

Perioperative medicine for older people (POPS)

Evaluation, optimisation & ER

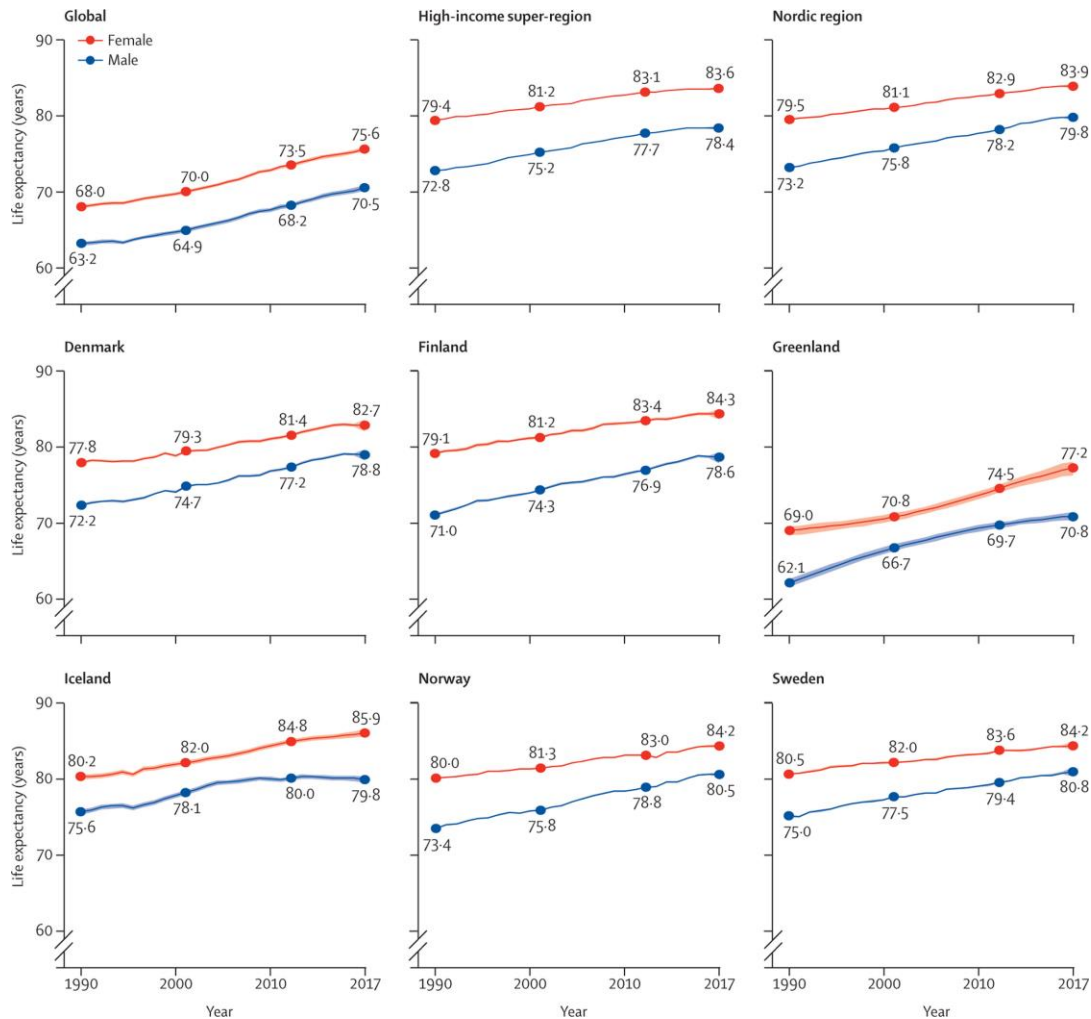
Jugdeep Dhesi, Geriatrician
Guy's and St Thomas' NHS Foundation Trust
Deputy Director Centre for Perioperative Care
Vice President, British Geriatrics Society



The success story of health and social care, globally...

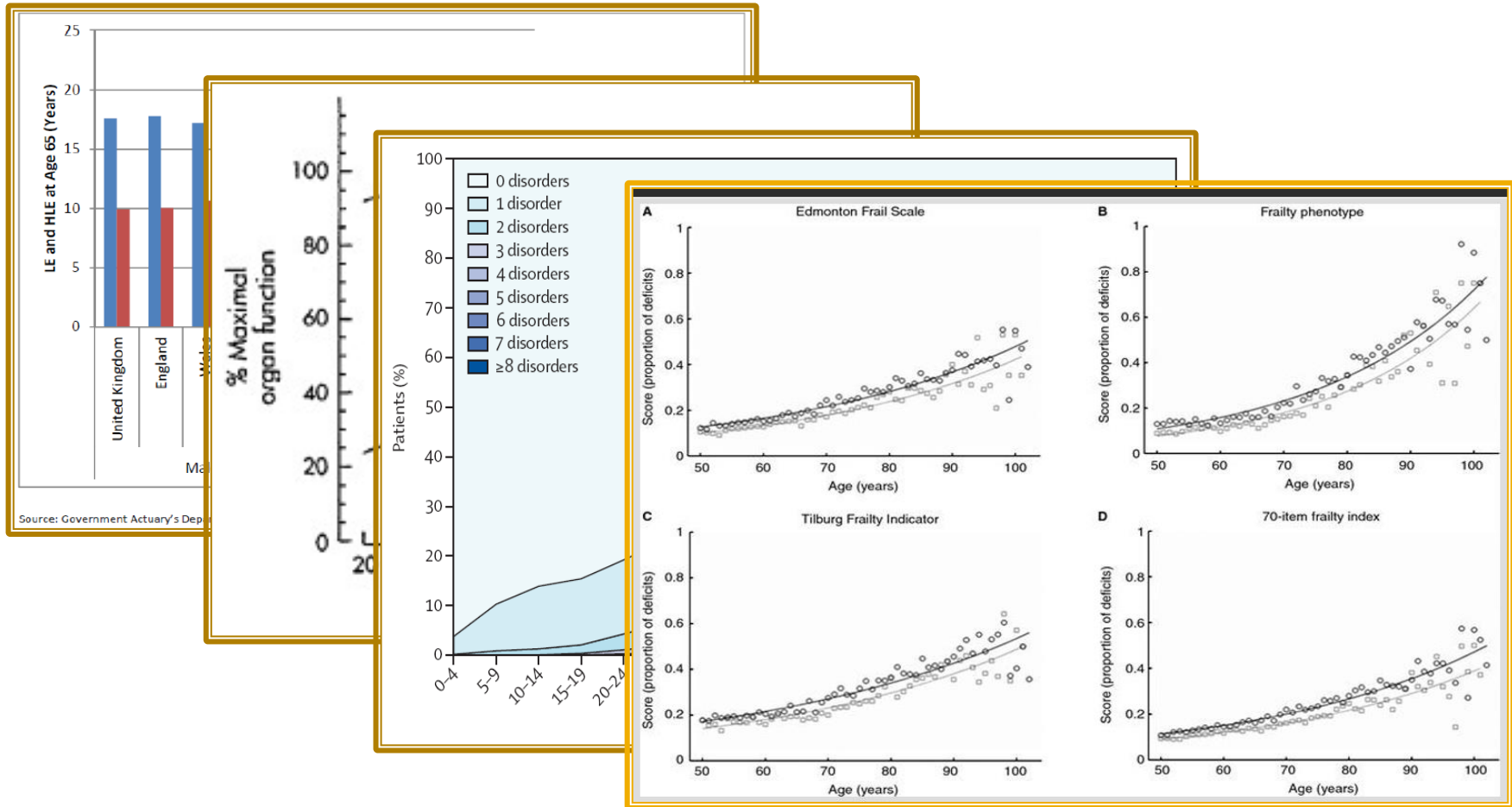


...and in Nordic regions...



Lancet
[https://doi.org/10.1016/S2468-2667\(19\)30224-5](https://doi.org/10.1016/S2468-2667(19)30224-5)

...has come with an associated challenge...



Theou JAGS 2014;901-906, Barnett Lancet 2012

...such that we see patients like Johanna...

78 yrs old F

Living alone

No support

'Difficult'
historian

Osteoarthritis

Diabetes

Hypertension

SOB ?cause

Anaemia

No surgery

HbA1c 8.2%

BP 170/88

ECG NAD

CXR NAD

Hb 100g/l

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

...where the following can happen...

Declines surgery

- Understanding - Info poorly communicated
- Understanding –Sensory/cognitive impairm't
- Health literacy – life expectancy, impact of ca/stoma
- Burden of intervention

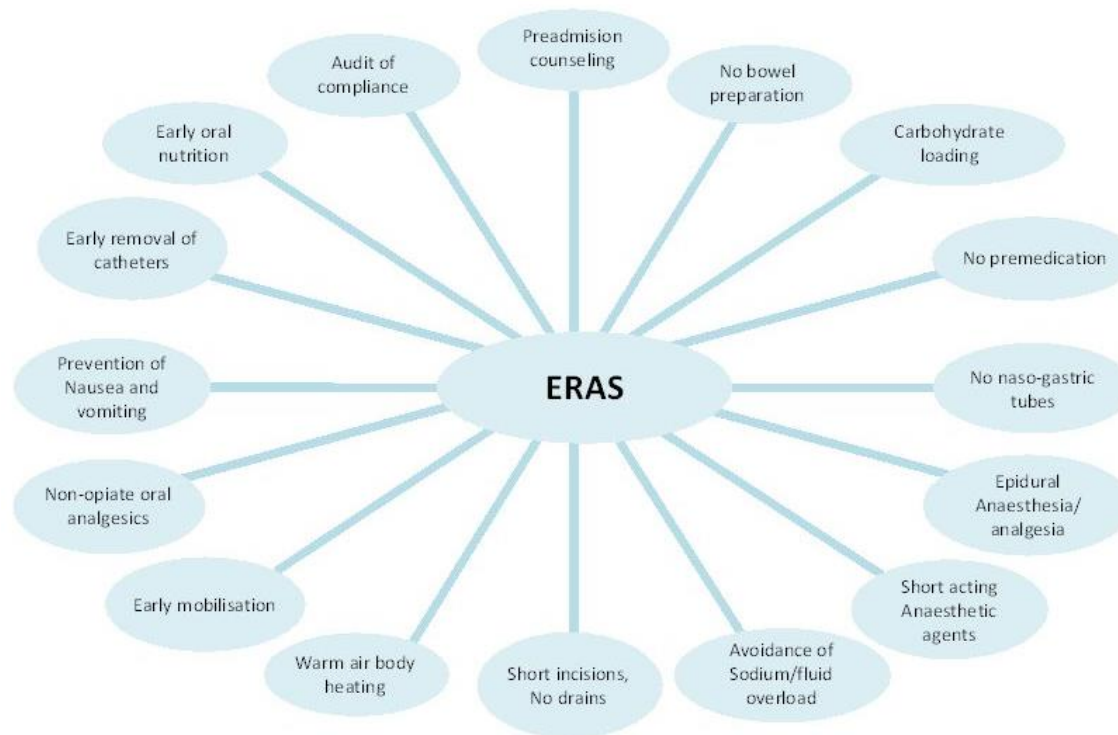
Referred for medical opinion

- Anaemia
- Diabetes
- Shortness of breath

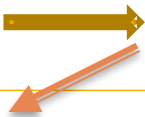
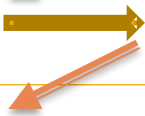
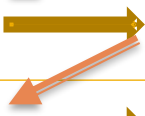




Cancelled on day of surgery

- Not followed fasting/medicines instructions
- Concern about medical status (anaemia, SOB)

...or can proceed on enhanced recovery programmes...



...but on the wards we still see such scenarios

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

Older people are at higher risk...

Clinician reported outcomes

- Morbidity
- Mortality



Patient reported outcomes

- Recovery
- Experience, satisfaction



Process related outcomes

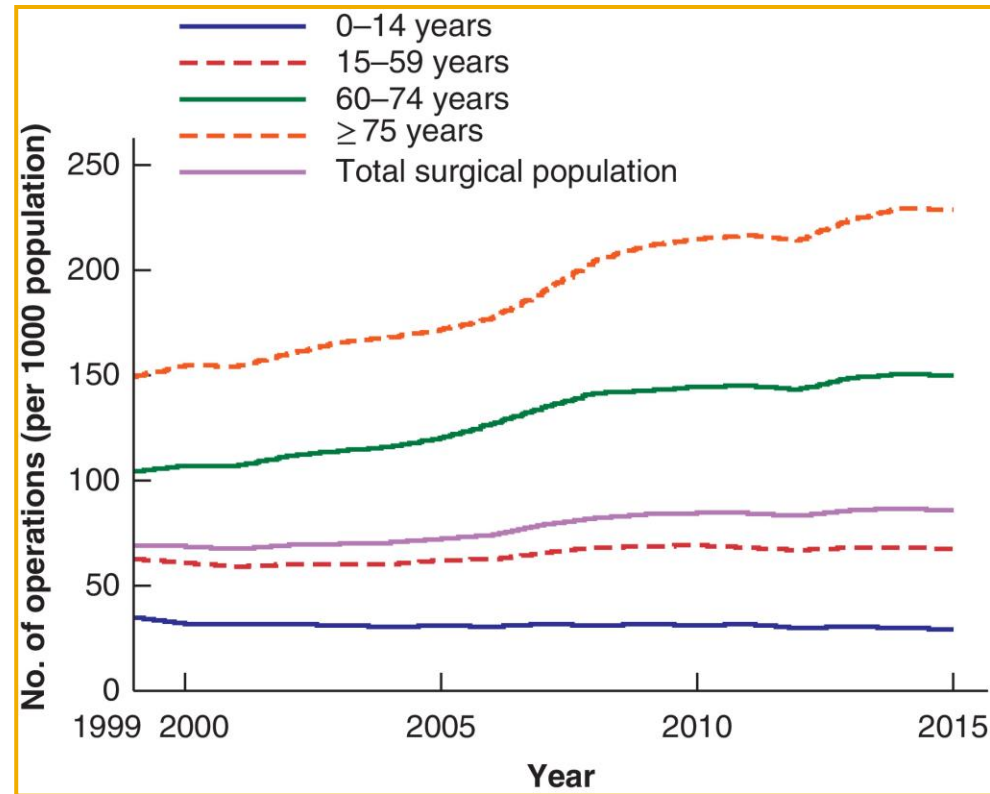
- Harm and complaints
- LOS, readmissions
- Cost



...and it's a numerical problem too...

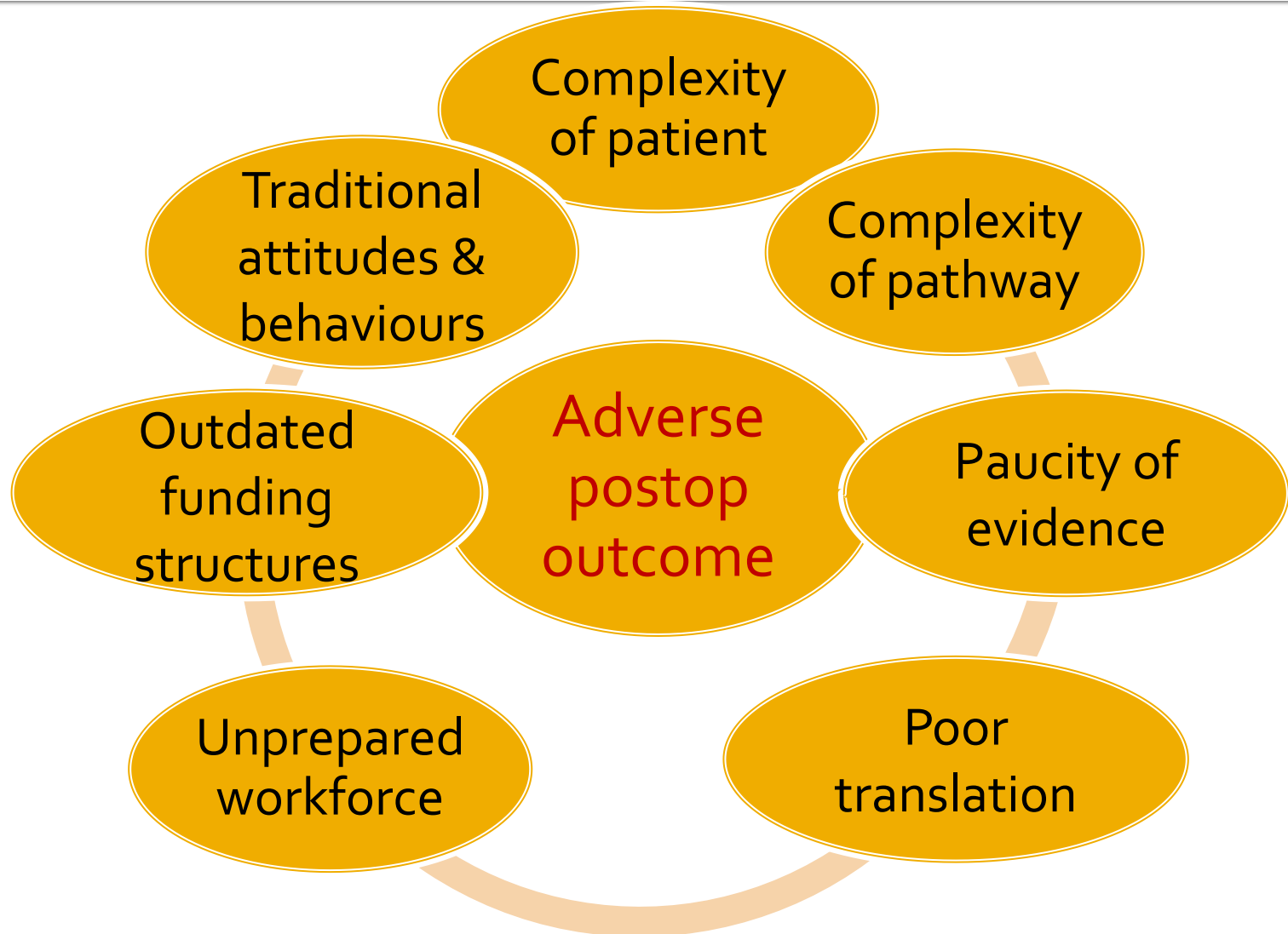
Twice as many people aged over 65 years have surgery compared to those under 65 years

Even more so now in COVID recovery

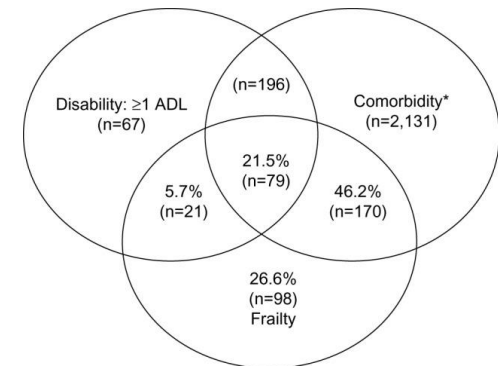
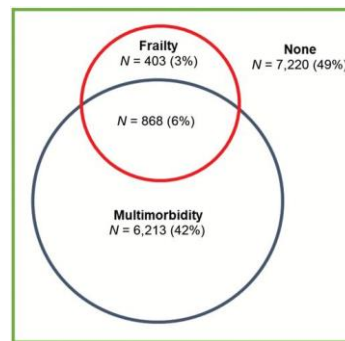
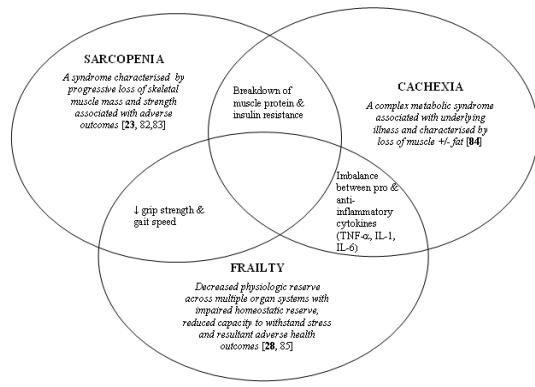
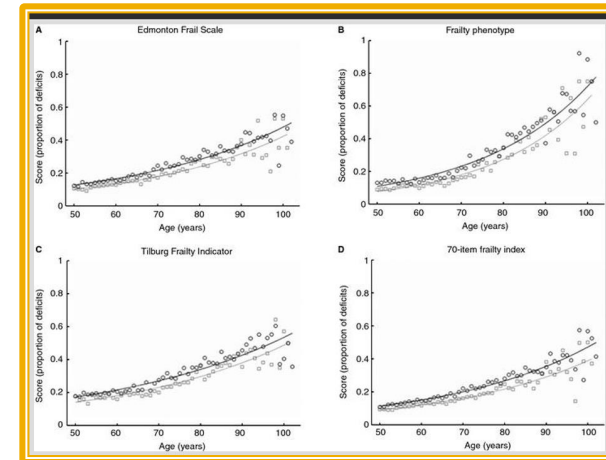
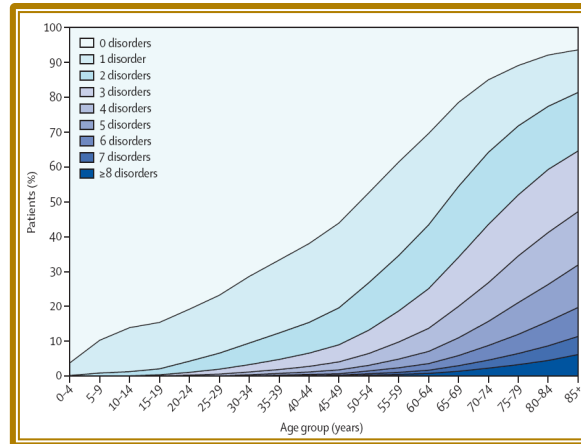
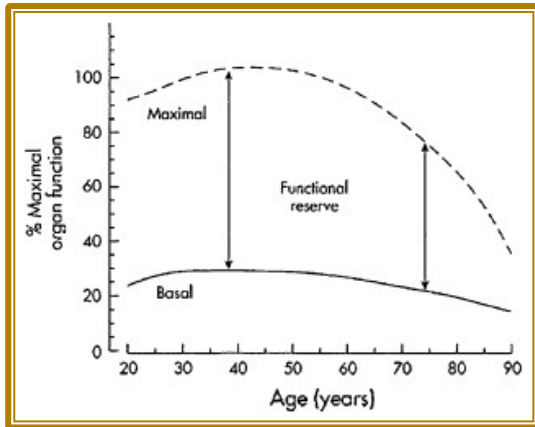
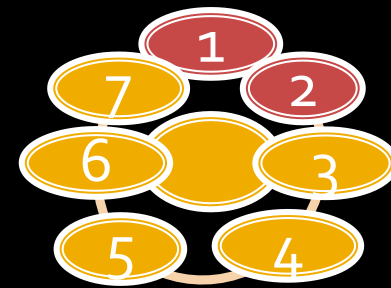


Fowler et al, BJS 2019 : 1012-1018

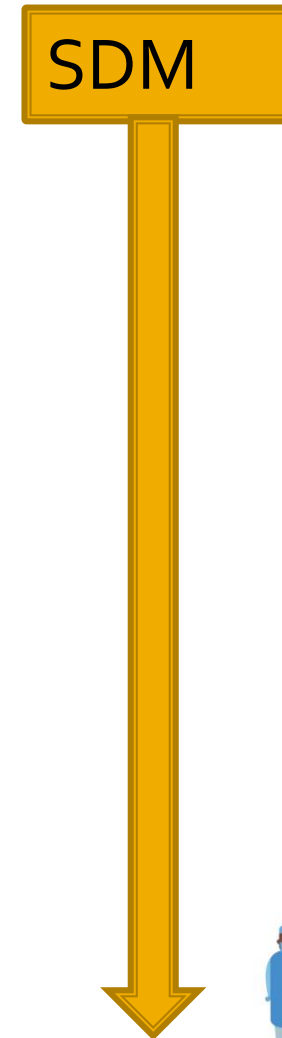
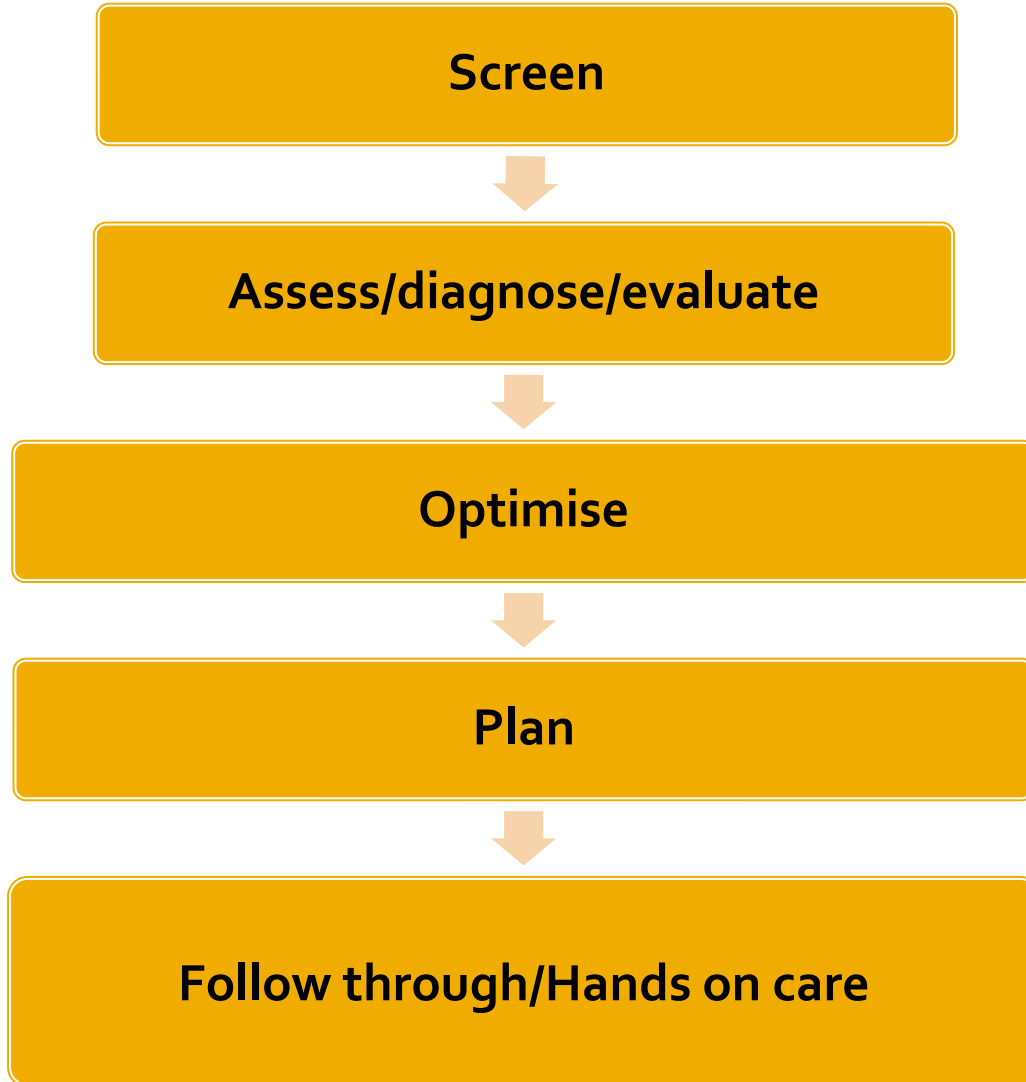
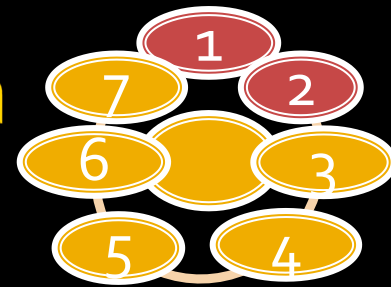
Factors contributing to poor outcomes



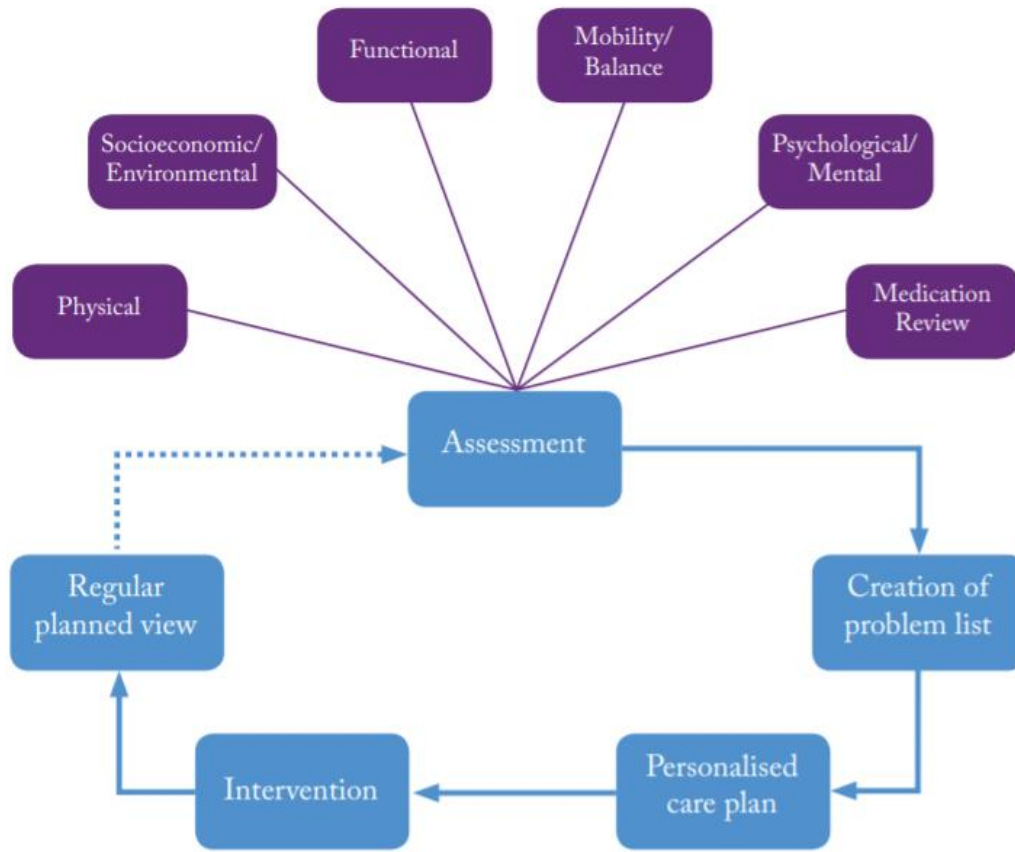
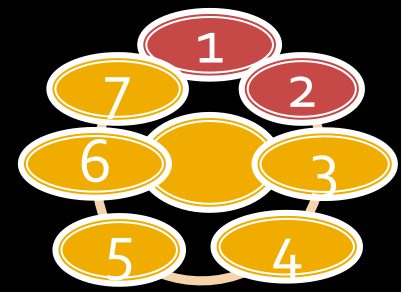
Addressing the complex patient...



...in a complex pathway, needs an underpinning methodology



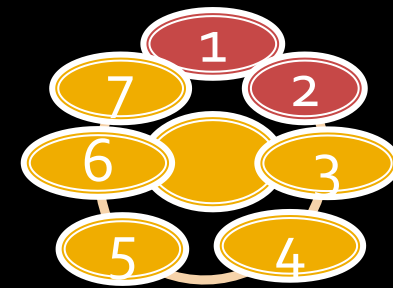
...sounds a bit like...



- Hx and examination
- Objective scores
- Existing & new diagnoses/issues
- Multidisciplinary assessment/treatment

- Multidisciplinary interventions
 - Medications
 - **Lifestyle**
 - **Exercise**
 - **Psychological**
 - Home adaptations

...CGA & optimisation



30% higher chance of being alive and in own home
NNT 13 (OR 1.31, CI 1.15-1.49)

Originally published as volume 2, Issue 6876

Clinical practice

Comprehensive geriatric assessment

A.E. Stuck, et al.

DEPARTMENT OF PUBLIC HEALTH, OXFORD

Targeted
Objective tools
Multidomain
Hands on
Follow through

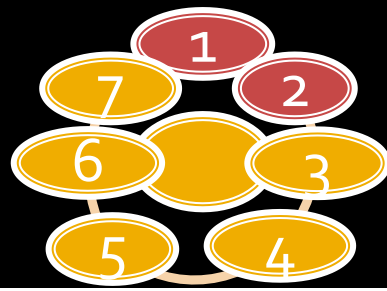
Cochrane
Library

Cochrane Database of Systematic Reviews

Comprehensive geriatric assessment for older adults admitted to hospital (Review)

Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, O'Neil D, Saltvedt I, Wald H, O'Neill D, Robinson D, Shepperd S

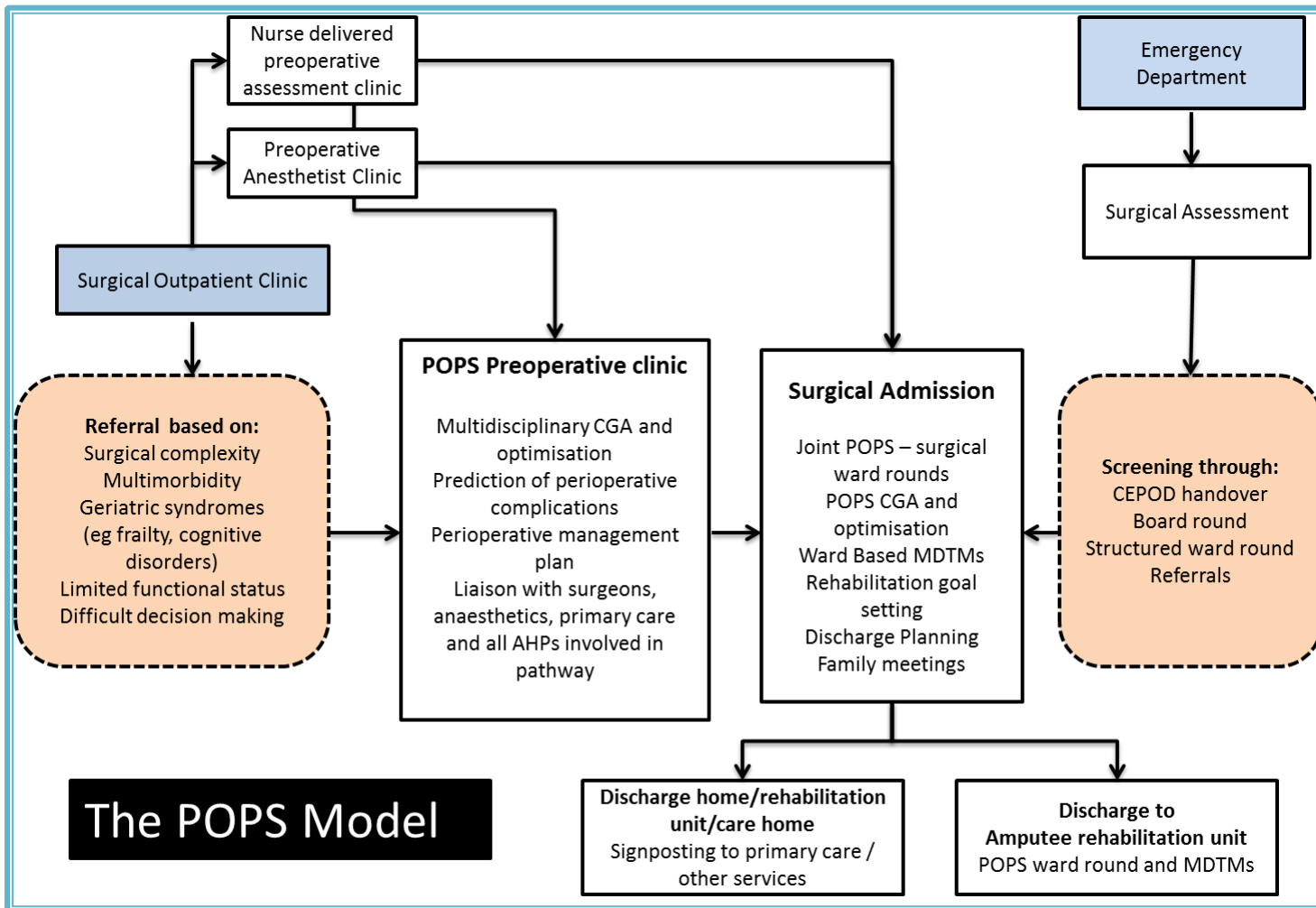
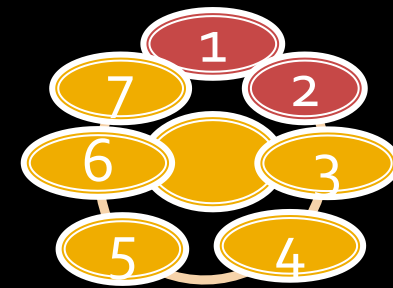
We have used this methodology...



Guy's and St Thomas' NHS
Foundation Trust



...in the POPS@GSTT model



POPS surgical referral pathway

Is my patient for POPS?

1

Do they have...?

- **Multimorbidity** (more than 2 co-existing conditions requiring assessment +/- optimisation)
- **Frailty** (reduced ability to adapt to stress of perioperative period)
- **Functional dependency** (requiring support in activities of daily living)
- **Difficult decision making** (difficulties with capacity to consent or uncertainty regarding the most appropriate intervention)

Or

Are they >65yrs and having...?

- Cystectomy
- Major gynaecology surgery
- Oesophagectomy
- Pelvic exenteration
- Major head and neck surgery
- Open or complex abdominal aortic aneurysm repair

If considering POPS for patient under 65yrs please contact a member of the POPS team prior to referral

Refer

2

Creating the referral

Refer to POPS using EPR

1. Type '**POPS**' into manual entry field form
2. Complete the form

Submit

3

POPS will...

1. **Prioritise** referral and appointment accordingly (e.g. Cancer pathway patients)
2. **Inform** the patient of appointment via post and phone call (with reminder before appointment)
3. **Document** POPS outcome letter (at least draft) on EPR within 72 hours (in cases when admission for surgery before 72 hrs, email summary will be sent to surgical team)
4. **Record** outcome of assessment on PiMS ("stable to proceed to surgery" or "Not stable to proceed – see EPR")
5. **Liaise** with admissions, surgeon and anaesthetic lead by email if concerns regarding perioperative management

Remember – If referred to POPS, no separate preoperative assessment clinic appointment required if surgery within 4 months

Contact :ageing and health POPS team (email) or x82092 or x88617 if you have any queries.

What interventions does CGA prompt in the elective setting?

Component of care	Proportion of patients (n=500)
Assessment	2/3 new diagnosis
Optimisation	1/2 lifestyle advice 3/4 meds changed 1/4 therapy interventions (diet/exercise)
Communication	1/5 multispecialty discussion 4/5 anticipation of postoperative complications
Referral	1/7 preoperative investigations 1/10 anaesthetic input 1/20 organ specialty advice
Anticipatory care planning	1/10 anticipatory care planning
Long term condition mx	1/3 LTC management referral
SDM	Documented in 98%

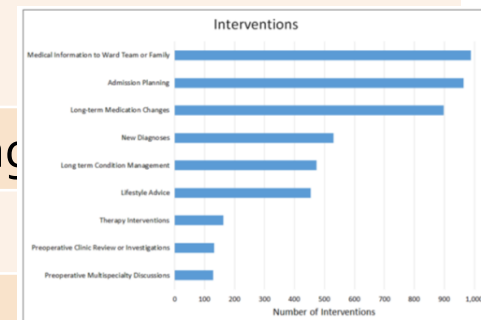
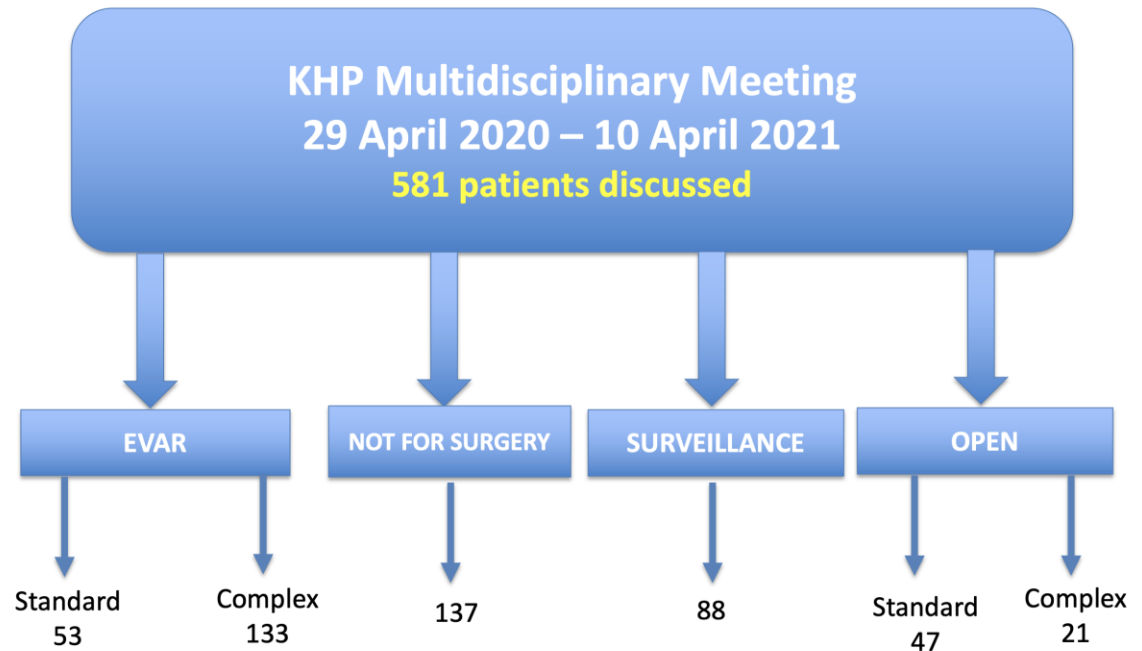


Figure 3: Comprehensive Geriatric Assessment prompted interventions

Collaborative shared decision making

15% of patients do not proceed with the surgery initially proposed

23% of our AAA population



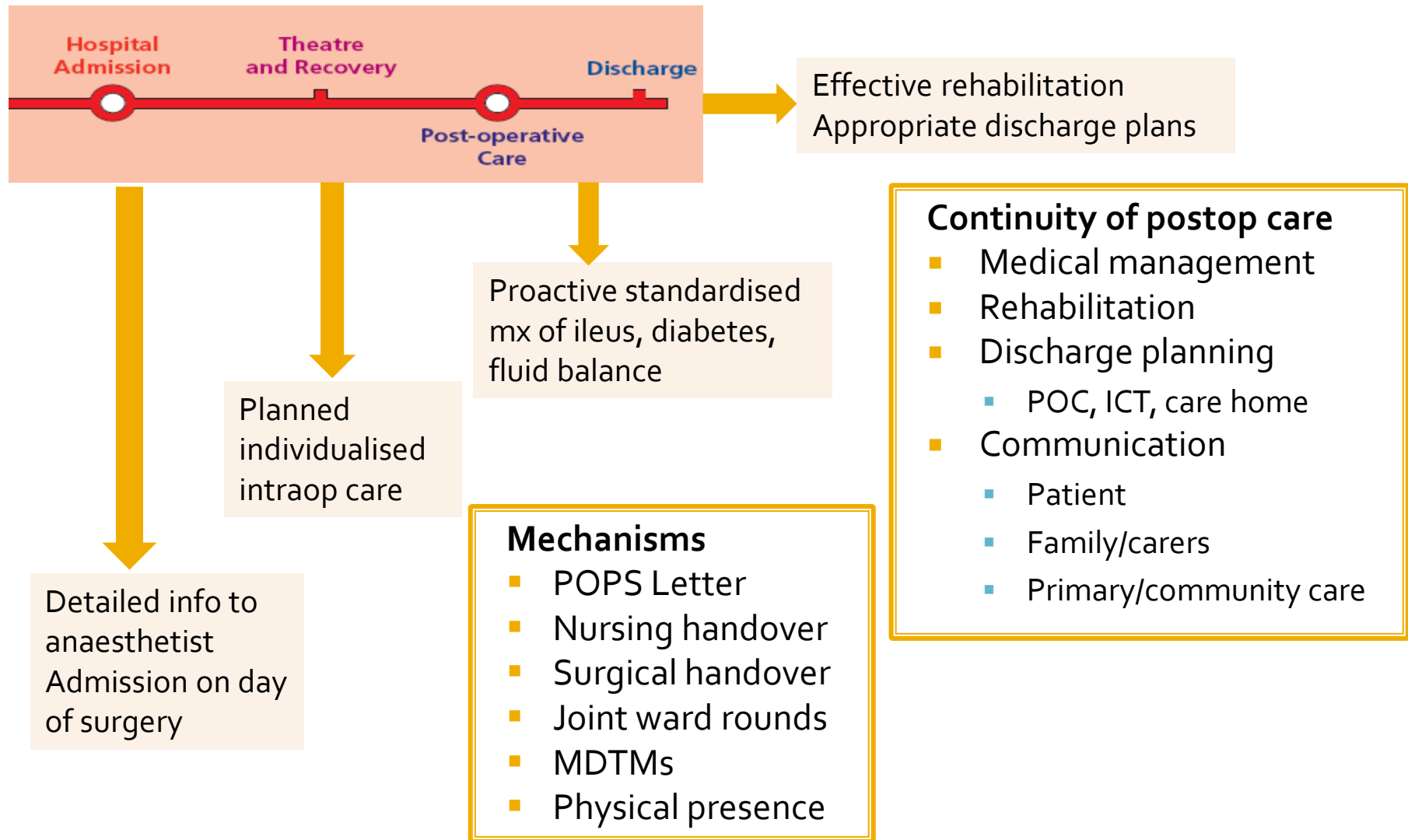
Acknowledgement –
Modarai & Tyrell, GSTT

Acknowledgment KHP colleagues:
Vascular Surgery, Interventional Radiology, Cardiothoracic Surgery, Peri-operative Medicine, Anaesthetic and Ultrasonic Angiology teams

Preoperative CGA for Doreen

OA	Pain	Assess/Treat (meds/physio)
Diabetes	HbA _{1c} 8.2%	Assess/Treat/plan/refer
HTN	BP 170/88	Assess - ABPM/treat
SOB ?cause	Ischaemic ECG	Assess/optimize/refer
'Difficult' historian	Anaemia	Diagnose/lv iron
	Deconditioning	Diagnose/Tx/Physio/OT
	Cog impair't	Diag/assess/plan/long term
	Social issues	Equipment/POC Psychological support Discharge planning

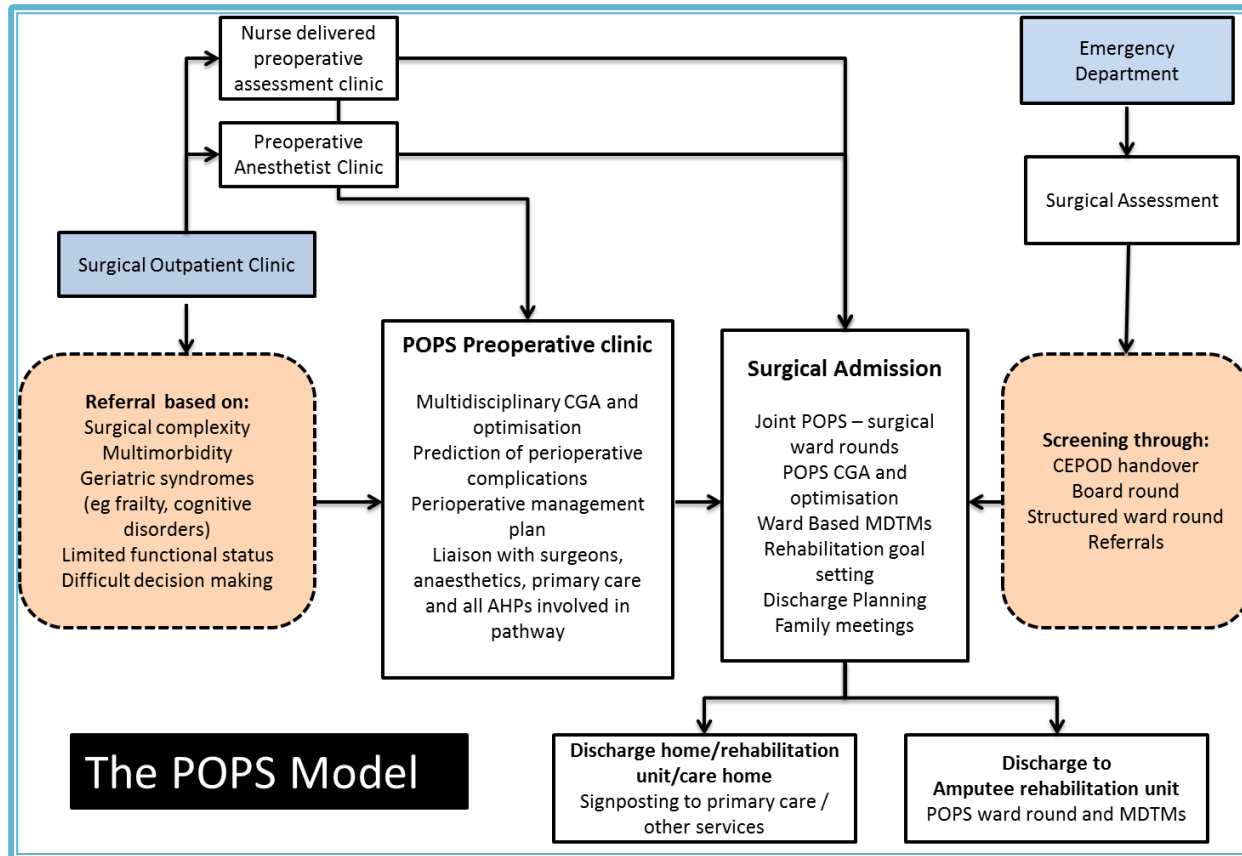
...and postoperatively



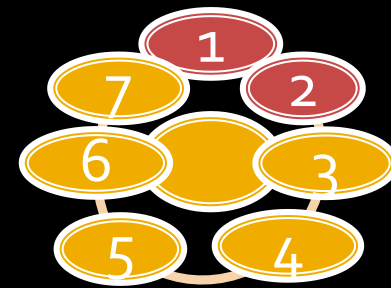
This service is provided across emergency and elective surgery...

ELECTIVE
1600 PATIENTS P/A

EMERGENCY
2400-3000 PATIENTS P/A



...and embedded into routine clinical care at GSTT



Guys	St Thomas'
Orthopaedic – elective Urology Head and Neck ENT	Orthopaedic – trauma Upper GI/Lower GI Vascular Plastics Cardiac surgery Gynaecology

**Amputee
Rehab
Unit**

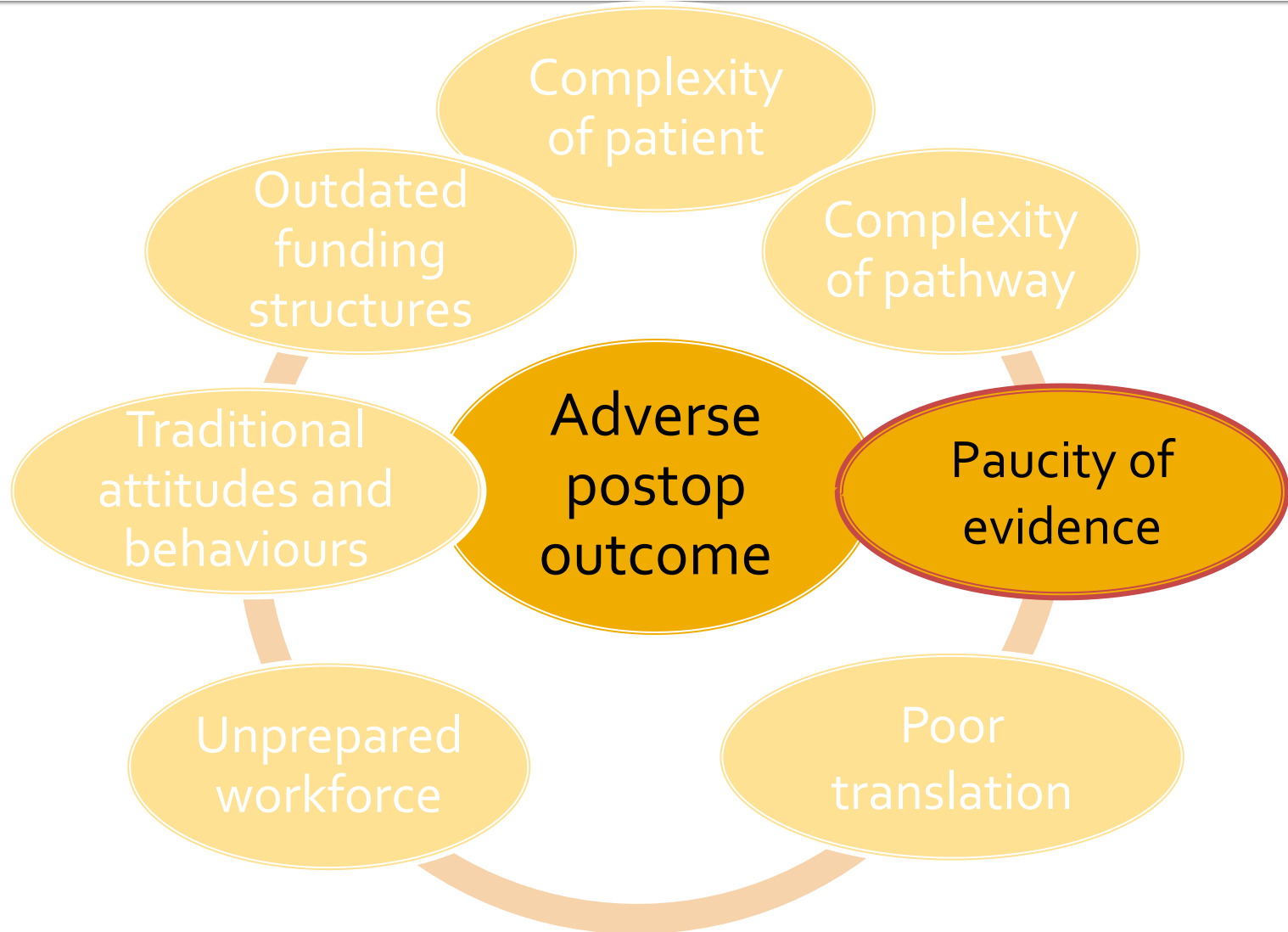
Elective
Unplanned

Out patient work

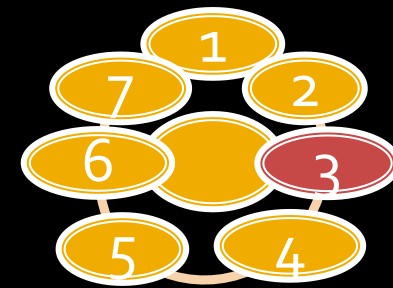
In-patient work

Community based

Factors contributing to poor outcomes



The evidence...



Year **What happened?**

Age and Ageing 2007; 36: 190–196 © The Author 2007. Published by Oxford University Press on behalf of the British Geriatrics Society.
doi:10.1093/ageing/af1163 All rights reserved. For Permissions, please email: journals.permissions@oxfordjournals.org
Published electronically 27 January 2007

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(BP) 3 PAs for

(BP) 5PAs for cardiac surgery

Funding for POPS@EKHUT

Randomized clinical trial

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Anaesthesia 2014, 69 (Suppl. 1), 8–16

doi:10.1111/anae.12494

Review Article

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Eamer G, Taheri

> 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

David Shipway ¹, Louis Koizia ², Nick Winterkorn ², Michael Fertleman ³, Paul Ziprin ⁴, Krishna Moorthy ⁵

Affiliations + expand

PMID: 31098544 PMCID: PMC6502563 DOI: 10.7861/futurehosp.5-2-108

Free PMC article

BJUI
BJU International

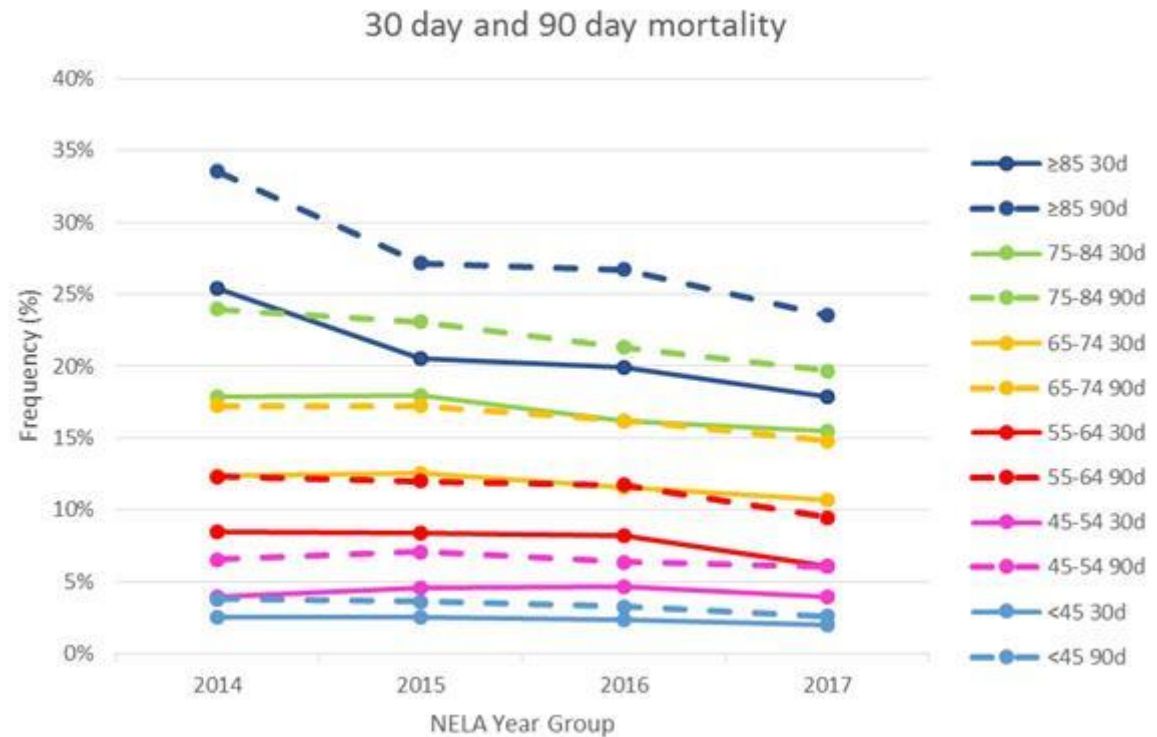
...now supported by big data studies...

Organisational factors and mortality after an emergency laparotomy

Oliver et al. *BMJ*

Postoperative mortality associated with older patients
OR 0.35;

EDITOR'S CHOICE
Older patients observed to have lower mortality after laparotomy
Rachel M...
Sarah Ha...
Age and A...
<https://doi.org/10.1136/bmj.m000000>
Publishe...



...with increasing evidence

Received: 12 February 2018 | Accepted: 29 March 2018
DOI: 10.1111/ijcp.13096

ORIGINAL PAPER

WILEY THE INTERNATIONAL JOURNAL OF
CLINICAL PRACTICE

Establishing a proactive geriatrician led comprehensive geriatric assessment in older emergency surgery patients: Outcomes of a pilot study

Matthew C. Mason¹ | Amy L. Crees² | Matthew R. Dean³ | Nahida Bashir³

Original article

doi:10.1111/codi.13785

Preoperative geriatric assessment and tailored interventions in frail older patients with colorectal cancer: a randomized controlled trial

N. Ommundsen[†], T. B. Wyller[†]†, A. Nesbakken[†]§, A. O. Bakka[†]¶, M. S. Jordhøy^{***}, E. Skovlund^{††} and S. Rostaft^{††}

[†]Institute of Clinical Medicine, Oslo University Hospital, Oslo, Norway, ^{††}Department of Geriatric Medicine, Oslo University Hospital, Oslo, Norway, [‡]Department of Gastrointestinal Surgery, Oslo University Hospital, Oslo, Norway, [§]ICC, Jibson Colorectal Cancer Research Centre, Oslo University Hospital, Oslo, Norway, [¶]Department of Digestive Surgery, Akerhus University Hospital, Lørenskog, Norway, ^{***}The Cancer Unit, Inlandspital Hospital Trust, Hamar, Norway, and ^{††}Department of Public Health and Nursing, NTNU, Norway

Received 11 November 2016; accepted 26 April 2017; Accepted Article online 26 June 2017

Abstract

Can comprehensive geriatric assessment be delivered without the need for geriatricians?

Age and Ageing 2019; **48**: 643–648
doi: 10.1093/ageing/afz025
Published electronically 22 March 2019

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Can comprehensive geriatric assessment be delivered without the need for geriatricians? A formative evaluation in surgical settings

DAVID KOZMAN¹, EMMA REGEN¹, KAY PHELPS¹, GRAHAM SIMON CONROY¹

Saripella et al. *BMC Anesthesiology* (2021) 21:127
<https://doi.org/10.1186/s12871-021-01337-2>

BMC Anesthesiology

RESEARCH ARTICLE

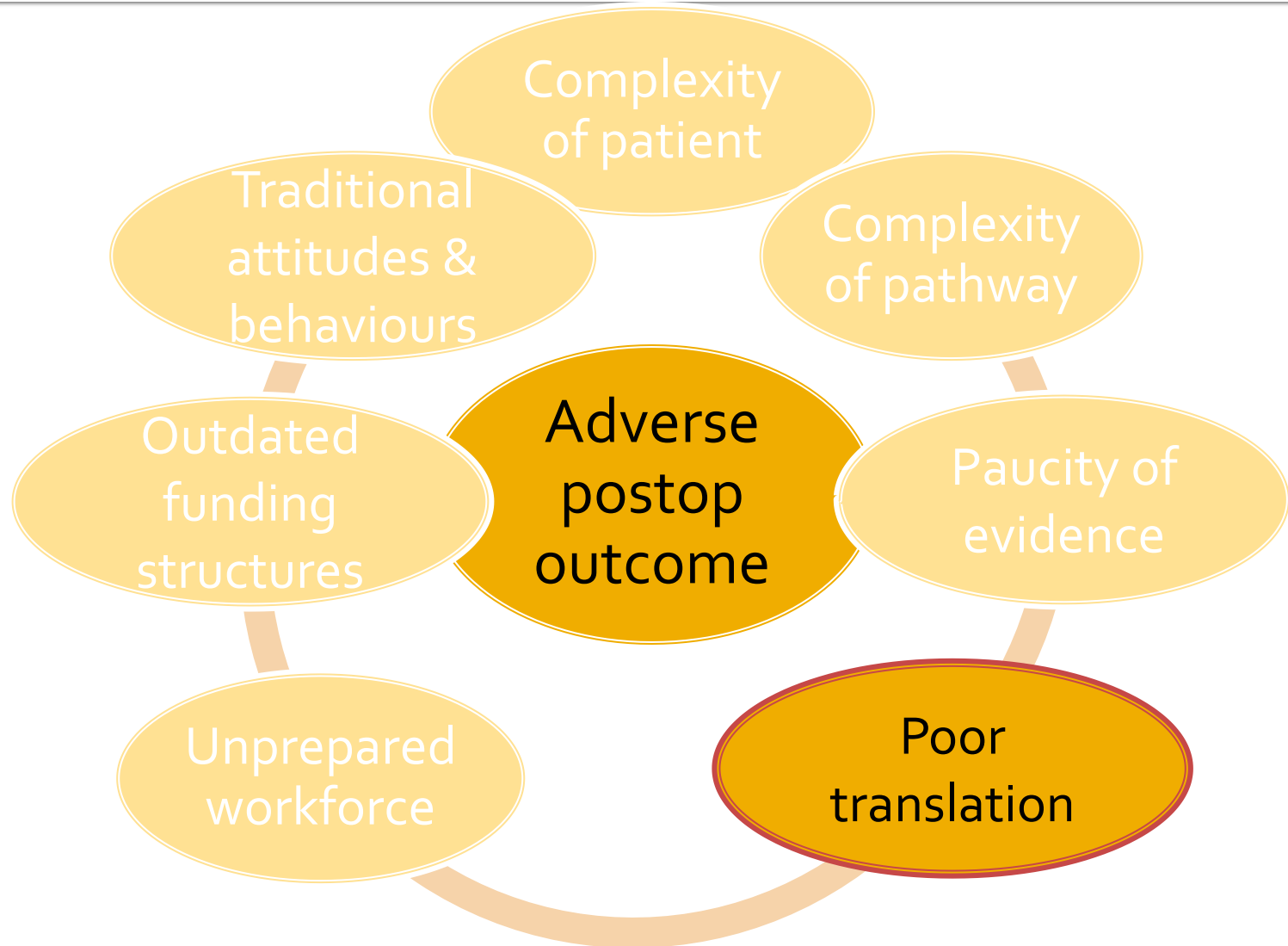
Open Access

Effects of comprehensive geriatric care models on postoperative outcomes in geriatric surgical patients: a systematic review and meta-analysis

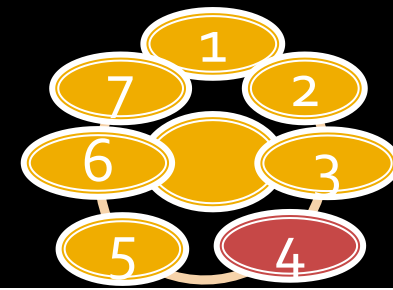


Mixed results
Concerns about power, methodology
Often due to a lack of fidelity to CGA

Factors contributing to poor outcomes



What about translation?



Method of risk assessment	n
CGA	12
Comorbidities	8
Frailty	
ASA	
POSSUM	
No risk asse	

Total no. respondents providing perioperative services to older patients = 38/130

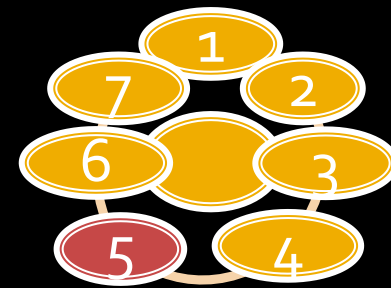
“we want to but it cant be done at a DGH, because we don’t have...
- the workforce
- the money”

Optimisation	n
Geriatrician	4
Geriatrician led MDT	9

care	n
	10
	11
d	5

Figure 1. Features of perioperative services provided by geriatric medicine in the UK.

The workforce



AHPs

- Curriculum, Competency framework
- E-learning & face to face modules

FY

- Modular training programme
- From contemplation to recovery

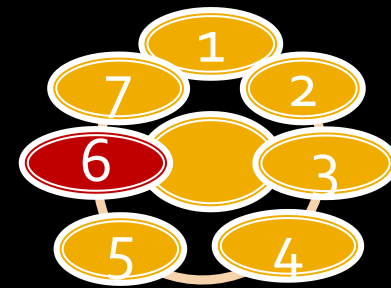
Specialist

- Curriculum
- OOPE/T
- Darzi fellows

National/
International

- E-learning modules
- MSc
- POPS conference

The money



- Number of inpatient days
- Number of complications
- Number of medical admissions
- Duplication of services
- Late cancellations
- Length of stay
- Readmissions
- Informal/formal social care

Age and Ageing 2021; 1–8
doi: 10.1093/ageing/afab094

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RESEARCH PAPER

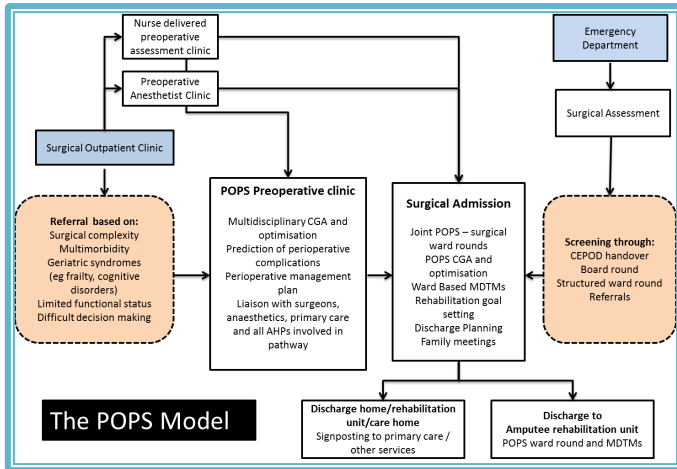
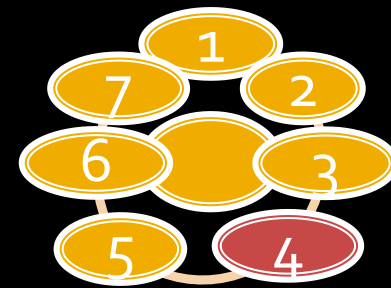
Preoperative comprehensive geriatric assessment and optimisation prior to elective arterial vascular surgery: a health economic analysis

JUDITH S. L. PARTRIDGE^{1,2,†}, ANDREW HEALEY^{3,†}, BIJAN MODARAI^{4,5}, DANIELLE HARARI^{1,2}, FINBARR C. MARTIN², JUGDEEP K. DHESI^{1,2,6}

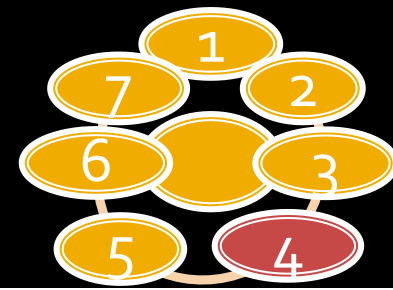
Surgical directorate funding

- Cost savings
- Ring fencing of services

And so it can be done...

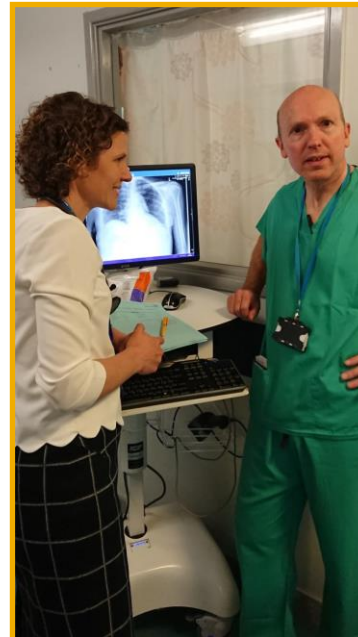


...by using QI methodology

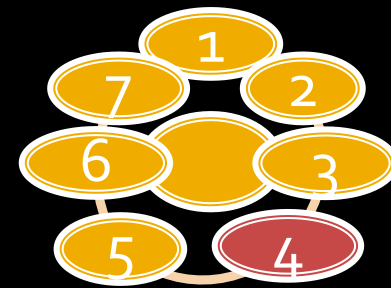


Co-design & production
Adaption not adoption
Ensuring fidelity
Leadership

- Clinical (resilience)
- Strategic (culture)
- Financial

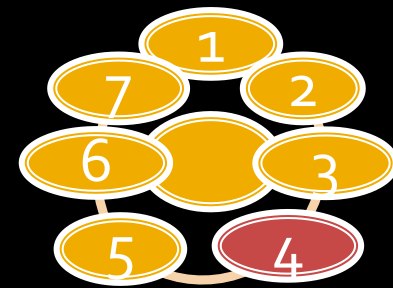


...with replicable results at a DGH

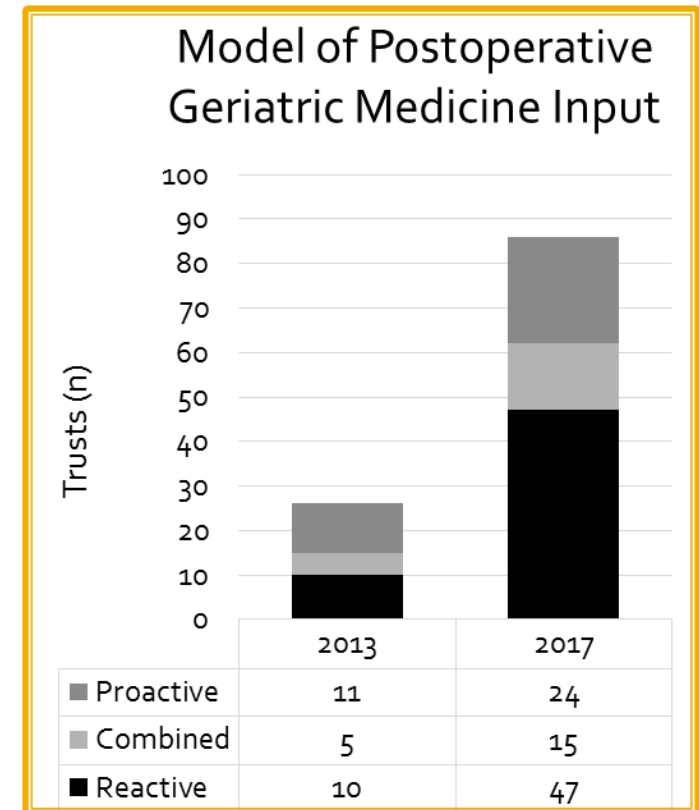


	Age	Documented co-morbidities	Median LOS (days)	30 day re-admission
Pre POPS (n=50)	77.7	2.42	8	30%
First 4/12 POPS (n=299)	77.3	6.3	6	11%

...and is happening across the UK (and further afield)



- Response rate 127 of 152 NHS hospitals (88%)
- Preoperative clinics= 37
 - 20 existing clinics
 - 14 dedicated ger med
 - 3 jt clinics (anaes & ger med)
- Increase in
 - joint meetings
 - joint guidelines
 - surgical directorate funding



But scale up/roll out, through knowledge mobilisation, needs to happen at pace

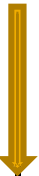
Test systematic rollout at a 'small' number of sites

- Toolkit
- Coaching and mentoring
- Support with measurement for improvement



Support early adopters to become regional centres

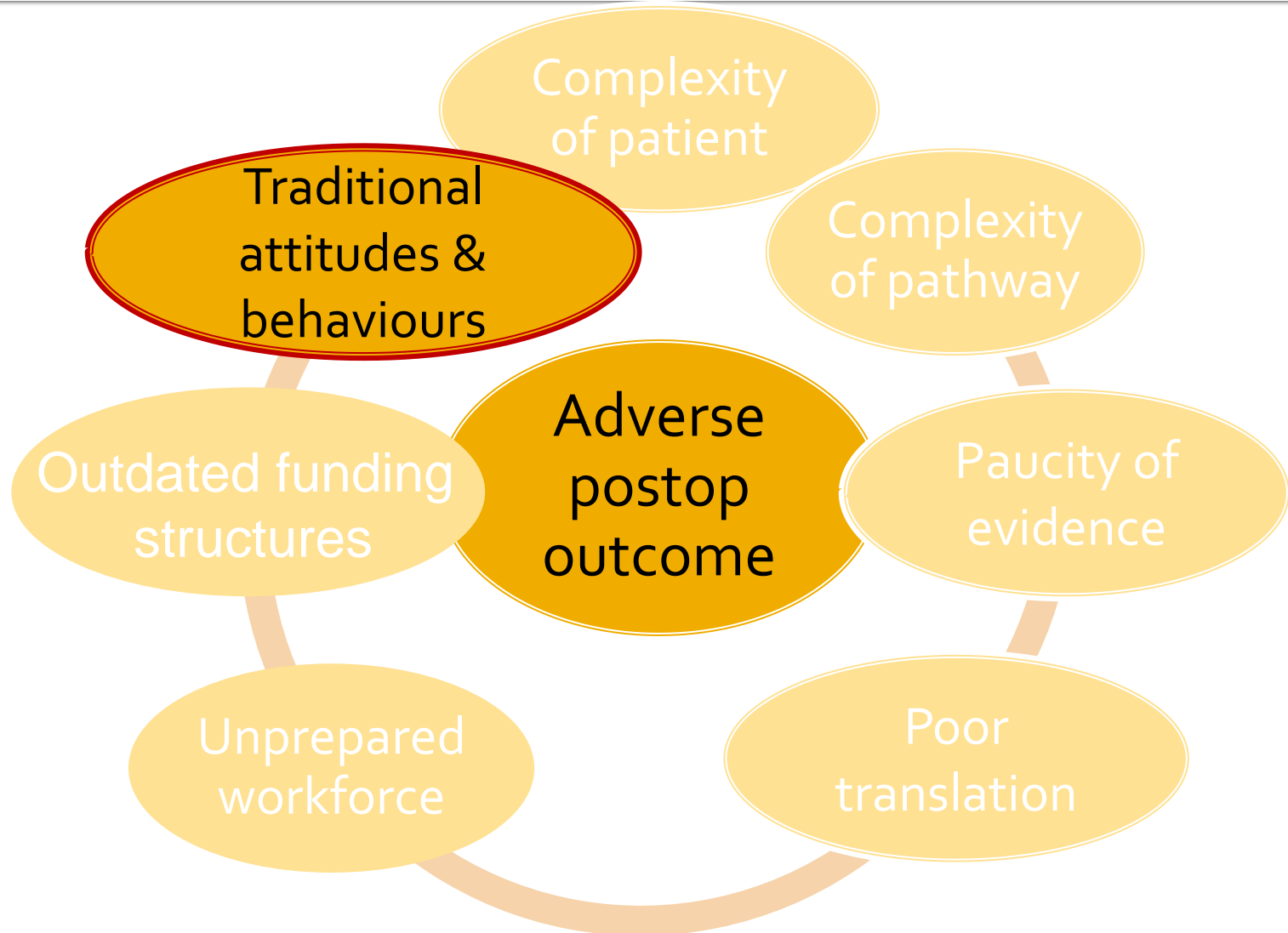
- Build expertise and capacity to support stage 3



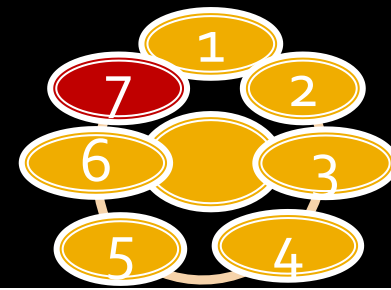
Implement systematic scale up/spread/roll out

- At the speed at which it is required!!

Factors contributing to poor outcomes



The need for cultural and policy change



Joint meetings

SSOC



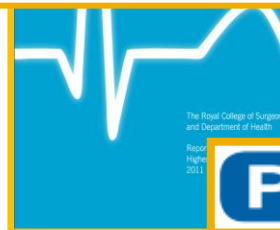
Centre for Perioperative Care

CPOC is a partnership between:



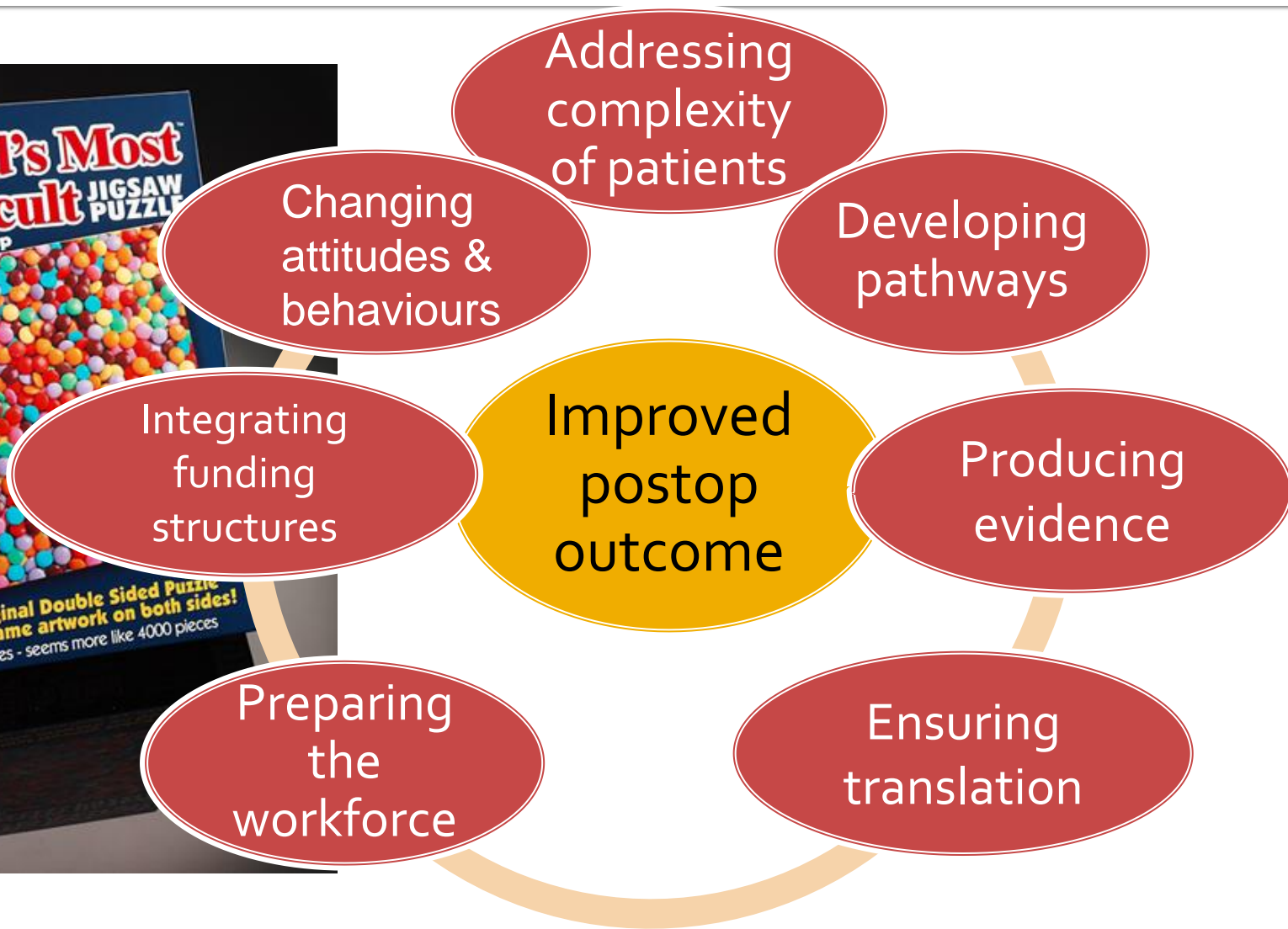
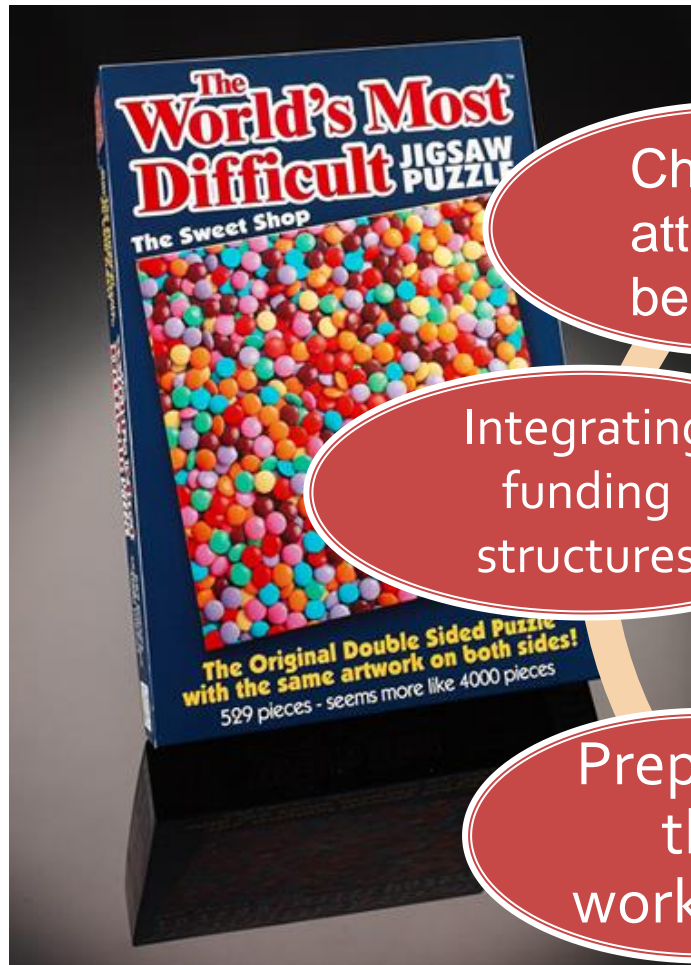
Guideline for Perioperative Care for People Living with Frailty Undergoing Elective and Emergency Surgery

September 2021



or
Surgery

Improving outcomes for older people requires a multimodal approach



Resources

- British Geriatrics Society POPS SIG www.bgs.org.uk
- CPOC (@CPOCnews www.cpoc.org.uk)
- POPS eLearning module – via BGS
- UCL Perioperative Medicine MSc
- NHS Elect POPS network
- NHFD, NELA
- POPS, CPOC, EBPOM, RCoA conferences

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