



University of  
**BRISTOL**

**North Bristol**  
NHS Trust



# The Role of the Perioperative Geriatrician

**2<sup>nd</sup> London Critical Care &  
Perioperative Medicine Meeting  
9<sup>th</sup> October 2019**

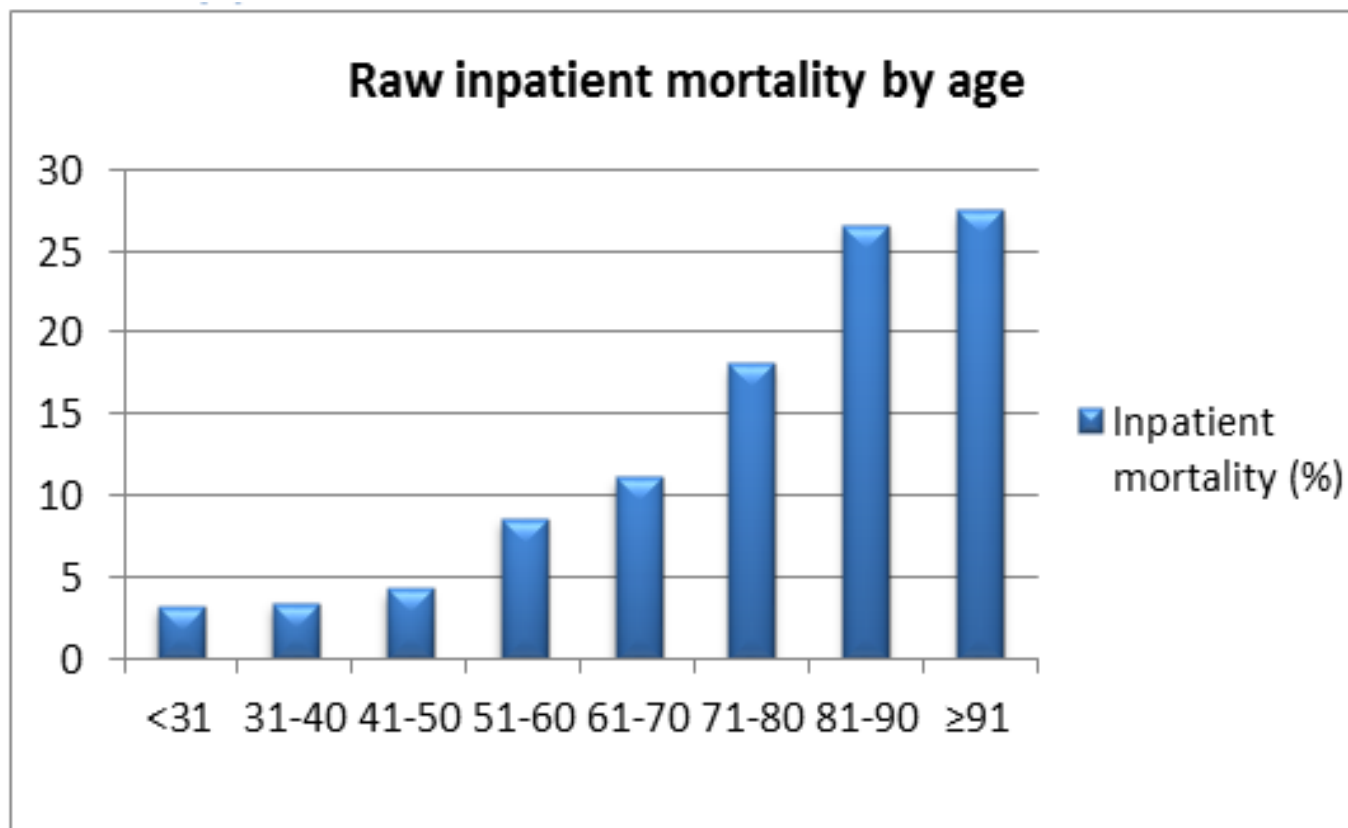
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# Overview

- What happens to older surgical patients?
  - *The case for change...*
- How can Geriatrics help?
  - Enhanced Pre-assessment
  - Multimodal Prehabilitation
  - Post-op Ward Support
  - Discharge Planning



# What happens to old people after surgery?



# What sort of complications occur?

Age	Resp	CVS	CNS	T -emboli	An 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	<0.0001	<0.0001	<0.0001	0.0004	0.2607

	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%

# When do complications occur?

Table 3. Temporal Occurrence of Complications for the Total Group\*

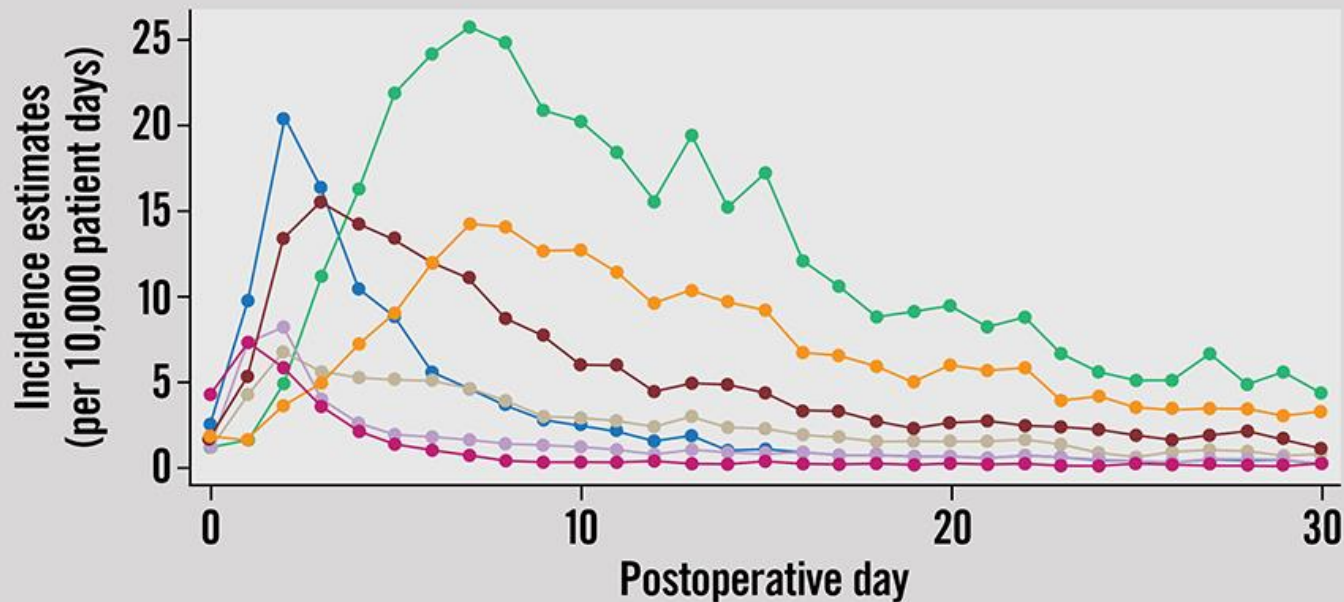
Variable	Specific Interval			
	Day 1	Days 1-3	Days 4-7	Days 8-30
<b>Cardiac</b>				
Myocardial infarction	21 (47)	17 (38)	5 (11)	2 (4)
Congestive heart failure	6 (17)	16 (46)	6 (17)	7 (20)
Hypotension	13 (43)	5 (17)	4 (13)	8 (27)
Cardiac arrhythmia	7 (33)	7 (33)	3 (14)	4 (19)
Angina			2 (40)	0
<b>Pulmonary</b>				
Respiratory failure			9 (7)	12 (10)
Pneumonia			26 (38)	16 (24)
Respiratory depression	11 (55)	2 (10)	2 (10)	5 (25)
Pulmonary embolus	0	1 (50)	1 (50)	0
<b>Other</b>				
Sepsis	0	4 (11)	7 (18)	27 (71)
Renal failure	2 (13)	5 (31)	0	9 (56)
Cardiovascular accident	0	4 (24)	4 (24)	9 (52)
Gastrointestinal tract bleeding	3 (20)	4 (27)	3 (20)	5 (33)
<b>Total</b>	<b>74 (17)</b>	<b>185 (43)</b>	<b>72 (17)</b>	<b>104 (24)</b>

17% Complications occur Day 1  
84% Day 2+ ....

\*Data are given as the number (percentage) of patients. A patient may have experienced the same or another complication in more than 1 period.

# When do complications occur?

Figure Daily Incidence of Index Postoperative Complications



# Impact of Geriatric Syndromes

Br J Surg. 2010 Feb;97(2):273-80. doi: 10.1002/bjs.6843.

## Risk factors and incidence of postoperative delirium in elderly patients after elective and emergency surgery.

Ansaloni L<sup>1</sup>, Catena F, Chattat R, Fortuna D, Franceschi C, Mascitti P, Melotti RM.

### Author information

#### Abstract

**BACKGROUND:** : This study evaluated the risk factors associated with POD, and

**METHODS:** : Patients aged over 65 years were included in a retrospective study. Risk factors significantly associated with POD were identified by logistic regression analysis. Risk factors associated with POD were identified by logistic regression analysis.

**RESULTS:** : A total of 351 patients were included in the study (150 elective and 201 emergency operations). Independent risk factors for POD were age >65 years, cognitive impairment, psychopathological disorders, and abnormal glycaemic control. Median LOS in patients with POD versus 8 (range 1-75) days for patients without POD (P = 0.021).

**CONCLUSION:** : The incidence of POD is high in elderly patients undergoing general surgery, the risk factors associated with POD are age >65 years, cognitive impairment, psychopathology and abnormal glycaemic control. To minimize POD, associated risk factors of co-morbidity, cognitive impairment, psychopathology and abnormal glycaemic control must be identified and treated.

- Incidence up to 17.9% in age >65
- Median LOS 21 days (vs 8 days)
- Mortality 19% (vs 8.4%)

g general surgery, the risk

ontrol study. Risk factors  
hose independently

er cent (17.9 per cent for  
perative cognitive  
(range 1-75) days for  
nd 8.4 per cent respectively

to an increase in hospital

# Functional decline has an organic basis



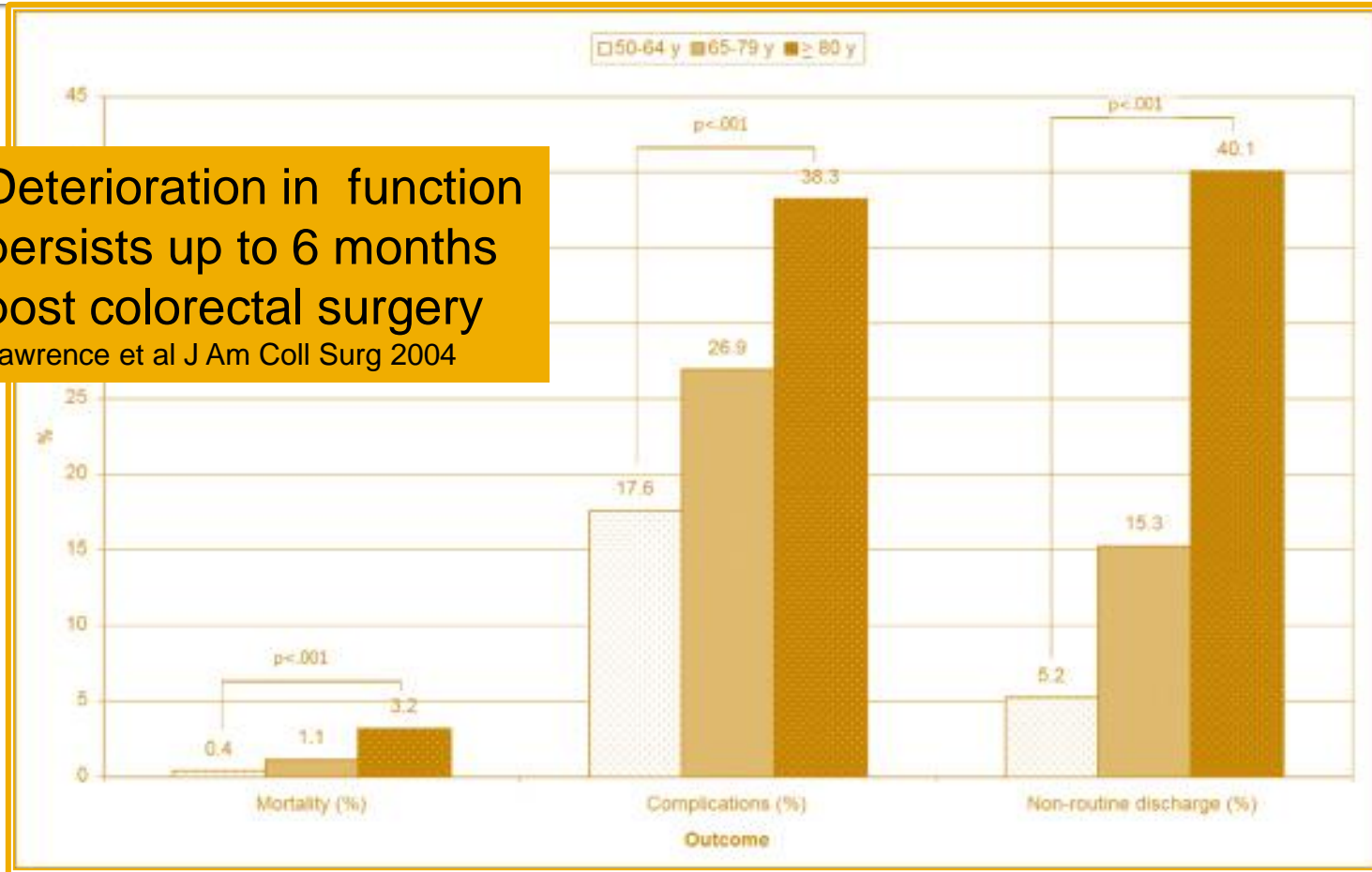
- 18 days immobilisation in fit healthy male
- 40% loss muscle strength 1 week
- Parry et al, Extrem Physiol Med 2015



# Functional Decline & Complex Discharge

Deterioration in function persists up to 6 months post colorectal surgery

Lawrence et al J Am Coll Surg 2004



Mortality

Complications

Adverse Discharge

# We're all familiar with the problem



**THE**  
**Sun**

## ELDERLY 'TRAPPED' IN HOSPITAL BEDS

**DAILY EXPRESS**  
THE WORLD'S GREATEST NEWSPAPER express.co.uk WEATHER: SHOWERS SATURDAY, JUNE 16, 2018 90p

**WORST EVER SUMMER OF HAY FEVER MISERY** SEE PAGE 6

**SHAME ON YOU! MP blocks law to stop sex pests** SEE PAGE 7

**SCANDALOUS WASTE OF HEALTH CASH**

# BED BLOCKING COSTS NHS £3BN A YEAR

**LESLIE GRANTHAM 1947-2018**

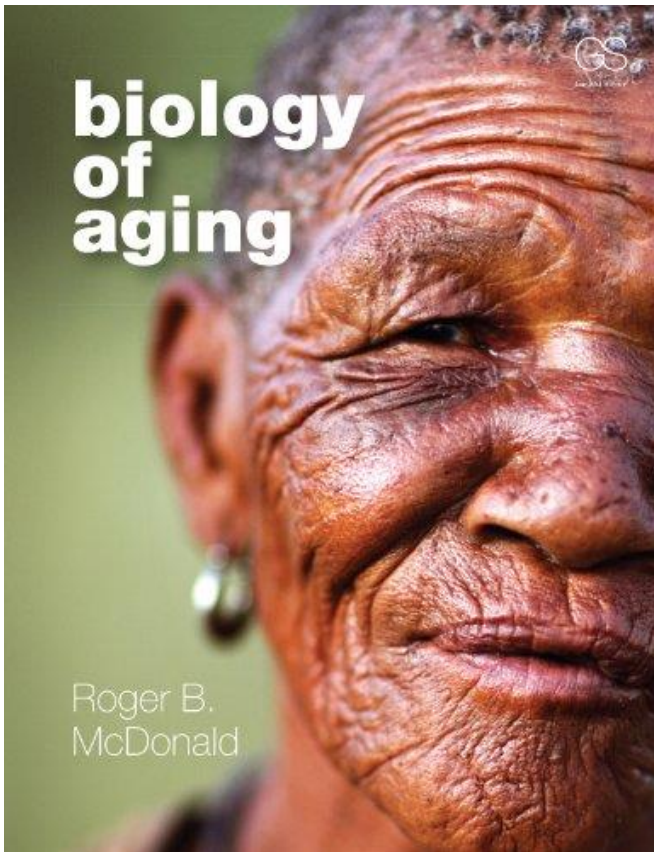
**Demands for free social care to ease pressure on hospitals**

A RADICAL plan to end the bed-blocking crisis that costs the NHS £3bn a year was put forward today. Social care should be offered to all practitioners who need it, said a report by **By Sarah O'Grady Social Affairs Correspondent** elderly people from facing such a dire fate of more than £300m. It would bring the social care system into line with the NHS, where care is free at the point of need. And it would reduce pressure on hospitals to be discharged because **They would begin with daily tasks such as dressing, washing and eating.** One of the report's authors, Labour peer Lord Darcy, a former minister, said: "No politician should ignore the gulf between the NHS and social care." "Social care capacity shortages are crippling NHS services. We and **SEE PAGE 4**

**Anita's touching tribute to TV's Dirty Den** SEE PAGE 10

# Why are the elderly at higher risk?

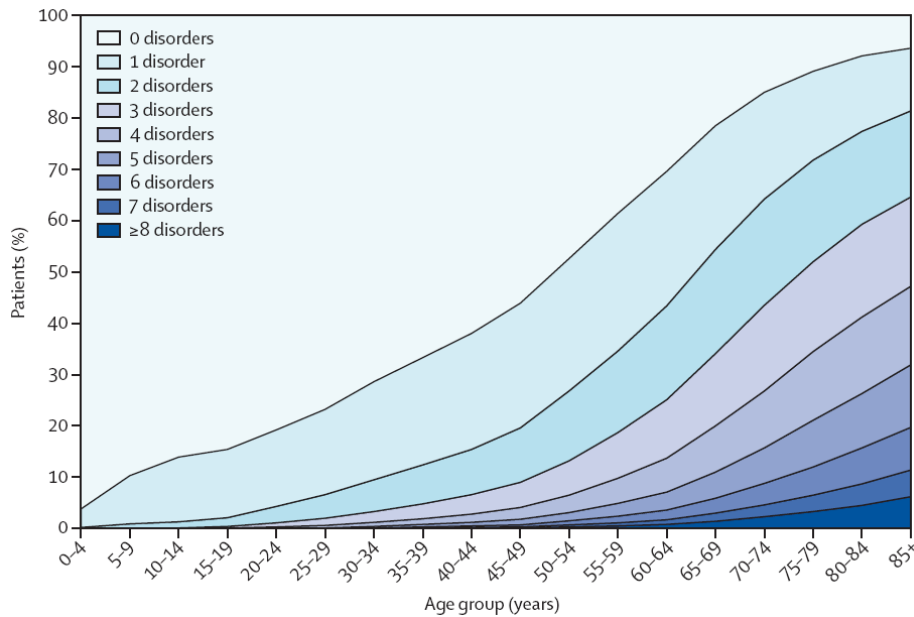
## PATIENT FACTORS



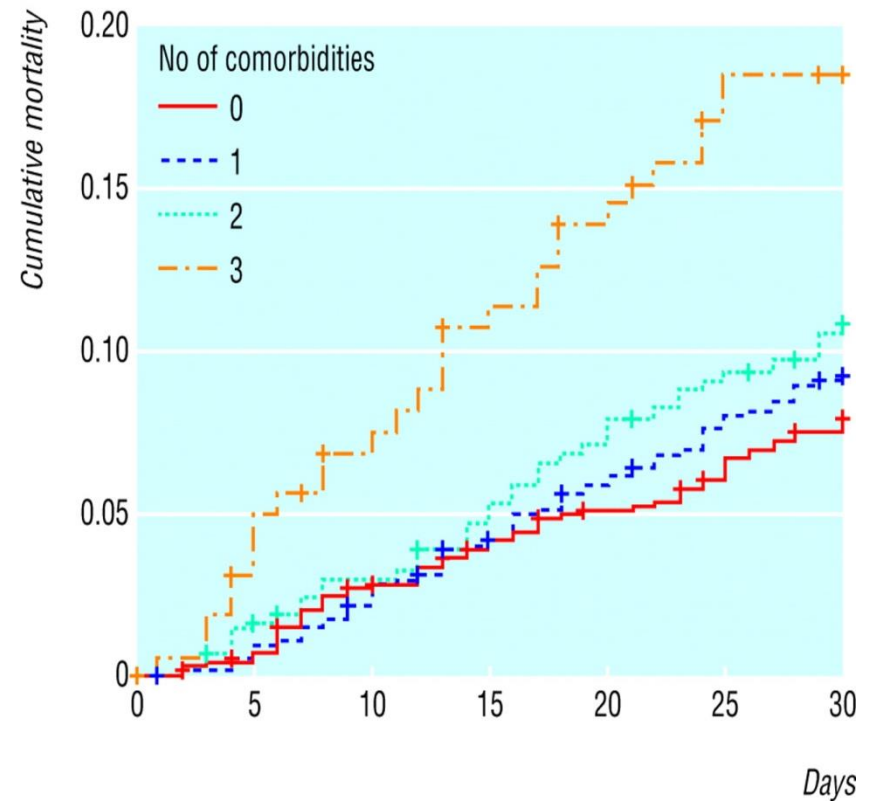
## SERVICE FACTORS



# The impact of multimorbidity

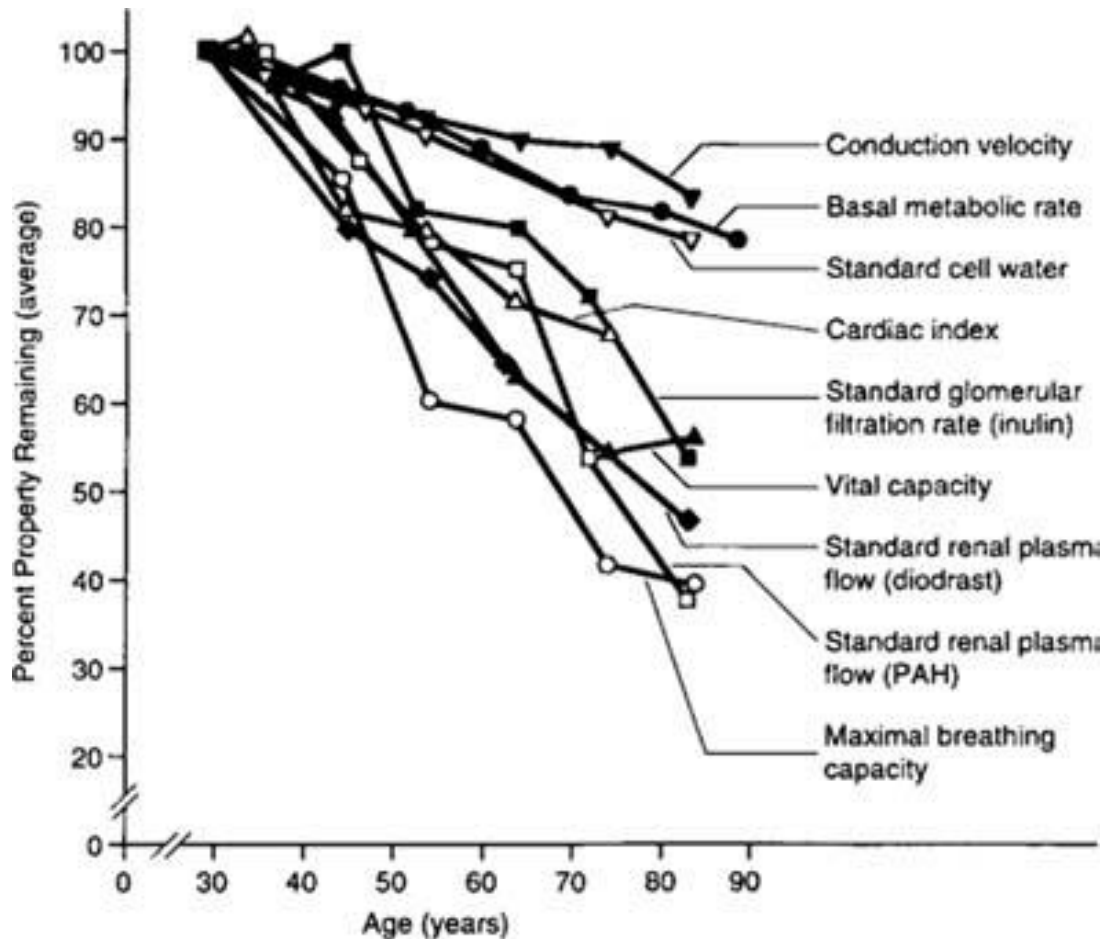


Barnett et al Lancet 2012



Roche et al. BMJ 2005

# Physiology of Ageing & Frailty



-Decline in measurable parameters

-Preservation of organ *function*

-Reduced physiological reserve

-Concept of *Homeostenosis*

Frailty = Reduced physiological reserve across *multiple* organ systems

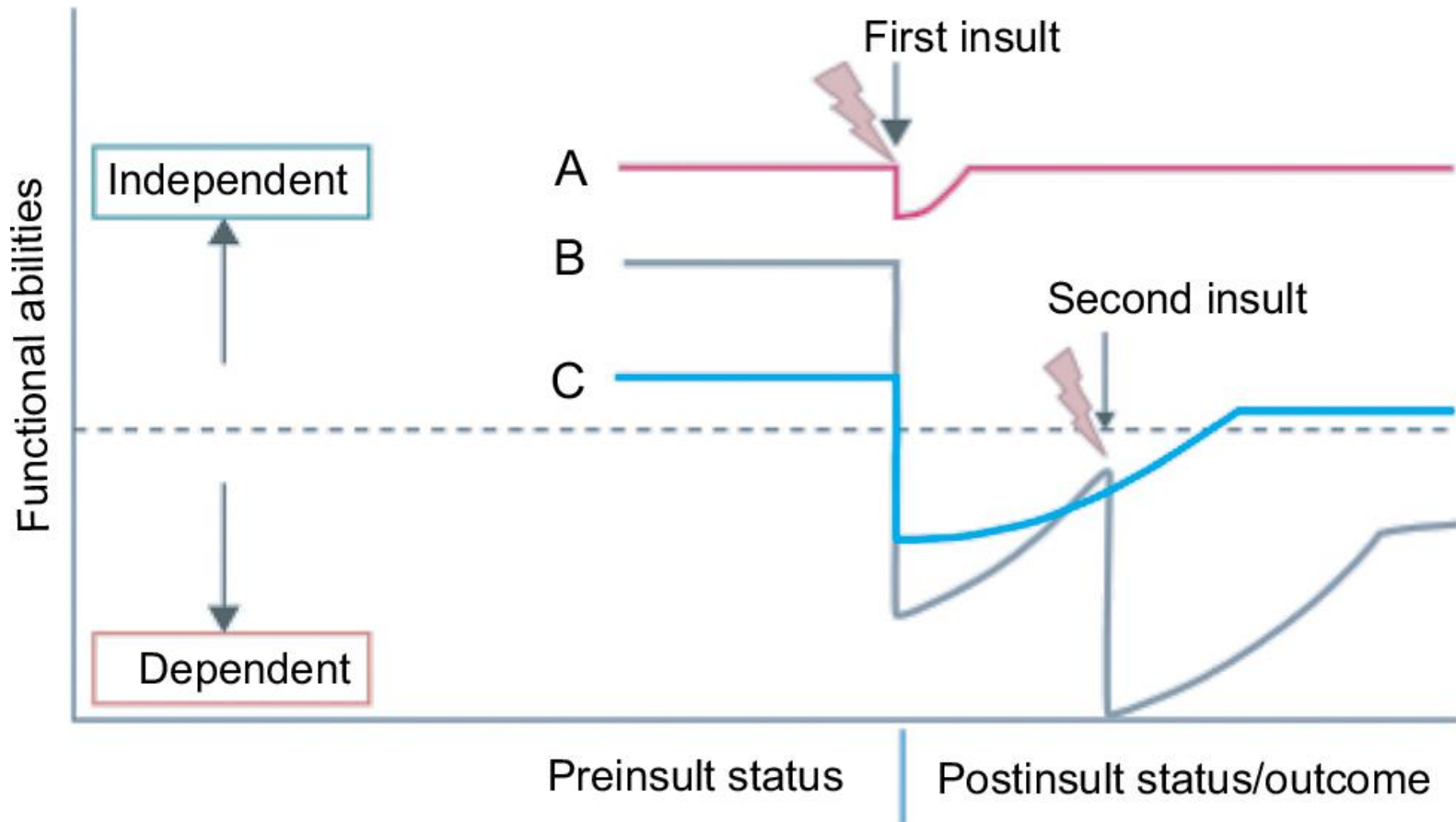
# Frailty and Surgical Outcomes

**Table 2** Baseline frailty and postoperative outcomes

Colorectal operations	Total (N = 72)	Nonfrail (n = 33)	Prefrail (n = 15)	Frail (n = 24)	P value
One or more complications (%)	27 (38)	7 (21)	6 (40)	14 (58)	.016
Cardiac	2 (3)	0 (0)	0 (0)	2 (8)	
DVT	1 (1)	0 (0)	0 (0)	1 (4)	
Sepsis	8 (11)	1 (3)	1 (7)	6 (25)	
Postoperative infection	18 (25)	6 (18)	4 (27)	8 (33)	
Renal disease	2 (3)	0 (0)	0 (0)	2 (8)	
Respiratory	6 (8)	0 (0)	0 (0)	6 (25)	
Neurologic	1 (1)	0 (0)	0 (0)	1 (4)	
Reoperation	6 (8)	1 (3)	0 (0)	5 (21)	
Hospital stay (d)	9 ± 8.0	6 ± 3.6	8 ± 6.1	14 ± 11.0	<.001
30-day readmission (%)	11 (15)	2 (6)	3 (20)	7 (29)	.046

Approx 3-fold complications  
>Double LOS

# Impact of surgery (and complications) in frail



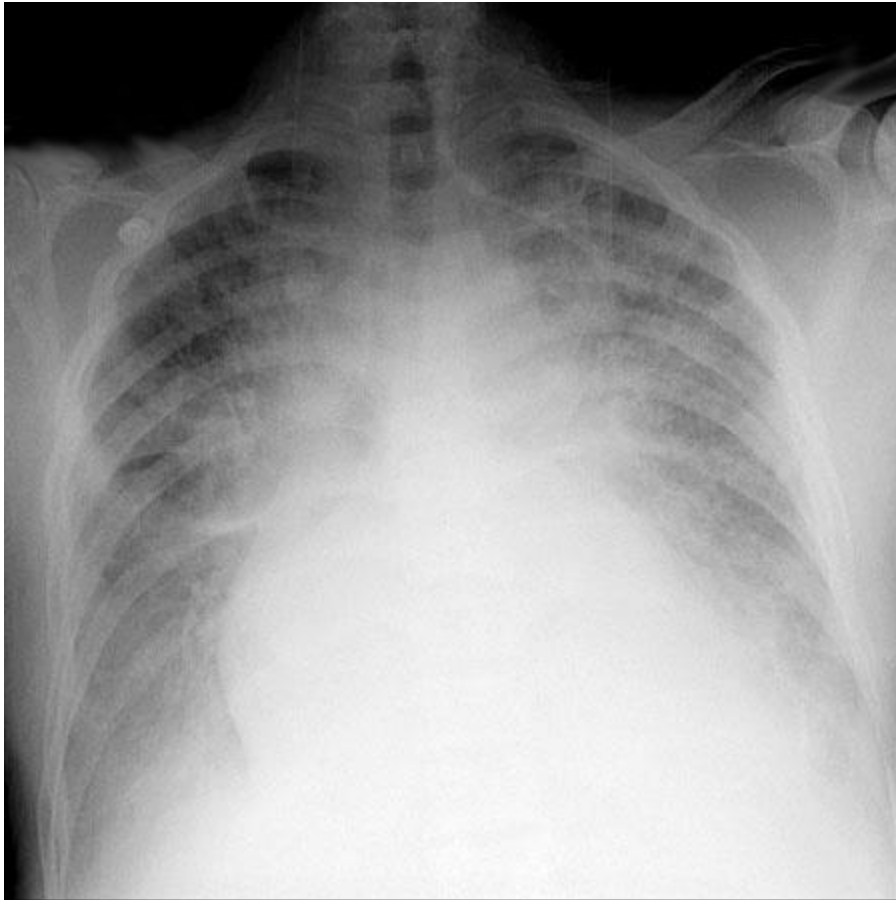
# Service Related Factors

- Surgical Ward Rounds
  - Usually senior
  - Highly focussed
  - Time pressured
- Concept of false reassurance?
- Reactive care
  
- After 0900 am, limited senior availability – clinic, theatre





# Post-op Crisis – call the Med Reg?



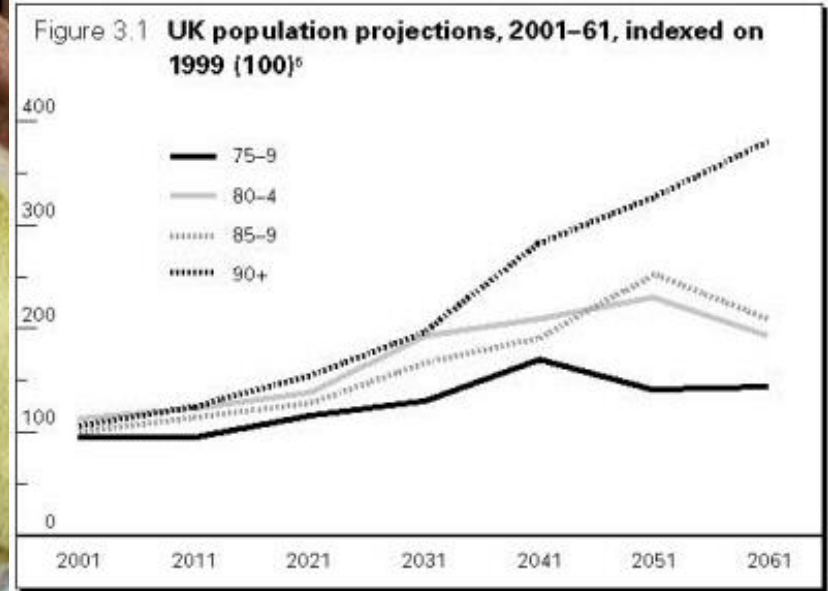
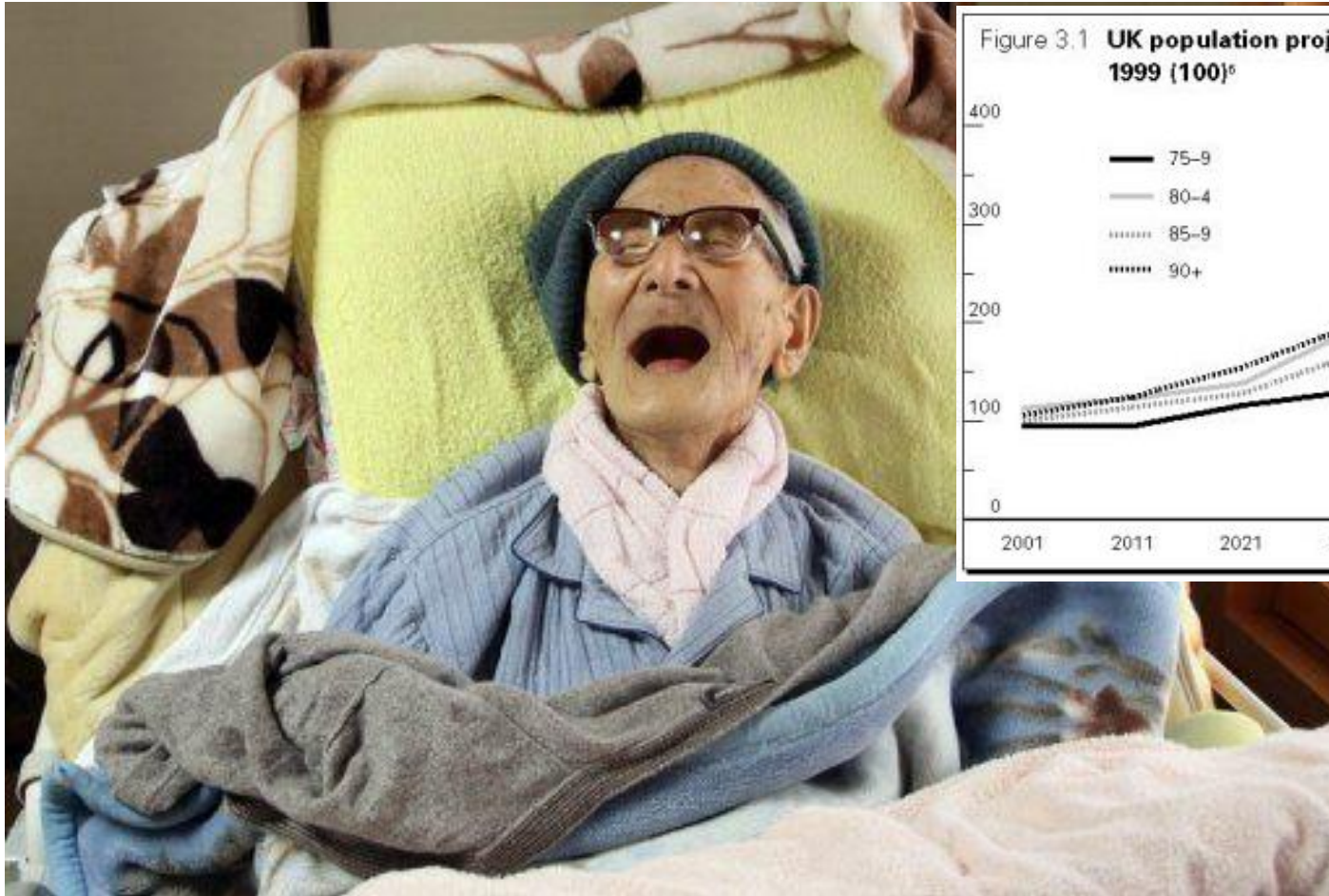
Name:	CXA&E	
S/N:	09032295	
<b>Measured (37.0°C)</b>		
pH	↓ 6.87	
pCO <sub>2</sub>	↓ 2.9	kPa
pO <sub>2</sub>	↓ 7.7	kPa
Na <sup>+</sup>	138	mmol/L
K <sup>+</sup>	↑ 6.5	mmol/L
Cl <sup>-</sup>	↓ 94	mmol/L
Ca <sup>++</sup>	↓ 1.04	mmol/L
Glu	5.6	mmol/L
Lac	↑ 19.2	mmol/L
<b>CO-Oximetry</b>		
tHb	149	g/L
O <sub>2</sub> Hb	↓ 79.9	%
COHb	↑ 1.6	%
MetHb	1.5	%
HHb	↑ 17.0	%
sO <sub>2</sub>	82.5	%
<b>Derived</b>		
BE <sub>ecf</sub>	↓ -29.4	mmol/L
HCO <sub>3</sub> <sup>-</sup> std	2.1	mmol/L
Hct(c)	45	%
<b>Operator Entered</b>		
Temp	37.0	°C

# What's the discharge plan?

Where's the physio and occupational therapist? I want to send this patient home.



# Not so fine for her....



- 2050 10% population aged >80

# Surgeons beginning to realise they can't do it all?

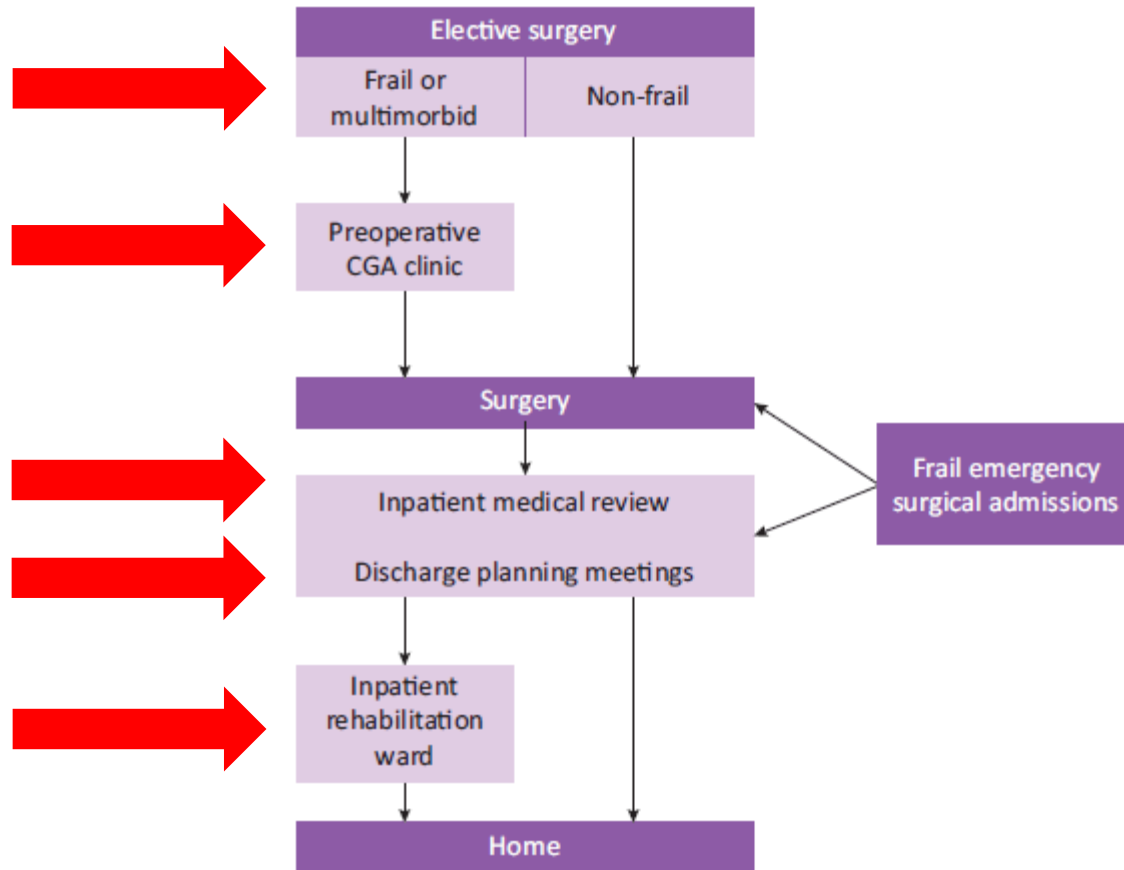
- 70% describe inadequate training in mx of complex older patients
- 85% often need medical advice
- 68% difficulty in accessing medical support
- 92% felt need for closer collaboration

## Ideal components of a collaborative geriatric medicine-surgical service

Medical Optimisation	79%
Mental Capacity Assessment	71%
Quantifying Medical Risks of Surgery	64%
Managing Medical Complications	87%
Communication with patients and families	38%
Post-op rehab/ discharge planning	92%

# Patient Pathway

## Opportunities for Intervention



**Fig 1. Model of care - embedded geriatric surgical liaison.** CGA = Comprehensive Geriatric Assessment

# Pre-operative: enhanced case selection

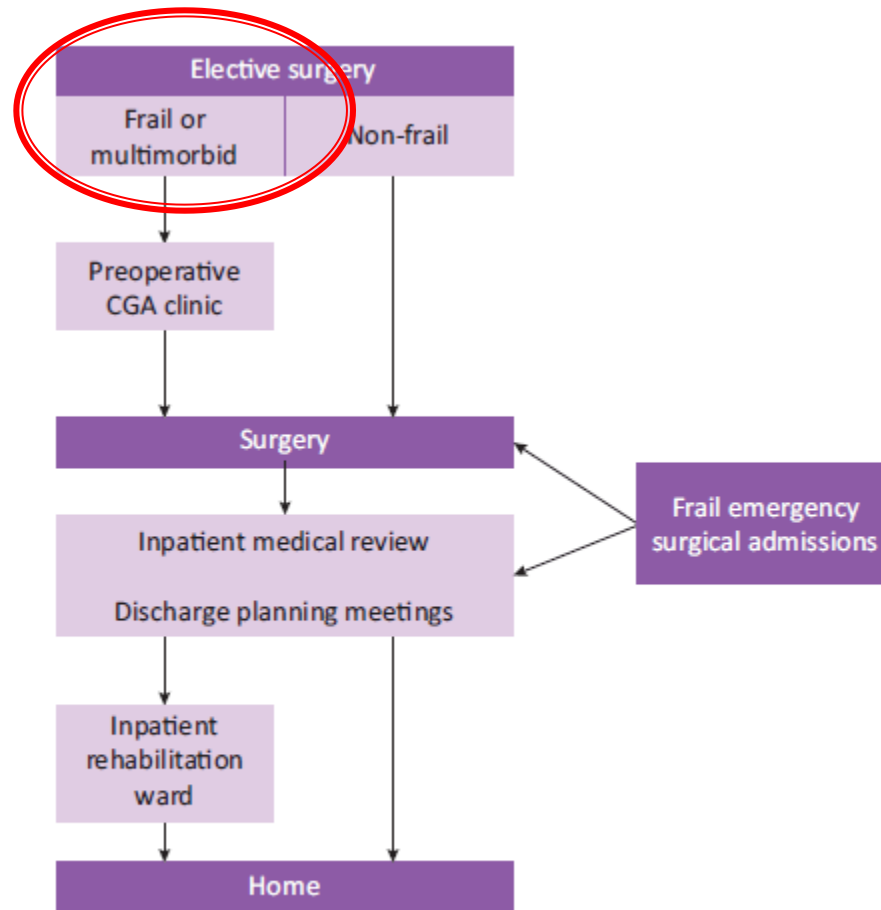
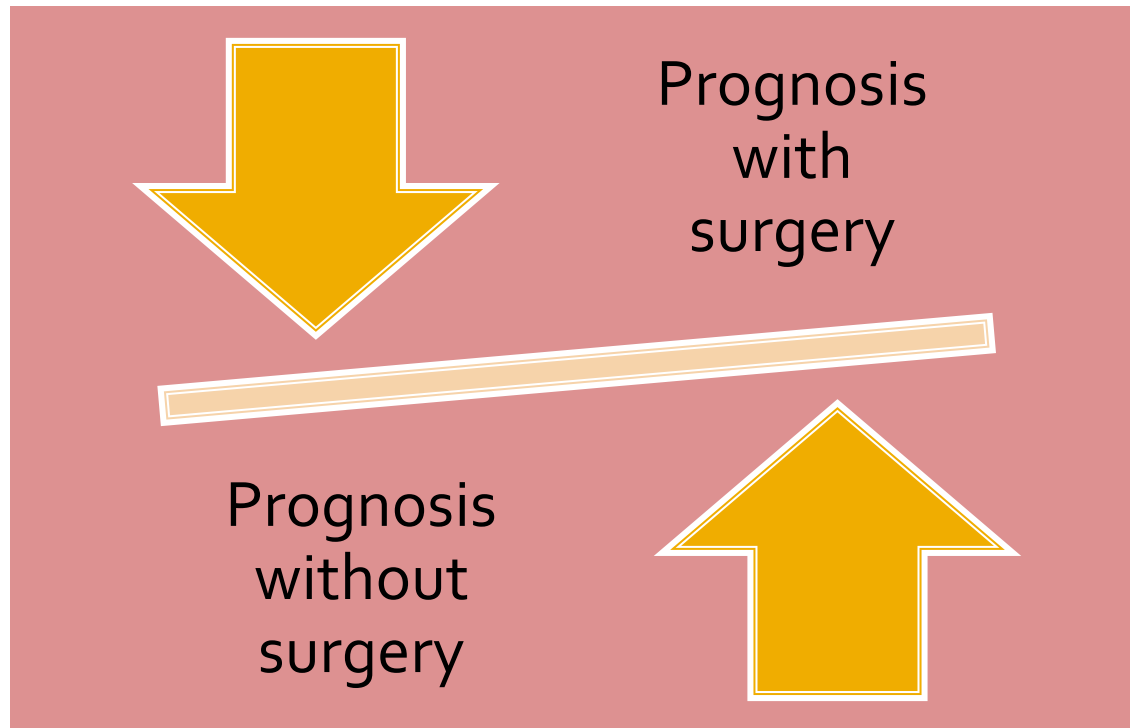


Fig 1. Model of care - embedded geriatric surgical liaison. CGA = Comprehensive Geriatric Assessment

# Enhanced Case Selection



- Support shared decision making

# Life Expectancy Without Surgery

## 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

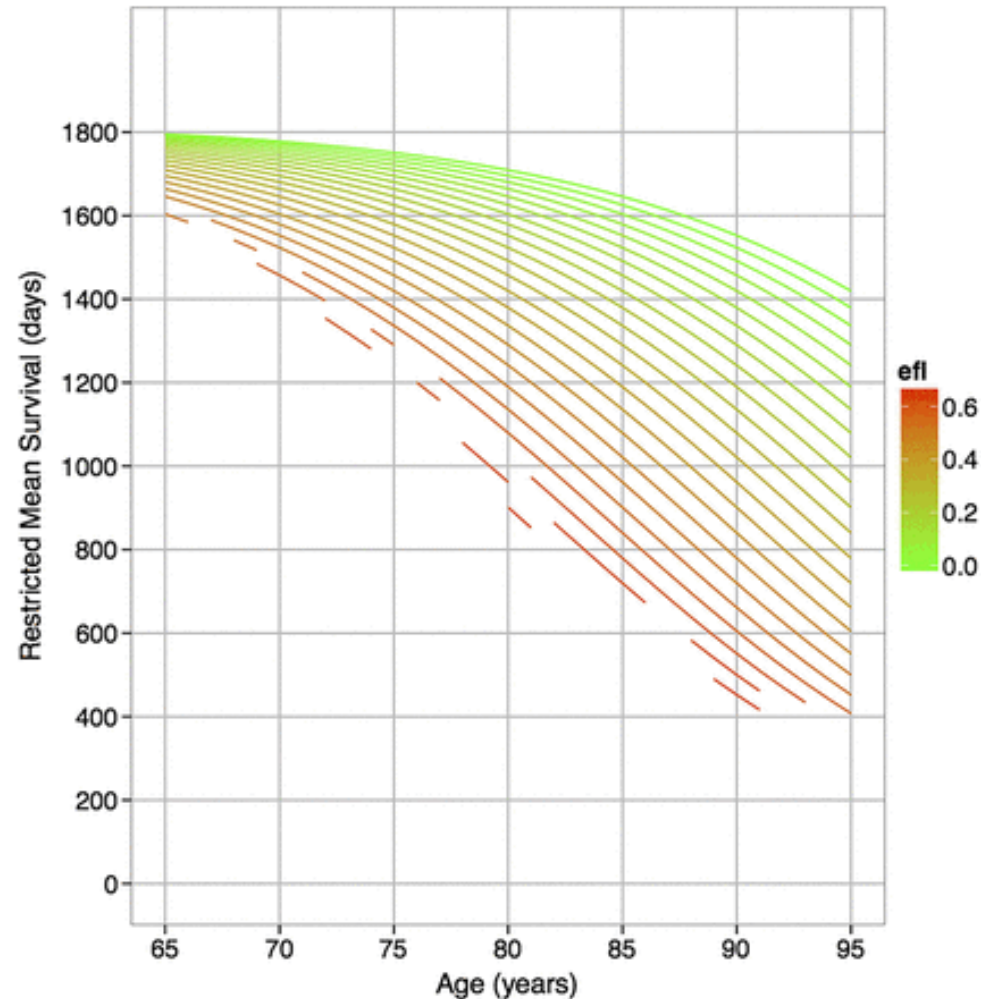
Office for National Statistics , UK, 2012.

- But...
  - Figures are averages across whole population
  - Doesn't account for specific disease states
- Unlikely to be accurate for many surgical patients



# Life Expectancy in Frailty

Outcome	Internal validation			
	Fit	Mild frailty	Moderate frailty	Severe frailty
1 year mortality	1,721 1.7%	3,263 4.7%	2,413 10.6%	971 19.1%
3 year mortality	5,693 5.7%	9,633 14.0%	6,530 28.6%	2,418 47.5%
5 year mortality	10,263 10.2%	16,271 23.6%	10,160 44.5%	3,540 69.5%
1 year emergency hospitalisation	4,406 4.4%	6,278 9.1%	3,519 15.4%	1,276 25.1%
3 year emergency hospitalisation	13,483 13.4%	16,839 24.3%	8,198 35.9%	2,451 48.1%
5 year emergency hospitalisation	24,161 24.0%	27,163 39.3%	12,051 52.8%	3,151 61.9%
1 year nursing home admission	270 0.3%	570 0.8%	464 2.0%	195 3.8%
3 year nursing home admission	1,151 1.1%	2,087 3.0%	1,476 6.5%	525 10.3%
5 year nursing home admission	2,692 2.7%	4,355 6.3%	2,647 11.6%	842 16.5%



Clegg et al. *Age and Ageing* 2016; 45(3): 353–360

[Risk Calculator Home Page](#)

[About](#)

[FAQ](#)

[ACS Website](#)

[ACS NSQIP Website](#)

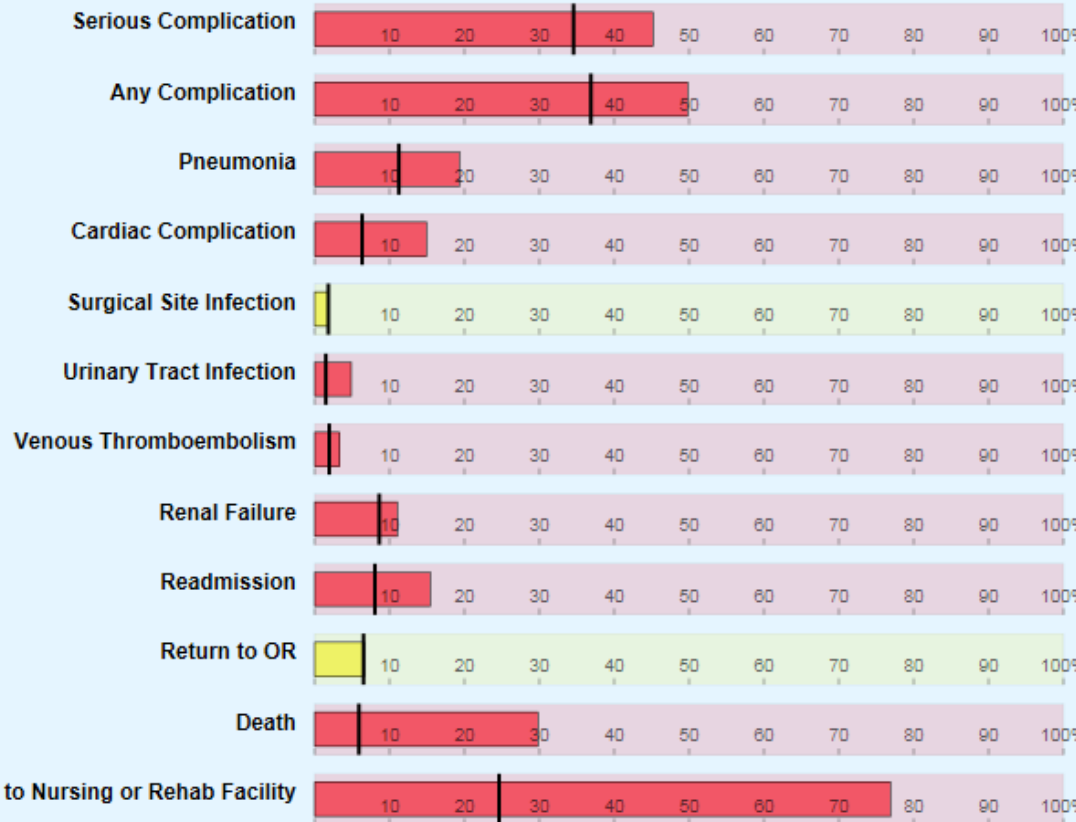
**Procedure:** 34830 - Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair; tube prosthesis

**Risk Factors:** 85 years or older, Partially dependent functional status, Severe systemic disease/constant threat to life, Diabetes (Oral), HTN, Dyspnea with moderate exertion

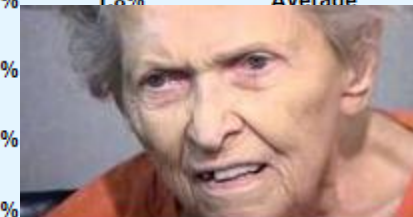
[Change Patient Risk Factors](#)

Note: Your Risk has been rounded to one decimal point.

**Outcomes** ⓘ



**Your Risk**      **Average Risk**      **Chance of Outcome**



Woman, 92, shoots son dead over decision to put her in care home, US authorities say

[Telegraph.co.uk](https://www.telegraph.co.uk)

1 day ago

**Predicted Length of Hospital Stay: 12.5 days**

# Example – Frail 82 yo 6.5 cm AAA for EVAR

Risk of Rupture	Surgical Risk	Life Expectancy
5-10% per annum	Mortality 8%	Office for National Statistics = 8 years
	Complications 22%	Electronic Frail Scale 2.5 years
	Discharge to long term rehab or permanent institution 42%	

We influence patient appreciation of risk significantly

# Preoperative: Prehab & Medical Optimisation

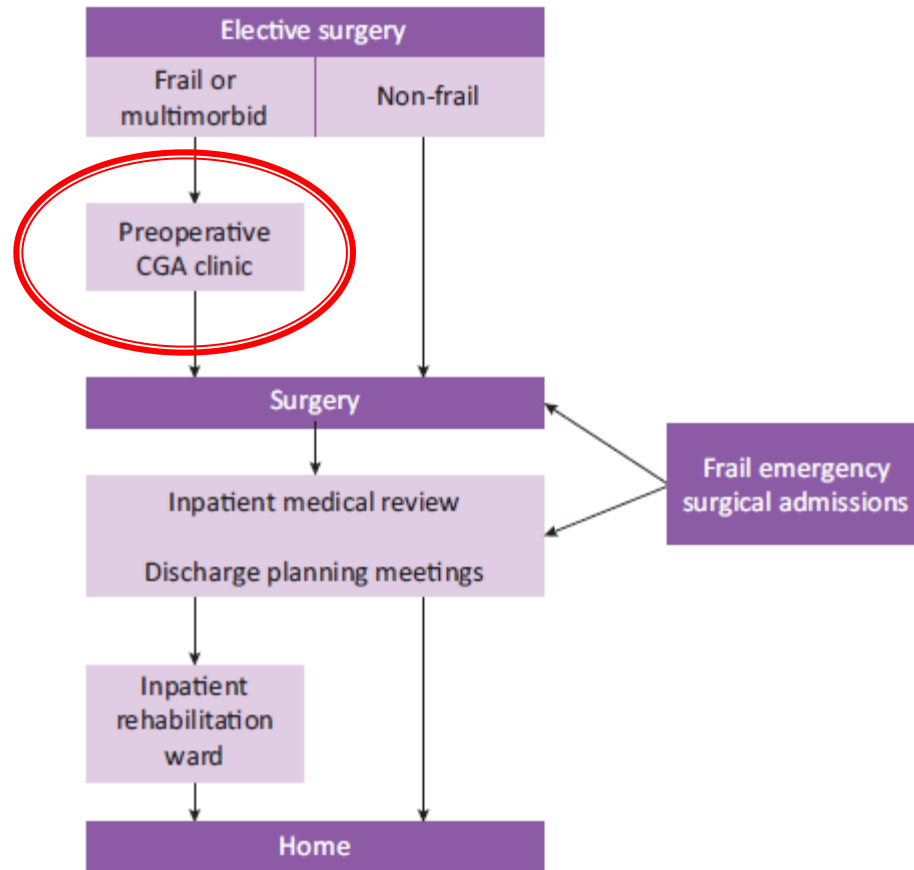
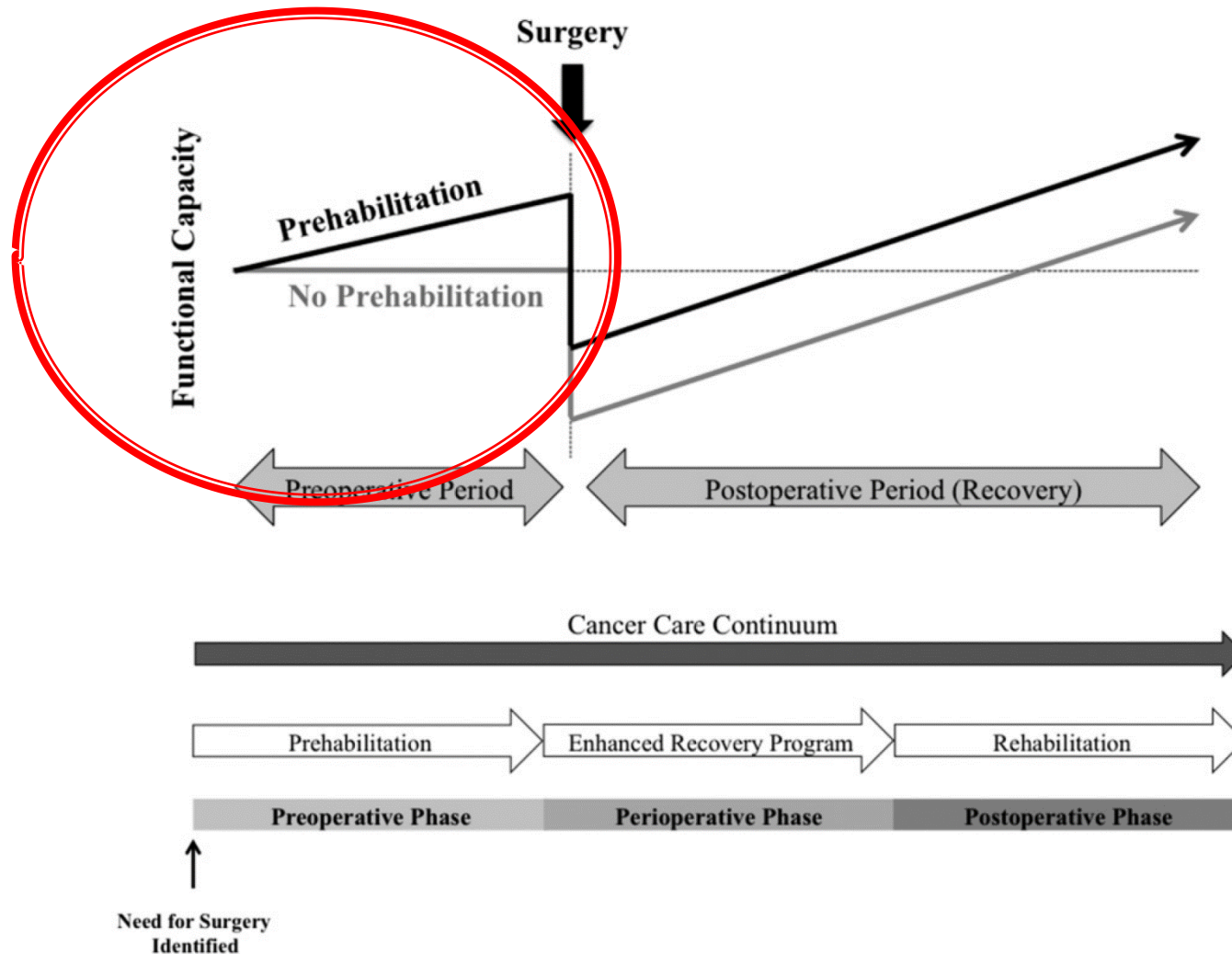


Fig 1. Model of care - embedded geriatric surgical liaison. CGA = Comprehensive Geriatric Assessment

# Prehabilitation Programmes



# But what about....

**TABLE 1. Risk Factors According to the Classifications of Goldman, Lee, and Boersma for Adverse Postoperative Outcome in Patients Undergoing All Types of Noncardiac Surgical Procedures<sup>a</sup>**

Goldman et al, <sup>5</sup> 1977	Lee et al, <sup>7</sup> 1999	Boersma et al, <sup>8</sup> 2005
Life-threatening and fatal cardiac complication	Major adverse cardiac event	Cardiovascular death
Third heart sound or jugular venous distention Myocardial infarction in the preceding 30 days >5 PVCs per minute at any time before surgery Other than sinus rhythm or presence of bundle branch block Age over 70 years Intraperitoneal, intrathoracic, or aortic surgery Emergency operation Important valvular aortic stenosis Poor general medical condition	<ul style="list-style-type: none"> <li>• Heart Disease</li> <li>• Lung Disease</li> <li>• Renal Failure</li> <li>• Anaemia</li> </ul>	Acute heart failure Ischemic heart disease Peripheral vascular disease Diabetes mellitus Hypertension Chronic kidney disease Failure of any organ Preoperative risk according to the AHA/ACC classification Age group: <40 years, 40-50, 50-60, 60-70, 70-80, >80
No. patients in original report: 1001	No. patients in original report: 2893 AUC in original report: 0.77	No. patients in original report: 108 593 AUC in original report: 0.85

<sup>a</sup>PVC indicates premature ventricular contraction; PAC, premature atrial contraction.

# And these?

## OTHER PATIENT FACTORS...

- Cirrhosis
- Stroke
- Diabetes Mellitus
- Obesity
- OSA
- Parkinson's Disease
- Myasthaenia Gravis
- Depression
- Schizophrenia
- Drugs

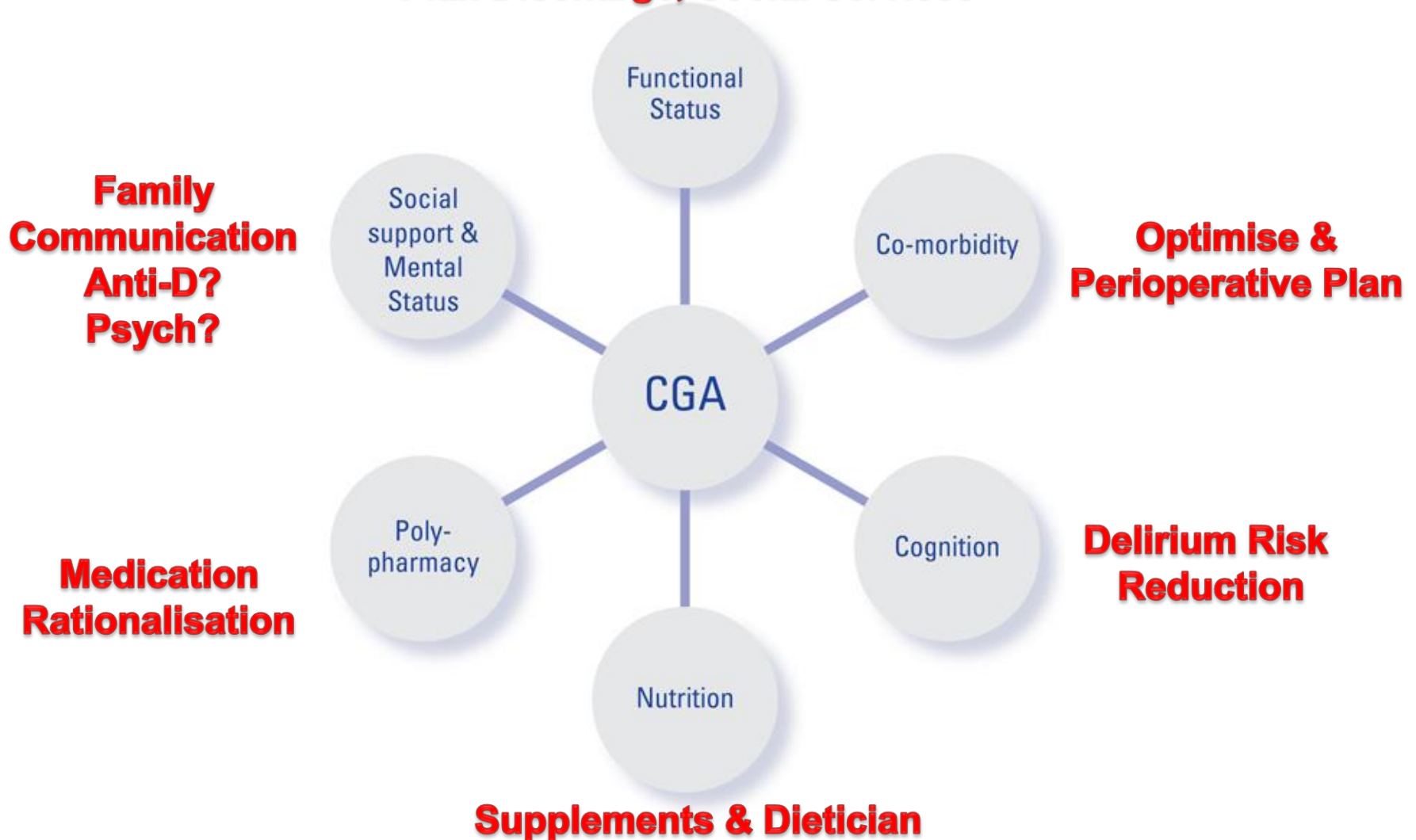


Illustration of Parkinson's disease by [William Richard Gowers](#), first published in *A Manual of Diseases of the Nervous System* (1886)

# Pre-operative CGA Clinic

## Risk Assessment, Communication & Intervention

### Plan Discharge, Social Services





# Detailed Perioperative Plans

## Standardised Evidence-Based Perioperative Plans for:

Prevention Respiratory Complications  
Arrhythmia Prevention  
IHD and Anti-platelets  
PPM & ICD  
CKD  
Parkinson's  
Myasthenia Gravis  
Stroke  
Diabetes  
Chronic Liver Disease  
Alcohol Withdrawal  
Anticoagulants  
Long-term Steroids  
Delirium Avoidance  
Nutrition & Anaemia  
Jehovah's Witnesses  
Cognitive Impairment and Mental Health  
Frailty and Complex Discharge

### **Risk of Postoperative Delirium**

The risk of delirium is elevated.

Plan:

Delirium reduction strategies:

- a. Anaesthetic review to allow tailoring of anaesthetic technique.
- b. Please follow delirium guidelines post-operatively.
- c. Avoid deliriogenic drugs (eg benzodiazepines, sedatives, anti-histamines, tramadol, long-acting opiates).
- d. Maintain adequate hydration and avoid constipation.
- e. Falls risk assessment
- f. Maintain orientation and day-night routine
- g. Sensory impairments are optimised (give pt glasses / hearing aids)
- h. Unrestricted ward access to patient for immediate friends and family.
- i. Sedation only if poses significant threat to self or others.

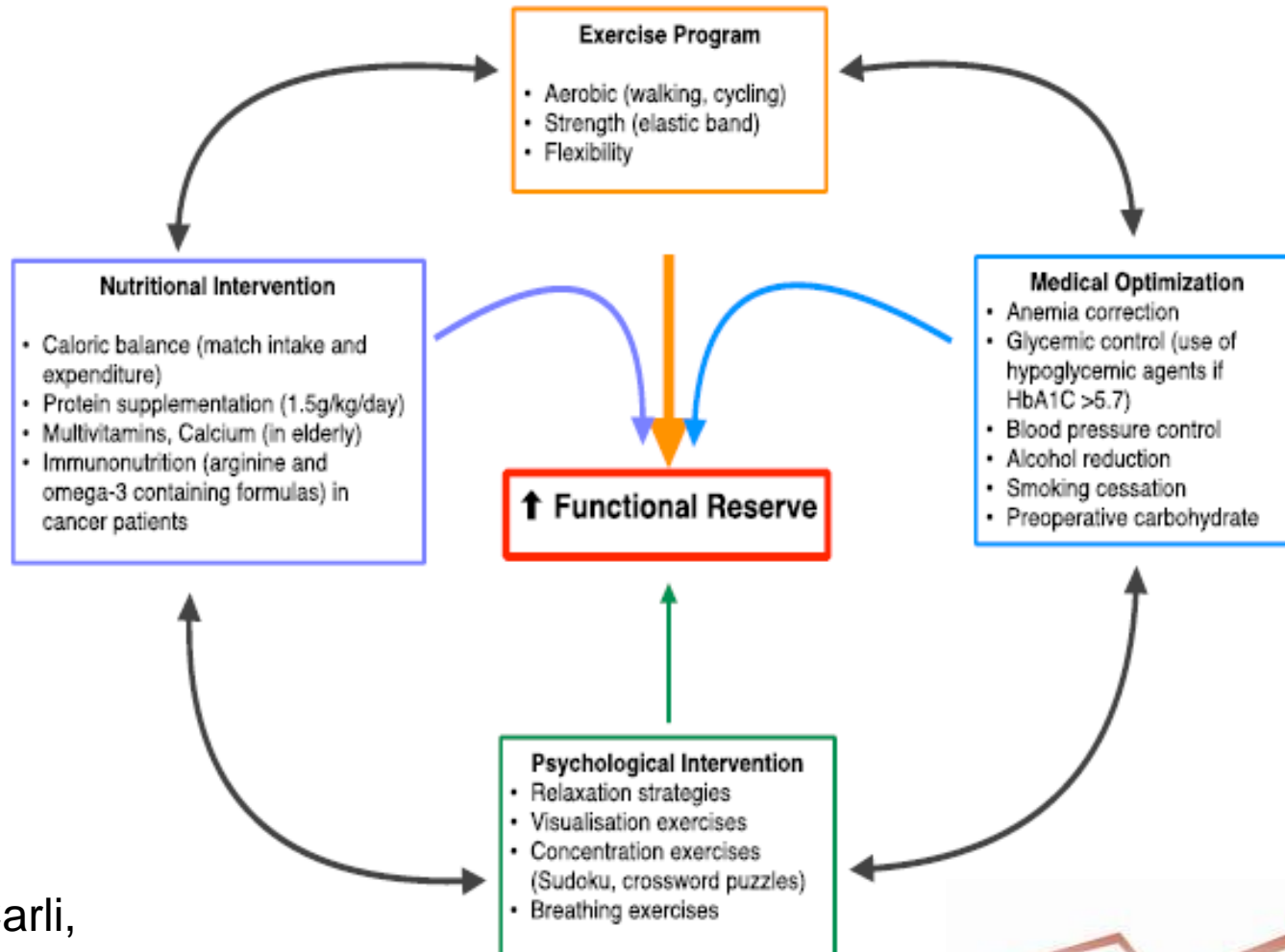
### **Parkinson's disease.**

This is a risk factor for falls, delirium, impaired swallow and aspiration pneumonia.

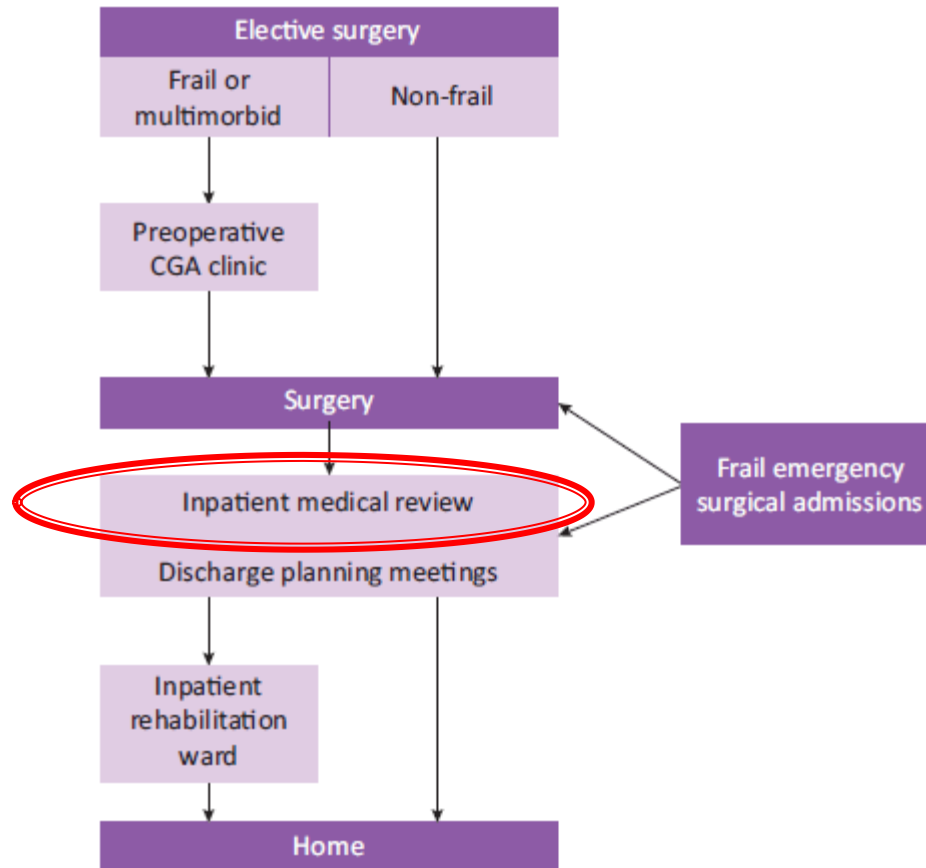
Plan:

- a. To receive oral medication for Parkinson's on morning of surgery with sips of water at 0600am (even if nil by mouth from 0200).
- b. NG tube sited for medications whilst nil by mouth. Use OPTIMAL calculator for dose conversion.
- c. If unable to use NG tube, use OPTIMAL calculator to convert oral medication to Rotigotine patch.
- d. Regular assessment of swallow. This is vulnerable to deterioration and NG feeding may be required.
- e. Avoid haloperidol and metoclopramide at all times.

# Multimodal Prehab



# Inpatient Rounds



**Fig 1. Model of care - embedded geriatric surgical liaison.** CGA = Comprehensive Geriatric Assessment

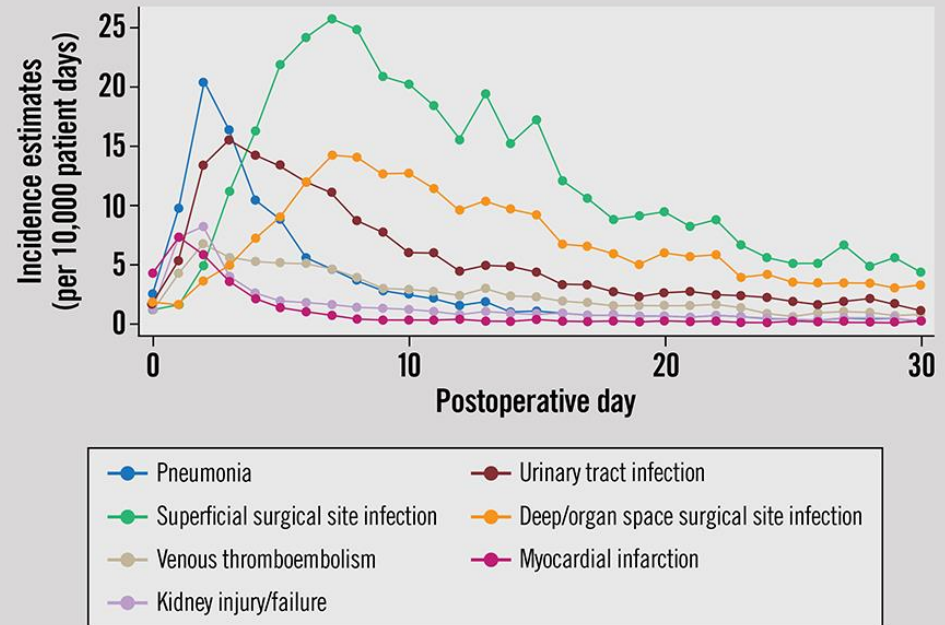
# What do we actually do?

**Table 4. Clinical indications for inpatient medical review**

Perioperative medical issues addressed	Percentage of patients
Fluid balance (CCF; AKI)	20.1% (n=48)
Cardiology (arrhythmia; ischaemia)	16.7% (n=39)
Delirium	16.3% (n=38)
Respiratory (HAP; PE; pleural effusion)	14.6% (n=34)
Sepsis	13.3% (n=31)
Gastroenterology (constipation; colitis; hepatitis; decompensated chronic liver disease)	7.3% (n=17)
Haematology (anaemia; coagulation; thrombocytopenia)	7.3% (n=17)
Endocrinology (electrolyte derangement; diabetes)	6.9% (n=16)
Neurology (seizures; stroke; TIA)	2.6% (n=6)
Medication rationalisation	11.6% (n=27)
Pain management	1% (n=3)
Nutritional optimisation	7.7% (n=18)
Communication with family	30.5% (n=71)
Surgical HDU review (vasopressors; NIV supervision)	23.6% (n=55)
De-escalation (removal of lines; catheters; therapeutics)	15% (n=35)
Discharge planning	48.1% (n=112)

AKI = acute kidney injury; CCF = congestive cardiac failure; HAP = hospital acquired pneumonia; HDU = high dependency unit; NIV = non-invasive ventilation; PE = pulmonary embolism; TIA = transient ischaemic attack

**Figure Daily Incidence of Index Postoperative Complications**



Source: Adapted from: Hyder J, et al. *J Surg Educ.* 2015;72:430-437.

Shipway et al. Embedded geriatric surgical liaison is associated with reduced inpatient length of stay in older patients admitted for gastrointestinal surgery. *Future Healthcare Journal* 2018 Vol 5, No 1: 1–9.

# Operational Details

- Daily review is key
  - 1400 hrs Mon-Fri
- Allows manageable caseload
  - Eg 2-4 patients per day
  - Detailed reviews
- Opportunity for follow up and continuity

- Always see with FY1-2
  - Improves bilateral communication
  - Accountability
  - Follow through of plan
- Education and Training
  - Protect existing staff resource

# Postoperative: Proactive Discharge Planning

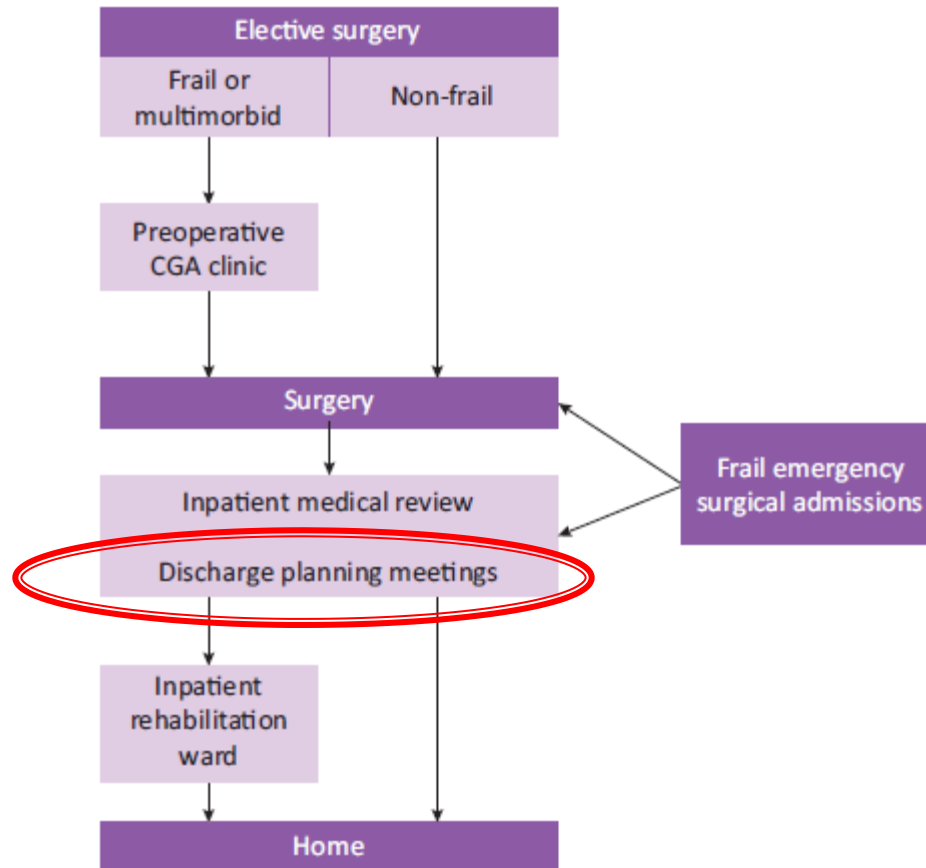


Fig 1. Model of care - embedded geriatric surgical liaison. CGA = Comprehensive Geriatric Assessment

# Proactive Discharge Planning

- Once weekly meeting
  - Monday 1200-1300
- Attended by:
  - Consultant Surgeon
  - Consultant Geriatrician
  - Junior doctor(s)
  - Nurse in charge
  - OT
  - Physio
  - Case Manager
- Update on medical status
  - Challenge need for ongoing inpatient care?
- Identify discharge destination
  - Home v rehab v repat v NH
- Set anticipated date for discharge
- Identify barriers to discharge
  - Don't tolerate nonsense
  - Calculated risk-taking
  - Provide team responsibility
  - Manage patient/family expectations realistically

# Role of Perioperative Geriatricians

<u>Pre-operative</u>	<u>Post-operative</u>
<ol style="list-style-type: none"><li>1. Inform decision-making process</li><li>2. Increase safety of surgery</li><li>3. Coordination Role</li></ol>	<ol style="list-style-type: none"><li>1. Clear referral pathway to medical team</li><li>2. Focussed discharge planning</li></ol>
Medical risk assessment and prediction of complications	Proactive response to medical complications Embedded medical opinion +/- escalation
Diagnosis and optimisation of co-morbidity	Ward presence for junior doctors - Education and training
Assessment of functional reserve and frailty	Liaison with therapists to oversee rehab
Assessment of undiagnosed cognitive problems and mental capacity	Discharge planning MDM Board rounds
Assessment of social problems and forward planning, expectation management	=Systems Change...

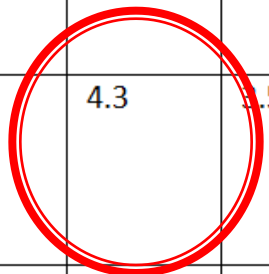
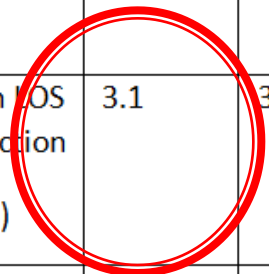


# Does it work?

## Impact on Length of Stay in GI Surgery

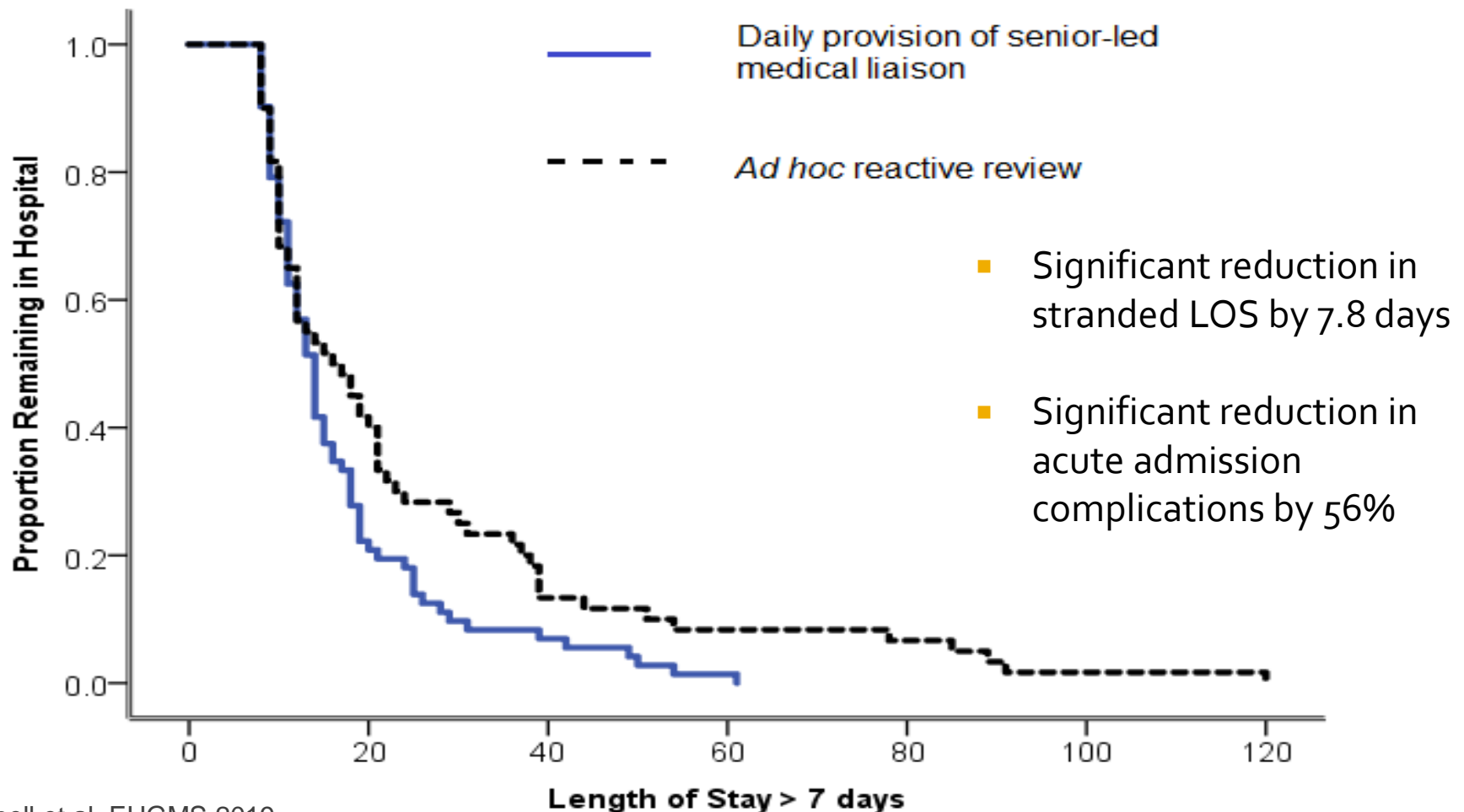
Table 4: Mean Length of Stay (LOS) Before and After Service Implementation

	All GI Surgery			Emergency GI Surgery			Elective GI Surgery		
Age	>60	>70	>75	>60	>70	>75	>60	>70	>75
Mean LOS Pre- Service  (n=)	10.6  (=203)	10.5  (=129)	10.3  (=79)	11.1  (=137)	10.3  (=91)	9.01  (=57)	9.5  (=66)	10.9  (=38)	13.3  (=22)
Mean LOS Post- Service  (n=)	7.5  (=479)	7.2  (=301)	7.2  (=189)	6.7  (=236)	6.9  (=150)	6.3  (=99)	8.2  (=233)	7.4  (=146)	8.14  (=84)
Mean LOS Reduction  (days)	3.1	3.3	3.0	4.3	3.5	2.75	1.3	3.4	5.2
P-value	0.006	0.009	0.017	0.006	0.029	0.029	0.18	0.062	0.066



# Vascular LOS Reduction in Stranded Patients

Figure 1b: Kaplan-Meier Survival Curve. Reduction in LOS was seen for patients admitted for >7 days ( $p=0.025$ , 95% CI for mean difference, 1.5 to 14 days).



# Engaging the Executive- Bed Impact

## BED IMPACT MODELLING- BEN HEWLETT, AGM MEDICINE

	Pt. numbers 2.7 day LOS improvement		2 day LOS improvement	
Vascular	10 patients	5 patients	10 patients	5 patients
General Surgery	10 patients	5 patients	10 patients	5 patients
Major Trauma	4 patients	4 patients	4 patients	4 patients
<b>Total patients</b>	<b>24 patients per week</b>	<b>14 patients per week</b>	<b>24 patients per week</b>	<b>14 patients per week</b>
Assuming 52 weeks per year	1,248 patients	728 patients	1,248 patients	728 patients
Bed days saved (based on LOS impact noted)	3,369 bed days saved	1,965 bed days saved	2,496 bed days saved	1,456 bed days saved
<b>Bed impact (whole year effect)</b>	<b>9.2 beds</b>	<b>5.3 beds</b>	<b>6.8 beds</b>	<b>4 beds</b>

Approx. 2.8 beds per year for Vascular? Elective caseload impact?

# NELA Mortality & Discharge Destination

6 Month Review All Emergency Laparotomies Aged >70	Pre-Intervention (n=31)	Post-Intervention (n=50)
Geriatrician Review	16% (n=5)	86% (n=43)
Discharge to own home	68% (n=21)	76% (n=38)
Inpatient Mortality	23% (n=7)	14% (n=7)

"After adjustment for age, sex, cardiac and respiratory comorbidity post-operative geriatrician review is associated with reduced risk of 30-day mortality by 74% as represented by a hazard ratio of **0.259**; **CI 0.076–0.833**; **p=0.031** "

# NELA: Impact of Geriatrician Review



BJA  
British Journal of Anaesthesia

## Organisational factors and mortality after an emergency laparotomy: multilevel analysis of 39 903 National Emergency Laparotomy Audit patients

Available online 3 October 2018

C.M. Oliver | M.G. Bassett | T.E. Poulton | I.D. Anderson | D.M. Murray | M.P. Grocott | S.R. Moonesinghe |

- Postoperative geriatric medicine review was associated with substantially lower mortality in older ( $\geq 70$  yr) patients
- OR: 0.35; 95% CI: 0.29–0.42

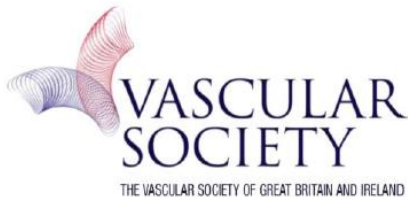
# Medical Liaison Seems to Work



The Kings Fund



Royal College  
of Surgeons  
ADVANCING SURGICAL CARE



THE VASCULAR SOCIETY OF GREAT BRITAIN AND IRELAND



THE ASSOCIATION OF ANAESTHETISTS  
of Great Britain & Ireland

[Future Healthc J](#), 2018 Jun;5(2):108-116. doi: 10.7861/futurehosp.5-2-108.

**Embedded geriatric surgical liaison is associated with reduced inpatient length of stay in older patients admitted for gastrointestinal surgery.**

[Shipway D](#)<sup>1</sup>, [Koizia L](#)<sup>2</sup>, [Winterkorn N](#)<sup>2</sup>, [Fertleman M](#)<sup>3</sup>, [Ziprin P](#)<sup>4</sup>, [Moorthy K](#)<sup>5</sup>.

[Aging Clin Exp Res](#), 2018 Mar;30(3):277-282. doi: 10.1007/s40520-017-0886-5. Epub 2018 Feb 6.

**Geriatricians and the older emergency general surgical patient: proactive assessment and patient centred interventions. Salford-POP-GS.**

[Vilches-Moraga A](#)<sup>1,2</sup>, [Fox](#)

[Br J Surg](#), 2017 May;104(6)

**Randomized controlled trial of geriatric surgical liaison in older patients undergoing colorectal surgery.**

[Partridge JS](#)<sup>1,2</sup>, [Harari D](#)

[BJU Int](#), 2017 Jul;120(1):12

**Evaluation and implementation of a geriatric surgical liaison service for older patients undergoing colorectal surgery.**

[Braude P](#)<sup>1</sup>, [Goodman A](#)<sup>2</sup>

[Anaesthesia](#), 2014 Jan;69 Suppl 1:8-16. doi: 10.1111/anae.12494.

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

[Partridge JS](#)<sup>1</sup>, [Harari D](#), [Martin FC](#), [Dhesi JK](#).

[Age Ageing](#), 2007 Mar;36(2):190-6. Epub 2007 Jan 27.

**Proactive care of older people undergoing surgery ('POPS'): designing, embedding, evaluating and funding a comprehensive geriatric assessment service for older elective surgical patients.**

[Harari D](#)<sup>1</sup>, [Hopper A](#), [Dhesi J](#), [Babic-Illman G](#), [Lockwood L](#), [Martin F](#).

## Best Practice Tariffs

- Orthogeriatrics
- Major Trauma - new
- NELA 2020-21?

# Engaging the Executive- Coding Income

- Collaboration with Clinical Coding
- Study of tariff income before/after medical summary
- Medical summaries generated:
  - Additional secondary diagnoses
  - Additional complications (eg AKI, hyponatraemia)

- Mean uplift figure = **£740 per patient**
- **£34,000 additional** income for 47 patients studied
- **Additional £384,800** per annum for 10 patients seen per week.

# Financial Viability

## Major Trauma Best Practice Tariff

Geriatrician Frailty Scoring age  
Age >65; ISS >15

295 patients seen; 120 qualified for BPT  
April-August 2019

94.6% success rate

16 misses (9 our fault: )

Level 2 BPT payment is £2819 per patient

L2 BPT income Apr-Aug 19  
= £338,220

Projected income  
generated directly  
by us for the trust  
over 12 months?

= £831,605



# Qualitative Analysis- What Consultant Surgeons Say

- *I have nothing but praise for the complex care service. I am now referring patients into the clinic with conditions other than colorectal cancer. They have found the second opinion very helpful in their decision making process.*
- *The input of a specialist in frailty and the elderly is proving to have enormous benefit to the delivery of a high quality vascular service. This has now **been incorporated within our AAA pathway and recognised as a core member** of the MDT for vascular surgery.*
- *The work that we are doing in this area has been recognised as best practice for this patient group. **It is reducing both hospital length of stay and re-admission rates.***
- *Since the presence of the Complex care team on the vascular ward, the **Foundation Programme doctors have been far better supported** in managing a complex patient group with significant co-morbidities.*
- *Being able to compare to my past 5 years as a consultant in a unit with no complex medical care I can't stress how useful this is to both patients and staff. In my opinion, the single biggest difference to care in this unit which makes things better for the patients is this service.*
- *The preoperative assessments make our decision making far easier as we can risk stratify patients more easily. **It saves lives and improves quality of life by reducing complications.***
- *I have no doubts that it significantly **improves the patient outcomes, shortening length of stay** and helping patients get home after surgery or trauma, for all our emergency surgery and trauma patients.*

# Summary

- Changing surgical population
- Complications occur late after surgery- *these are typically medical*
- Role for Geriatricians throughout pathway of frail or comorbid:
  - Preoperative Case Selection, Risk Assessment & Shared Decision Making
  - Preoperative Optimisation
  - Postoperative Medical Review
  - Postoperative Discharge Planning
- There is an emerging evidence base to support these models



*A Surgical Operation.*  
Reginald Brill 1934