Pre-assessing the older patient in a District General Hospital

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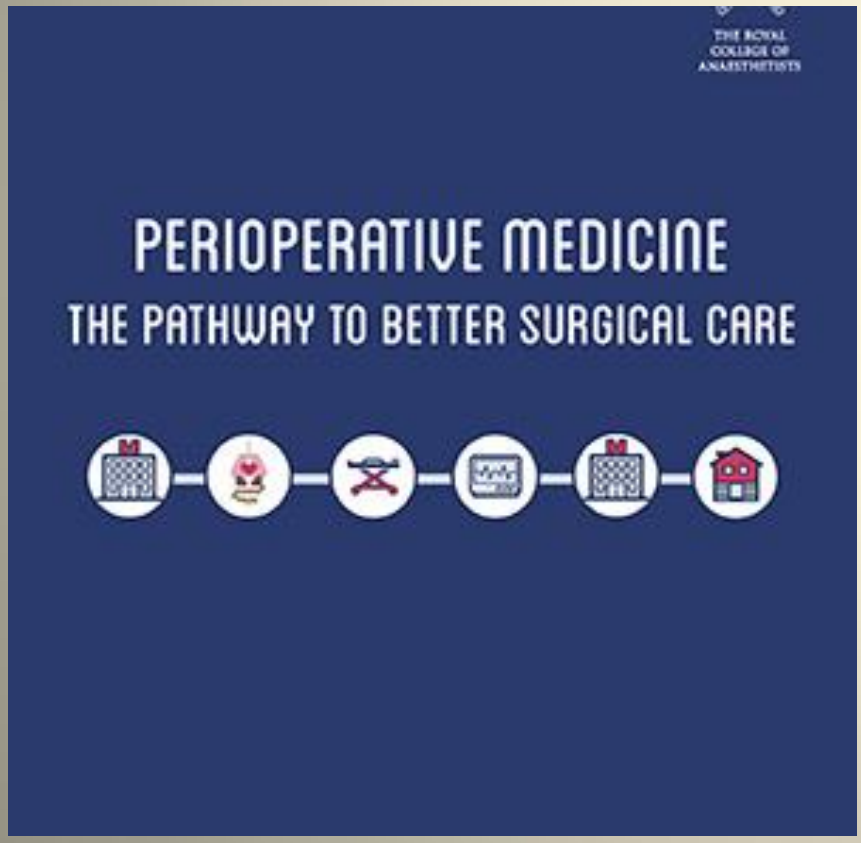
Perioperative Medicine

Improve the care of patients to maximise quality and quantity of life

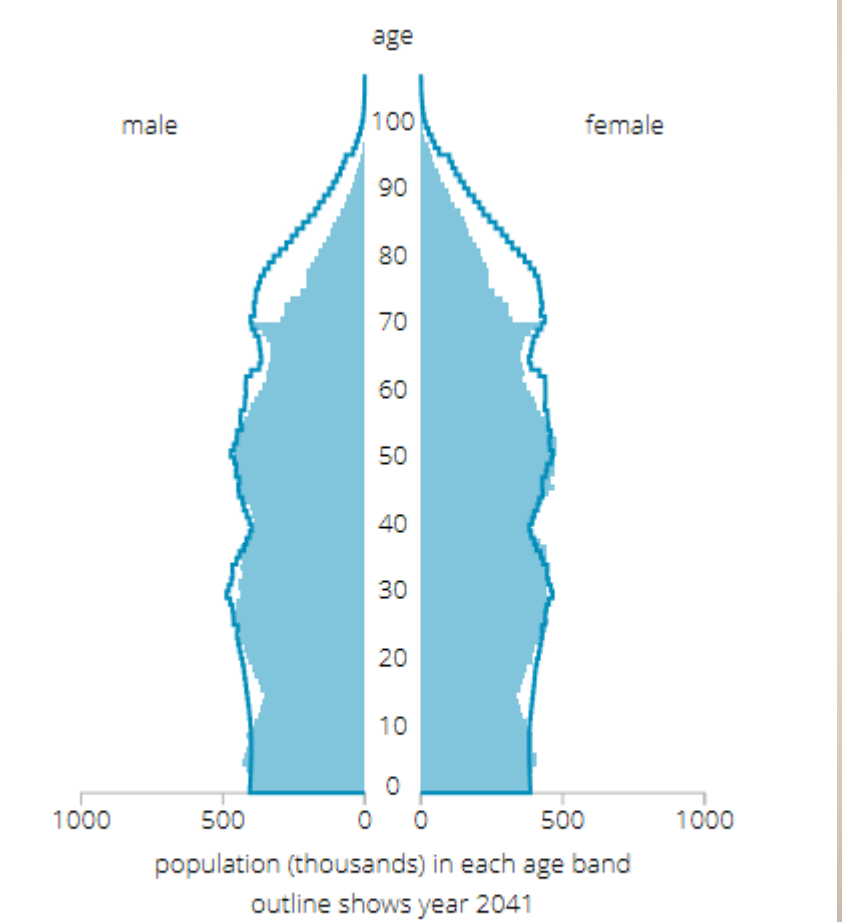


The Focus of Pre-assessment

- Shared decision making
- Patient optimisation
- Assessing frailty
- Identifying cognitive disorders
- Risk stratification
- Management of expectations
- Prehabilitation
- Planning for admission

Pre-operative assessment – is it that straightforward?

A growing number of older people



Source: Office for National Statistics

The elderly surgical patient

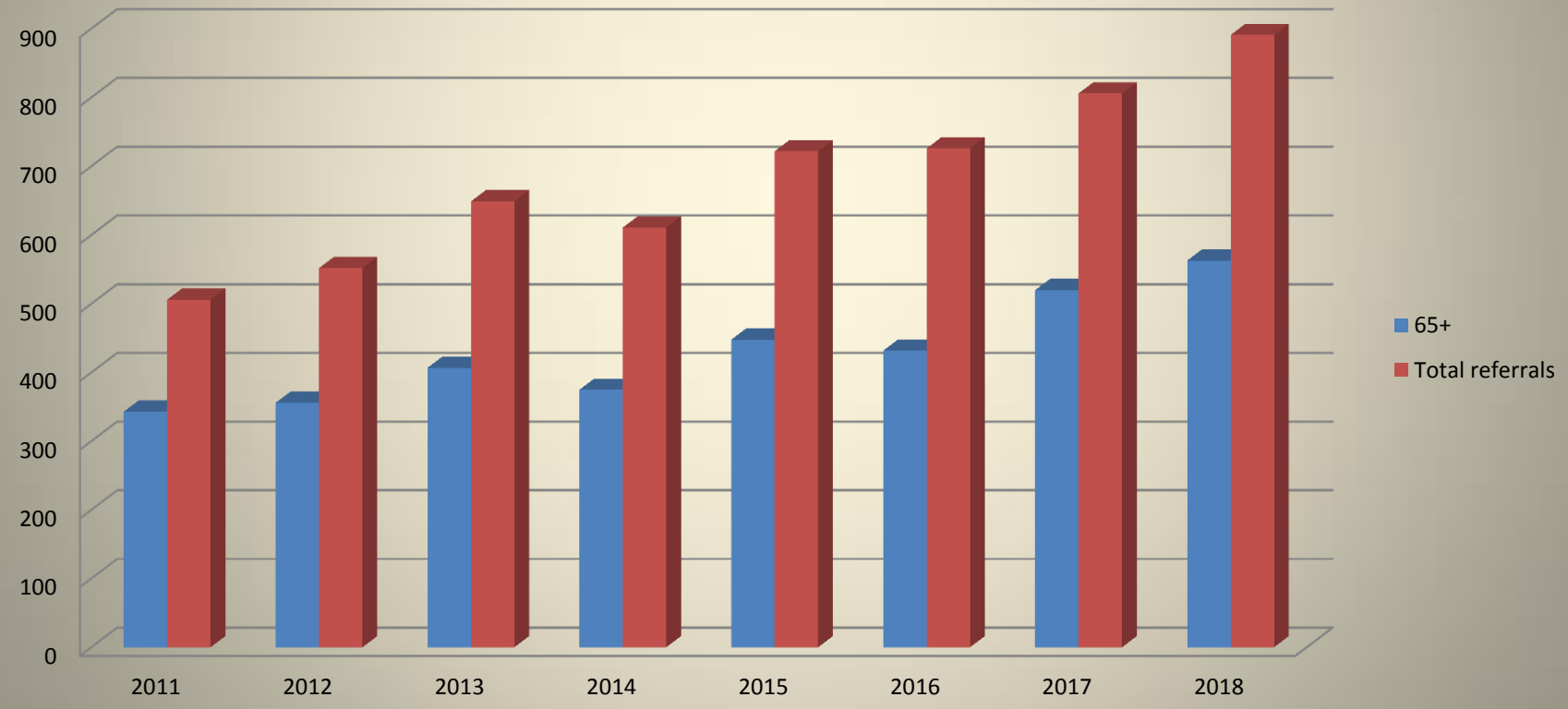
- Conflict between operating on older or younger people
- To operate on those with shorter life expectancies or on those with relatively low rates of dying now but longer life expectancy

Risk Prediction Models for Major Surgery: composing a new tune. JB Carlisle. Anaes 2019, 74 (Suppl 1) 7-12

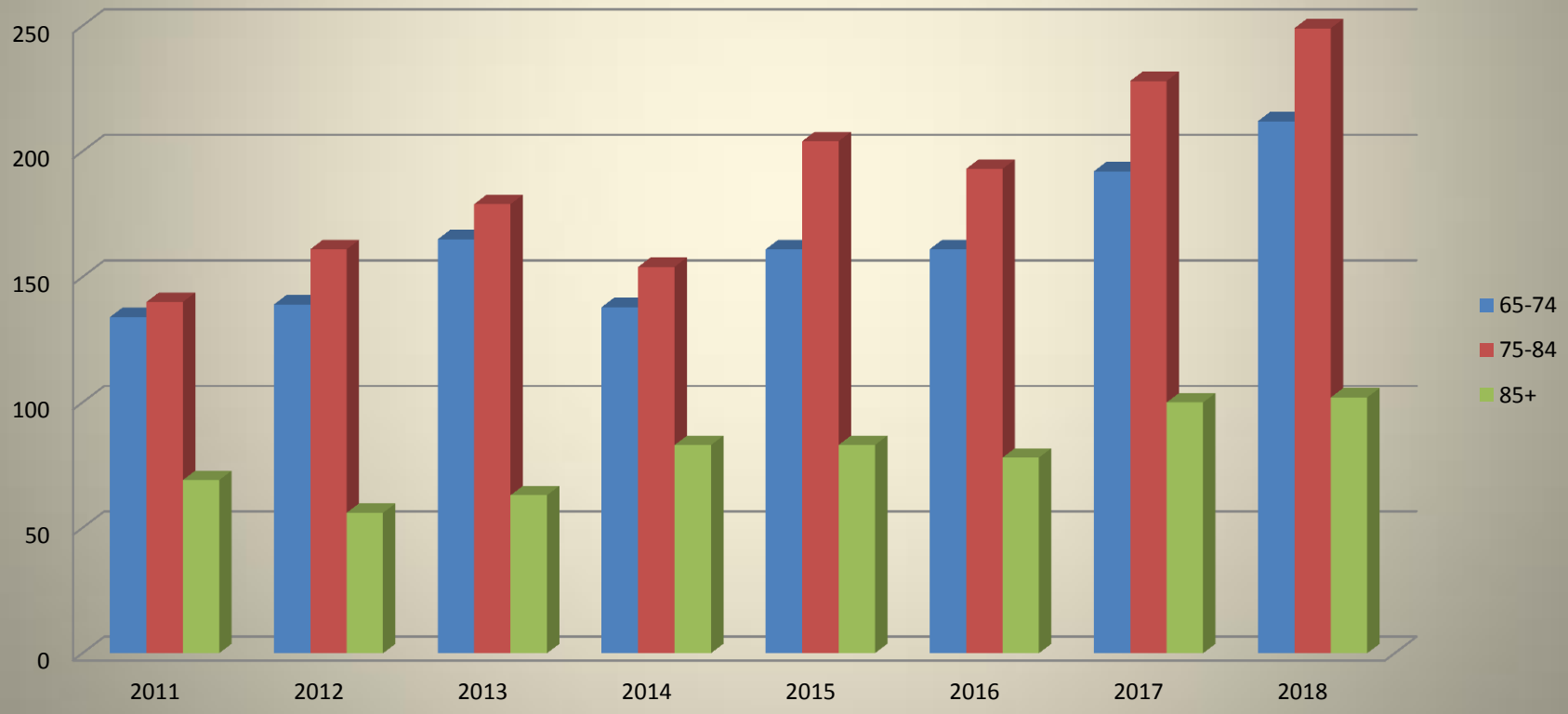
The Peterborough Story

- Anaesthetist led clinic
- Patient triaged based on perioperative risk to attend clinic
- Stratify risk in detail
- Assess functional reserve either by clinical assessment or CPET
- Then discussion with patient and family about risks and benefits of surgery based on results
- Following clinic, may seek advice from experts and engage other healthcare professionals

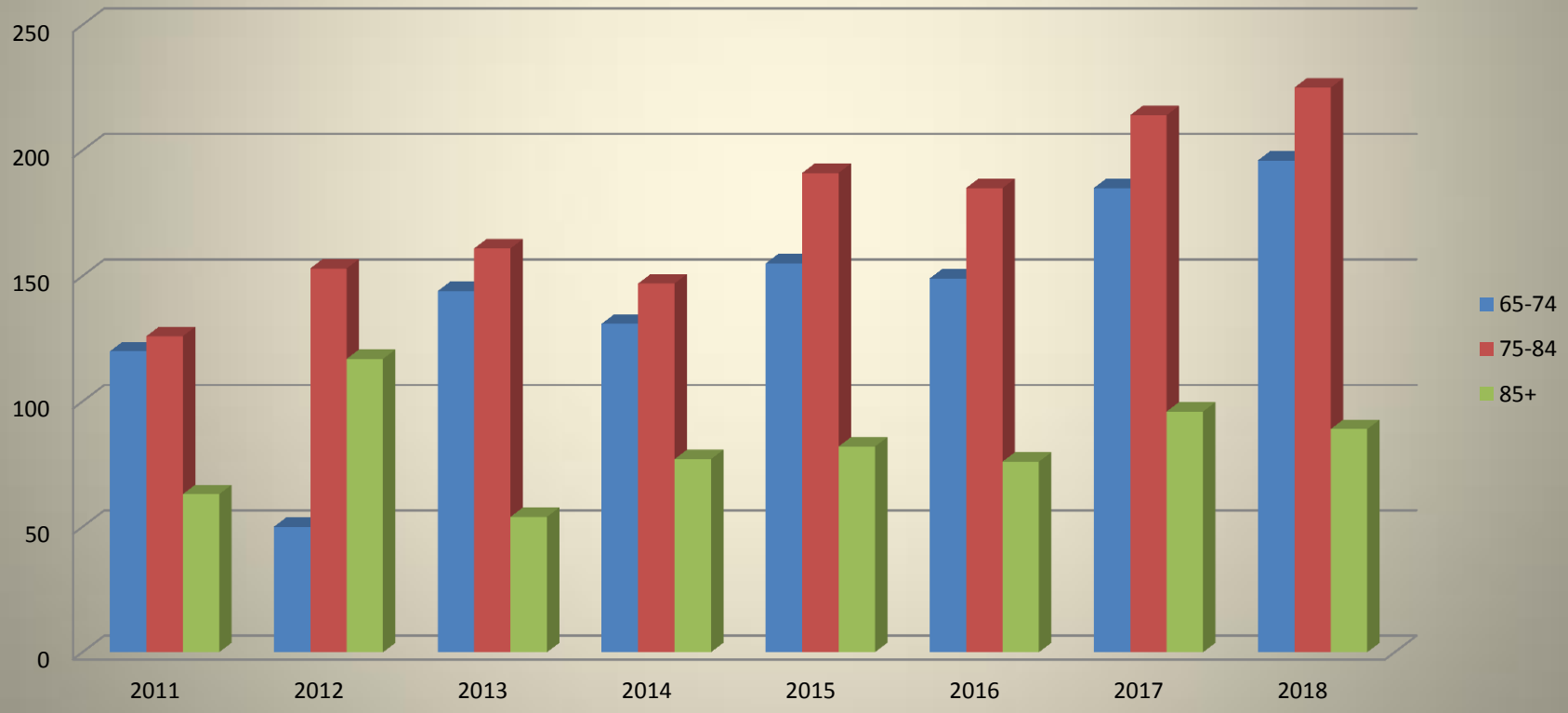
Patients aged 65 and over compared to all referrals 2011-2018

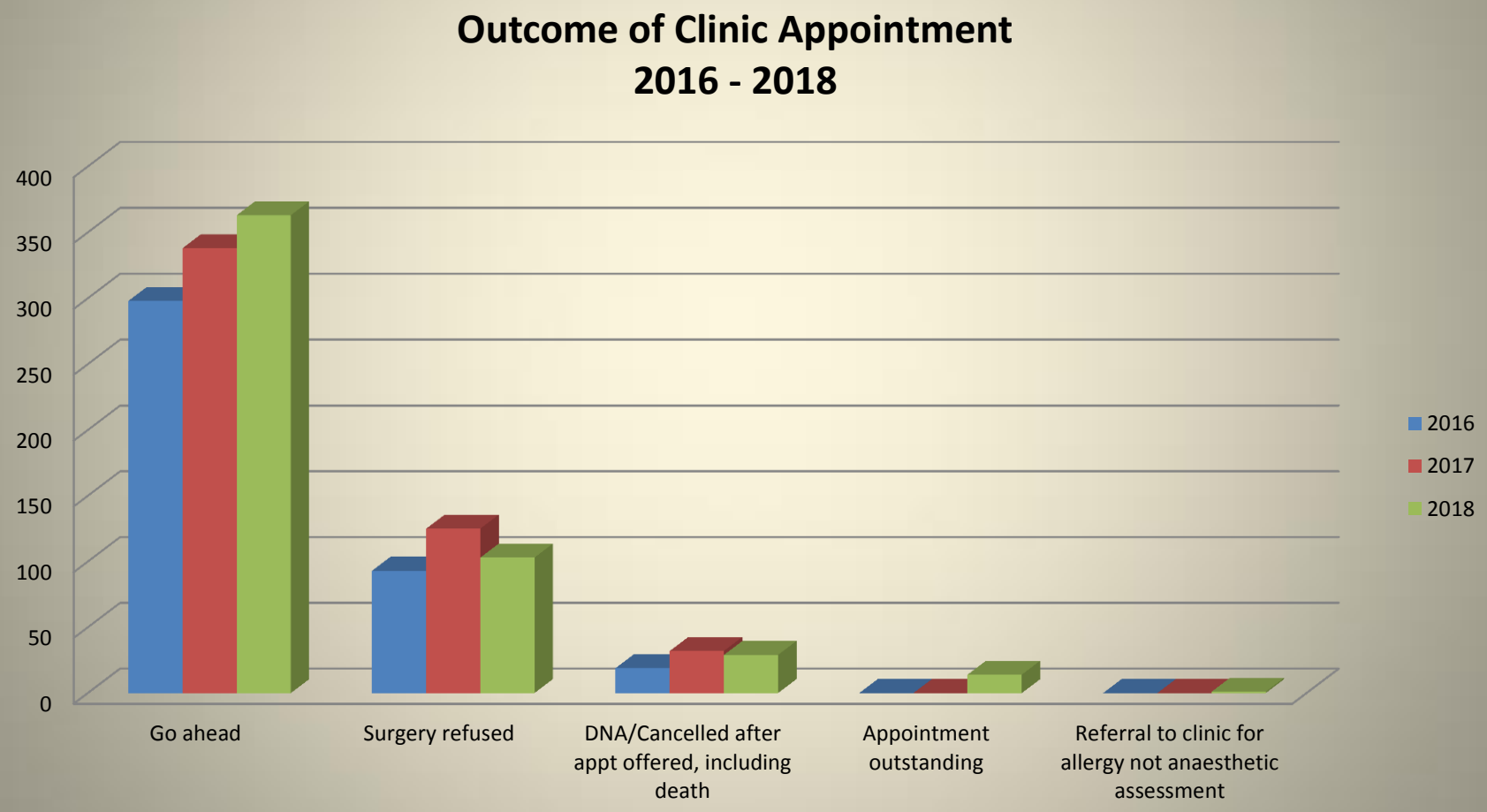


Referrals received for patients aged 65 and over 2011-2018

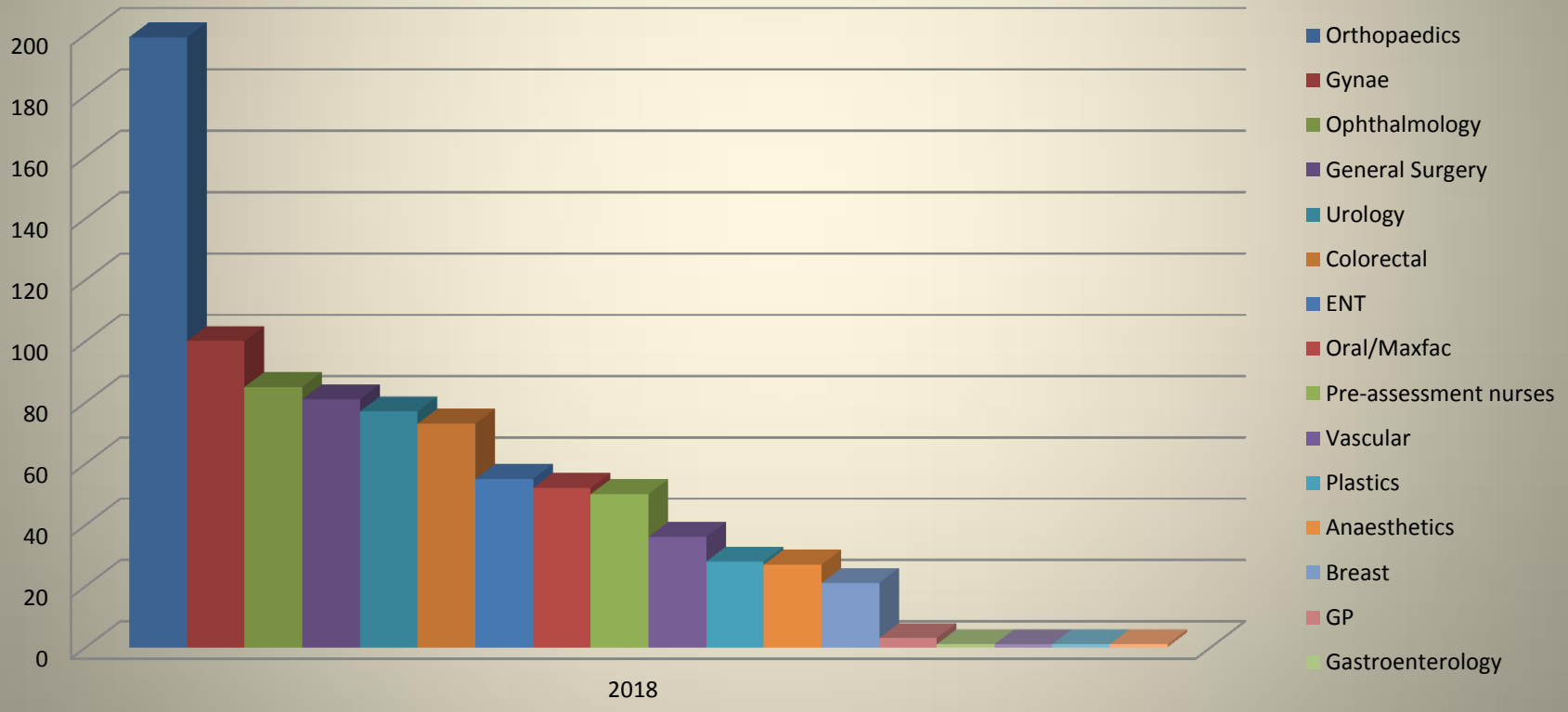


Patients aged 65 and over offered a clinic appointment 2011 - 2018

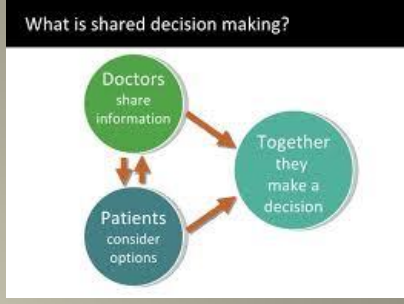



Outcome of Clinic Appointment
2016 - 2018
400
350
300
250
200
150
100
50
0
Go ahead
Surgery refused
DNA/Cancelled after appt offered, including death
Appointment outstanding
Referral to clinic for allergy not anaesthetic assessment
2016
2017
2018

Number of referrals by specialties 2018



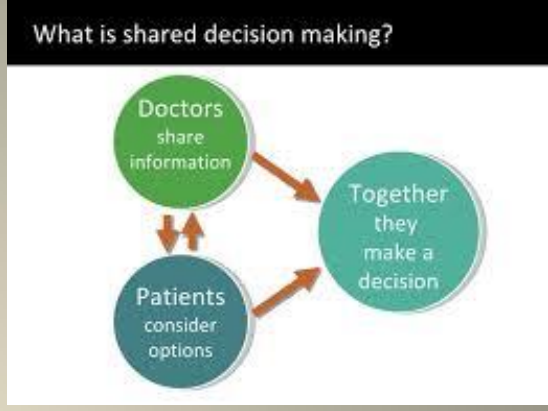
Shared Decision Making (SDM)



- Bringing together patients' preferences and values together with doctors' expertise to work out the best bespoke package of care for that individual.
- To determine what may or may not be a material risk
- All patients should undergo SDM, not just the high risk ones

Shared Decision Making in perioperative medicine: a narrative review. J Sturgess, JT Clapp, L Fleisher. Anaes 2019, 74 (Suppl 1)

SDM



- Preoperative counselling
- Discussions about functional decline, loss of independence, subsequent care burden
- Advanced directive
- Appropriate post operative care
- Discharge planning
- Disparity between doctors view and patients acceptable risk

Perioperative optimisation of elderly and frail patients: a narrative review SP Chan, KY IP, MG Irwin Anaes 2019, 74 (Suppl.1)

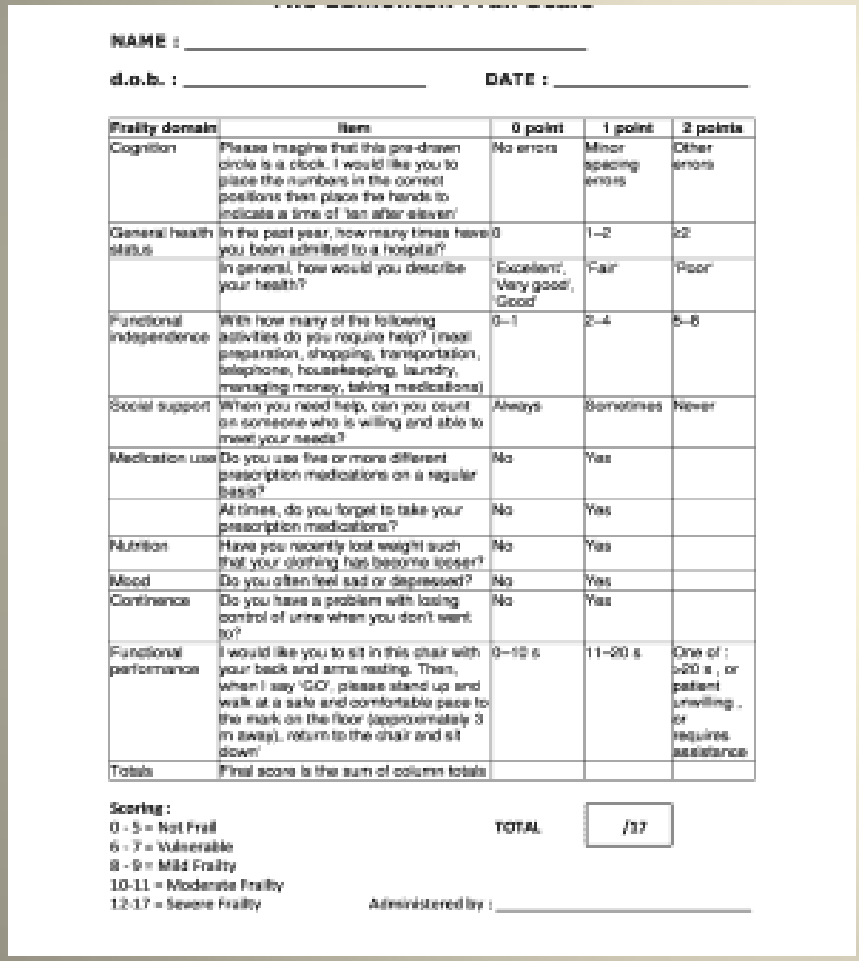
Frailty

- “vulnerability to external stressors”

- Increased morbidity and death in this group
- May affect up to half of older surgical patients
- Impact of frailty will depend on the proposed operation

The association of perioperative scores, including frailty with outcomes after unscheduled surgery. D McGuckin et al. Anaes 2018, 73,819-824

Edmonton Frail Scale



NAME : _____

d.o.b. : _____ DATE : _____

Frailty domain	Item	0 point	1 point	2 points
Cognition	Please imagine that this pre-drawn circle is a clock. I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten after eleven'	No errors	Minor spacing errors	Other errors
General health status	In the past year, how many times have you been admitted to a hospital?	0	1–2	≥2
	In general, how would you describe your health?	'Excellent', 'Very good', 'Good'	'Fair'	'Poor'
Functional independence	With how many of the following activities do you require help? (meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications)	0–1	2–4	5–8
Social support	When you need help, can you count on someone who is willing and able to meet your needs?	Always	Sometimes	Never
Medication use	Do you use five or more different prescription medications on a regular basis?	No	Yes	
	At times, do you forget to take your prescription medications?	No	Yes	
Nutrition	Have you recently lost weight such that your clothing has become looser?	No	Yes	
Mood	Do you often feel sad or depressed?	No	Yes	
Continence	Do you have a problem with losing control of urine when you don't want to?	No	Yes	
Functional performance	I would like you to sit in this chair with your back and arms resting. Then, when I say 'GO', please stand up and walk at a safe and comfortable pace to the mark on the floor (approximately 3 m away), return to the chair and sit down'	0–10 s	11–20 s	One of : >20 s , or patient unwilling , or requires assistance
Totals	Final score is the sum of column totals			

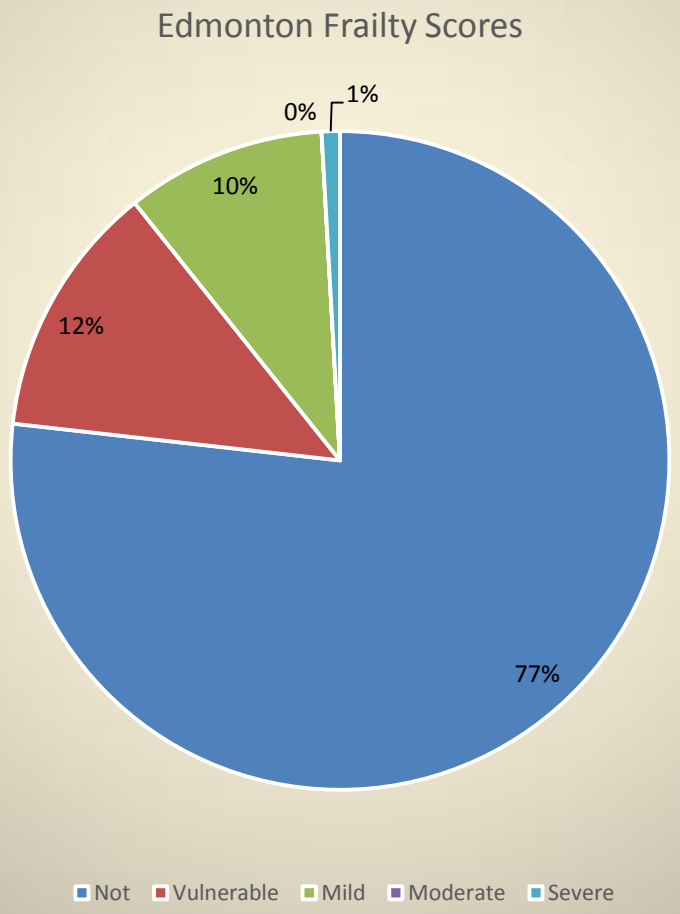
Scoring :
0 - 5 = Not Frail
6 - 7 = Vulnerable
8 - 9 = Mild Frailty
10-11 = Moderate Frailty
12-17 = Severe Frailty

TOTAL /17

Administered by : _____

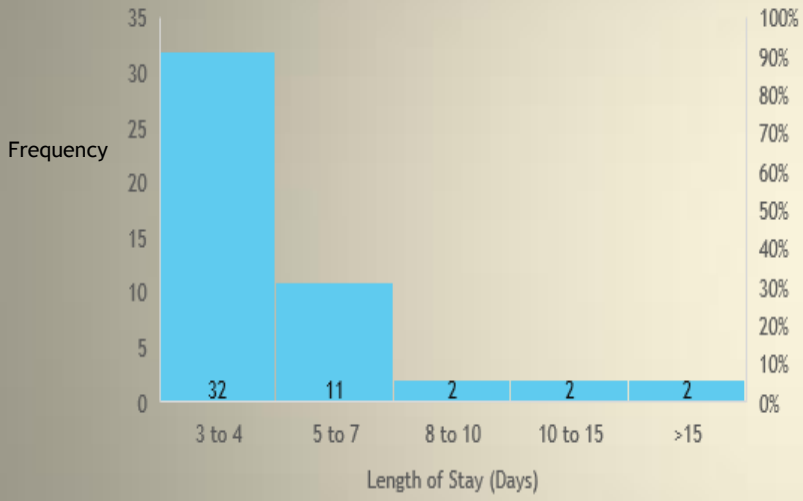
- Highlights those at greater risk, needing further assessment and support

Edmonton Frailty Scores Audit



Courtesy of Drs Stoker and Burgess

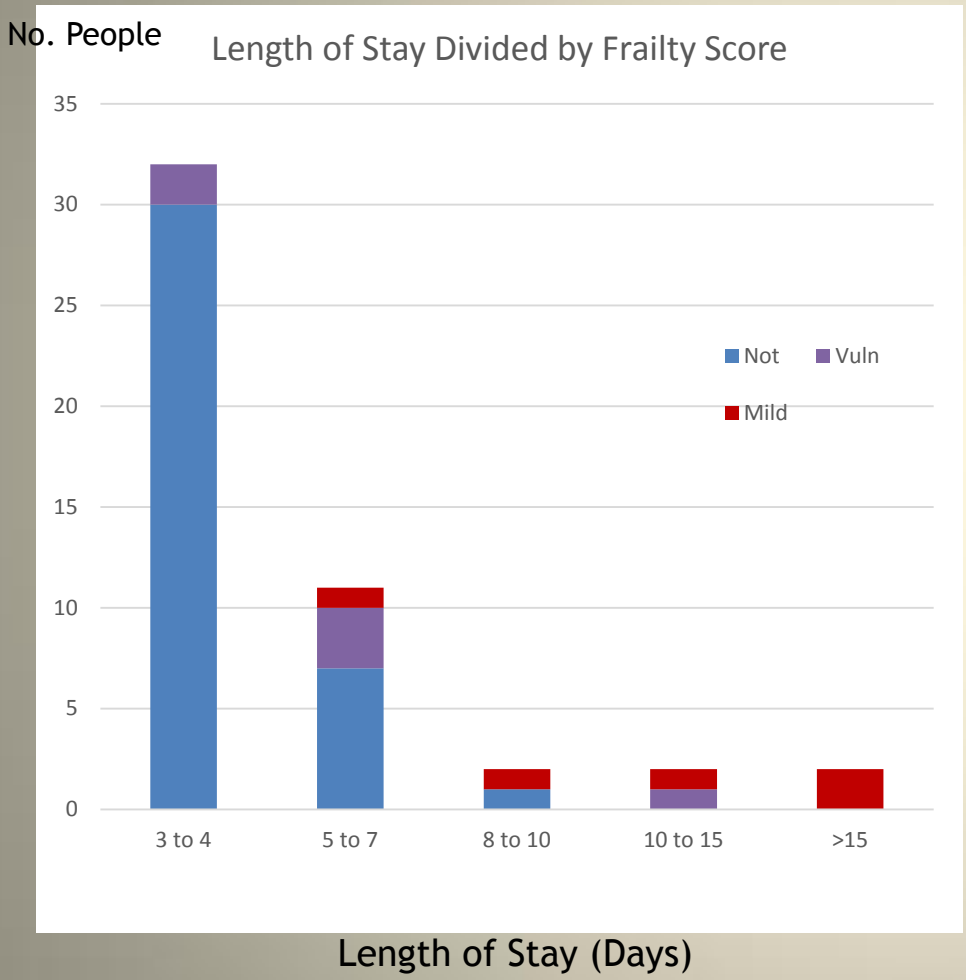
Results – Length of Stay



For All Patients

- Mean LOS was 5.3 Days
- Median 4 days
- 65% had LOS <5 days
- 3% postponed or cancelled for medical reasons
- 2% postponed due to non-clinical reasons

But For the Frailer Patients…



- Median LOS for "Vulnerable" People was 7 Days
- For "Mildly" Frail people was 13 days

Courtesy of Drs Stoker and Burgess

How Many Are There?

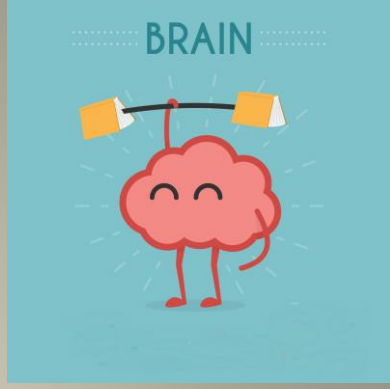
- Over the course of 38 days
- 15 Mildly-severely frail people were identified (13.4%)
- 11 Vulnerable (9.8%)
- = 3.7 people admitted per week

Nutritional Status

- Risk for all-cause mortality increases starting at BMI 24 $kg.m^{-2}$
- For men doubles when BMI <22 $kg.m^{-2}$
- For women when BMI<20 $kg.m^{-2}$
- Weight loss >10% in 6 months
- Decreased oral intake
- Low albumin

Perioperative optimisation of elderly and frail patients: a narrative review SP Chan, KY IP, MG Irwin Anaes 2019, 74 (Suppl.1)

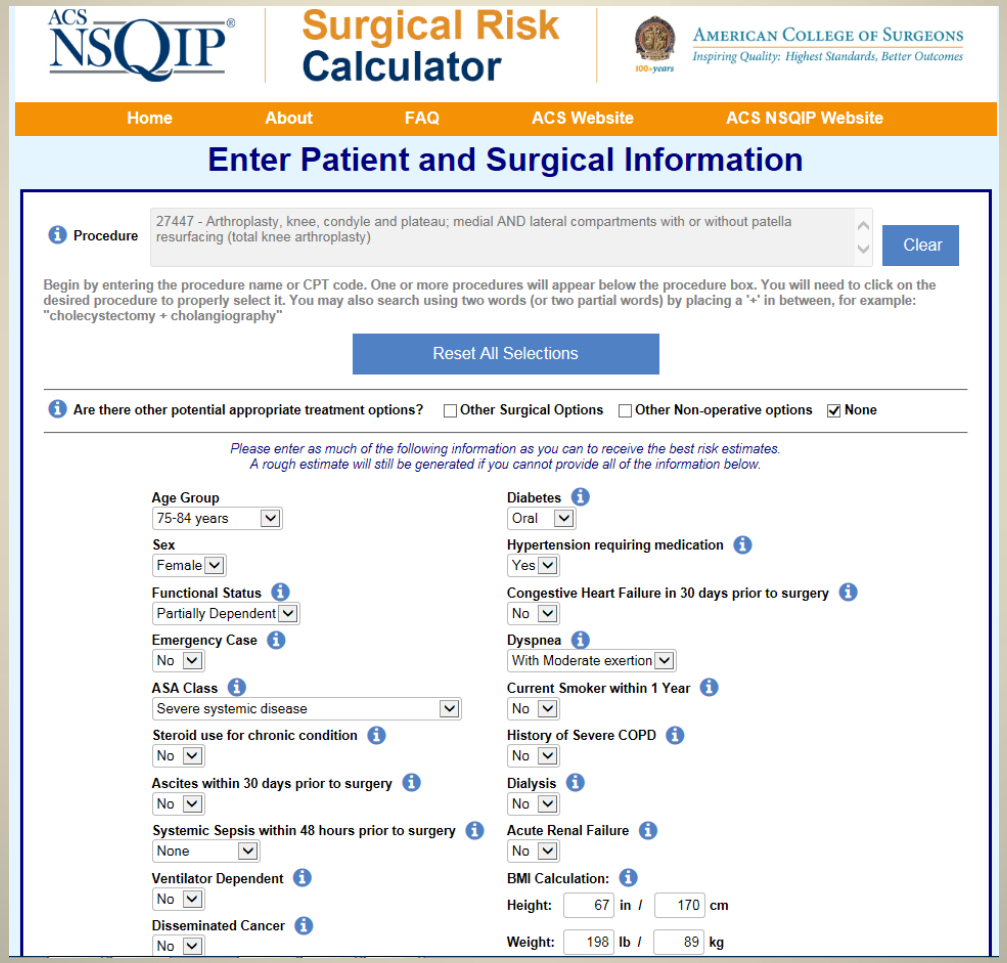
Post-operative Cognitive Dysfunction



- Spectrum of diseases
- From immediate post-op delirium to POCD
- Screening and Identification
- Reduce risk
- Mild cognitive impairment has 5-10% per year risk of progression to dementia and higher risk of post-op delirium
- Impact of dementia may outweigh the surgical condition

Caring for the ageing mind - Editorial. DA Scott, LA Evered. Anaes 2019, 74, 271-273

Calculating risk



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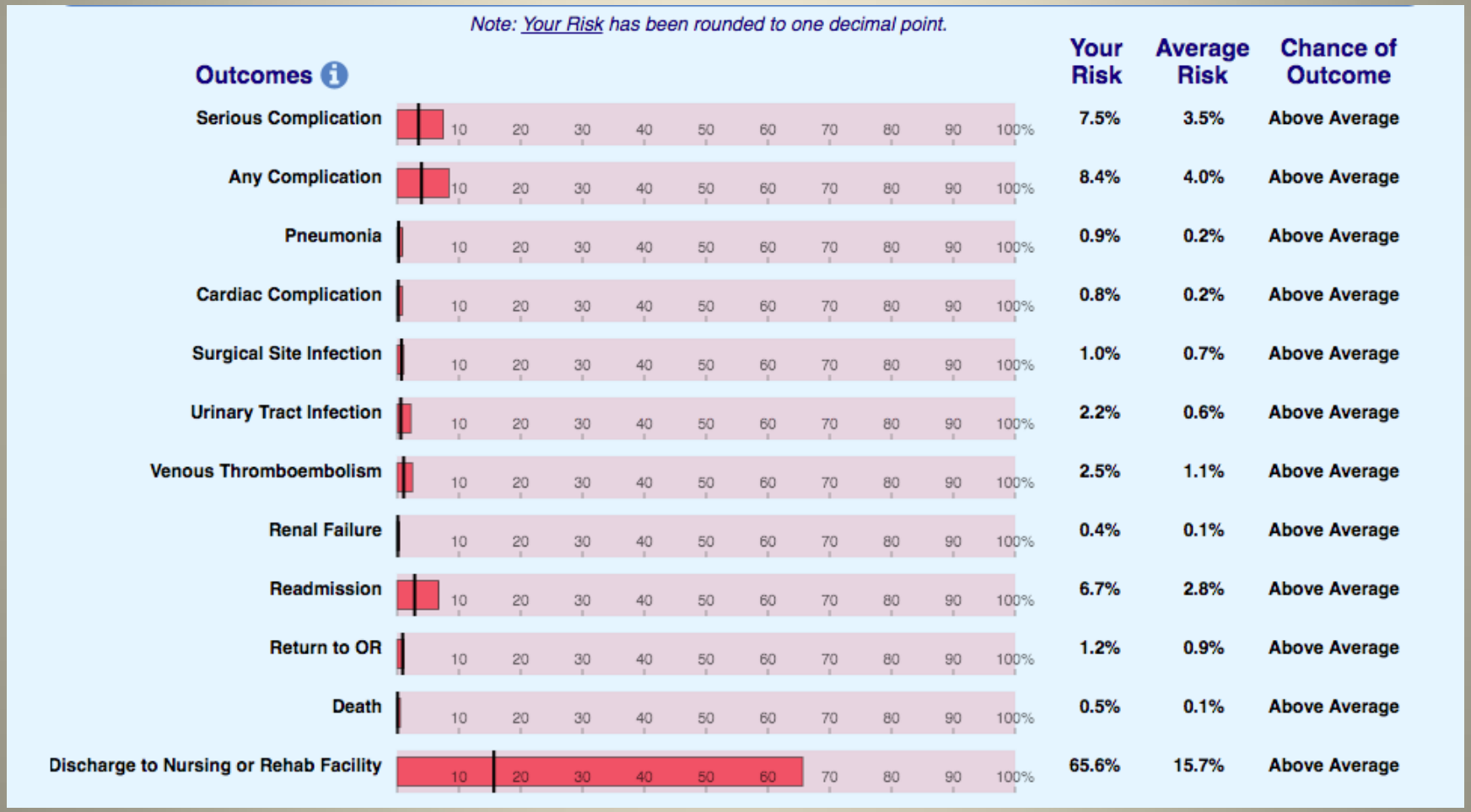
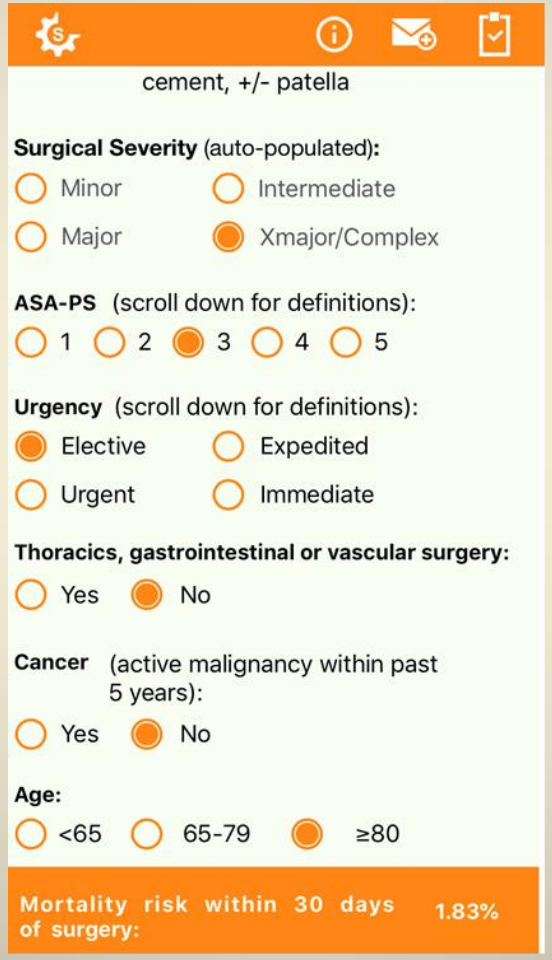


Calculating risk



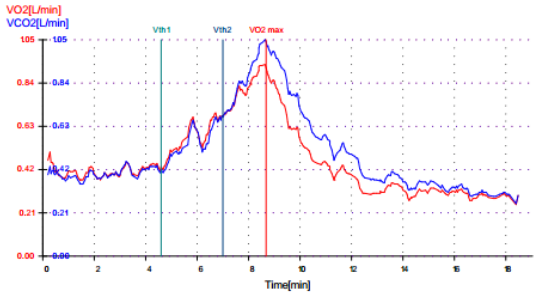
CPET

------ Exercise Test Summary Results -------

RESPIRATORY		Baseline	1.5 MLoad	AT		Peak Exercise	Pred.
Time	min	01:22	04:35	07:01	08:31		
Ve	L/min	21.0	22.6	34.2	48.9	111.1	44%
Vt	L	1.26	0.96	1.23	1.61		
RR	#/min	15.1	21.9	25.4	27.6		
RR	#/min	15.1	21.9	25.4	27.6		
VR	%	81	80	69	56		

CARDIOVASCULAR							
H.R.	#/min	87	103	115	127	161	79%
VO2/HR	ml/#/min	5.5	4.2	5.9	7.3	18.1	40%
BP Syst.	mm Hg	126	0	0	0		
BP Dia.	mm Hg	66	0	0	0		

METABOLIC							
Load	Watt	0	16	40	55	193	29%
Met		1.3	1.2	1.8	2.4		
VO2 sp	ml/kg	4	4	6	9	27	32%
VO2	L/min	0.48	0.43	0.68	0.93	2.91	32%
VCO2	L/min	0.45	0.42	0.68	1.04		
RER		0.94	0.97	0.99	1.12		
Veq O2		43.92	51.95	50.40	52.79		
Veq CO2		46.93	53.72	50.68	47.21		
PetO2	mm Hg	117	117	117	118		
PetCO2	mm Hg	29	29	30	31		
Vd/Ti	L/min	52	54	88	138		
Vd/Vt		0.29	0.36	0.35	0.32		



Medi soft Exp'air 1.29.01

CPET

AGE (yrs)	75	MEASUREMENT	RECORDED VALUE	PREDICTED VALUE	DIFFERENCE	%	INTERPRETATION		
HEIGHT (cm)	183						Ventilatory mechanics		
MASS (kg)	108	FVC (L)	3.52	4.23	-0.71	-17			
Predicted	84	FEV1 (L)	2.32	3.18	-0.86	-27			
Overweight (kg)	24	FEV1/FVC (%)	66.73	77	-10.27	-13			
Hb (g/dL)	13.9						Fitness & effort		
Peak [creatinine]	99	Peak VO2 (ml/kg/min)	8.6	22.8	-14.2	-62			
BMI	32.2	Peak VO2 (ml/kg/min): 2nd method	8.6	20.5	-11.9	-58			
		Peak VO2 (ml / min)	930	2465	-1535	-62			
VO2 (after 1.5min of ramp)	430	Peak power (Watts)	55	174	-119	-68	Fitness		
						16			
Ramp (W/min)	10	AT (ml/kg/min) Wasserman	7.5	9.1	-1.6	-18			
Cycle factor	23	Peak heart rate (bpm)	127	145	-18	-12	Peak stroke volume =	52.5	
		Peak O2 pulse (ml)	7.3	18.1	-10.8	-60			
esting metabolic rate (personalised 1 MET)	2.49	VO2/W slope (ml/min/W)	12.5	10	2.5	25			
Peak METs	3.46								
eGFR	67.94	VE/CO2 at AT	50.68	30.3	20.4	67	V/Q match		
Expected eGFR	71.25	VE/O2 at AT	50.4	36	14.4	40			
PREOPERATIVE RISK OF DYING / 30 days	"1 IN . . ."								
Risk of dying (age, sex)	302	Operation?	3	Had an MI?	1				
Risk of dying (age, sex, fitness)	47			Had a stroke?	1				
Risk of dying (age, sex, fitness, morbidity)	31			Heart failure diagnosed?	1				
POSTOPERATIVE RISK OF DYING / 30 days				PAD?	1.5				
Risk of dying (preop risk x severity of opera	10			Additional factors	1				
Risk of dying %	9.8								

Prehabilitation

SupPoRtive Exercise Programmes for Accelerating REcovery after major ABdominal Cancer surgery (PREPARE-ABC)

BJA

British Journal of Anaesthesia, 119 (S1): i34–i43 (2017)

doi: 10.1093/bja/aex393
Clinical Practice

CLINICAL PRACTICE

Fit for surgery? Perspectives on preoperative exercise testing and training

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Guidelines

Guidelines for the peri-operative care of people with dementia

Guidelines from the Association of Anaesthetists

S. White,[1] **R. Griffiths,**[2] **M. Baxter,**[3] **T. Beanland,**[4] **J. Cross,**[5] **J. Dhesi,**[6] **A. B. Docherty,**[7] **I. Foo,**[8] **G. Jolly,**[9] **J. Jones,**[10] **I. K. Moppett,**[11] **E. Plunkett**[12] and **K. Sachdev**[13]

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Summary

Ageing populations have greater incidences of dementia. People with dementia present for emergency and, increasingly, elective surgery, but are poorly served by the lack of available guidance on their peri-operative management, particularly relating to pharmacological, medico-legal, environmental and attitudinal considerations. These guidelines seek to deliver such guidance, by providing information for peri-operative care providers about dementia pathophysiology, specific difficulties anaesthetising patients with dementia, medication interactions, organisational and medico-legal factors, pre-, intra- and postoperative care considerations, training, sources of further information and care quality improvement tools.

Summary – The ideal preparation

- Shared Decision Making
- Risk stratification
- Optimisation of modifiable risk factors
- Risk of operation vs the intended benefits
- Preferences and values defined
- Manage expectations

a. Organ specific morbidity
b. Ischaemia
c. POCD
d. Malnutrition
e. Functional decline

We are all geriatric anaesthetists!

Thank you