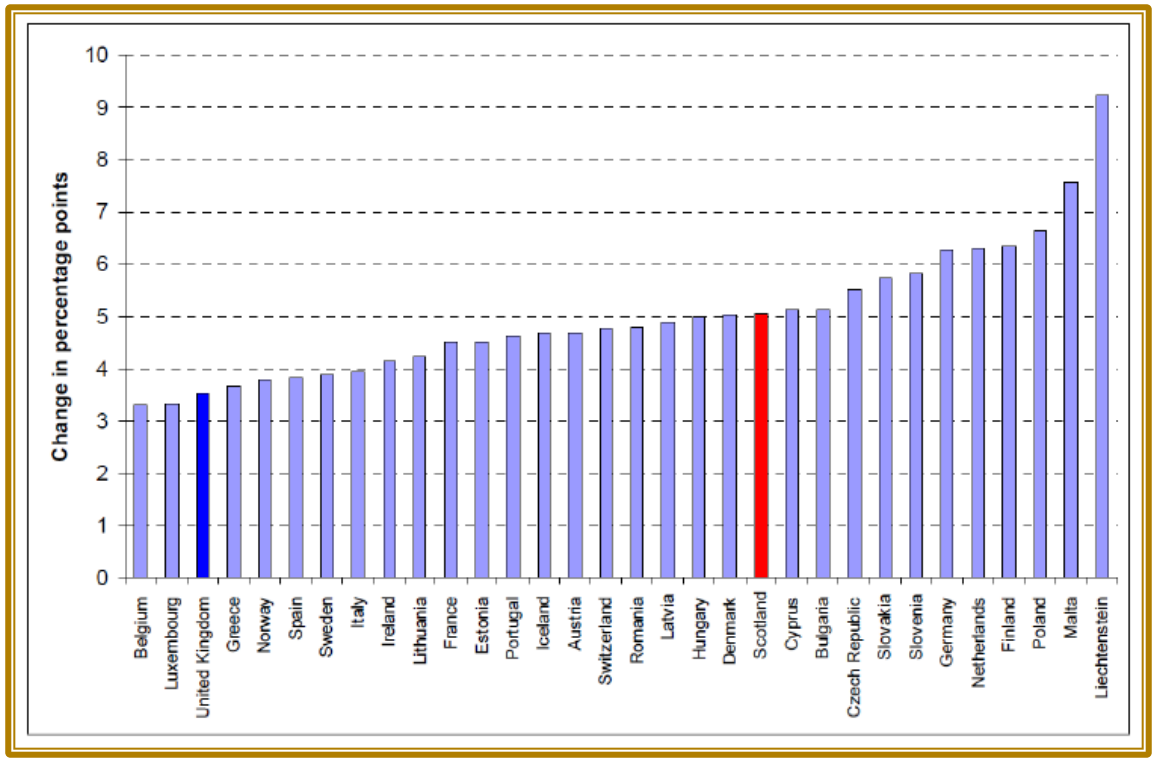
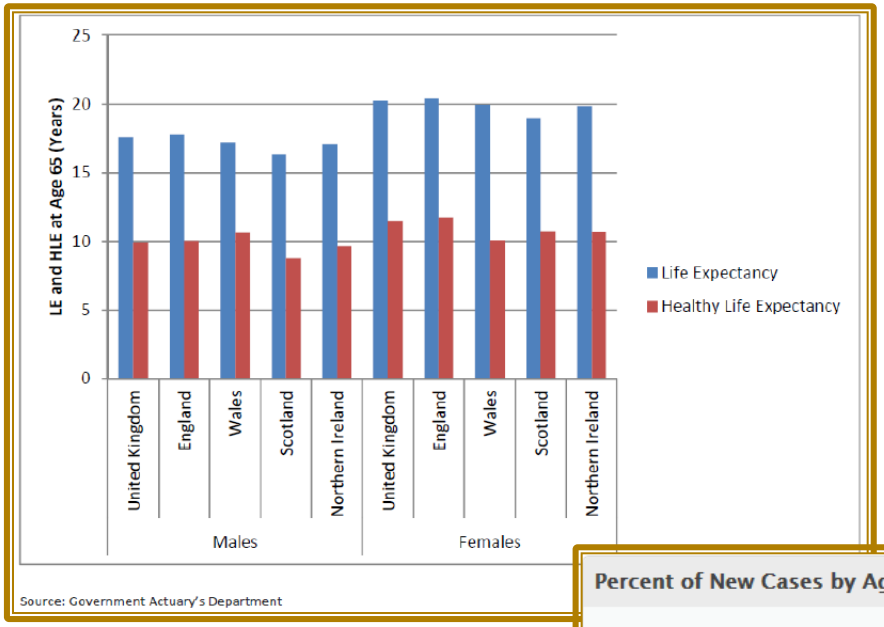
The changing population…

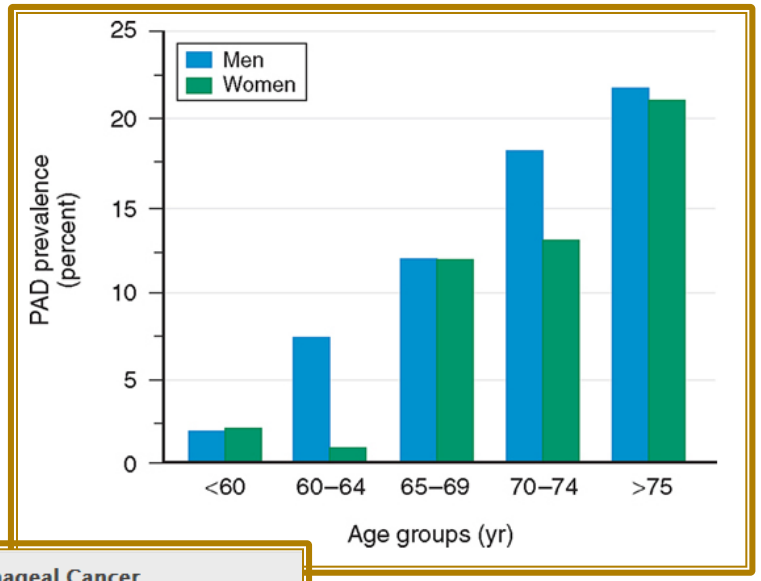
Projected change in proportion of population aged 75 and over from 2010 to 2035

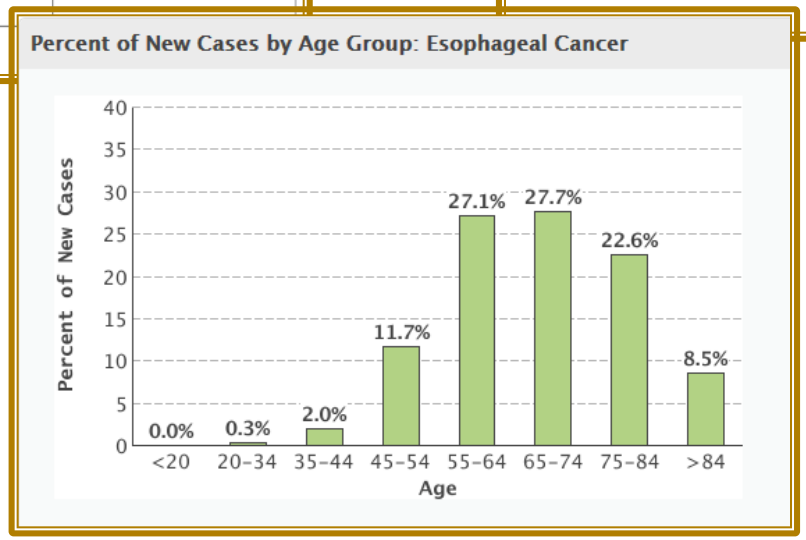


Life Expectancy in the UK		
Age in 2014	Men	Women
65	18.9	21.4
75	11.7	13.5
85	6.1	7.2
90	4.3	5.0
Office for National Statistics, 2012.		

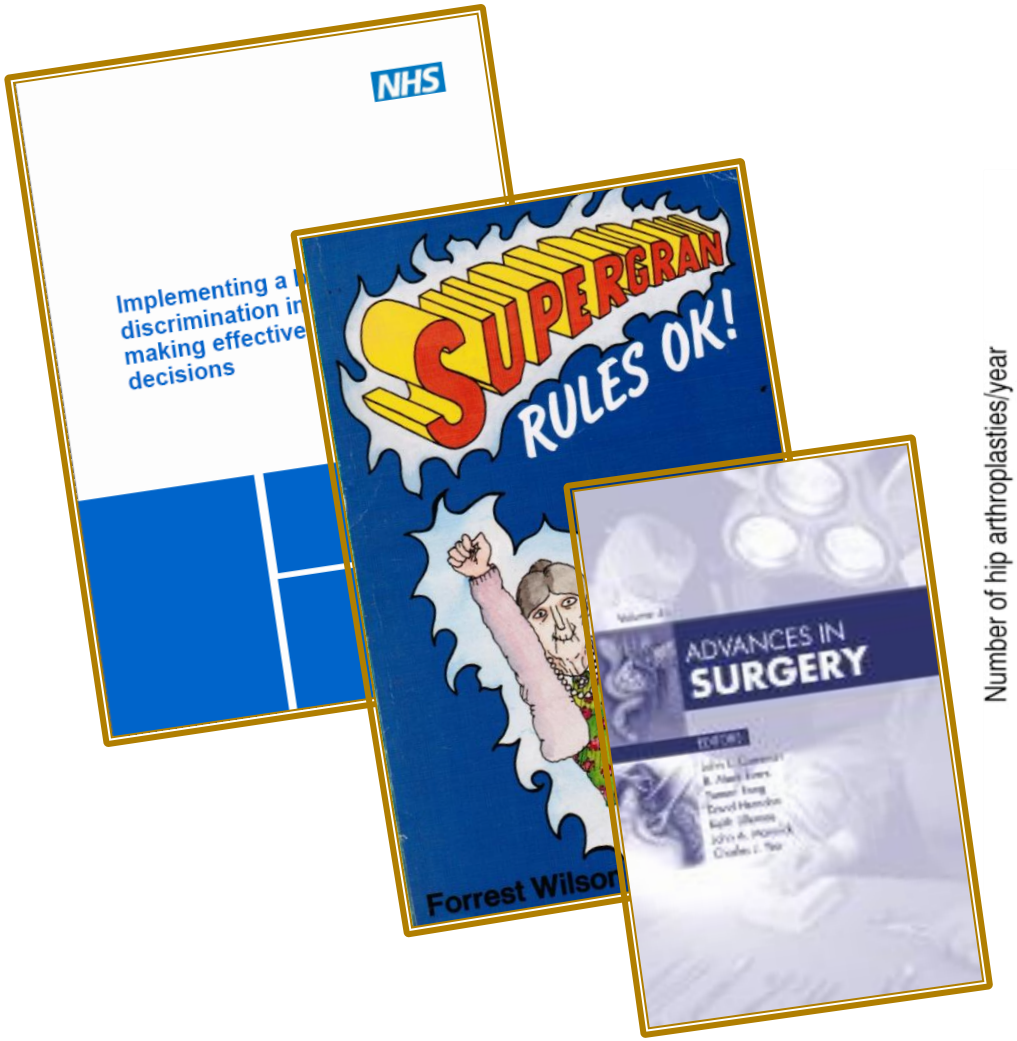
… with potential health-related problems…

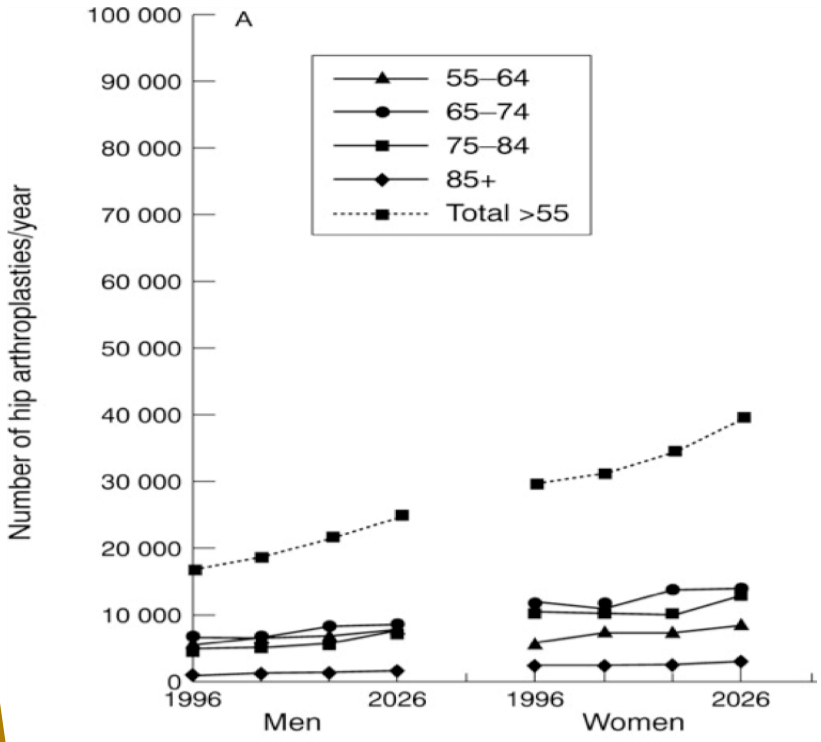






…that require surgery…

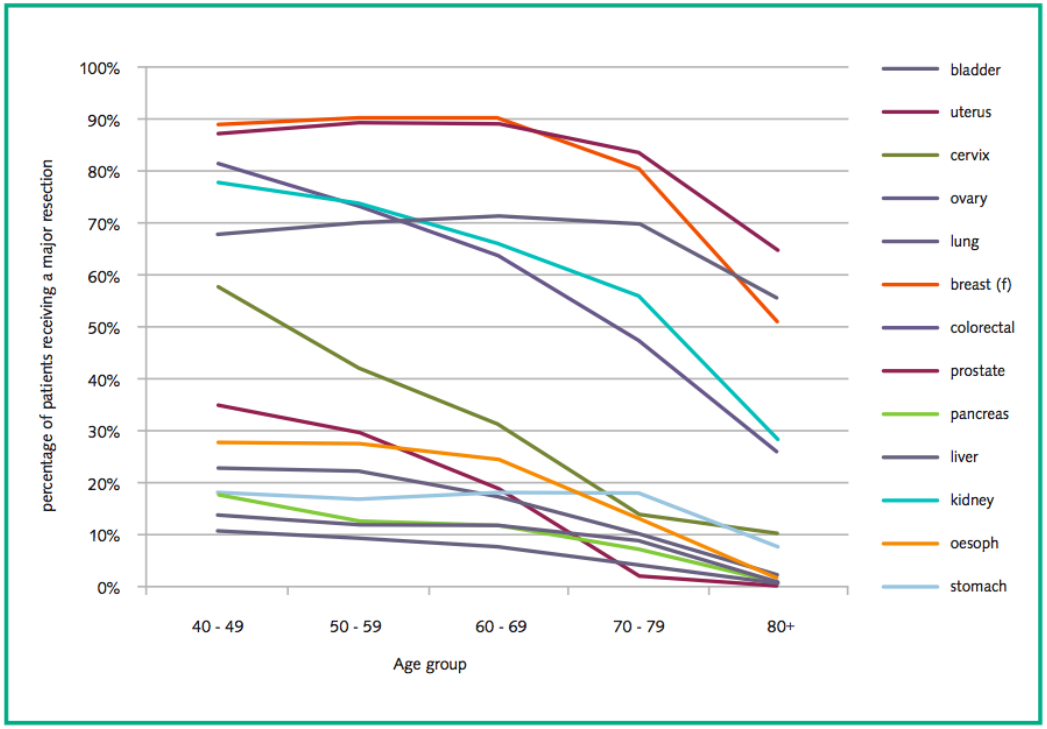




Birrell, Ann Rheum Dis 1999

…but older people don't always have the surgery they 'need'

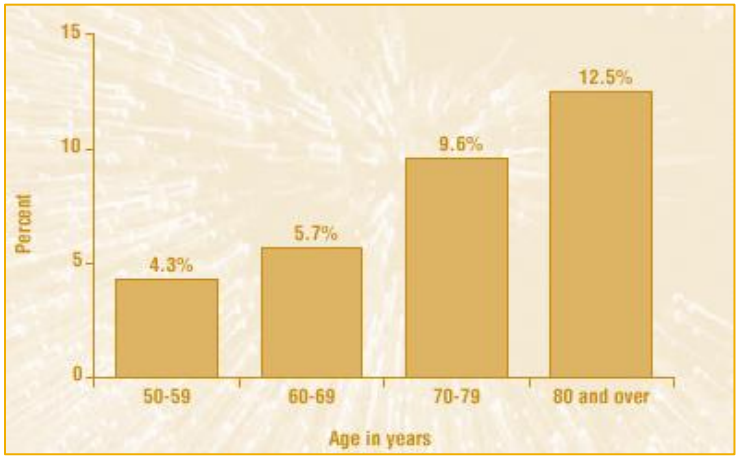
Figure 1: Percentage of patients with a record of a major resection, by age and cancer site, patients diagnosed 2004-2006, followed up to 2007



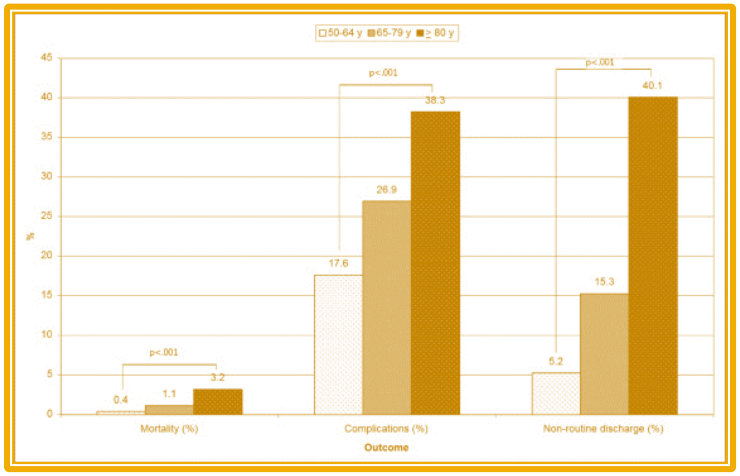
National Cancer Intelligence Network, UK 2010

RCS and Age UK 2012

Older people are at higher risk of postop morbidity…



Ann Intern Med 2001;134(8):637-43



Am J Surg 2011;201(6):789–796

Table 1. Rates of Postoperative Complications — *J Am Geriatr Soc 2001;49:1561-64*

	Complications				
Age (Years)	Pneumonia/Respiratory	Cardiovascular	Cerebrovascular	Thromboembolism	Anastomotic Leak
<65	5%	0.8%	0.2%	1%	4%
65–74	10%	2%	0.6%	2%	5%
75–84	12%	4%	1%	2%	4%
≥85	15%	4%	1%	2%	3%
P-value	<.0001	<.0001	<.0001	.0004	.2607

…at higher risk of postop mortality…

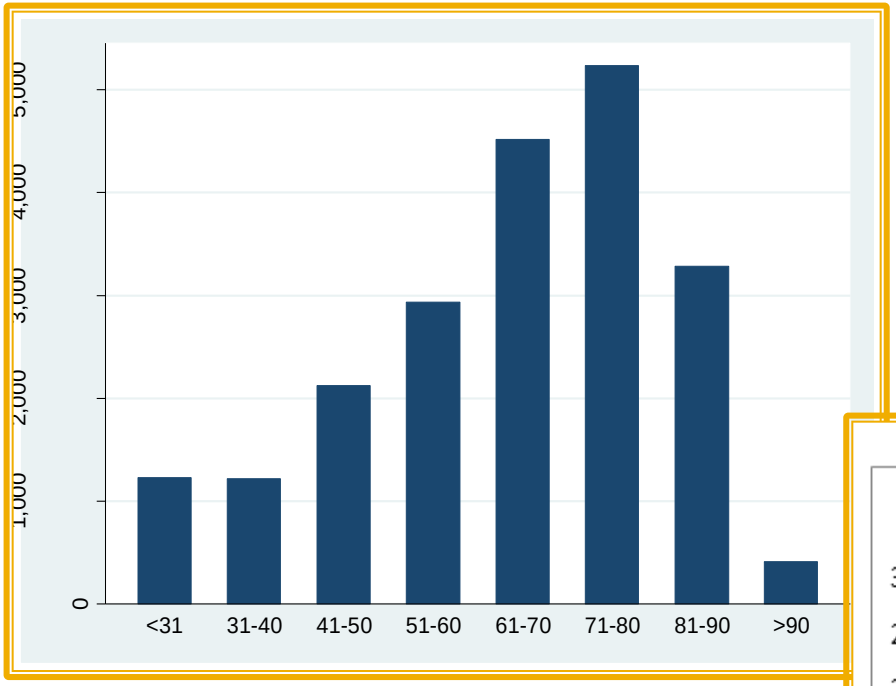
	30day mortality		1 year mortality		5year mortality	
	with	without	with	without	with	without
Any complication	13.3%	0.8%	28.1%	6.9%	57.6%	39.5%

	<80yrs	>80 yrs
General	4.3%	11.4%
Vascular	4.1%	9.4%
Thoracic	6.3%	13.5%
Orthopaedic	1.2%	8.3%

Khuri, Ann Surg 2005;242:326

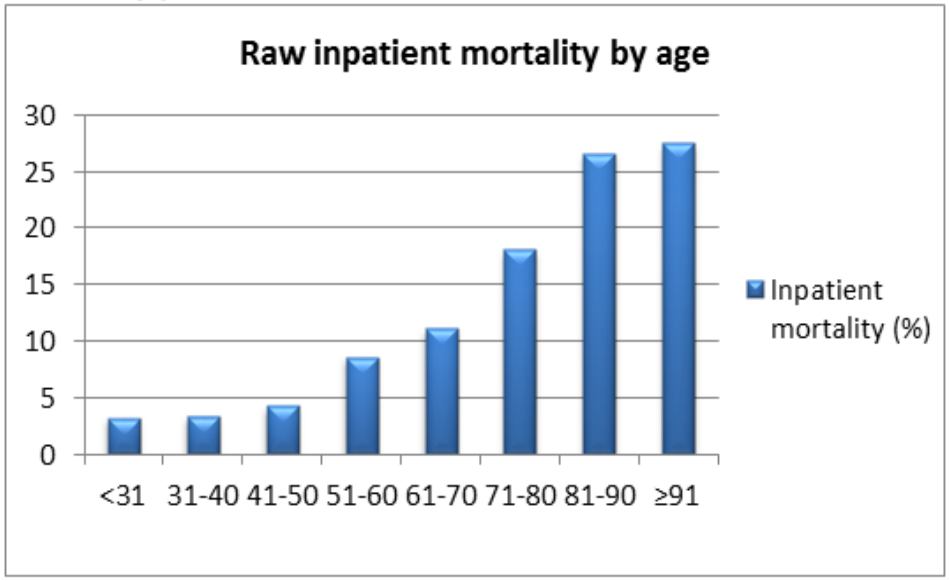
Hamel, *JAGS 2005;53:424-9*

…and this is seen in 'real life'…

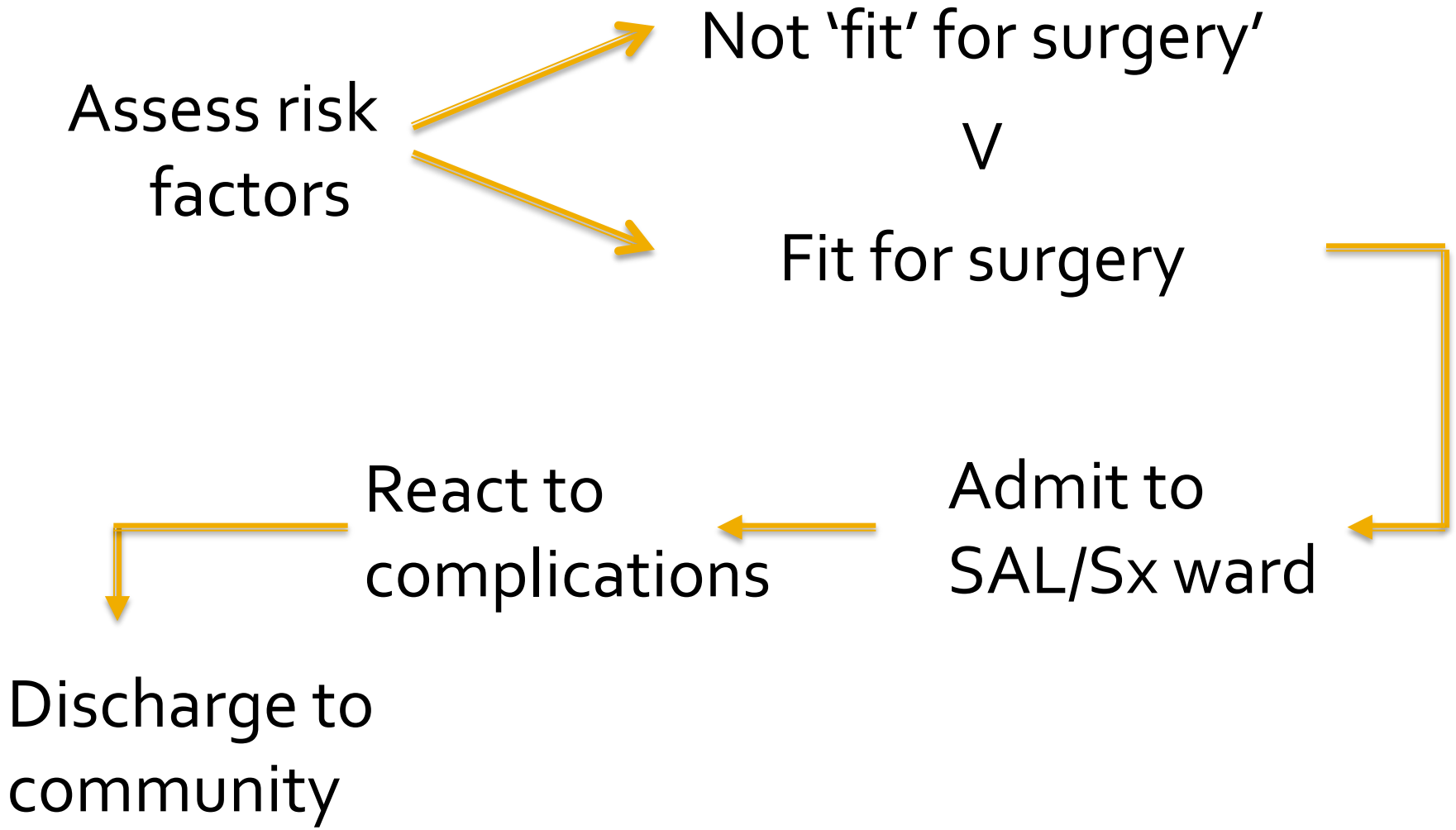


NELA
National Emergency Laparotomy Audit

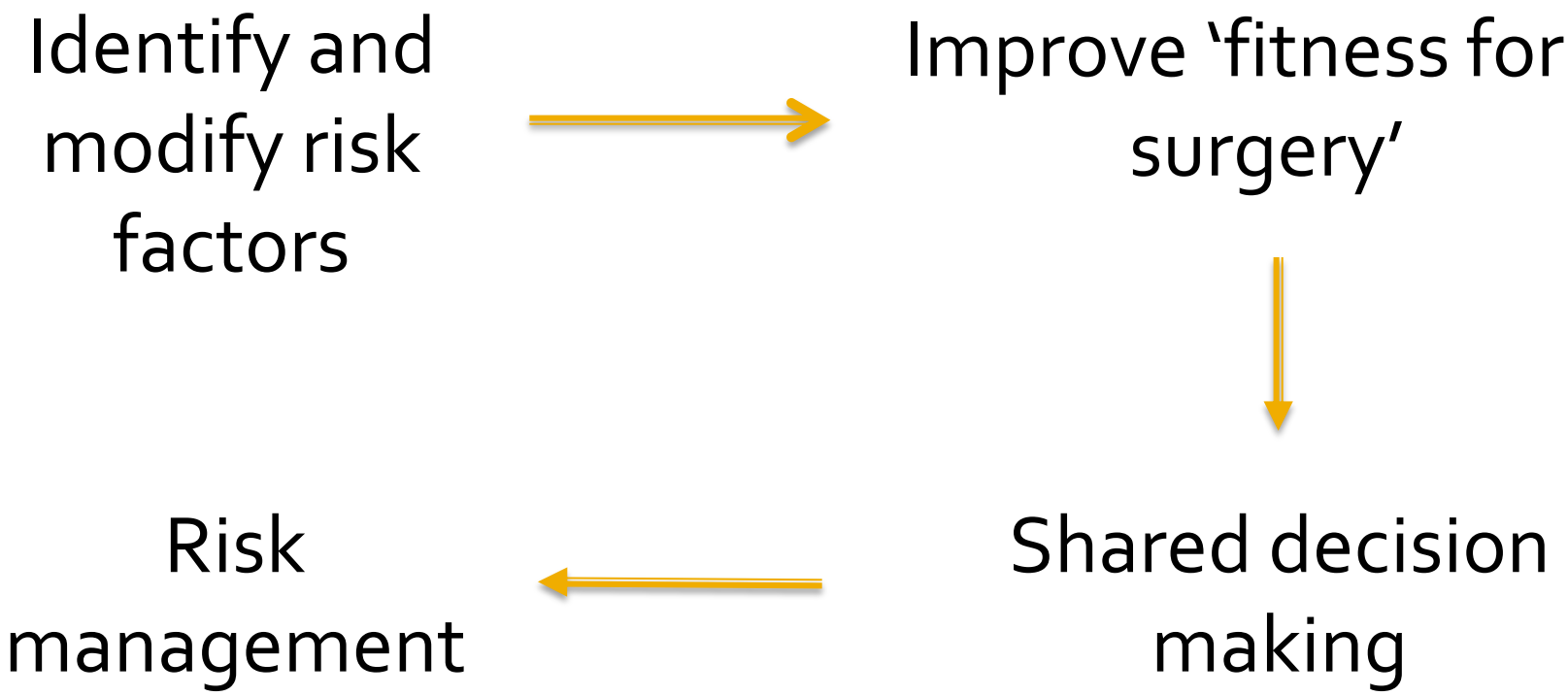
i. By patient characteristics



How do we currently manage?



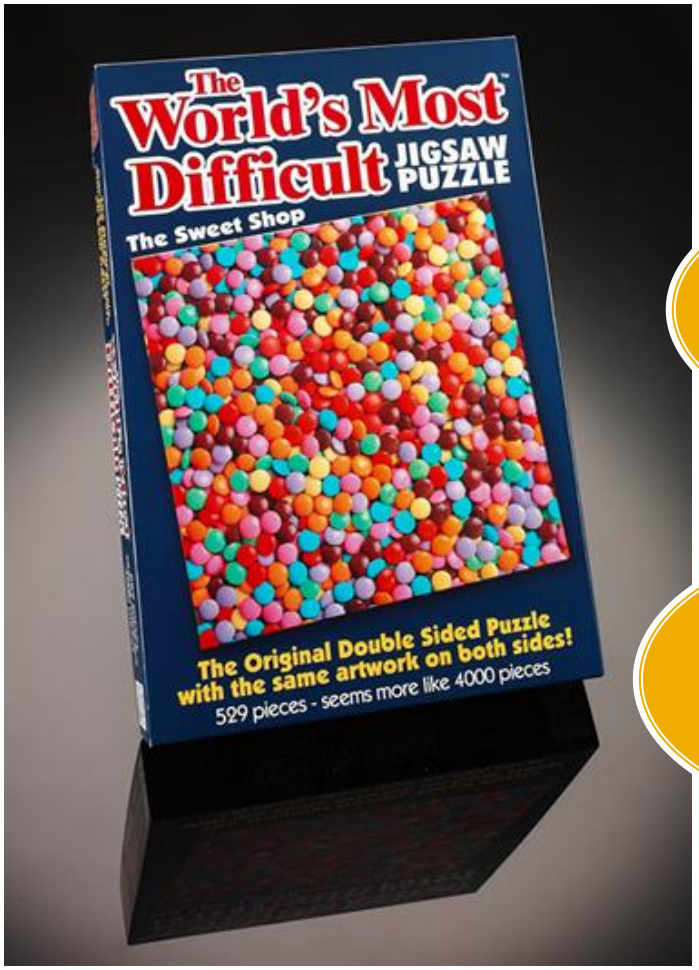
Whereas what we could be doing is….

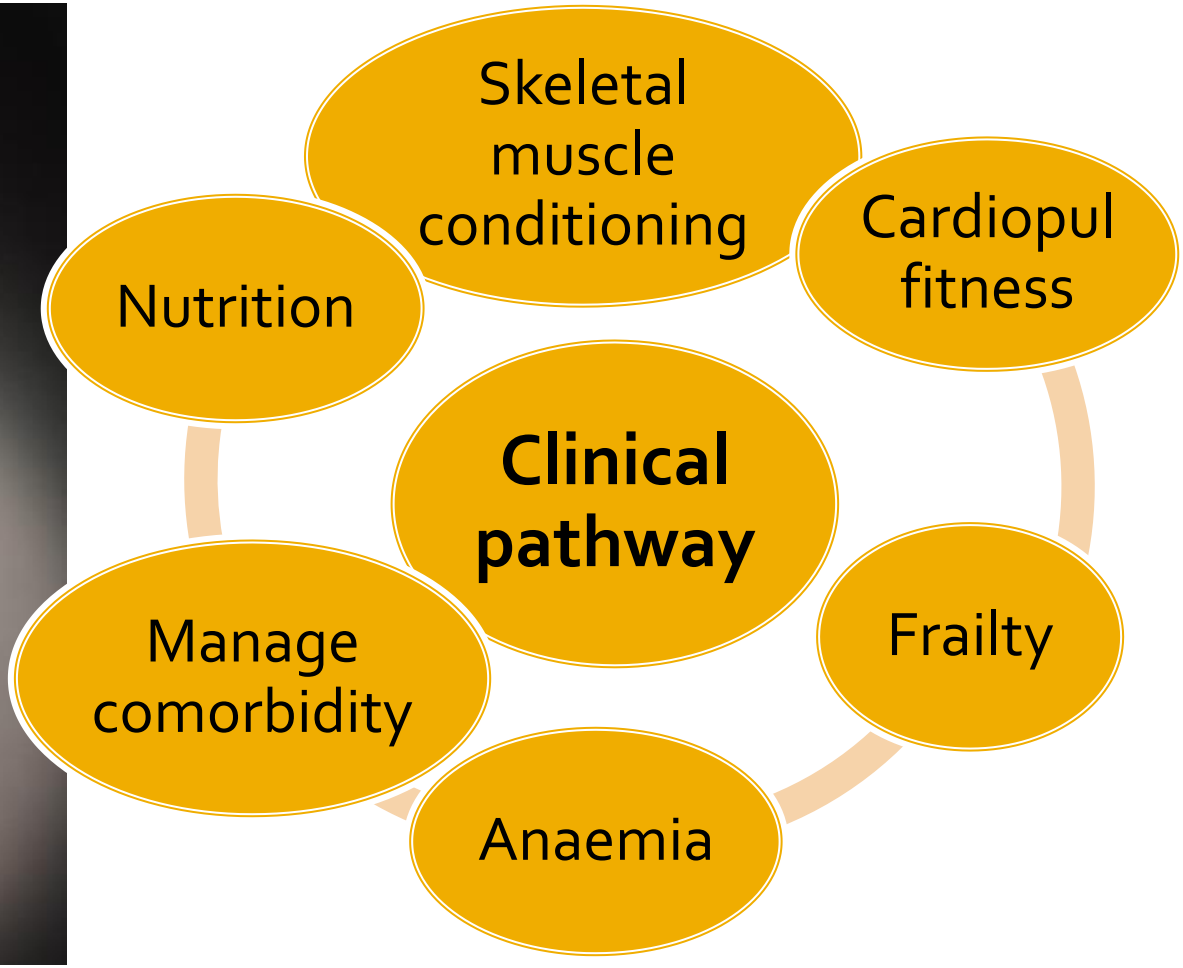


…but is this possible?

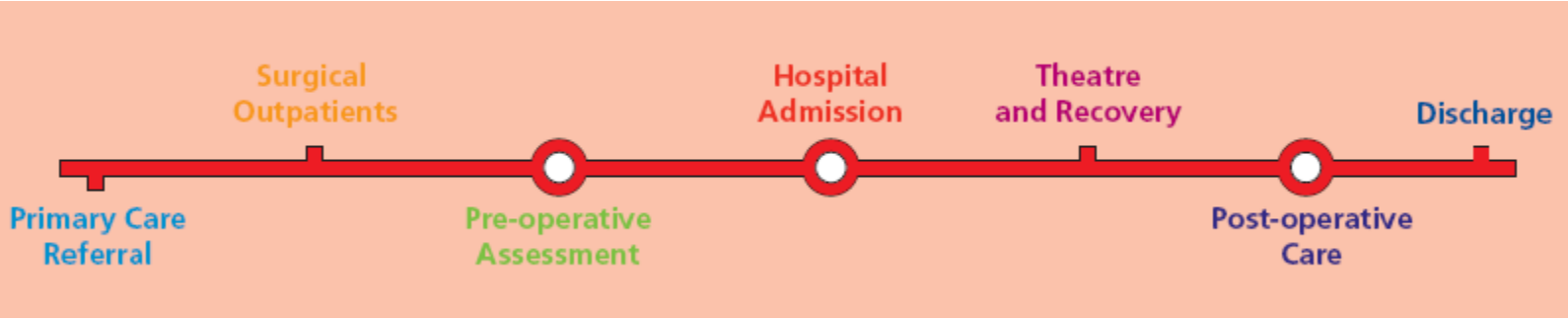
- Identify risk factors
- Modify risk factors
- Make patient fitter
- Less complications, managed better
- Improve outcomes

Yes, but it is complicated…





…even before we get to the in-patient phase….



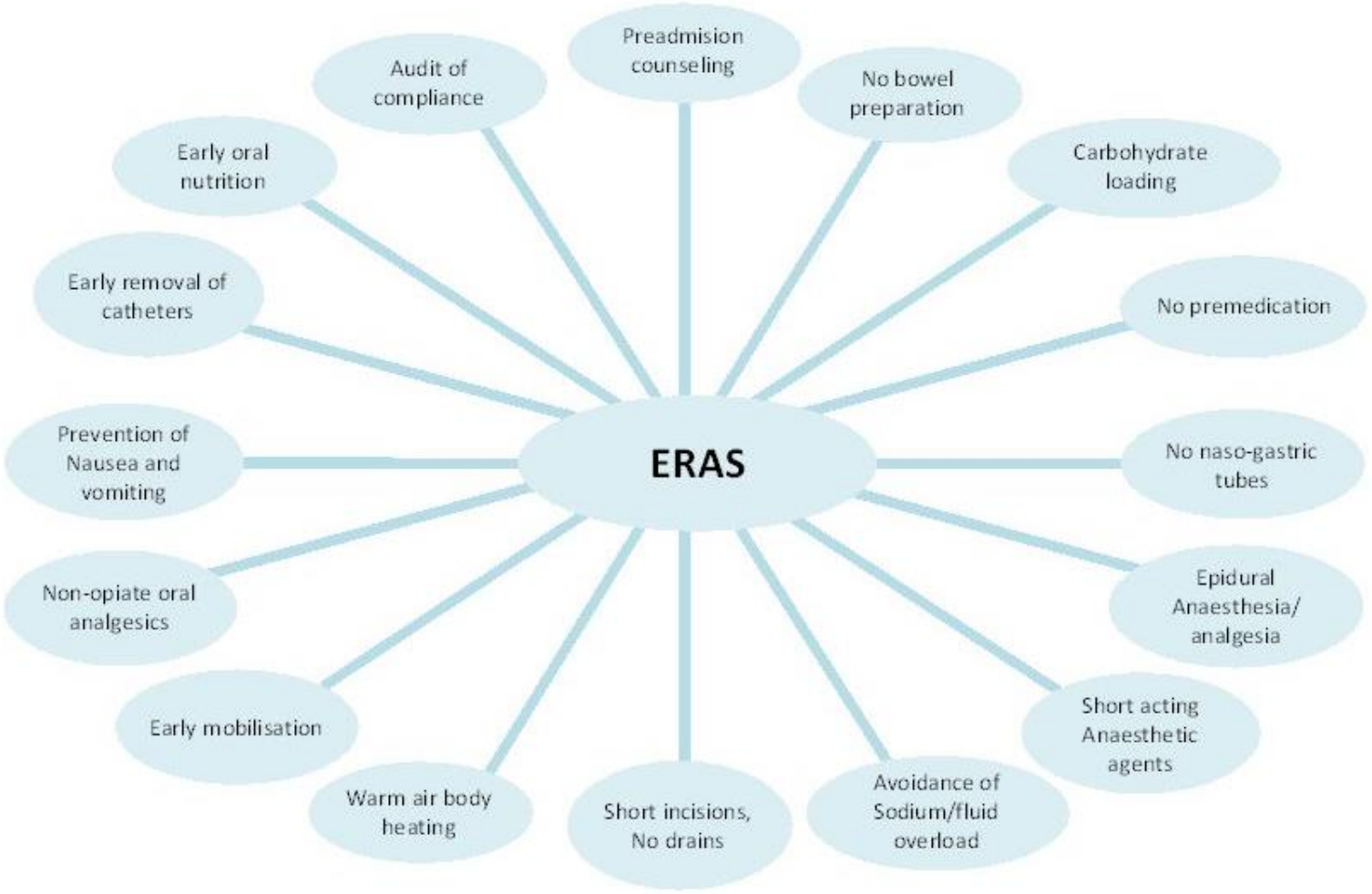
- Medical complications
- Rehabilitation
- Discharge
- Follow up

A typical 'not too complicated' patient story

74 yrs old F	Osteoarthritis	No surgery
Living alone	Diabetes	HbA1c 8.2%
No support	Hypertension	BP 170/88
'Difficult' historian	SOB ?cause	ECG NAD CXR NAD
	Anaemia	Hb 100g/l

Elective colorectal cancer (orthopaedic/vascular/gynae/any) surgery

…on the enhanced recovery programme…



…but the following happens

Refuses surgery	Referred for medical opinion	Cancelled on day of surgery

Pain	Opiates
Post-op ileus	On/off ‘sliding scale’
Hypovolaemic (AKI)	Fluids
Anaemia	Blood
Peripheral oedema	Diuretics
(Apathy) Hypoactive delirium	Anti-depressants
Functional decline	POC

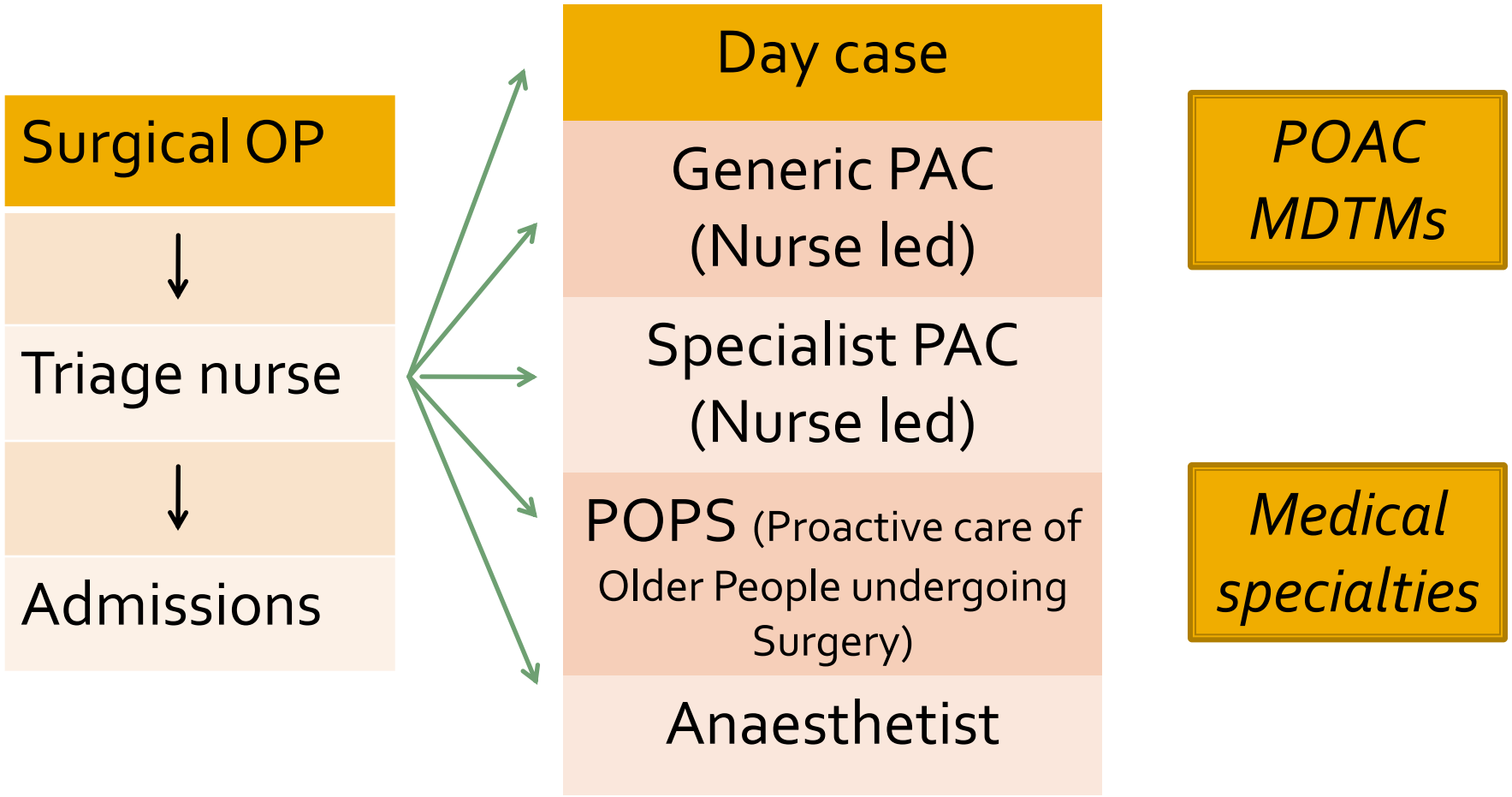
Does this really happen?

- 4 in 5 high risk patients to general ward
- Management on wards by junior staff
- Poor recognition of medical problems
- Reliance on on-call staff
- Multiple medical team involvement

Why does this happen?

- Knowledge
  - Assessment, optimisation, post-op medical care, rehabilitation, discharge planning
- Behaviours
  - Reactive approach
  - Unstandardised and uncoordinated medical management
- Attitudes
  - Cultural, traditional, silos of care

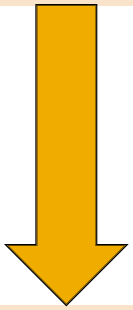
An alternative model



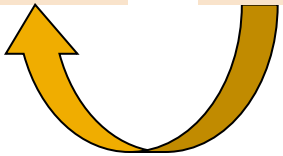
The POPS model

Surgical OP/PAC
Referrals
- Screening criteria
- 'Medically unfit'
- Support required for decision making

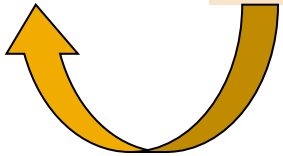
Pre-op CGA
Consultant
CNS
OT
Social worker



Liaison
Patient
Surgical team
Anaesthetists
GP
Community service



Hospital Admission
Ward rounds
MDMs
Case conferences
Education and training



Post Discharge
Intermediate Care
Primary care
Social care
Specialist clinics

…uses CGA methodology…

Comprehensive geriatric assessment (CGA)

- Holistic, multidimensional, interdisciplinary assessment of an individual
- Formulation of
  - a list of needs and issues to tackle
  - an individualised care and support plan
  - tailored to an individual's needs, wants and priorities

…because it allows…

Risk assessment

- Recognition of known comorbidity
- Identification of unrecognised disease, disability, frailty
- Assessment of functional reserve

Optimisation

- Medical, functional, psychological & social condition
  - Application of organ specific guidelines
  - Use of multidisciplinary interventions

…and facilitates…

Collaborative decision making

- Risk/harm versus benefit
- Consent, capacity, advance directives
- Communication

Risk management

- Prediction of post operative complications
- Planning of postoperative care promoting
  - Early identification of medical complications
  - Standardised mx of medical complications
- Prediction of support required on discharge

…and has a good evidence base

THE LANCET
Volume 342, Issue 8878, 23 October 1993, Pages 1032–1036
Originally published as Volume 2, Issue 8878

Clinical practice

Comprehensive geriatric assessment: a meta-analysis of controlled trials

A.E Stuck, MD[a], A.L Siu, MD[b], G.D Wieland, PhD[c], L.Z Rubenstein, MD[c], J Adams, PhD[d]

UNIVERSITY OF OXFORD

DEPARTMENT OF PUBLIC HEALTH, OXFORD

June 2012– Evidence Summary of a Cochrane Effective Practice and Organisation of Care group systematic review

Does inpatient comprehensive geriatric assessment improve care for frail older adults admitted to hospital ?

Anaesthesia 2014, 69 (Suppl. 1), 8–16

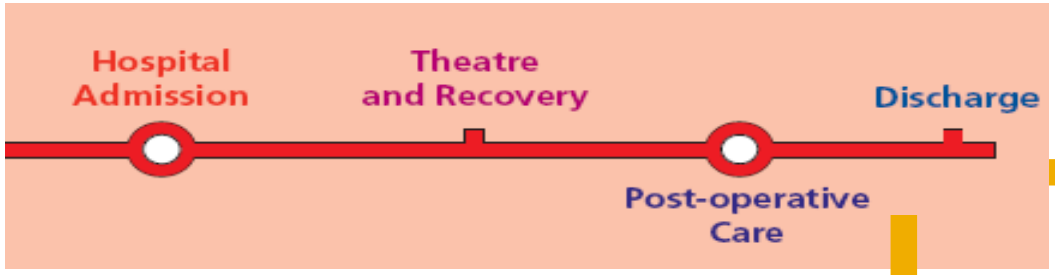
Review Article

The impact of pre-operative comprehensive geriatric assessment on postoperative outcomes in older patients undergoing scheduled surgery: a systematic review

The same patient with POPS input…

OA	Pain	Treat/physio
Diabetes	HbA1c 8.2%	Treat/plan
HTN	BP 170/88	ABPM/treat
SOB ?cause	Ischaemic ECG	Medical optimisation
'Difficult' historian	Anaemia	Iv iron
	Deconditioning	Exercise programme
	Cog impair't	Delirium risk/mx
	Social issues	Equipment/POC Psychological support Discharge planning

…with postop follow through



Appropriate discharge plans

Proactive standardised mx of ileus, diabetes, fluid balance by joint team

Planned individualised intraoperative care

Admission on day of surgery
Detailed info to anaesthetist

POPS Letter

Does this approach work?

Pre and post study

Ortho elective, Age and Ageing, 2007;36:190-196

Randomised controlled trial

- Single centre elective aortic & lower limb vascular
- 40% reduction in LOS
- No increase in readmission
- Predominantly due to
  - reduction in medical complications
  - streamlining of process (reduction in SD of LOS)

The additional benefits

Pre-op	↓ multiple hospital appts
	↓ 'lost in the system'
	↓ late cancellations
Post-op	↓ medical/multidisciplinary complications
	Standardised mx of complications
	Improved quality of overall care
	Improved discharge planning
Costs	Reduced LOS
	Reduced readmissions
	Improved coding

Cancer pathways

18 week pathway

Day of surgery admission

Communication

Education

Patient and staff satisfaction

What are the challenges….

- Knowledge
  - Perioperative medicine (embed knowledge or specialists)
  - Surgical subspecialties are the same but different
- Attitudes
  - Understanding culture
  - 'Can do', inventive, developing the workforce
- Behaviours
  - Embed knowledge or embed the specialist
  - Team working (Within team and across teams)
  - Changing systems
    - Across boundaries and departments

…not to mention….

The volume of work

- Increasing numbers/complexity of patients

The funding

- Which specialty/directorate?

So….

- Do we 'believe' in such models?
  - Single site evidence (but more coming)
- Are there people out there who want to do this kind of work?
  - BGS survey, RCoA survey
- What can we do to help implement such models?
  - Commissioning of pathways to include geriatrician/physician/medical support (eg BPT in hip fracture)