## How I set up my service; reflections from Salford

14.00

Session F

15.00

Surgery in older people

Chair: Dr David Shipway
Venue: Richard Burton theatre

Arturo Vilches-Moraga



Salford Royal NHS Foundation Trust

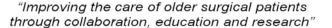


11th April 2019











## How WE set up OUR service; reflections from Salford

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Surgery in older people

Chair: Dr David Shipway
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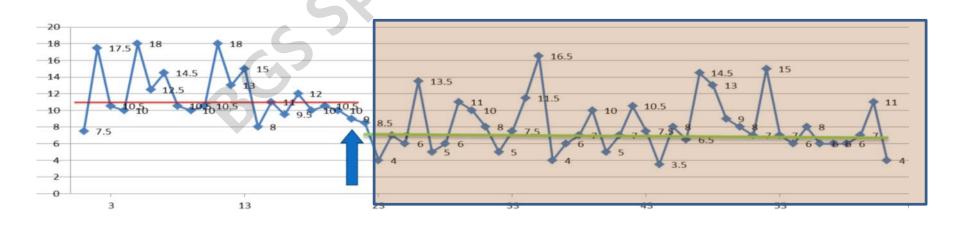
#### **Improving surgical outcomes (POP-GS)**



# **1776** patient-episodes 8<sup>th</sup> September 2014 10<sup>th</sup> May 2019

Before February 1<sup>st</sup>
11 Median

After February1<sup>st</sup>
7 Median



#### Overview of this presentation

- Single best answer questions
- Models of care
- Collaborative working in progress: Salford-POPS-GS
- Tips: Collaborative care in General Surgery
- Key messages



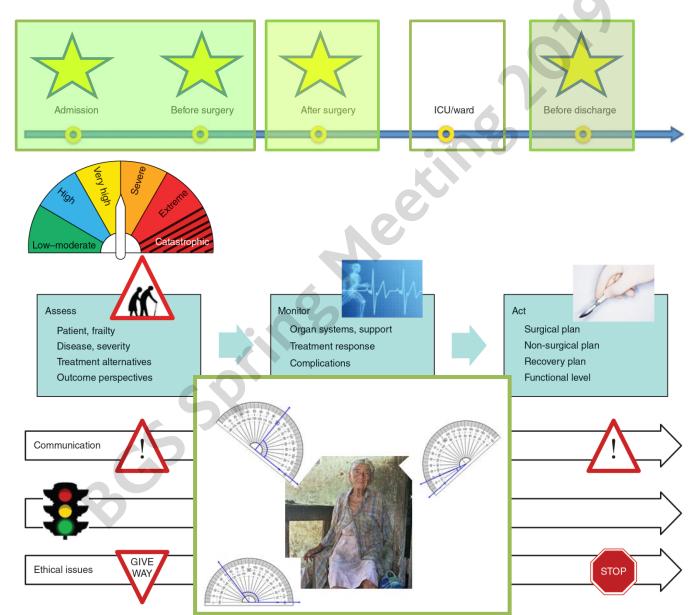
#### Key messages



# Short Term Focus Long Term Vision

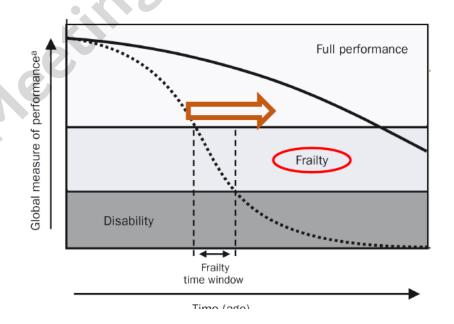
Admission Before surgery After surgery ICU/ward Before discharge

Pre-admission



Do you support the motion that Geriatric Teams/Geriatricians' should review (perioperatively) all **frail patients over 65** years of age who undergo an **emergency laparotomy**?

- 1. Yes
- 2. No
- 3. Undecided
- 4. I don't'care



- Highly prevalent in Emergency Laparotomy patients
- Worse short term prognosis, more complications and readmissions
- Frailty is Easy to measure/identify

#### Disclosure of conflict of interests

I am a Geriatrician...

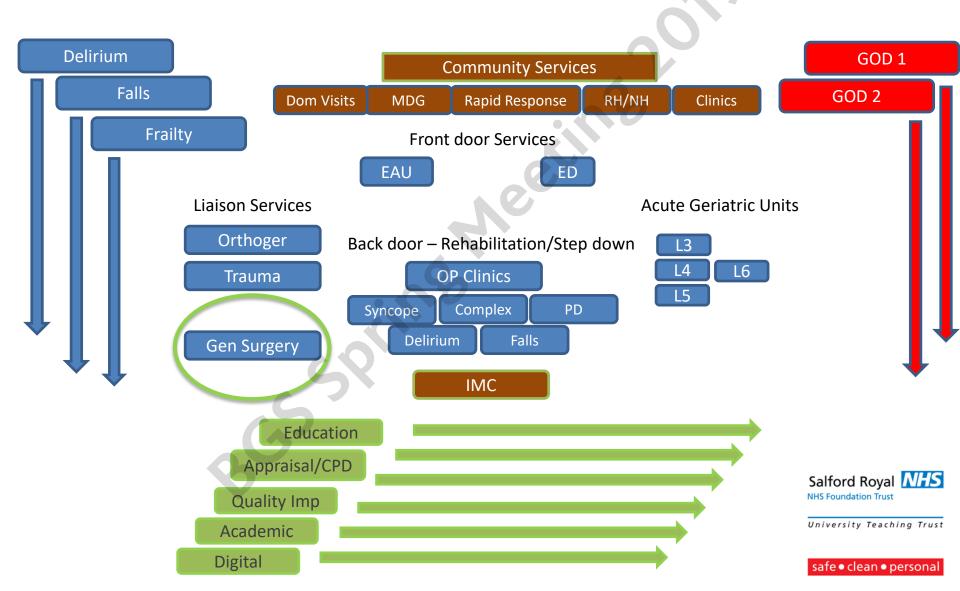
#### **ACM - Current Service**











Do you support the motion that Geriatric Teams/Geriatricians' should review (perioperatively) all **frail patients over 75** years of age

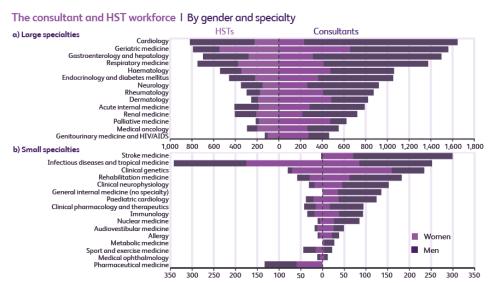
who undergo an emergency laparotomy?

- 1. Yes
- 2. No
- 3. Undecided
- 4. I don't'care

- High numbers > 70
- Higher mortality, morbidity, LOS and cost

#### Disclosure of conflict of interests

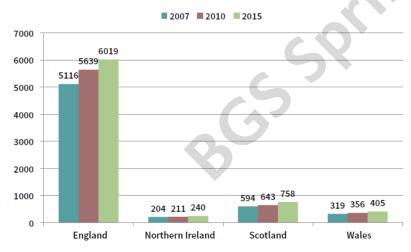
Ageing and Complex Medicine...



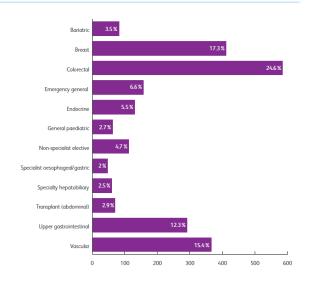




Specialty	England	Wales	Northern I	reland TOTAL
General Surgery	2052	133	88	2273







Do you support the motion that Geriatric Teams/Geriatricians' should review (perioperatively) all **patients over 80** years of age who undergo an **emergency laparotomy**?

- 1. Yes
- 2. No
- 3. Undecided
- 4. I don't'care

Do you support the motion that Geriatric Teams/Geriatricians' should review all **frail patients over 65** years of age admitted to General Surgery as an emergency?

- 1. Yes
- 2. No
- 3. Undecided
- 4. I don't'care

Autonomy Beneficence Non-maleficence

**Justice** 

Do you support the motion that Geriatric Teams/Geriatricians' should review

all **frail patients over 75** years of age admitted to General Surgery as an emergency?

- 1. Yes
- 2. No
- 3. Undecided
- 4. I don't'care

Do you support the motion that Geriatric Teams/Geriatricians' should review all **patients over 80** years of age admitted to General Surgery as an emergency?

- 1. Yes
- 2. No
- 3. Undecided
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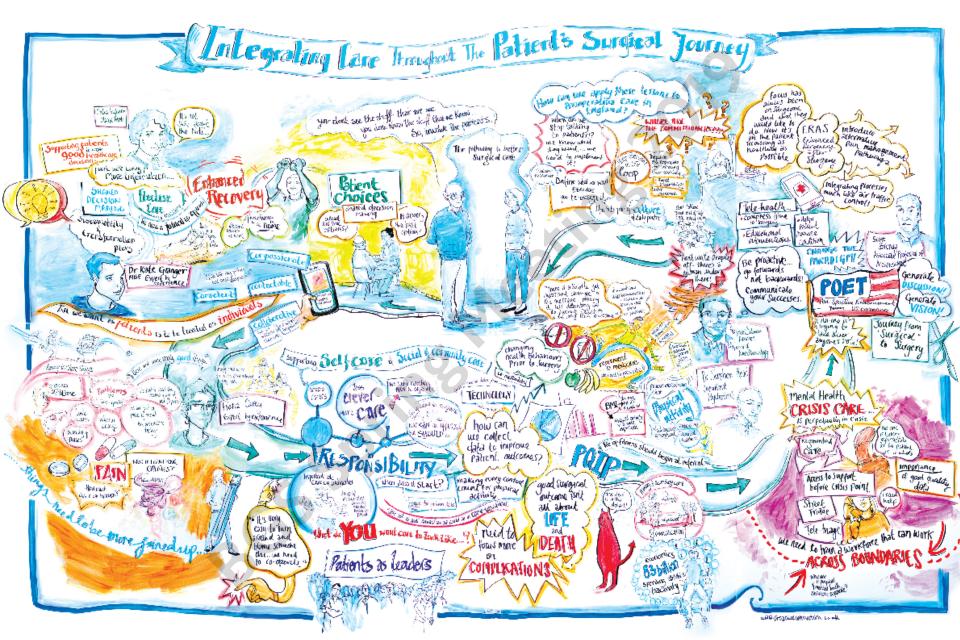
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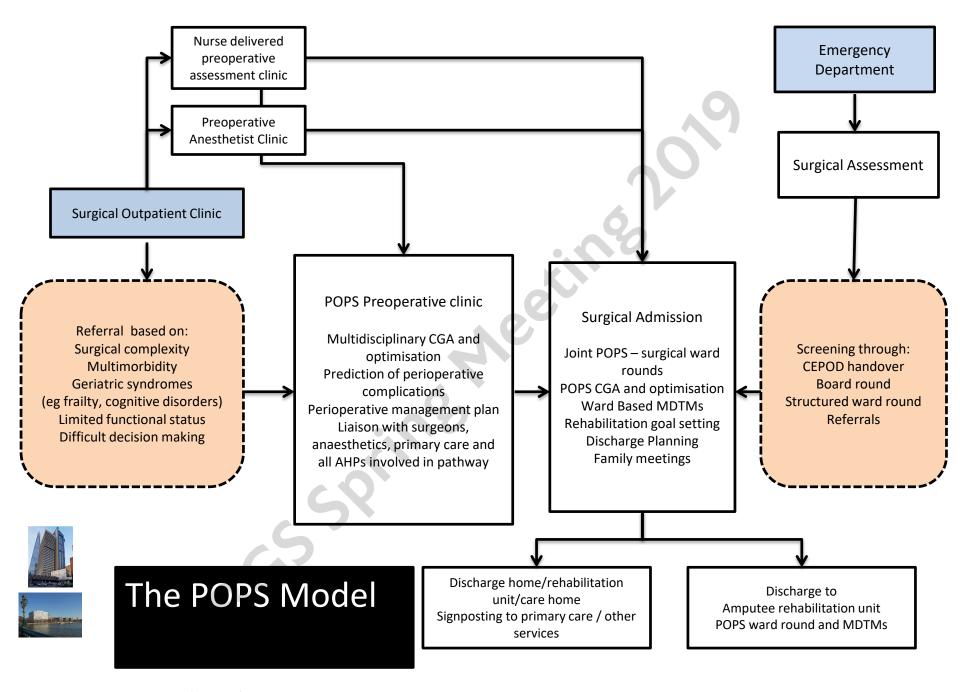


#### Conundrums in Emergency General Surgery

- Optimum model of care for older patients
- Optimum models of preoperative optimisation/risk stratification
- **Cost effective** service provision

Emergency surgery in the elderly: challenges and solutions
Andrew D W Torrance<sup>1</sup>
Susan L Powell<sup>2</sup>
Ewen A Griffiths<sup>3</sup>
Open Access Emergency Medicine 2015:7





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

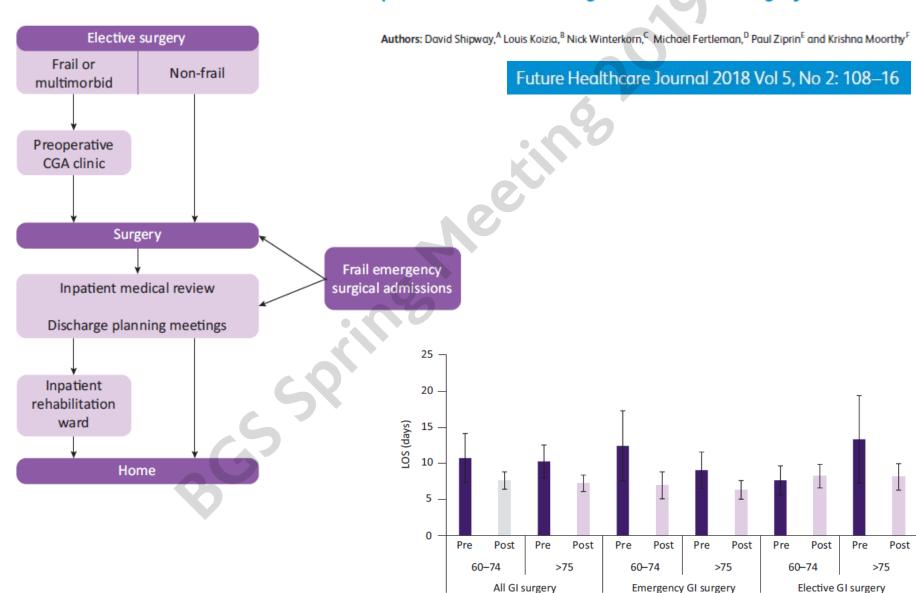
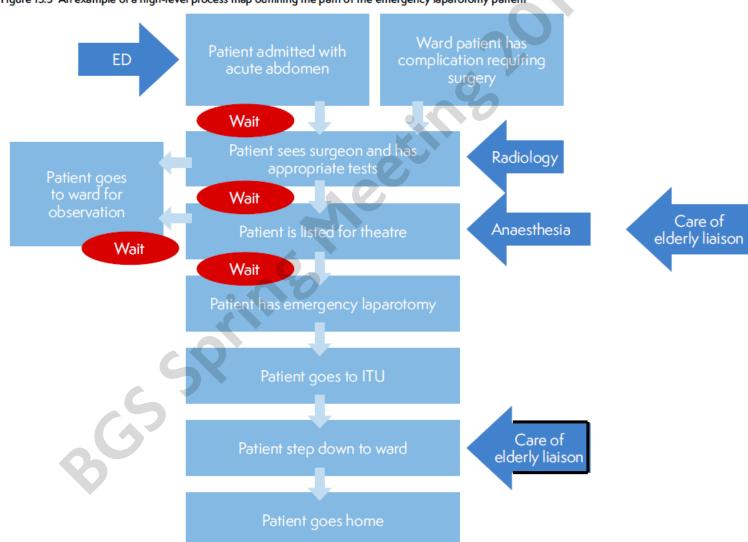




Figure 13.3 An example of a high-level process map outlining the path of the emergency laparotomy patient



#### Older patients & surgery

- 1. Decision making
- 2. Patient's goals & priorities
- 3. Role/expected effect of surgery
- 4. Informed consent
- 5. CGA (geriatric team)
- 6. MDT Optimisation

Clinical Review & Education

Care of the Aging Patient: From Evidence to Action

Preoperative Assessment of the Older Patient A Narrative Review

Lawrence B. Oresanya, MD; William L. Lyons, MD; Emily Finlayson, MD

Older patient with condition potentially amenable to surgery Does patient have No decision-making capacity Discuss treatment goals and Discuss treatment goals and choices with patient and others choices with patient's surrogate; of his or her choosing Involve patient as appropriate Elicit patient's global health care goals and priorities (see Table 1) Life prolongation Function and Independence Maintenance of cognition Comfort Assess role of surgery in satisfying patient's goals and priorities Possible surgical benefits Cure of disease Prolongation of life Symptom relief Improved function (eg, mobility after joint replacement) Possible surgical risks Premature death Delirium, cognitive loss Loss of function Loss of Independence (eq, Institutionalization) Risk > benefit Benefit > risk Discuss Informed consent and advanced directives Risk > benefit Benefit > risk Perform geriatric preoperative assessment Life expectancy Cognition Physical function Nutrition Frailty is it likely that surgical benefit Yes still exceeds risks? Conduct preoperative optimization (see Table 4) Treat medical comorbidities Assess for polypharmacy Consider physical therapy and strength training Provide nutritional supplementation as needed Use lesser procedures or Surgery nonoperative treatment

JAMA. 2014;311(20):2110-2120. doi:10.1001/jama.2014.4573

Figure 2.2 Proportion of hospitals in Year 4 meeting key standards

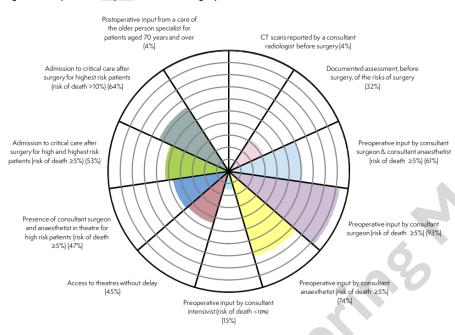
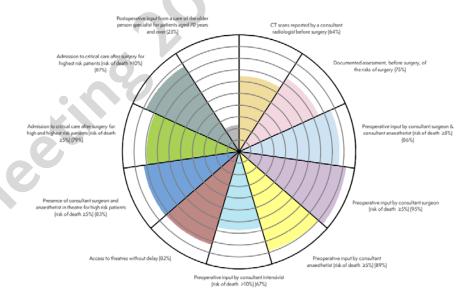
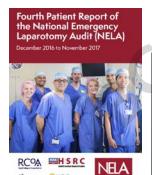
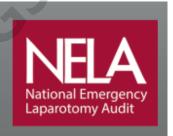


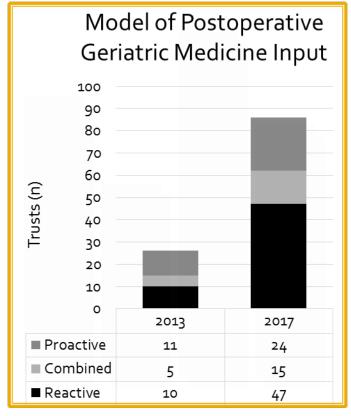
Figure 2.1 Proportion of all emergency laparotomy patients in Year 4, who had surgery between December 2016 and November 2017, meeting key standards











Article in press. Courtesy of Dr Jugdeep Dhesi

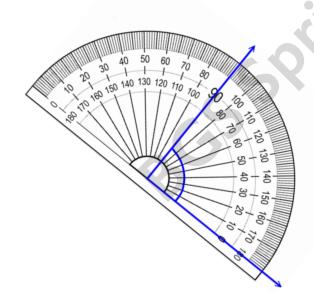
Elderly Care				
5.11	Commissioners, Provider Executive Boards and Medical Directors: scope requirements for Elderly Care input into patients undergoing emergency laparotomy, based on estimation of emergency surgical caseload, and work to address any shortfall	April 2019		
5.12	Clinical Directors from Elderly Care, Surgery, Anaesthesia, Intensive, local NELA leads, Multidisciplinary clinical teams: develop and agree multidisciplinary care pathways that define when input from Elderly Care should be sought	Pathways to be in place by April 2019 in anticipation of Best Practice Tariff		
5.13	<b>Local NELA leads, multidisciplinary clinical teams:</b> Ensure patients over the age of 70 have frailty, nutritional status, cognitive function and functional impairment assessed to inform decision-making and highlight those that may benefit from perioperative input by Elderly Care teams. Ensure these are embedded in clinical pathways	Pathways to be in place by April 2019 in anticipation of Best Practice Tariff		
5.14	Multidisciplinary clinical teams: ensure that NELA data on input by Elderly Care teams is reviewed at regular multidisciplinary governance meetings	Commence from next governance meeting (by January 2019 at the latest)		
5.15	NELA: share information on hospitals who perform well for Elderly Care input	December 2018		
5.16	NELA: collaborate with the British Geriatric Society to raise awareness of emergency laparotomy in older people	April 2019		

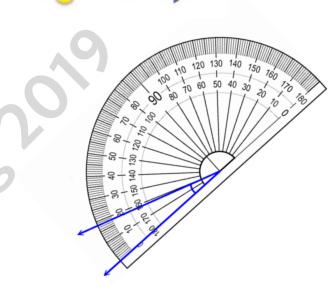
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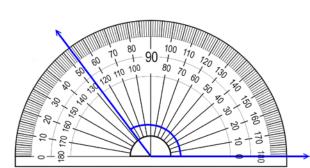


#### Collaborative working

- Skills
- Goal
- Vision
- Leadership
- Communication
- Creativity
- Quality improvement
- Research

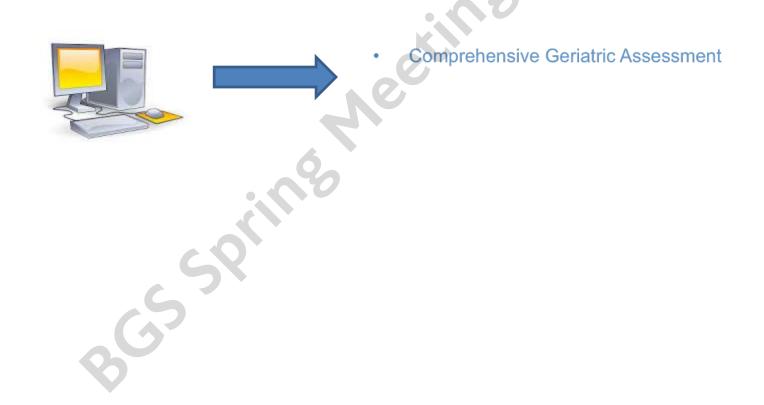






#### The set up: Salford-POPS-GS in-reach Service

 <u>Proactive</u>, daily case finding service for patients over 74-years of age (and 70 or older Emergency Laparotomy)



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85 year old independent non smoker with a diagnosis of dementia Hypertension, hyperlipidemia, prostatism and previous TURP Medications (6): No Allergies

Emergency admission 29/04/2018 (abdominal pain and vomiting): small bowe obstruction (adhesive)

Clinical Frailty Scale - 3

Social: Lives with wife in a house. Independent. Mobile with no aids. Recent dementia diagnosis with no behavioural symptoms

High Dependency Care: Yes

Procedure: Emergency Laparotomy & Release of Band Adhesion 29/04/2018

Complications: delirium, ileus, AKI, acute urinary incontinence

Current Function

Mobility: Independently mobile Cognition: CAM Positive. 4AT 12

Urinary catheter

Today's Assessment:

DOLS to be completed

Most Recent NEWS Score: 2 SaO2 97% on 2L

Bowels NOT opened since admission (according to EPR)

HAT assessment completed. On LMWH

Devices: Urinary catheter Ceiling of Care: Full

#### Diagnoses:

- 1. Acute small bowel obstruction (adhesions)
- Acute kidney injury prerenal (hypovolemia, iatrogenia)
- Emergency Laparotomy & Release of Band Adhesion 29/04/2018 abnormal looking jejunum
- Extubated 30/04
- Post-operative ileus 30/04
- Post-operative acute urinary retention difficulty catheterising
- Post-operative mixed type delirium superimposed on dementia 01/05 received olanzapine
- Polypharmacy

Changes to medication

STOPPED Aspirin and Atorvastatin (no active indication in the absence of established vascular disease), Omeprazole (low dose and no longer indicated as not on antiplatelet agents),

Bendroflumethiazide and Perindopril (AKI and low BP)

STARTED Trazodone 50mg at 6pm, Paracetamol 1gr up to QDS and Movicol OM CHANGED -

RECEIVED Olanzapine (acute confusional state)

Discharge Plan:

Surgical agenda: bowels not yet opened. Reduced bowel sounds.

I do appreciate Mr Teesdale suffered an episode of acute urinary retention perioperatively at the time of ileus.

He is restless and we should aim to TWOC as soon as practicable (providing he is moving his bowels regularly and mobile)

Continue to omit Bendroflumethiazide, perindopril and atorvastatin Stop aspirin all together as there isn't a clear indication. Omeprazole can also be discontinued

Pain appears under control (mild abdominal discomfort) I suggest that we give Paracetamol 1g QDS & PRN Nefopam 30mg

Stop Olanzapine and add in Trazodone 50mg at 6pm (it will help his restlessness).

We will aim to stop pre-discharge

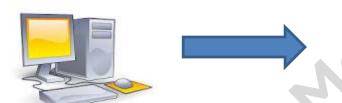
Please could ward staff continue to ensure usual delirium measures are taken, including regular re-orientation and reassurance, good hydration, regular bowel movements and monitoring of pain.

Information given to patient/carers:

Expected Discharge Date is 08/05/2018 Not Suitable for transfer to Pendleton Suite Advice given to General Practitioner: ACM Follow up: Not required

#### The set up: Salford-POPS-GS in-reach Service

- Proactive, daily case finding service for patients over 74-years of age
- <u>Core team</u>: Senior nurse, physiotherapist, Occupational therapist, geriatrician (4 DCC PA shared between 2 consultants)(4 DCC PA ACP)



Comprehensive Geriatric Assessment
 Targeted Multidisciplinary interventions
 Timely Discharge Planning

This patient is currently receiving multidisciplinary team care on Ward B2

#### Diagnoses:

-----

- 1. Acute small bowel obstruction (adhesions)
- 2. Acute kidney injury prerenal (hypovolemia, iatrogenia)
- 3. Emergency Laparotomy & Release of Band Adhesion 29/04/2018 abnormal looking jejunum
- 4. Extubated 30/04
- 5. Post-operative ileus 30/04
- 6. Post-operative acute urinary retention difficulty catheterisation successful TWOC
- Post-operative mixed type delirium superimposed on dementia 01/05 received olanzapine/Trazodone resolved
- 8. Polypharmacy

#### Current Function

------

Mobility: Independently mobile Cognition: CAM Negative.

#### Discharge Plan:

-----

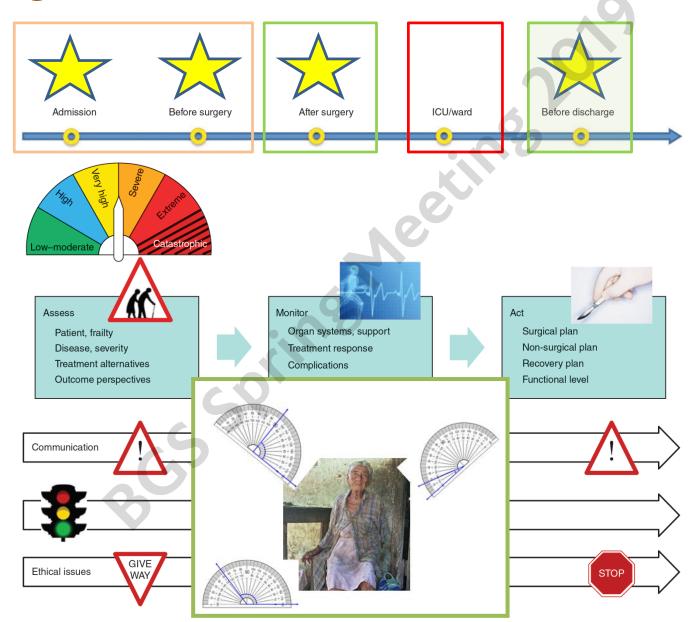
Medically fit for discharge and back at baseline Stairs assessment and discussion with spouse Re: home today or tomorrow

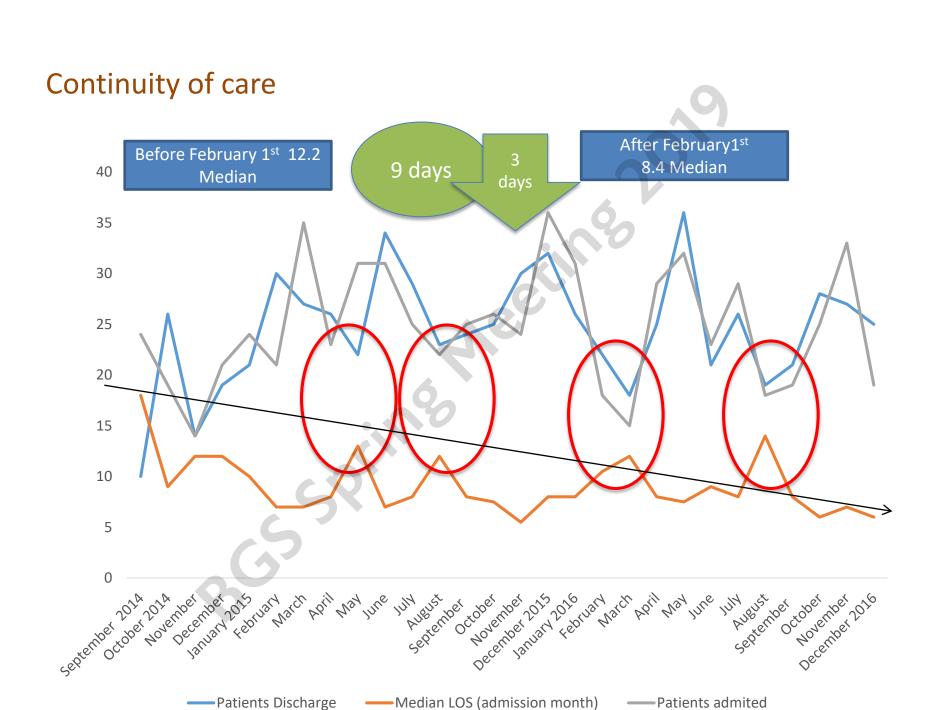
EDD 09/05/2018

09-05-2018 12:45 Discharge Planning



#### POPS@Salford



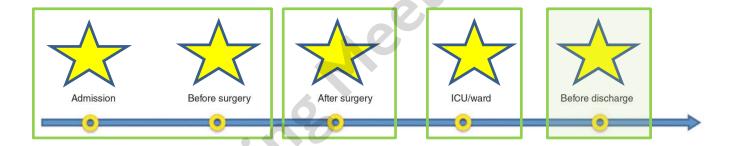


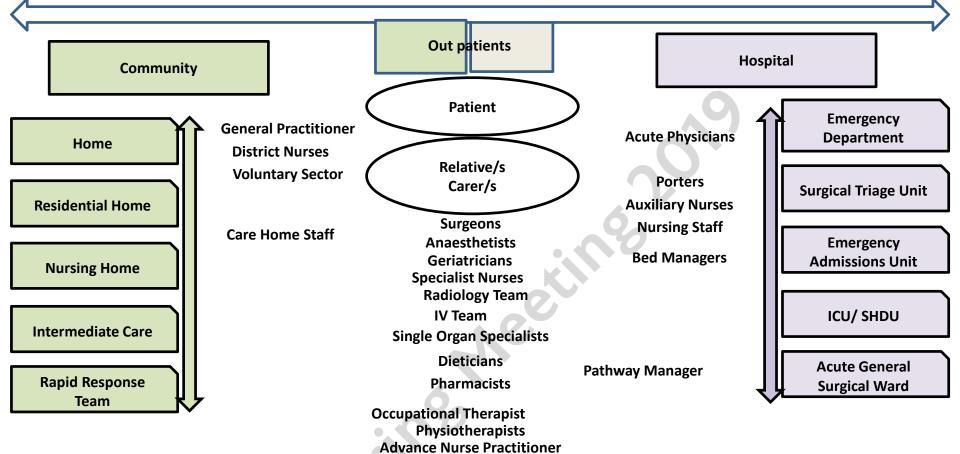
#### **Advanced Clinical Practitioner**

0.5WTE Band 8a ACP = £22,896 per annum
median LoS by 1 day = £160,000
Cost saving £137,104 per year
Payback period 9 weeks

Figures calculated by Angeline Price (ACP)

- Increase compliance with NELA standard 'Assessment by MCOP Team
- Decrease median LOS patients≥75 years by 1 day within 6 months
- Engagement with 2WWL cancer





Social Worker



#### **2WWL** cancer

Our journey towards

# Global Digital Exemplar





University Teaching Trust

safe • clean • personal

Digitised Pathways

Medicines

Acute Surgical Abdominal Pain care pathway

Digitised Theatres Optimising EPR





- Single best answer questions
- Models of care
- Collaborative working in progress: Salford-POPS-GS
- Tips: Collaborative care in General Surgery
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Look, listen, think (SWOT)

#### **STRENGTHS**

- 1. Growing evidence base
- 2. Innovative Trust
- 3. Existing service upon which to develop
- 4. Respected by surgical colleagues
- 5. Financial benefits already being realised
- 6. Increasing numbers of older surgical patients
- 7. Alignment of project with Trust objectives
- 8. Brand new ANP roles in ACM

#### WEAKNESS

- 1. Financial pressures
- 2. Priorities for Medicine: emergency care
- 3. Change fatigue
- 4. Complacency
- 5. Staff burnout not receptive to new ideas
- 6. Increasing numbers of older surgical patients
- 7. Organisational culture autocratic 'top down'
- 8. Lack of understanding of ANP role

#### **OPPORTUNITIES**

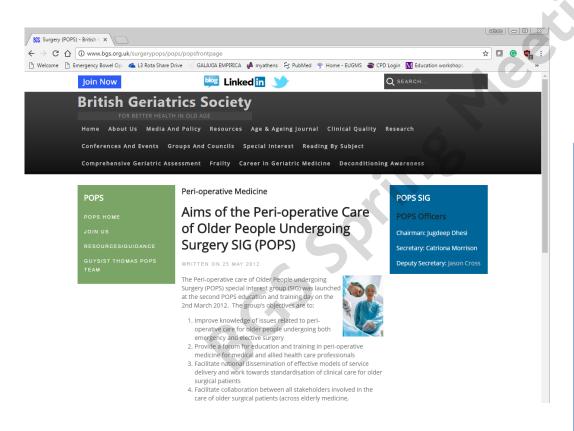
- 1. Increasing demand for service
- 2. Patient satisfaction
- 3 Further financial benefits
- 4. Demand on Geriatricians in surgery increasing
- 5. Literature/publication
- 6. Career progression
- 7. High motivation levels in self
- 8. NELA National lead an employee of Trust

#### THREATS

- 1. Staff retention/ deployment
- 2. Surgical directorate priorities
- 3. Financial pressures
- 4. Territorialism/Defensiveness
- 5. Loss of key team members
- 6. Sickness/Absence
- 7. Lack of vision in management
- 8. Other projects requiring ANPs in other areas

Figure created by Angeline Price (ACP)

- Look, listen, think
- Sell your idea (business plan/ Clinical Governance-MM meetings)





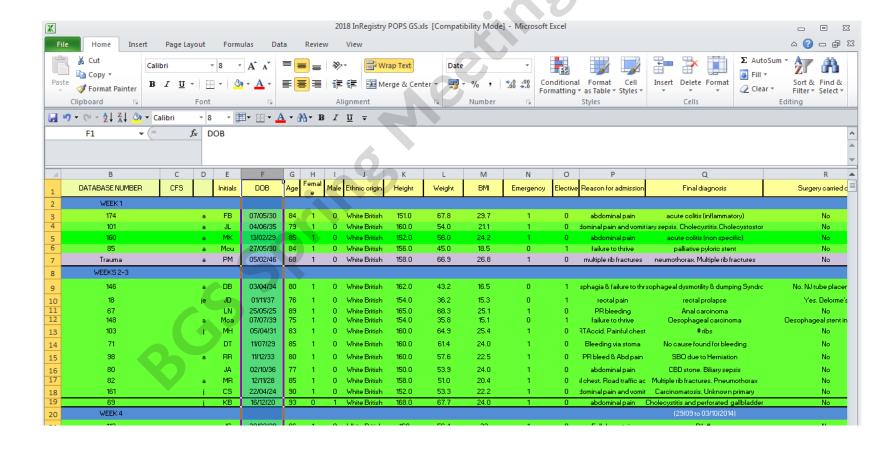
The Health Foundation

Setting up a proactive service to make surgery safer for older people

Jugdeep Dhesi



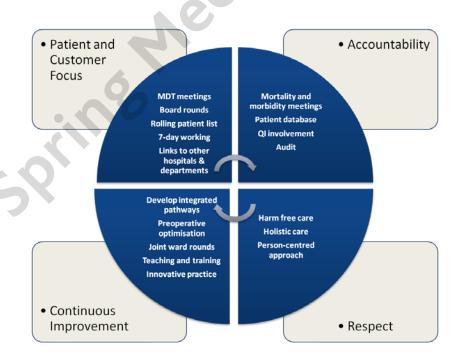
- Look, listen, think
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- Collect data prospectively (IM &T, excel, database,...)



- Look, listen, think
- Sell your idea (business plan/ Clinical Governance-MM meetings)
- Collect data prospectively (IM &T, excel, database,...)
- Empower other members of the team (True MDT)

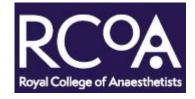


- Look, listen, think
- Sell your idea (business plan/ Clinical Governance-MM meetings)
- Collect data prospectively (IM &T, excel, database,...)
- Empower other members of the team (MDT)
- Update managers regularly (keep them on board)



- Look, listen, think
- Sell your idea (business plan/ Clinical Governance-MM meetings)
- Collect data prospectively (IM &T, excel, database,...)
- Empower other members of the team (MDT)
- Update managers regularly (keep them on board)
- Revise, attend POPS course ....







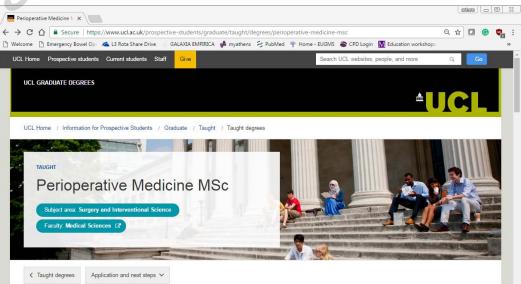








AAA SCIENTIFIC MEETING - BELTON WOODS, GRANTHAM on 16th & 17th May 2019



### Useful reads...

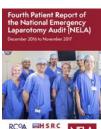
## Emergency general surgery in the geriatric patient

K. F. Desserud<sup>1</sup>, T. Veen<sup>1</sup> and K. Søreide<sup>1,2</sup>

#### Emergency surgery in the elderly: challenges and solutions

Andrew D W Torrance Susan L Powell<sup>2</sup> Ewen A Griffiths<sup>3</sup>

Open Access Emergency Medicine 2015:7





#### Frailty for Surgeons: Review of a National Institute on Aging Conference on Frailty for Specialists

Thomas N Robinson, MD, MS, FACS, Jeremy D Walston, MD, Nathan E Brummel, MD, MSCI. Stacie Deiner, MD. MS. Charles H Brown IV. MD. MHS. Maura Kennedy, MD. MPH. and Arti Hurria, MD

JAm Coll Surg. 2015 December: 221(6): 1083-1092. doi:10.1016/j.jamcollsurg.2015.08.428.

SPECIAL ARTICLE - http://dx.doi.org/10.1016/j.ja

#### Postoperative Delirium in Older Adults: **Best Practice Statement from the American Geriatrics Society**

The American Geriatrics Society Expert Panel on Postoperative Delirium in Older Adults





2014 ESC/ESA Guidelines on non-cardiac surgery: cardiovascular assessment and management

The Joint Task Force on non-cardiac surgery: cardiovascular assessment and management of the European Society of Cardiology (ESC) and the European Society of Anaesthesiology (ESA)

#### Peri-operative care of the elderly 2014

Association of Anaesthetists of Great Britain and Ireland

Membership of the working party: R. Griffiths, F. Beech, A. Brown, J. Dhesi, I. Foo, J. Goodall, W. Harrop-Griffiths, J. Jameson, 5 N. Love, K. Pappenheim and S. White

- 1 College of Emergency Medicine
- 2 British Geriatrics Society
- 3 Age Anaesthesia Association
- 4 Intensive Care Society
- 5 Royal College of Surgeons

**Optimal Perioperative Management of the Geriatric Patient: A Best Practices Guideline** from the American College of Surgeons NSOIP

and the American Geriatrics Society

http://dx.doi.org/10.1016/j.jamcollsurg.2015.12.026



Care of the Aging Patient: From Evidence to Action

#### Preoperative Assessment of the Older Patient A Narrative Review

Lawrence B. Oresanya, MD: William L. Lyons, MD: Emily Finlayson, MD

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AGING AND SURGERY

JUNE 2017-VOL. 65, NO. 6

Setting up a proactive service to make surgery

safer for older people

Surgical Guidelines for Perioperative Management of Older Adults: What Geriatricians Need to Know

Jessica L. Colburn, MD, \* Sanjay Mohanty, MD, MS, † and John R. Burton, MD \*

Guidelines for perioperative care in elective colonic surgery: Enhanced Recovery After Surgery (ERAS®) Society recommendations<sup>☆</sup>

U.O. Gustafsson a,b,\*,q, M.I. Scott c,d,q, W. Schwenk e,q, N. Demartines f,q, D. Roulin f,q, N. Francis g,q, C.E. McNaught h,q, J. MacFie h,q, A.S. Liberman i,q, M. Soop j,q, A. Hill k,q, R.H. Kennedy l,q, D.N. Lobo m,q, K. Fearon n,q. O. Liungqvist o,p,q

#### ESPEN guideline: Clinical nutrition in surgery



Arved Weimann a,\*, Marco Braga b, Franco Carli c, Takashi Higashiguchi d, Martin Hübner <sup>e</sup>, Stanislaw Klek <sup>f</sup>, Alessandro Laviano <sup>g</sup>, Olle Ljungqvist <sup>h</sup>, Dileep N. Lobo <sup>i</sup> Robert Martindale <sup>j</sup>, Dan L. Waitzberg <sup>k</sup>, Stephan C. Bischoff <sup>l</sup>, Pierre Singer <sup>m</sup>

- Look, listen, think (before crossing the road)
- Sell your idea (business plan/ Clinical Governance-MM meetings)
- Collect data prospectively (IM &T, excel, database,...)
- Pick and pamper your team (MDT)
- Update managers regularly (keep them on board)
- Revise, attend POPS course ....
- Make sure it works for You

- Look, listen, think (before crossing the road)
- Sell your idea (business plan/ Clinical Governance-MM meetings)
- Collect data prospectively (IM &T, excel, database,...)
- Pick and pamper your team (MDT)
- Update managers regularly (keep them on board)
- Revise, attend POPS course ....
- Make sure it works for You
- Network

## BGS Peri-operative care of Older People undergoing Surgery (POPS) SIG

Read on for latest updates from the BGS POPS SIG, including how to get involved with some of our current and upcoming projects

#### SIG vacancies

We are looking to get the BGS POPS SIG more active and are inviting applications for committee positions of Chair, Deputy Chair, Secretary and Treasurer.

If you are interested please send a two-page CV and a short application letter detailing why you would like the post and your aims in the relevant role. This may be followed by a telephone interview. If you have any queries about what this involves, do contact the current post holders or the BGS office: jugdeep.dhesi@gstt.nhs.uk, jason.cross@gstt.nhs.uk, judith.partridge@gstt.nhs.uk or committees@bgs.org.uk.

#### POPS case studies

We would like to thank those who completed the survey of perioperative medicine services for older people undertaken last year. It's very encouraging to see the progress that has been made since the last survey in 2014. Do look out for the results in Age and Ageing soon. We are also grateful to those of you who we contacted directly to provide more detail on the POPS-type services you are running. Of course, we may not be aware of all the good practice around the country, so if you are have a POPS-type service at your trust (not orthogeriatrics alone) and have not yet sent us details, please do get in touch with information under the following headings. If you do not have information for each question, don't worry, just send us what you have.

We hope that this approach will allow better sharing of good practice by illustrating the scope of work through the BGS website, influence funding and commissioning of services and also allow us to set up a national POPS network together with the BGS.

- My service is based at: (hospital and region)
- It is staffed by: (x consultants, x registars, x FYs, x OT, x physios, x other)
- It delivers: (pre op/postop/both pre and postop to x specialties)
- The key performance indicators (or outcomes) we collect data on are: (if nothing – just say)
- We have shown: (basic summary of any significant change or link to a report/abstract - if nothing just say)
- Our service costs:
- Our service is funded by: (medicine/surgery/other)
- · Any other relevant information:
- Lead contact:
- Website:

#### Advertising the good work

We recognise that it's often POPS@GSTT who present at national and international meetings, but we really would like to ensure all services are represented in this way. If you are keen to be discussing your service and results, or would

## Are YOU looking after an older person?

Salford Royal NHS

University Teaching Trust

safe + clean + personal

### Ageing can cause:

- reduced bone mass
- problems with blood pressure control
- reduced muscle strength
   hearing and visual impairment



Older patients are vulnerable



When an older person comes to hospital...



we often put them in a hospital bed which restricts their mobility which can result in...



increased confusion



functional incontinence



deconditioning and muscle weakness resulting in further immobility:



an increase in falls



reduced appetite and increased risk of aspiration



this is made worse by multiple medications, sensory impairment, constipation, dementia and their current illness

## Stand up for INDEPENDENCE

and ask yourself the following...

# hello my name is...

Does my patient

where they are?

know who I am and



Does my patient need the IV fluids?



Does my patient need to be in bed with the cot sides up?



Does my patient need the catheter?



Is my patient constinated?



Could my patient sit out in a chair?



Does mv patient need help with eating and drinking?



Does my patient need their glasses or hearing aid to help them communicate?

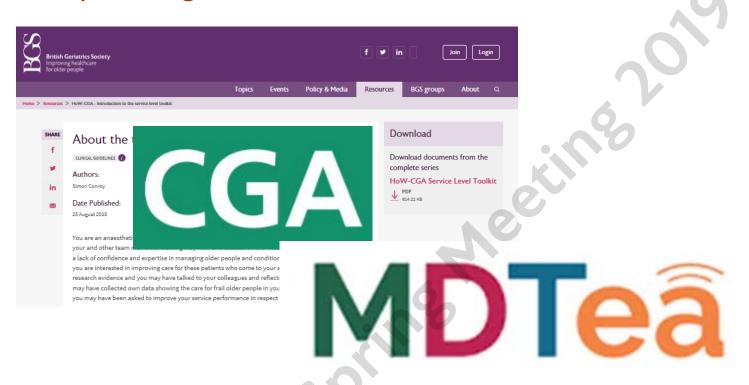


Have my patient's medications been reviewed?

By asking yourself these questions you can:

- Increase the chance of your patient going back to their own home
- Help them recover more quickly and reduce the need for ongoing support
- Reduce the risk of harm from falls, infection, delirium (acute confusion) and blood clots.

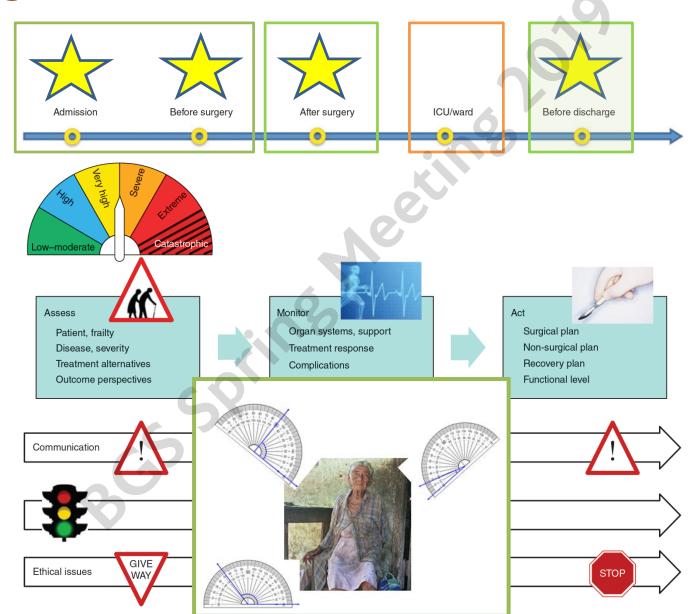
## Key messages



## Short Term Focus Long Term Vision

Admission Before surgery After surgery ICU/ward Before discharge

## POPS@Salford



After- discharge









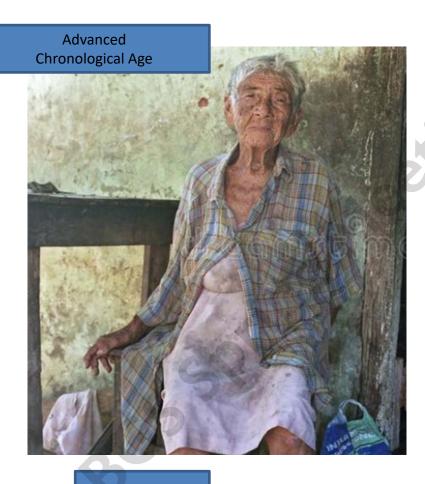
## arturo.vilches-moraga@srft.nhs.uk @avilmor





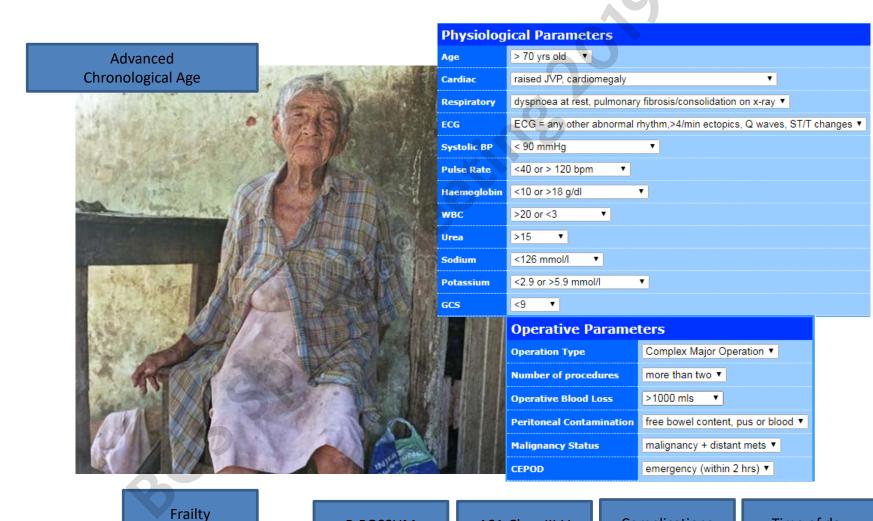
"Improving the care of older surgical patients through collaboration, education and research"

## Factors predictive of mortality at 12 months



Frailty

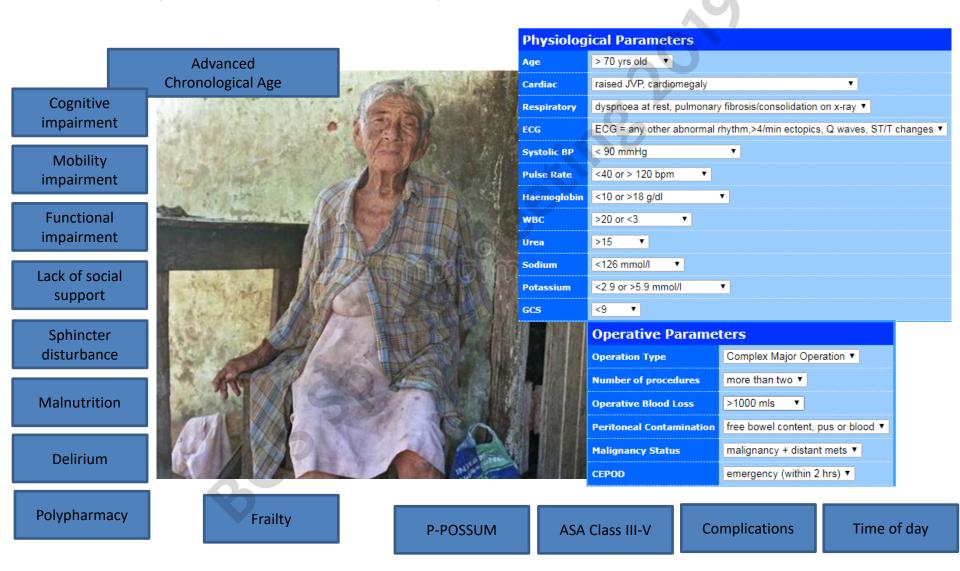
## Factors predictive of mortality at 12 months



P-POSSUM ASA Class III-V Complications

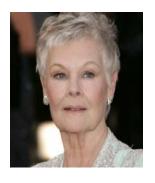
Time of day

## Factors predictive of mortality at 12 months



- Prospective observational study
- Aged > 74 years of age
- Emergency Laparotomy 8<sup>th</sup> September 2014 30<sup>th</sup> March 2017

## Emergency Laparotomy (n = 113)







32.7%



Emergency General Surgery (n = 598)

51.4%

48.6%





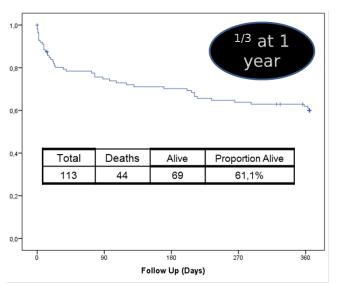
## Emergency Laparotomy (n = 113)

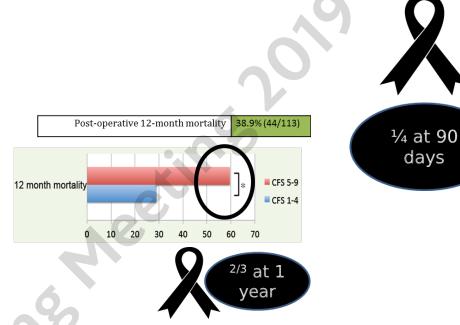
	Wald	р	Odds Ratio	95%	Cl
Not reviewed by POP-GS	11,234	,001	6,620	2,192	19,993
Clinical Frailty Scale 5-9	8,337	,004	5,403	1,719	16,982
ASA Class III-V	4,098	,043	2,704	1,032	7,081

# Emergency General Surgery (n = 598)

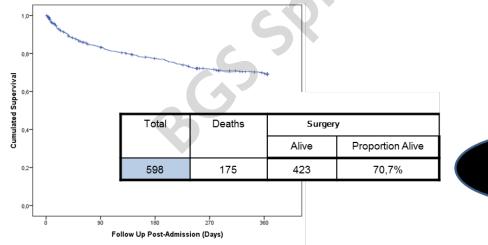
	Wald	р	Odds Ratio		onfidence erval
ASA Class III-V	21,012	,000	2,627	1,738	3,971
Dependent personal ADLs	15,108	,000	2,470	1,566	3,898
Clinical Frailty Scale 5-9	11,384	,001	1,944	1,321	2,860
24 hour Care	5,310	,021	1,790	1,091	2,937
Impaired cognition	3,965	,046	1,459	1,006	2,117

## Emergency Laparotomy (n = 113)





## Emergency General Surgery (n = 598)

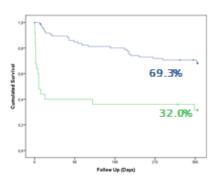


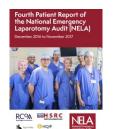


## We must improve our Risk stratification !!!

D. (1. 1. 1. 1. 1. 1. 0.0.1	04.00/ (07./4.0)
Patients still in hospital at 20 days post-surgery	31.0% (35/113)
Patients still in hospital at 60 days post-surgery	4.42% (5/113)
30-day readmission (after discharge)	5.68% (5/88)
In hospital mortality	22.1% (25/113)
Post-operative 30-day mortality (after surgery)	19.5% (22/113)
Post-operative 90-day mortality (after surgery)	24.8% (28/113)

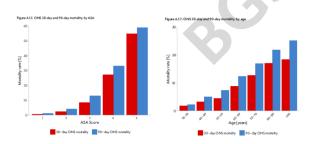
#### Review POP-GS





British Journal of Anaesthesia, 121 (6): 1346–1356 (2018)
Organisational factors and mortality after an emergency laparotomy: multilevel analysis of 39 903 National Emergency Laparotomy Audit patients

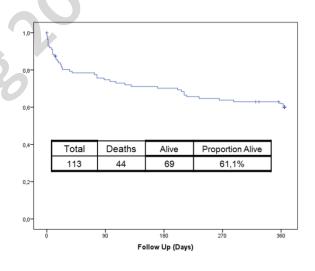
C.M. Oliver 1, 2, 3, 4, 8, 29, M.G. Bassett 2, 4, 5, 6, T.E. Poulton 2, 4, 5, LD. Anderson 3, 7, 8, 9, D.M. Murray, 19, M.P. Grocott 2, 11, 12, 13, S.R. Moonesinghe 2, 2, 4, 5, the Nasonal Emergency Laparotemy Audit cell

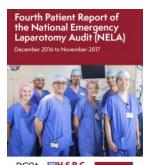




## Remember patients" wishes and expectations Quality of life and functional status!!!

Post-operative 12-month mortality	38.9% (44/113)		
Readmissions within 12 months	56.8% (50/88)		
Average time to first readmission, min-max	262.7 days 11-1147		
Median time to first readmission	176 days		













77% of patients are alive at one year post-surgery,

71% at two years, and 66% at three years.



39% dead at 12 months