Better Conversations for Better Informed Consent:

Helping Older Adults Consider Whether Surgery is Right for Them

Gretchen Schwarze, MD, MPP, FACS
Morgridge Endowed Professor of Vascular Surgery
University of Wisconsin-Madison
Department of Surgery,
Department of Medical History and Bioethics

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Josiah Macy Foundation

Vital Talk Content Contributor

“Let me assure you that as an unpaid ‘special factory employee’ Mr. Monster stands to personally gain nothing from this work.”

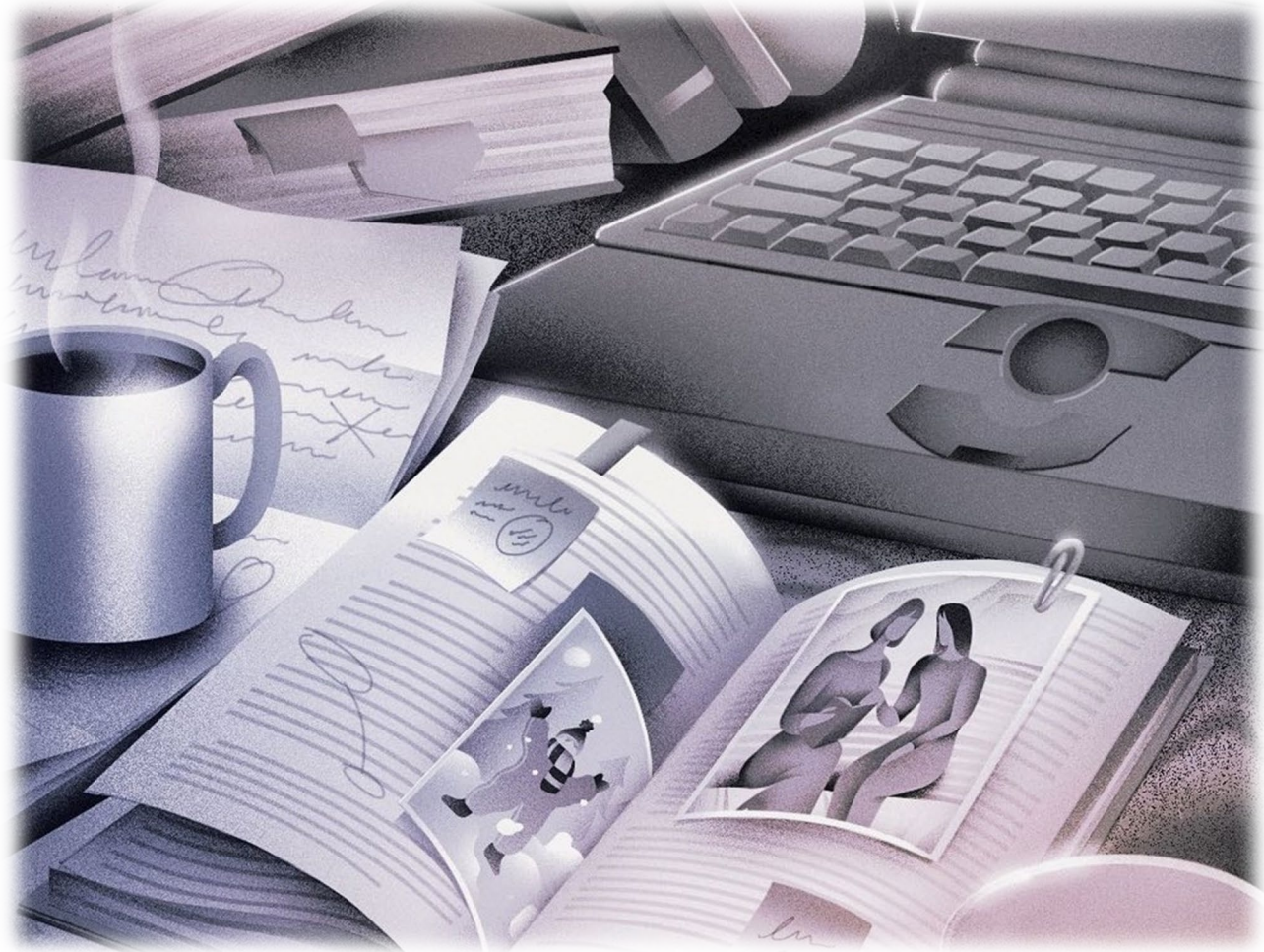
Cartoon by Brendan Loper
The New Yorker

MANAGING UNCERTAINTY

Best Case/Worst Case

She wrote to her doctors,
..."How is 'success' defined? Is it simply living through the procedure?"

...She lived through it. But living through it was not the definition of success.

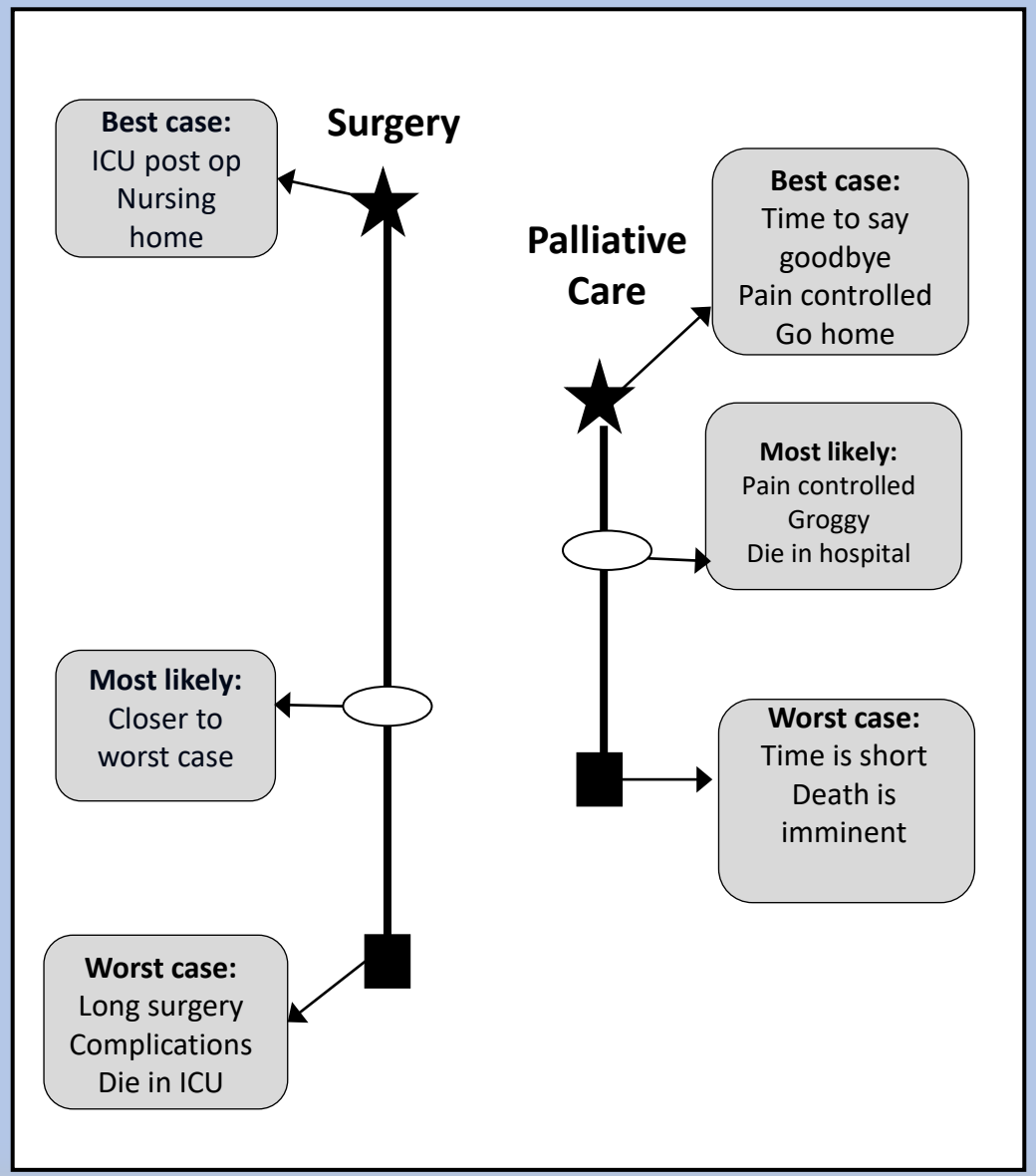


- Jill Lepore, The New Yorker, July 8, 2019

"The single biggest problem with communication is the illusion that it has taken place."

-George Bernard Shaw

Best Case/Worst Case

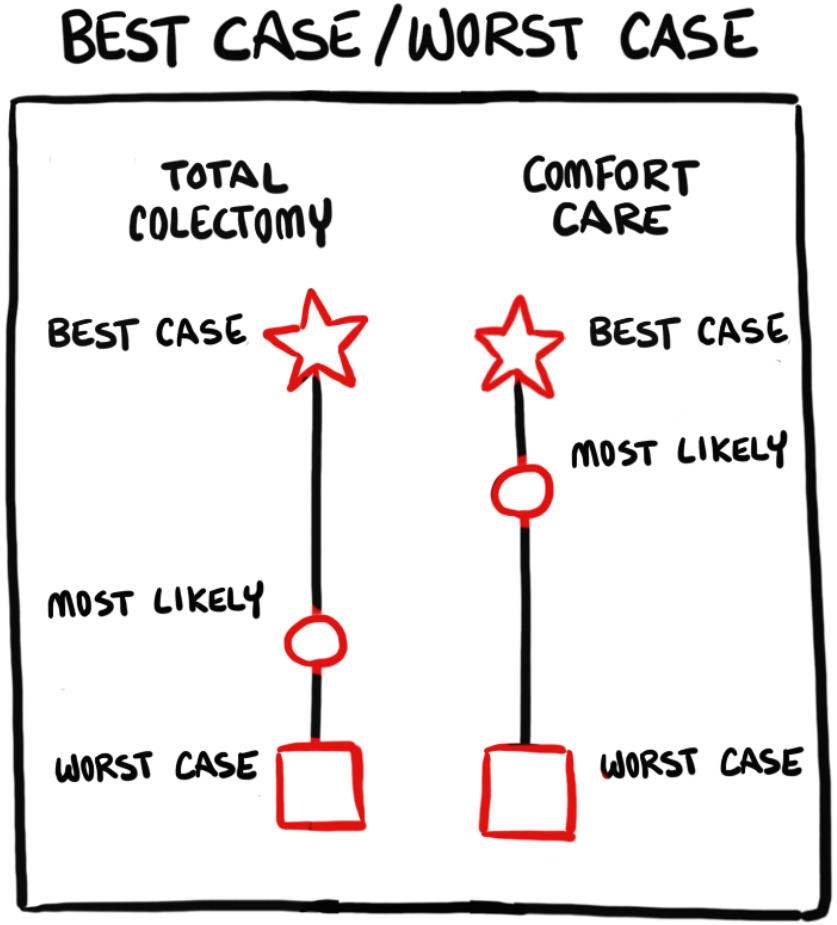


Schwarze ML et al, "Navigating High Risk Procedures with More than Just a Street Map", JPM, 2013.

Break Bad News

https://tinyurl.com/hfej6hv

Use the graphic aid to present options



https://tinyurl.com/hfej6hv

Best Case:

Alive
Lt Below knee Amputation
Return to Nursing home
Staged operation
1 wk in hospital
1 yr life expectancy in RN Home

Surgery

Amputation

Home Hospice

Best Case:

Home with family
Pain Medication
Life limited to 2 / wk (Death)

Most Likely:

10+4d - Hospitalization - Amputation
Nursing Home discharge
Likely some complication in hospital or nursing home

Most Likely:

Home with pain relief; limited time home till death.

Worst Case:

Stroke MI or Death in hospital
Amputation, staged

Worst Case:

Persistent Pain
Home or RN Home Hospice
Death

Surgery

Best Case

long surgery
ICU breathing tube
(one week)
month in hospital
poop bag / diarrhea
nursing home

Most Likely

surgery
long time in ICU
need support from
machines
don't get well enough
to get out of hospital

Worst Case

surgery
intestines too dead
to make better
never wake up

hospice

Best Case

go home
have nurses to
give pain meds
comfortable
time for family
to gather + say
good bye
time is short

Most Likely

stay in hospital
see family
do say goodbye

Worst Case

time is very short
< day
comfortable

Lossy

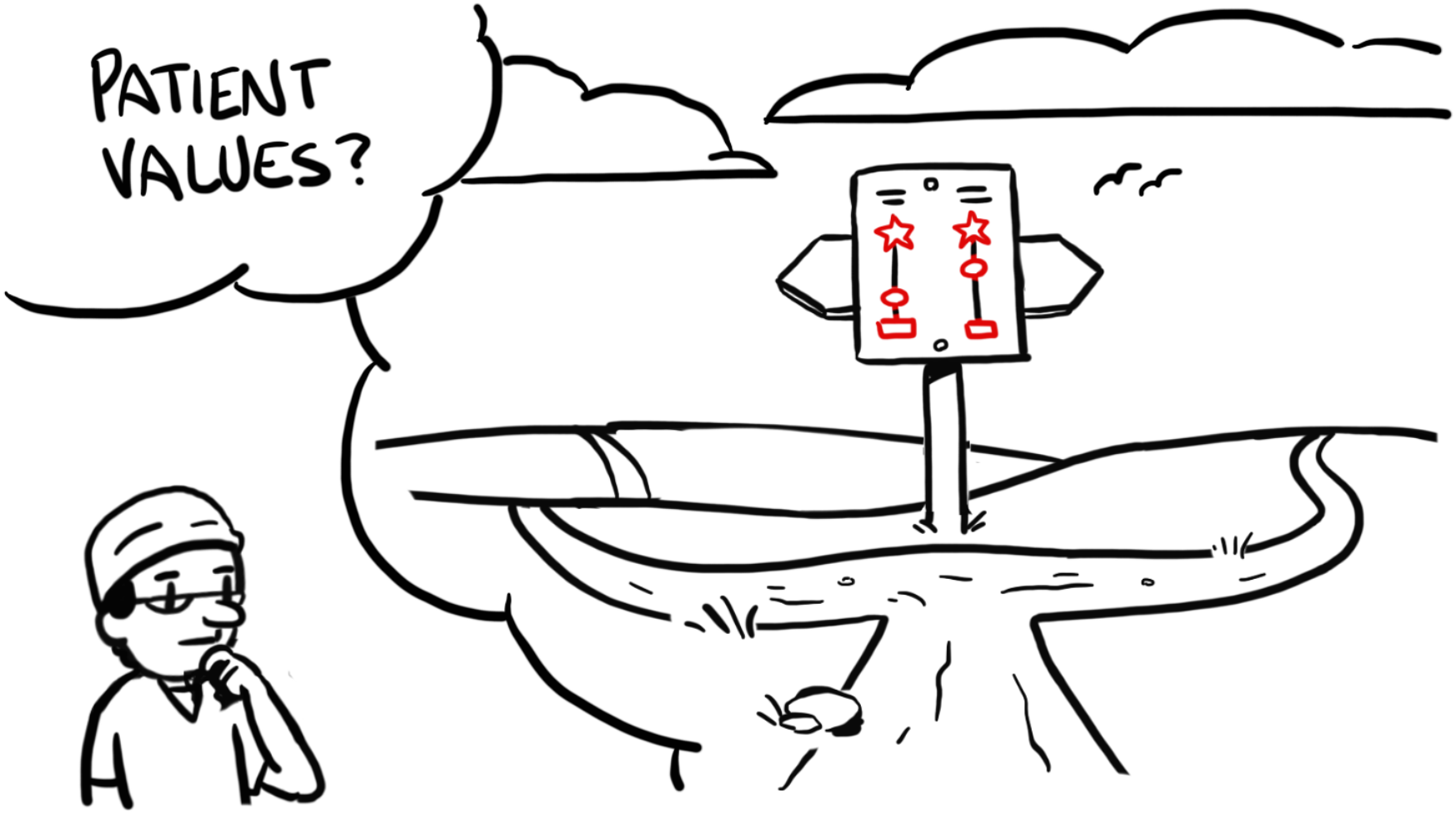
Scenario planning

https://tinyurl.com/hfej6hv

Elicit preferences

https://tinyurl.com/hfej6hv

Make a recommendation



https://tinyurl.com/hfej6hv

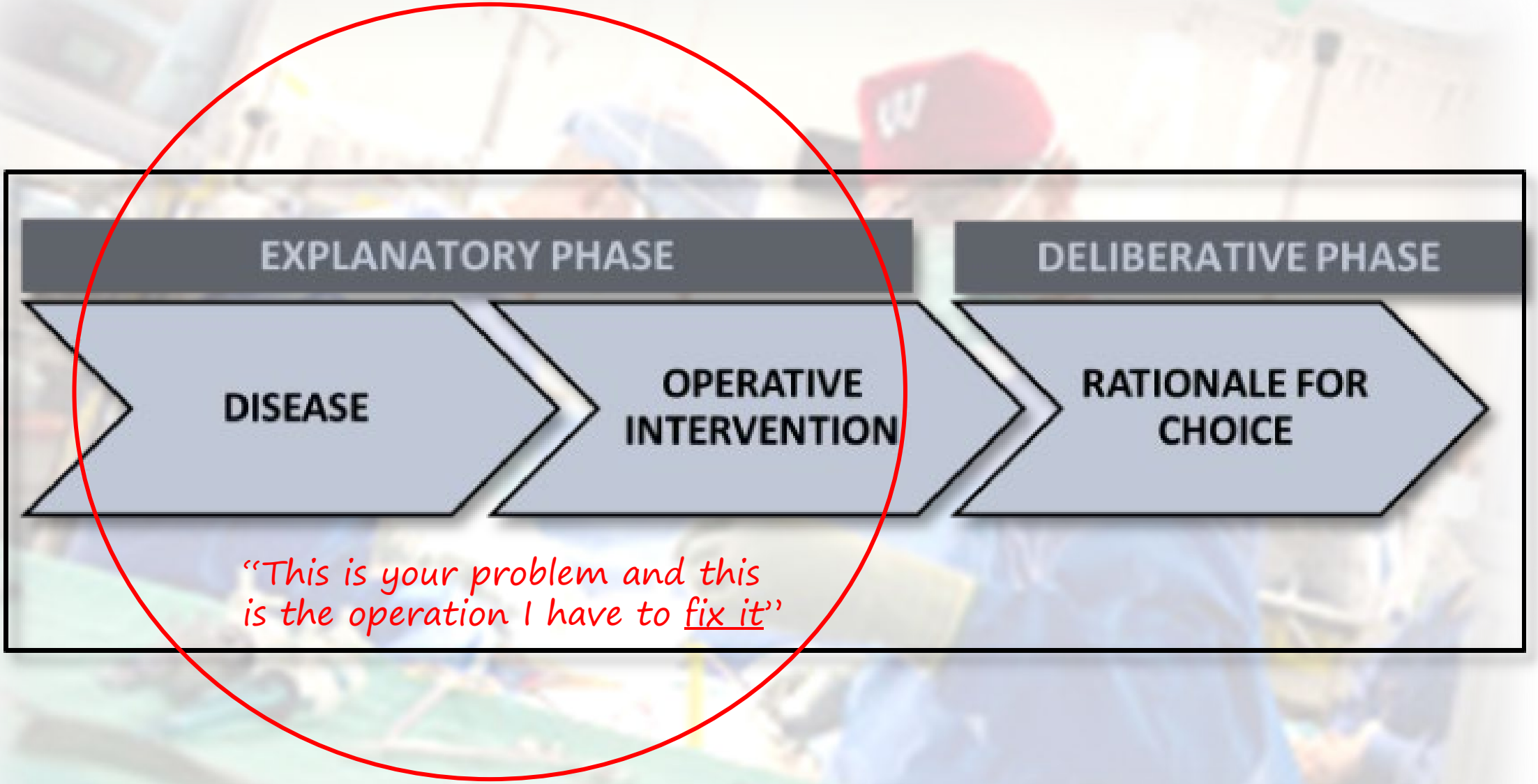
BETTER CONVERSATIONS

better informed consent

“I didn’t really decide I wanted to have it… after all those test…sent me to the heart surgeon…he said, well it should be done”

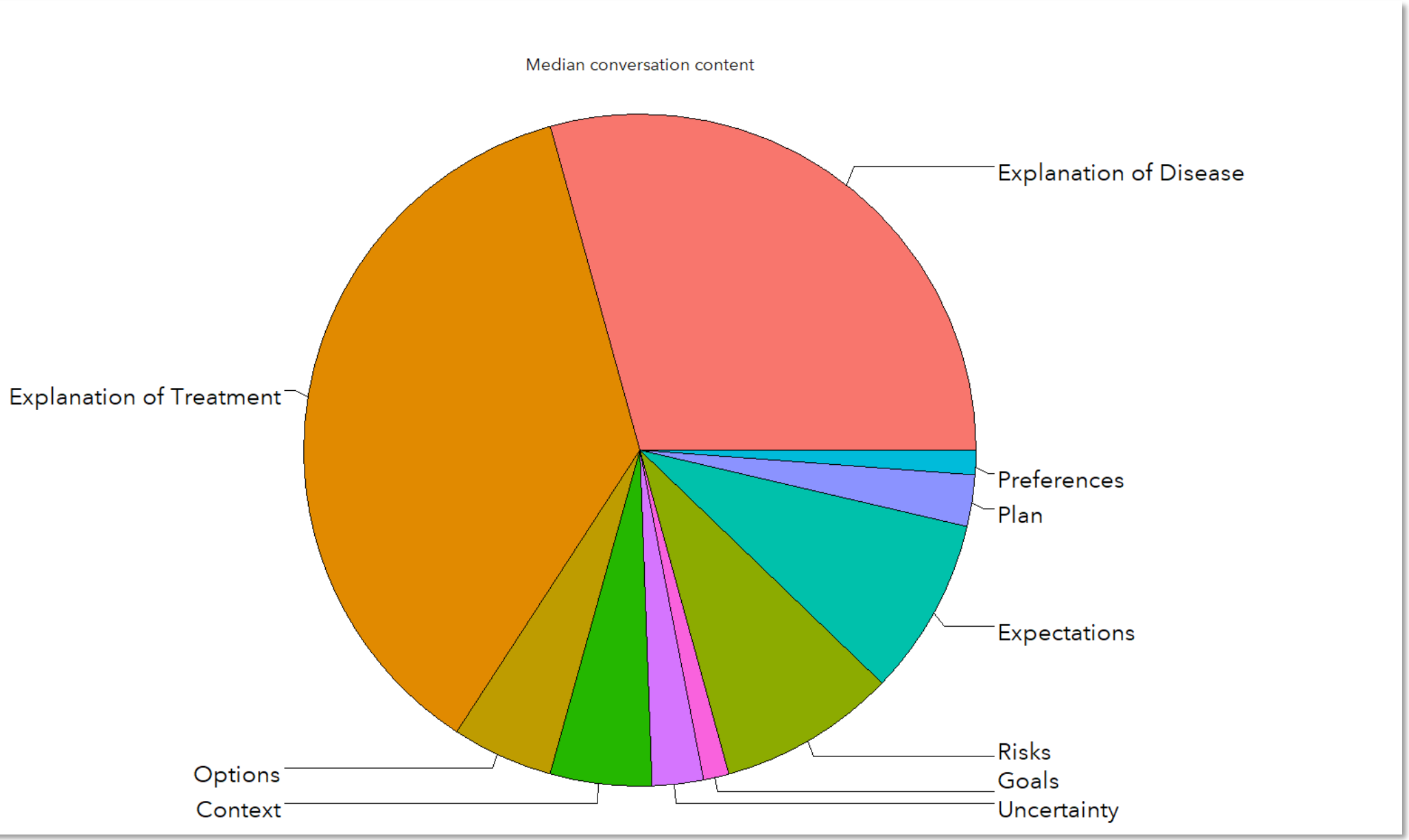
“Hey if I’m going to feel like I got hit by a truck, tell me before…it was more intensive than I realized it would be”


I would like to rent all of these movies and also purchase all of these Skittles.


EXPLANATORY PHASE
DELIBERATIVE PHASE
DISEASE
OPERATIVE INTERVENTION
RATIONALE FOR CHOICE
"This is your problem and this is the operation I have to fix it"

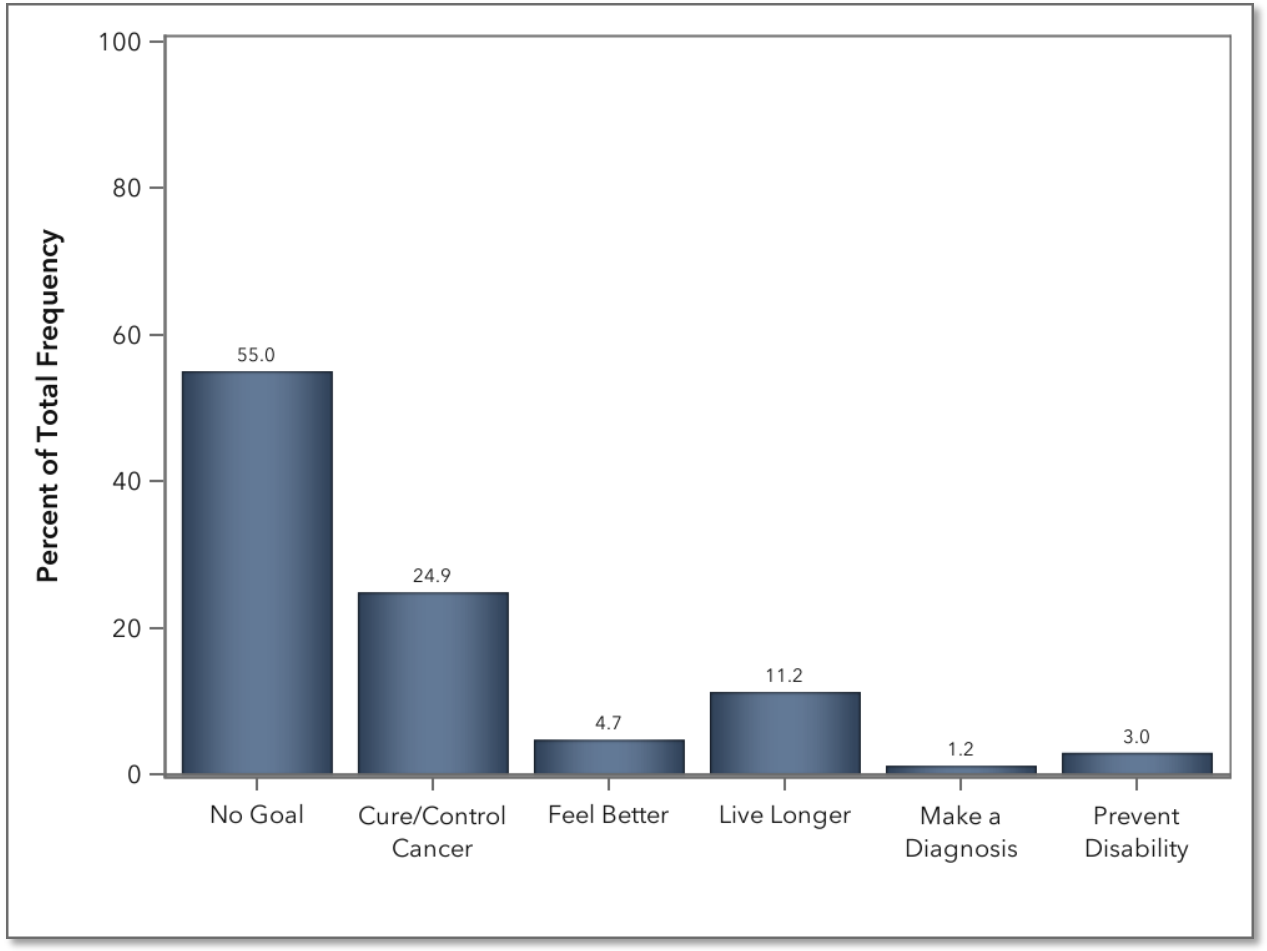
Descriptions of Procedures

SURGEON: That, that's right. So it's in the head of the gland, and it looks like, and this is why I'm thinking it might be an IPMN that's degenerated into a cancer. So some of these tumors can be very problematic. They can grow into blood vessels. They can cause more trouble. Uh, so yes, that's absolutely true. It can be a little bit more problematic. In your situation, it looks like it's removable right now. And because it looks like the tumor is small, in some cases we start with chemotherapy first, and I know that you've already had a tissue diagnosis. I think for your situation, especially knowing that it's most likely an IPMN, I would recommend going straight to surgery, removing the tumor. Doing these biopsies during the operation, just as I mentioned, and making sure that, that we don't leave you with any cancer. Now, what operation do I do? I do what's called a Whipple procedure. I would probably leave, uh, and it's called a pyloric sparing, so I'd leave your entire stomach and, and uh, I don't think that should be a problem. Your liver sits up here. So I'm glad your daughter is here and I'm glad you're recording it because you'll be able to uh, play this back. It's a complicated procedure, but it's basically plumbing. We have to disconnect parts of the GI tract and then reconnect them. If we remove certain things, we have to put things back together. So one of the things, the gallbladder needs to be removed, because it's connected to the bile duct system. Okay, the bile duct system comes down and it goes into the intestine like I just showed you. Okay? The pancreas as I just drew it for you, has your, the duct here. That has to be divided and, and removed. Okay, and I'll just draw where, where that happens. The other thing that needs to be cut is the intestine, and I cut the intestine in this area, the stomach-I'm just going to draw the stomach, um, in this area here. Okay? Stomach is here. And this is the duodenum. So I'm going to say A, B, and then on this side, is the intestine as it continues, C and D. So now I'll tell you where I cut. So there's three areas that I cut. I cut here, and that's one, actually that's more than that. This is the second area, that's two. There's three coming through the pancreas, and then um, the fourth part, the fourth cut is here. In this part of the intestine. So what gets removed? I'm going to shade it in. All of the duodenum, half of the pancreas…because I'm cutting that, and then the gallbladder, and the bile duct. All of that gets removed. So then what do we end up with? And I'm going to give you these so you can have them, okay? We have the liver, now it has a tube because I just cut the gallbladder off and that goes off into the, into the, I've cut the pancreas. And in your situation, you're going to have a very large duct that'll be like this. Not a lot of pancreatic [inaudible 21:09] and then your pancreatic gland will look like this. I'm just going to draw that, okay? I've divided the pancreas. The other thing that I've done is I've divided the intestine, and I've divided that part of the, the first part of the duodenum. So now, I'm going to bring up this piece of intestine which I've labeled D. This is the jejunum. That letter D is going to come up here. I bring it up here, like this. And that's the letter D. That's that part of the intestine. This is now the, the replumbing part that I talk about. And I'm going to draw the stomach off to the side over here just because, just to make the illustration. So the first connection I make is this one. It's called the pancreaticojejunostomy. That's the connection between the pancreas and the jejunum. That's all the juices from the pancreas will go back into the intestine, just like they were naturally. Just like this. Okay? The second connection I make is the bile duct to the intestine. And that gets connected, so now all the juices from the bile duct that are made in the liver flow in here, so the only other thing that-so the pancreatic juices, the liver juices all get mixed in, and then in this area we reconnect the stomach, and it's actually not the stomach but the pylorus, um, part, cause the rest of your stomach remains intact. So we keep all of the stomach. So now we connect the stomach to the jejunum. This is called a duodenal jejunal, um, anastomosis. So I'm connecting the duodenum, cause the pylorus of the stomach, so remember I left a little piece of the duodenum? That piece, that way the valve stays and the rest of your, of your stomach still functions normally. And then that, so when you eat, the food will come in here, mixes together with the juices from the pancreas, and then, then all of the anatomy is re-re-reorganized or re-plumbed in the same way, okay? One of the problems with this operation. Worst thing that can happen is you can die. And the chances of you dying is probably in the order of less than one percent.



Stalter L, et. al, MDM, April 2023

In >**75%** of conversations no goal or cure/control cancer was the only goal mentioned



Stalter L, et. al, MDM, April 2023

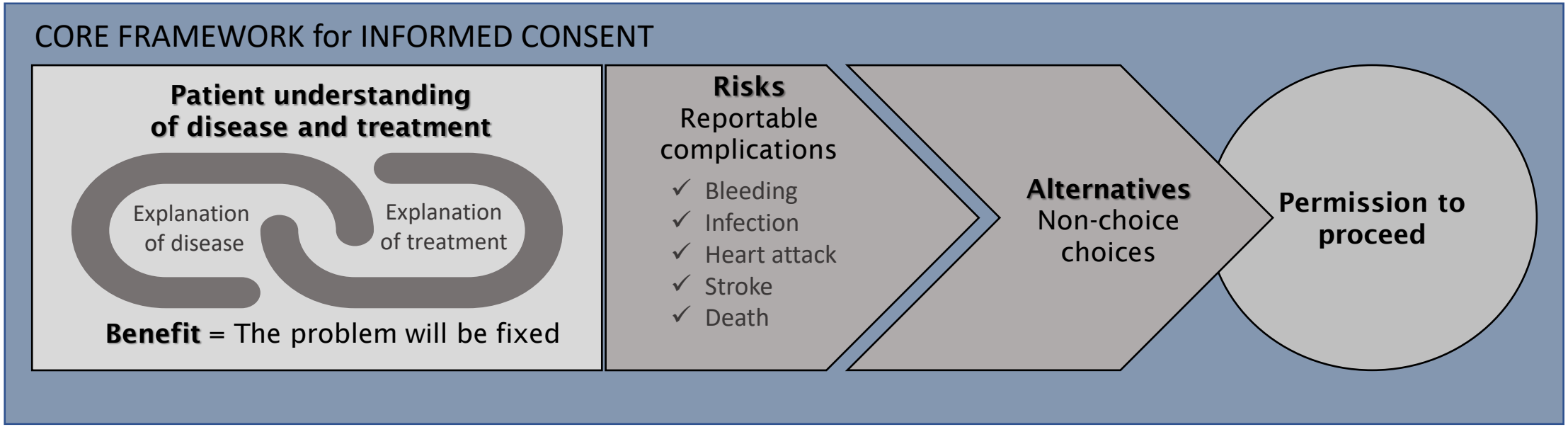
In 89% of conversations "fix-it" was used to describe treatment

Surgeons offer "Non-choice choices"

Surgeon: So the way that we treat muscle invasive bladder cancer is we use multi-modal therapy. So for about… and that's just a fancy way of saying we give it a one-two punch and if we pretend in an ideal world you were fifty years old and facing this, right? We would give you pretty heavy duty chemotherapy and we would follow it up by operation where we remove the bladder and the lymph nodes… bladder, prostate, and lymph nodes and then we take a piece of bowel and we create you a new place for your urine to be. So even in the healthiest person the operation has a complication rate of 60%. I've been able to get that down with various things here to 40%, but that number gets worse and worse and worse. So I would say if I just look at age, the oldest person I've done the operation on was eighty five.
Patient: So I'd be the oldest one then.
Surgeon: You would be. But I am worried and that eighty five year old was like hiking Everest.

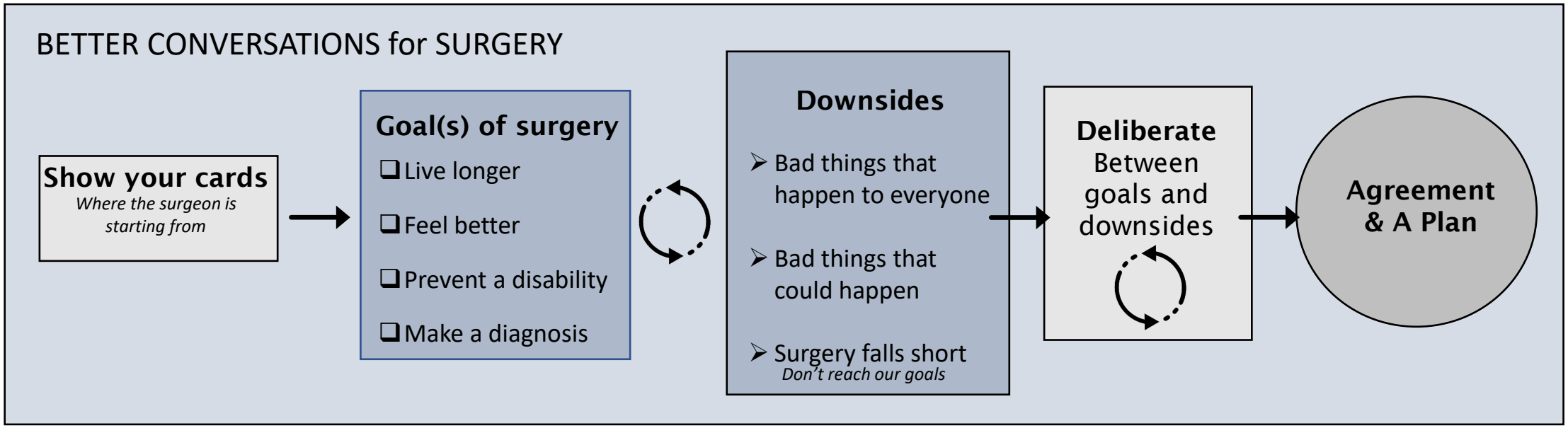
"Telling clinicians to 'offer patients more choice' may not achieve its objective."

Torien M., et. al, "Offering Choices…"Epilepsy Behavior, 2021

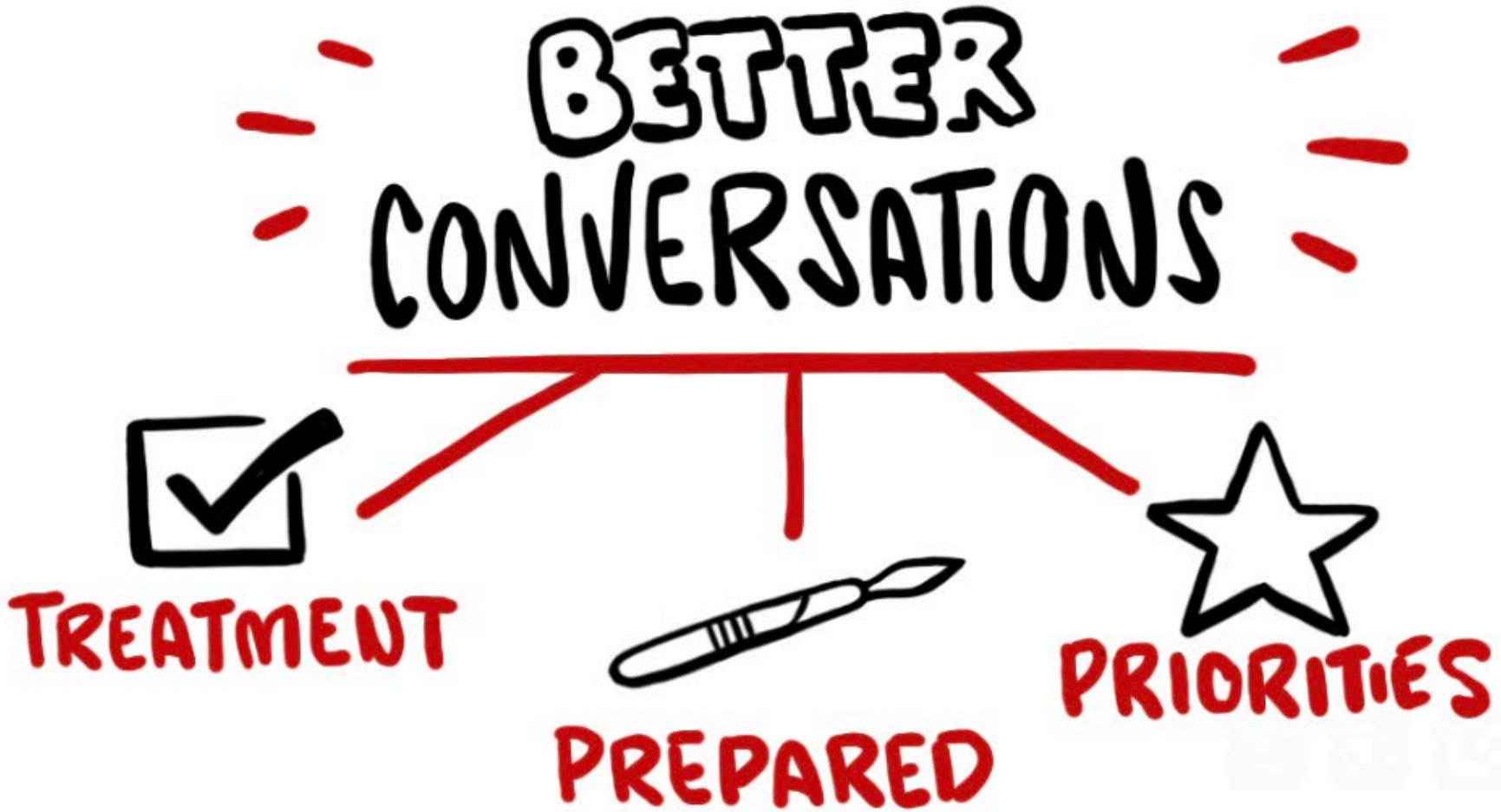


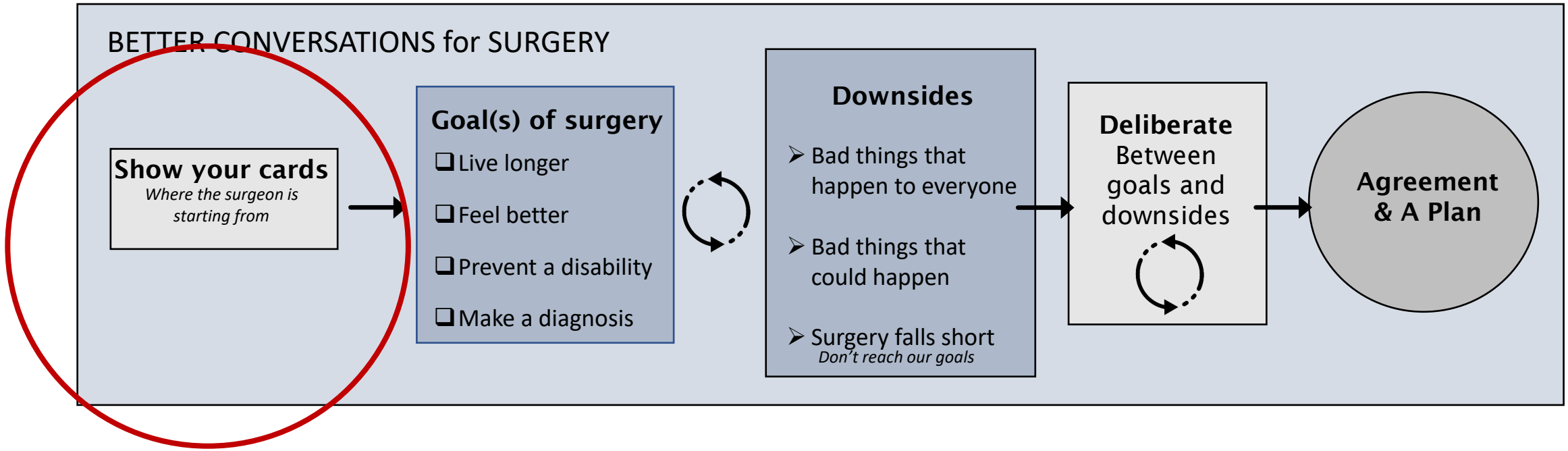
what matters to us

what matters to patients and families



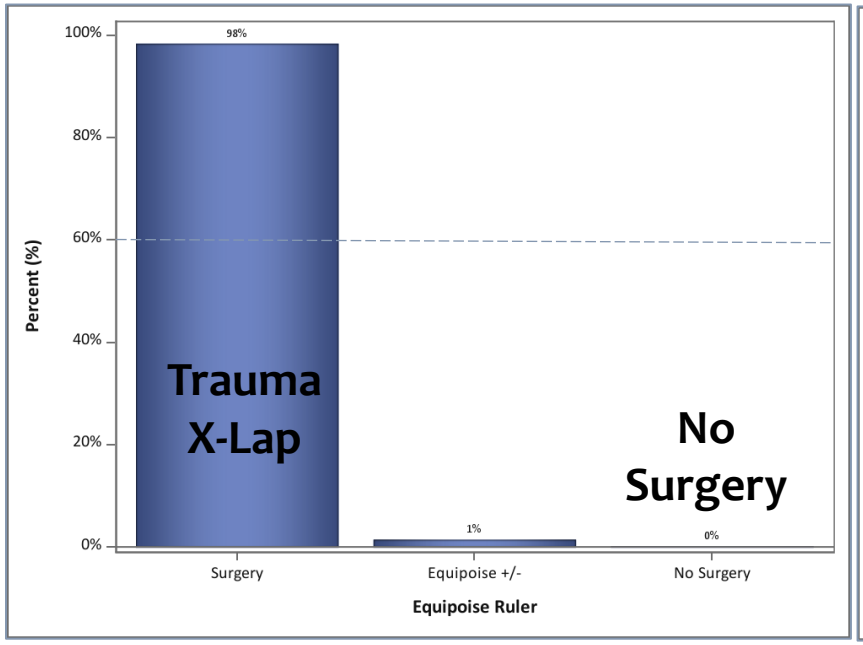
Schwarze ML, Better Conversations for Better Informed Consent, HCR, June 2024


BETTER
CONVERSATIONS
TREATMENT
PREPARED
PRIORITIES

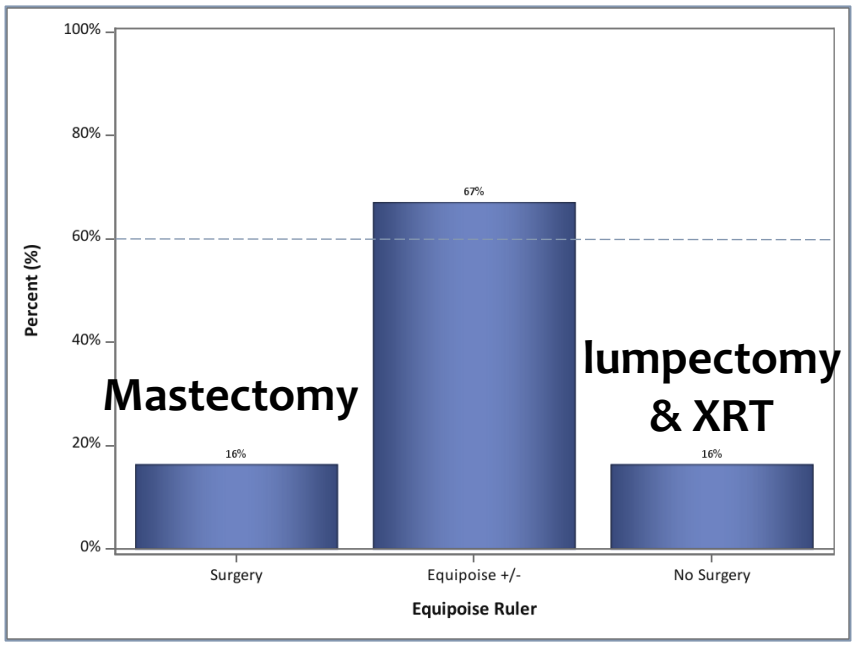

BETTER CONVERSATIONS for SURGERY
Show your cards
Where the surgeon is starting from
Goal(s) of surgery
Live longer
Feel better
Prevent a disability
Make a diagnosis
Downsides
Bad things that happen to everyone
Bad things that could happen
Surgery falls short
Don't reach our goals
Deliberate
Between goals and downsides
Agreement & A Plan

Disclosure of Professional Norms

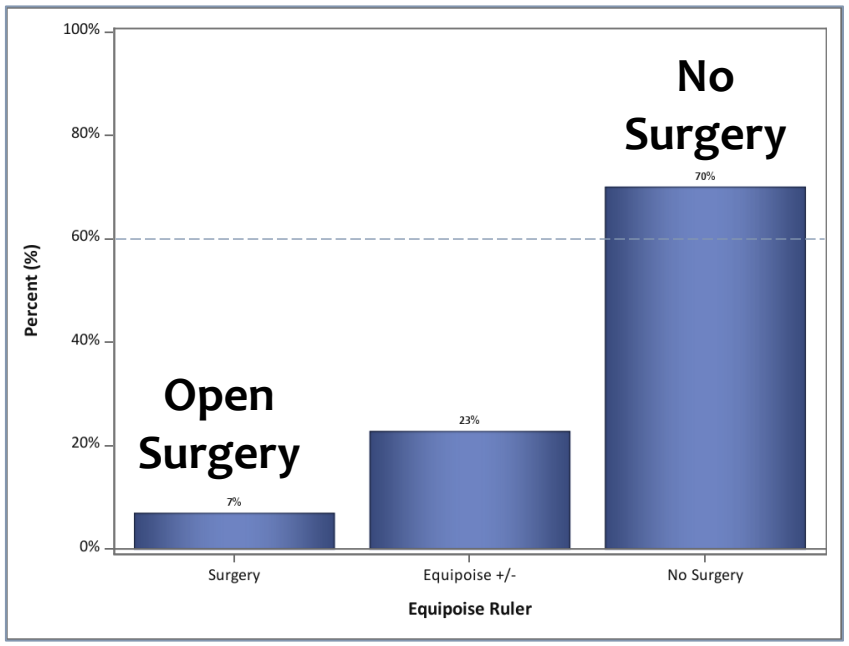
25-yo, +FAST, unstable



45-yo with breast cancer



75-yo aSx 6 cm AAA
& life-limiting comorbidities



Haug K, et. al, Ann Surg, Feb 2024

Step 1: Show your cards

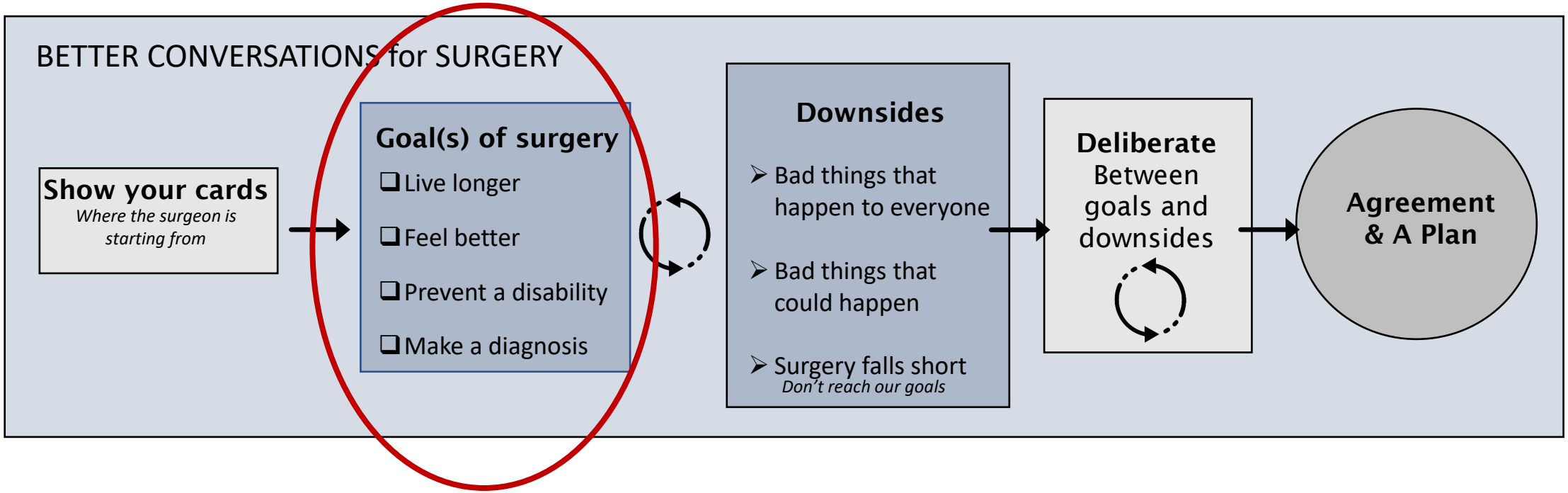
Usually, we think about doing surgery for this

I think surgery can help you

There are 2 ways to treat this

We don't usually operate in this setting..

I am worried surgery is not a good idea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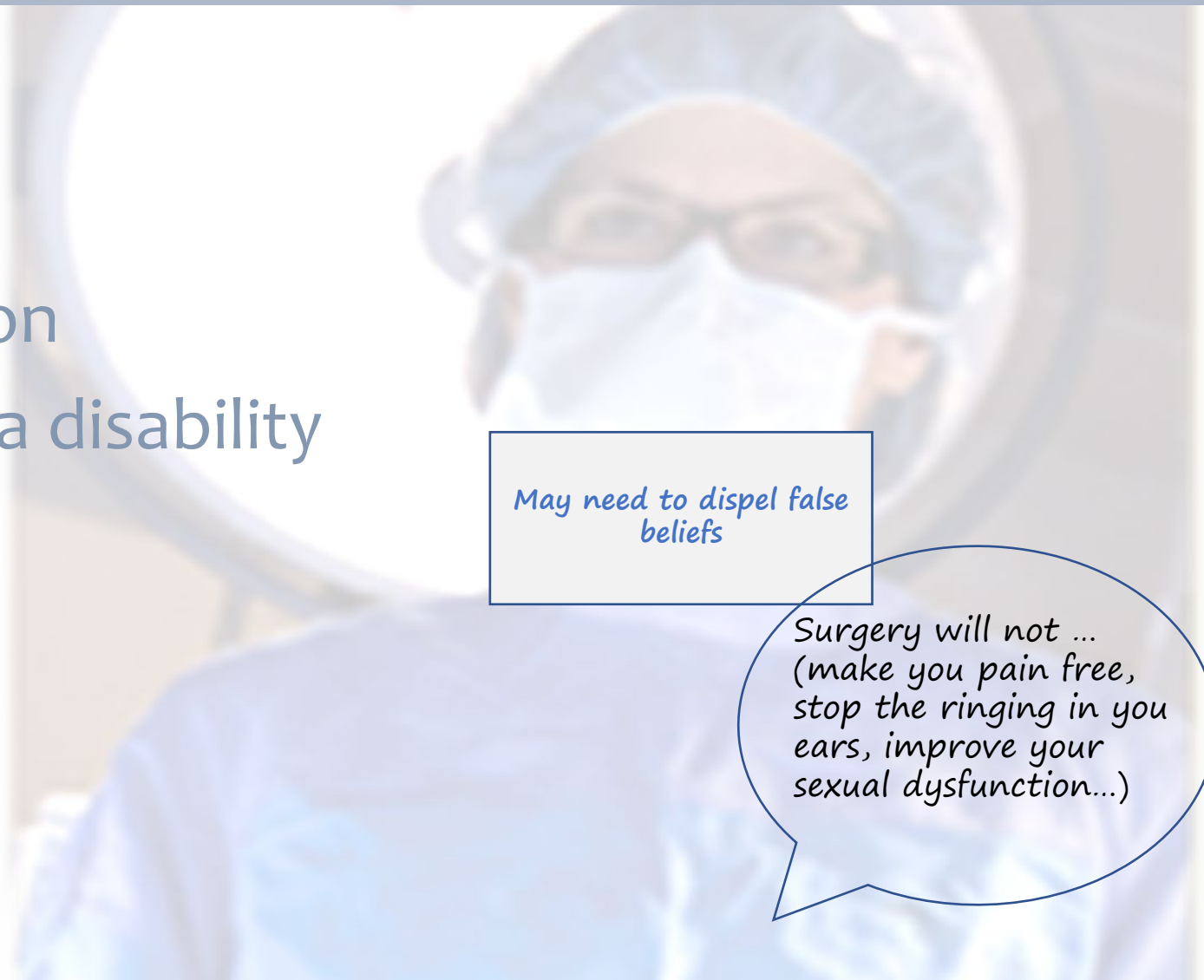
2. Name one of the 4 goals of surgery

Help people:

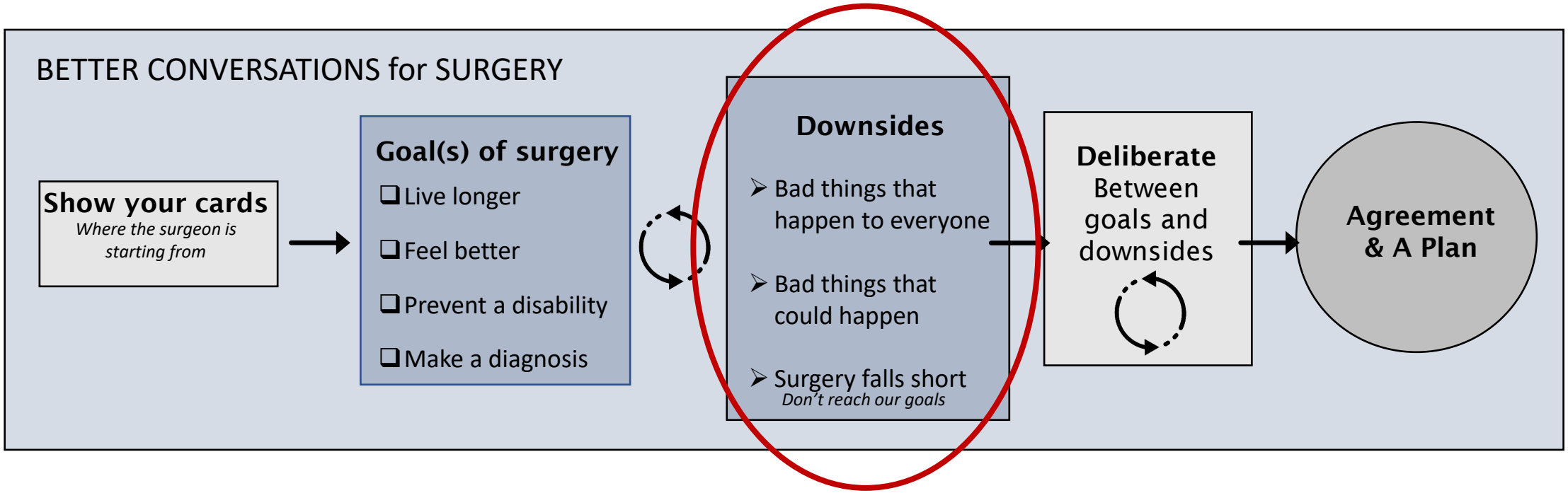
- Live longer
- Feel better/improve function
- Preserve function/prevent a disability
- Make a diagnosis

Specify the goal:
How much longer?
How much better?
What disability?



May need to dispel false beliefs

Surgery will not … (make you pain free, stop the ringing in you ears, improve your sexual dysfunction…)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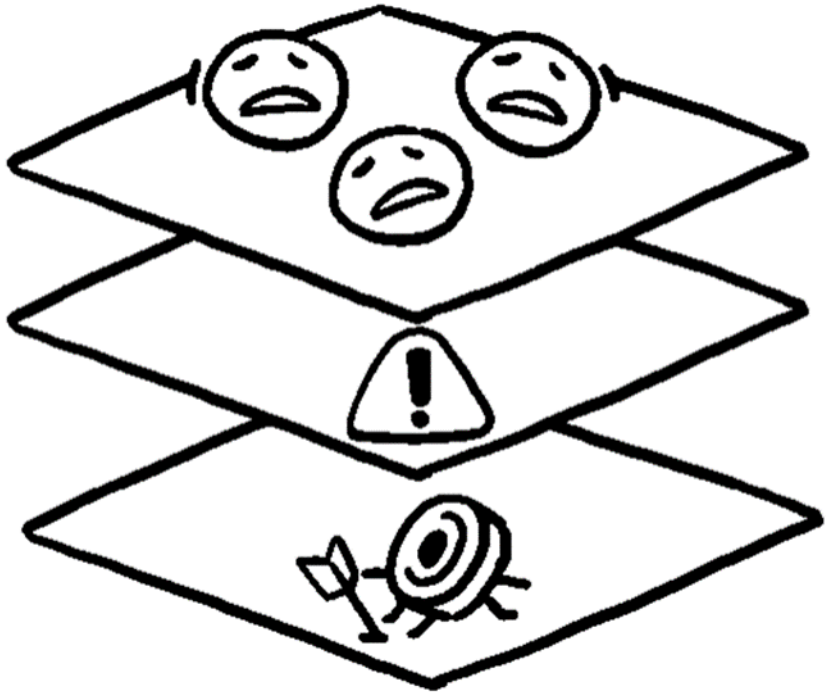
3. Discuss All of the downsides of surgery

The bin of bad s@#! has 3 layers

WHAT ARE THE DOWNSIDES?
(3-layers)

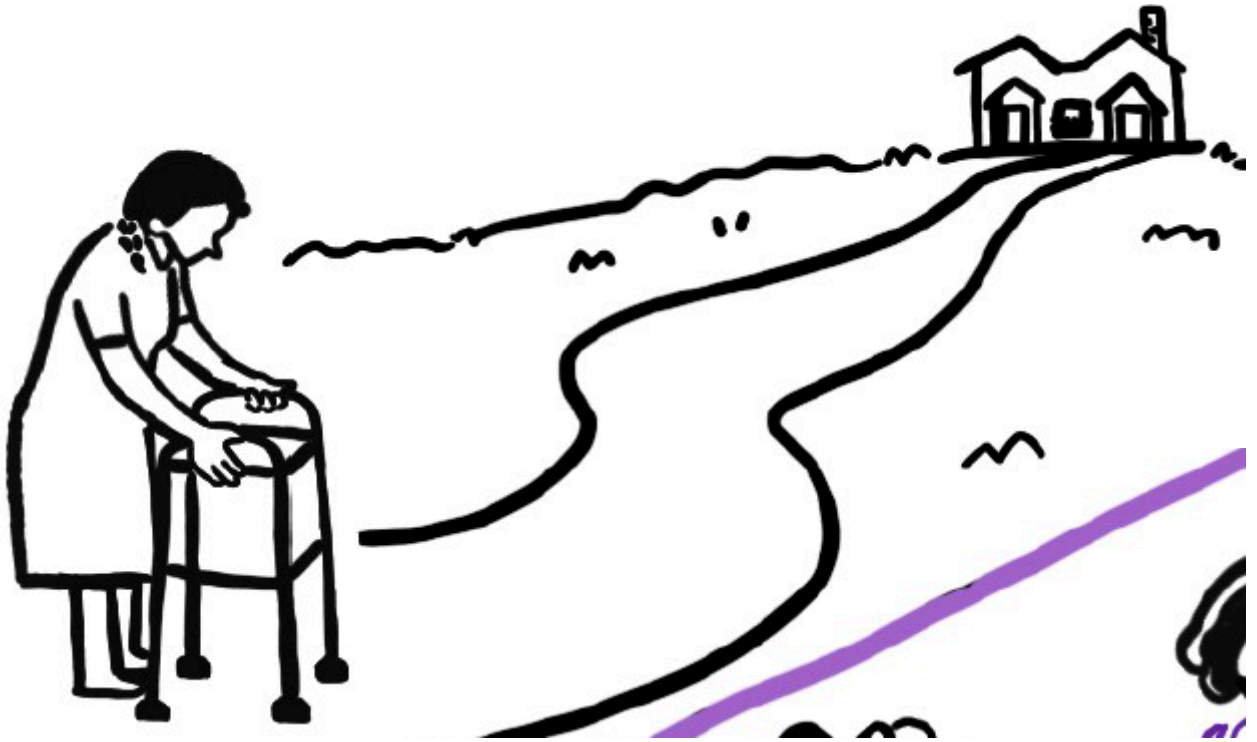
1. Expected stuff
2. Possible unpleasant & really bad stuff
3. Surgery falls short



Layer 1

Expected bad stuff

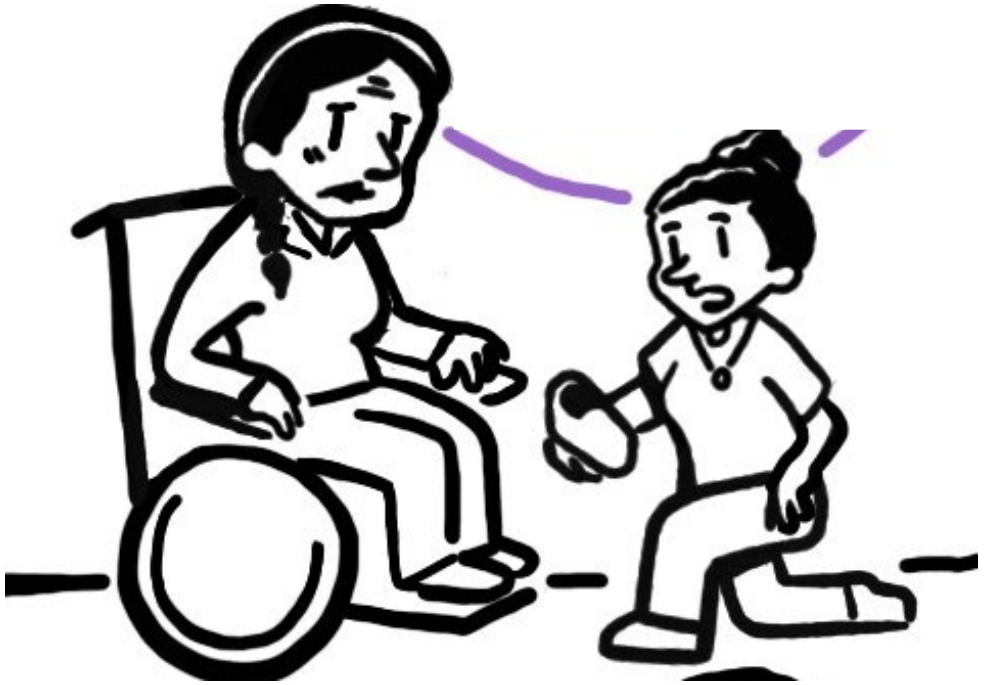
- Surgery: pain, time in hospital, work of recovery
- Body changes (short and long term): scar, physical function, permanent implants, new ostomies, short and long-term tubes



Layer 2

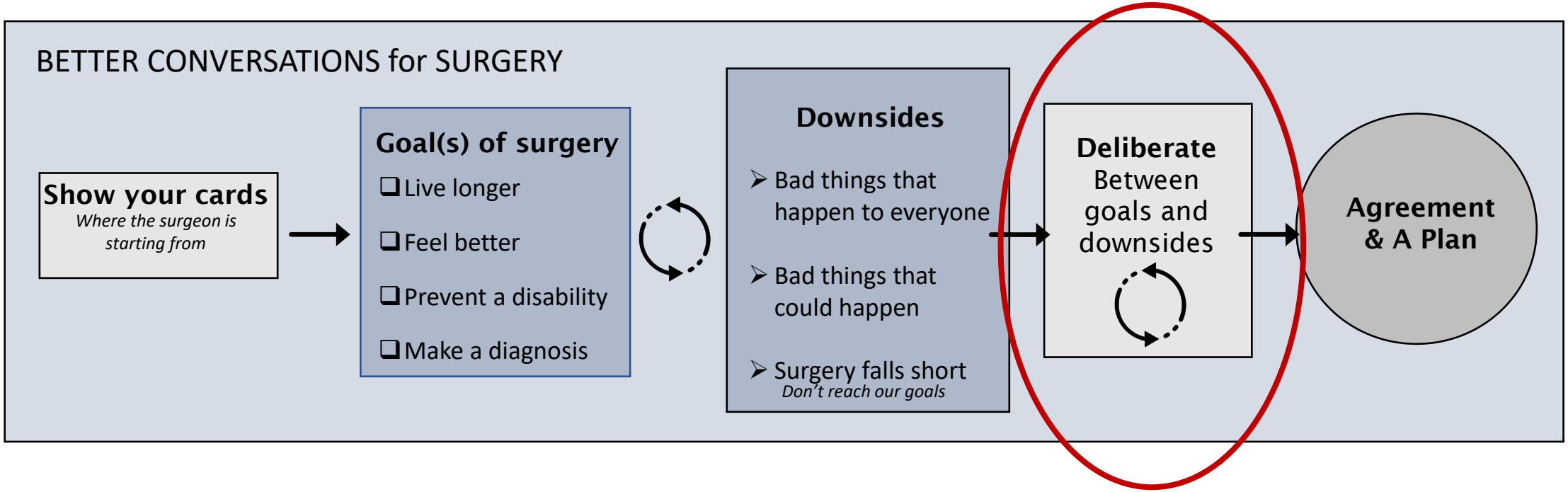
Possible bad stuff

- Bumps in the road
- Major functional changes
- Reportable complications
- Totally unexpected events



Layer 3

Surgery falls short of achieving its goals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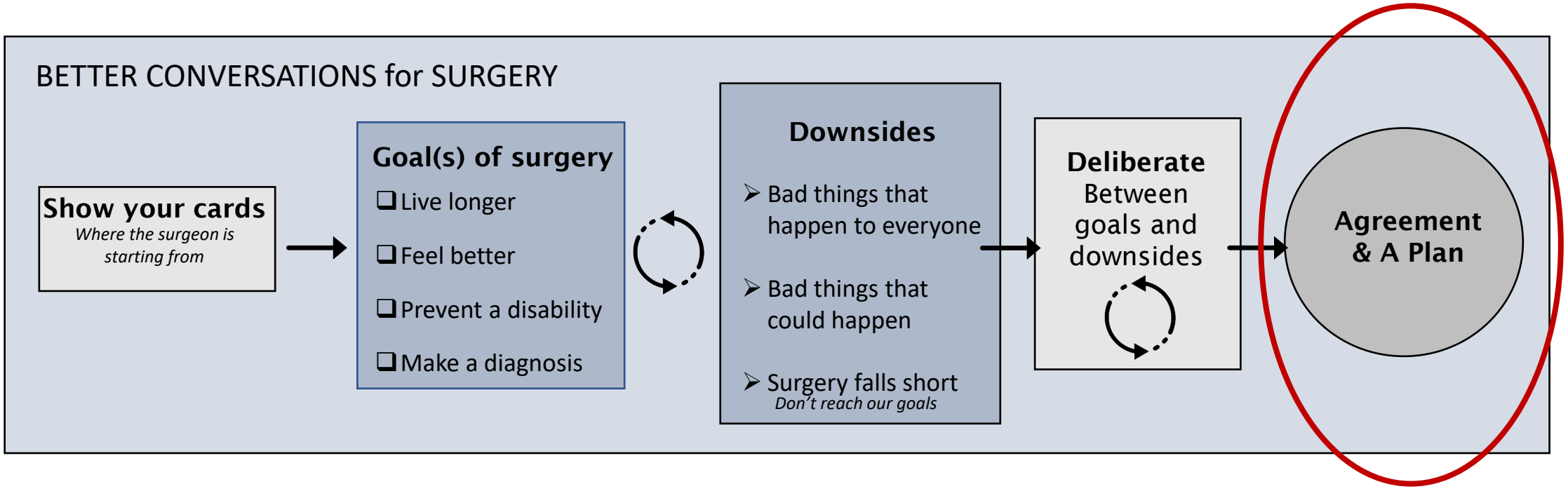
4. Generate a deliberative space

goals of surgery v. the downsides

- How are you thinking about this?
- How much does it bother you?
- How much are you willing to go through?
- Is it worth it?
- Does my reasoning make sense to you?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5. Make a plan

Some patients may be curious…

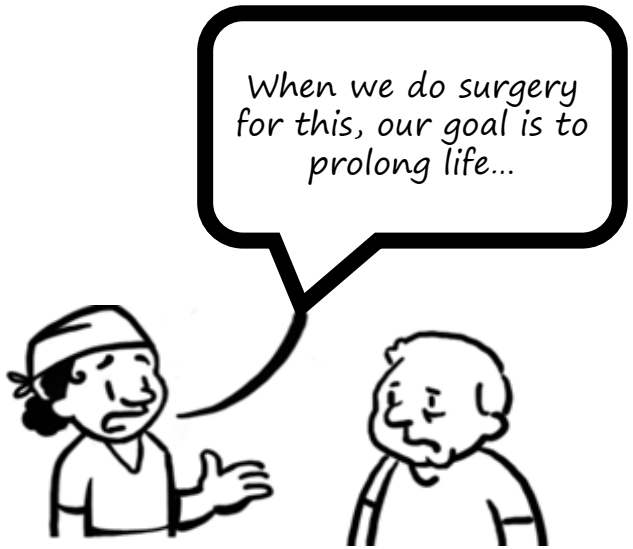
I’m worried…

We don’t usually operate in this setting..

I am worried surgery is not a good idea

CONTEXT

GOALS



Schwarze ML, Innovation in Surgical Communication 5, JAMA Surgery, May 2025

- Bob Arnold
- Justin Clapp
- Jacky Kruser
- Amy Zelenski
- Melanie Fritz
- Bret Hanlon
- Kyle Bushaw
- Lily Stalter
- Jolene Tsang
- Carly Sobol
- Rob Sorrell Bynum

The Greenwall Foundation

Thank you!

schwarze@surgery.wisc.edu

Additional Resources:

https://www.youtube.com/watch?v=FnS3K44sbu0

https://www.patientpreferences.org

https://chooseyourpath.vitaltalk.org/BEST-CASE-WORST-CASE/

"The size of your dreams must always exceed your current capacity to achieve them."

Ellen Johnson Sirleaf, Nobel Peace Prize Winner & President of Liberia

Care **C**oordination and **O**ptimization for **G**eriatric **S**urgery:

The Salt Lake City VAMC **COGS** Program

- Carole Baraldi, MD

- Rocky Mountain Geriatrics Conference September 2025

Objectives

- **Describe Our Program**
  - Attendees will appreciate the reasons for developing our team.
  - Attendees will understand the primary goals of our service.
  - Attendees will recognize the value of basing the program on a geriatric foundation.
- **Risk Assessment Instrument as a Frailty Screen**
  - Attendees will be able to identify the benefits of the Risk Assessment Instrument as a frailty screen.
- **(Very) Preliminary Data**
  - Attendees will appreciate the preliminary outcomes of our service.

SLC - Our Origin Story

- Geriatric Research Education and Clinical Center (GRECC)
    - Including **innovations** i.e. clinical demonstration projects to improve Veteran care
- Spring 2022, discussion with VISN 19 CMO
    - "Do something to improve surgical care of older Veterans"
- How can we collaborate to intervene?
    - "Often, the question is not whether the Veteran can have surgery, but rather whether they should have surgery"
- What are the next steps to take action?
    - "Put the geriatricians in the clinic with the surgeons."
- Funding approved by VISN 19 and the SLC PENTAD Leadership

Leadership Team – January 2023

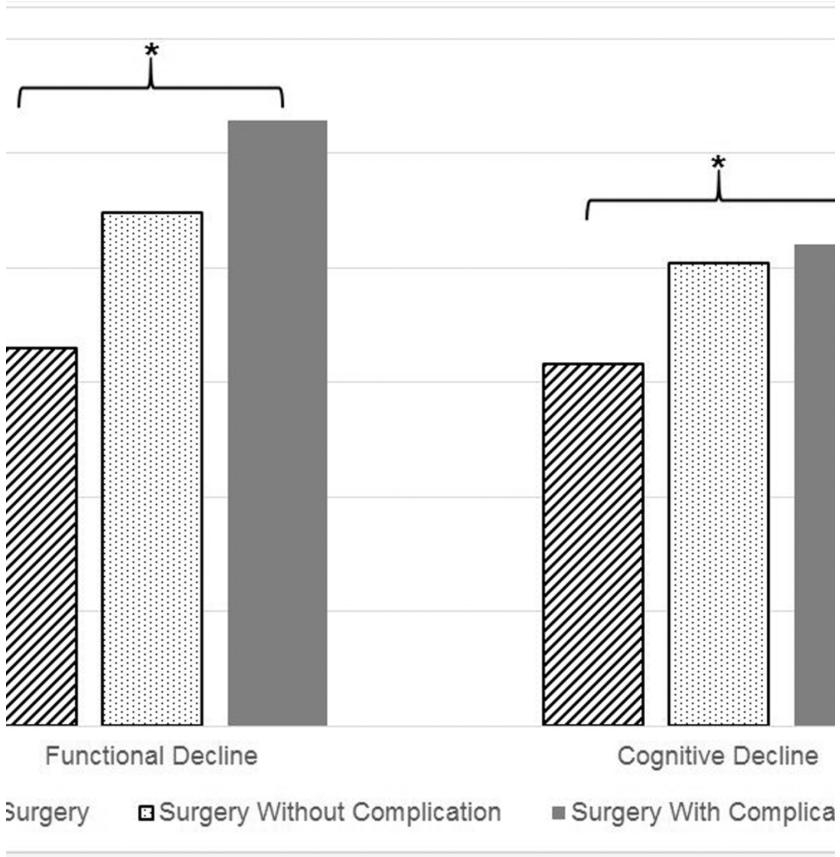
- Paul Eleazer, MD – GRECC Innovations Leader
- Rand Rupper, MD – GRECC Chief
- Michelle Mueller, MD – Surgery Chief
- Carole Baraldi, MD – Geriatrics, Medical Director

There is an opportunity here

- 2011 study: 30% of Medicare beneficiaries had surgery in last year of life – likely higher now (1)
  - 1.8 million fee-for-service Medicare decedents
    - 32% had an inpatient surgical procedure in their final year
    - 18% in the last month
    - 8% in the last week of life
- 2014 study: 22% of VHA patients had surgery in last year of life (2)

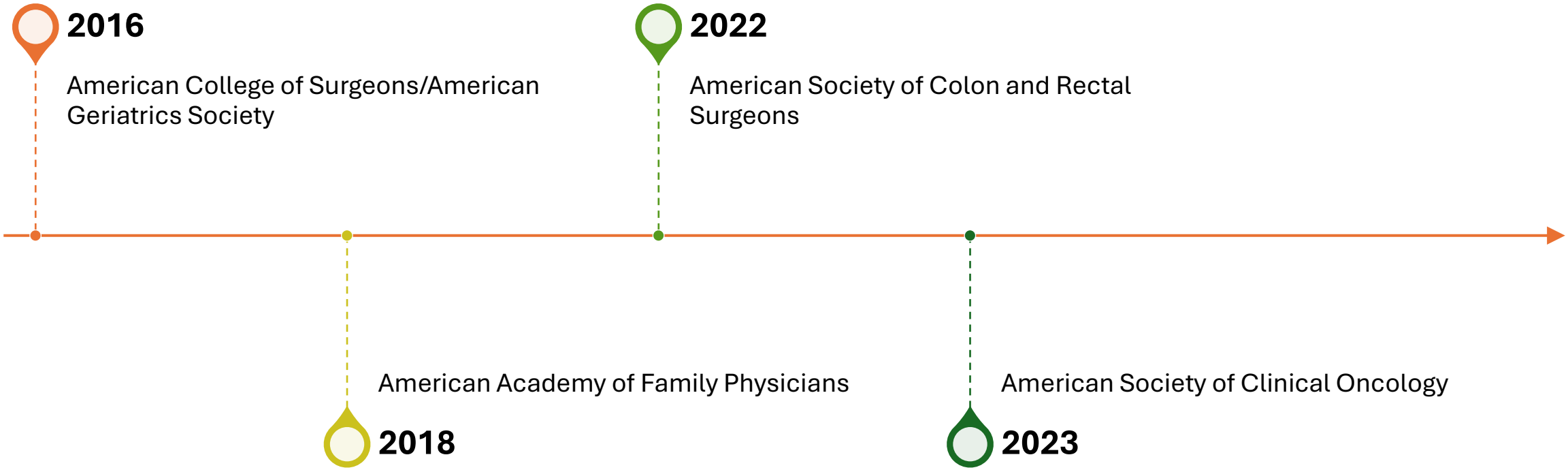
Surgery and Functional Decline

- Of those who survive, many have functional decline/loss of independence after major surgery (1-3)
  - 1600 pts age 65+: 22-26% had prolonged fxnal decline at 6 mo (vs. 17% non-surgical)



Step 1: Learn From Others

PRACTICE GUIDELINES FROM MULTIPLE SOCIETIES



INITIATIVES AROUND THE COUNTRY – early 2023

- **VA PAUSE – Growing initiative**
  - Focus on high-risk older surgical patients
  - Omaha, Pittsburgh, Gainesville, Houston, Little Rock, Bronx – others starting
  - Starting to distribute outside VA as well
- **Geriatric Surgery Verification (GSV) – American College of Surgeons**
  - Focused on all older surgical patients – certification process
  - Duke/Durham VA POSH program
  - Denver AVSH program

Program Development

VA “Site Visits” (in-person and virtual):

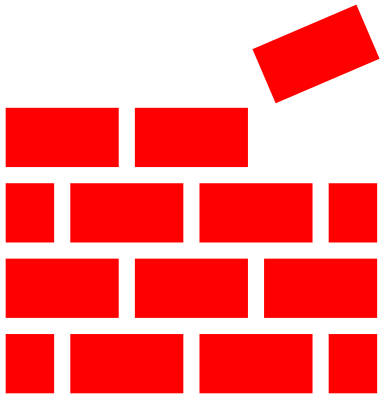
- Denver – attended interdisciplinary Teams meetings
- Durham – mini-fellowship in POSH program
- Gainesville – several hourly meetings
- All provided strong support and mentorship

Build Local Support – Familiarize and Coordinate

- 1:1 – Nursing Leadership, Service Chiefs, Other Programs
- Elevator Pitch: Clinic nurses, Attendings, Residents, Clerks

Weekly Planning Committee Meetings

Step 2: Program Design



Taking Action to Improve Outcomes
"Do something to improve surgical care of older Veterans"

How do we identify those at highest risk for poor surgical outcomes?

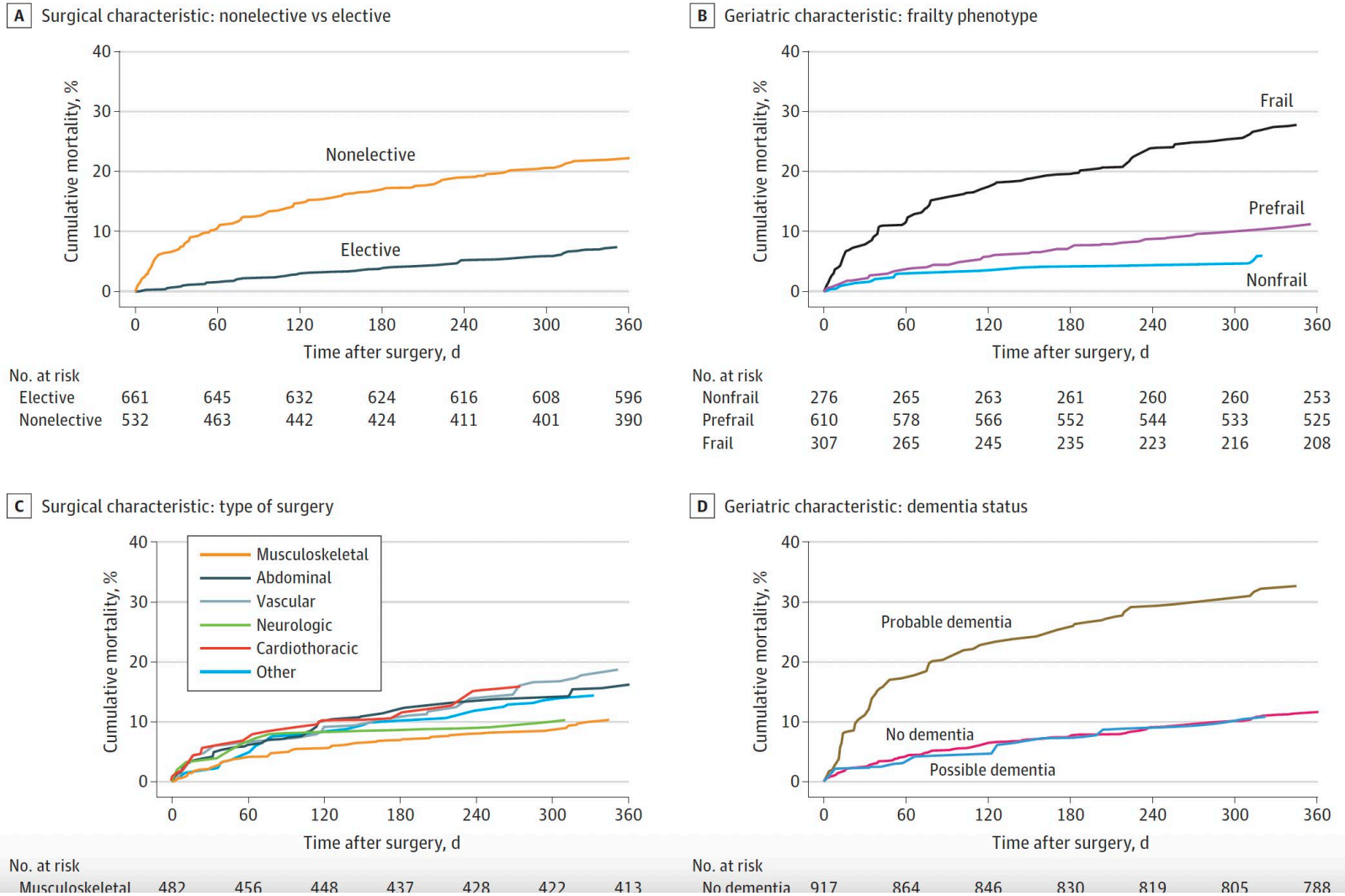
- Age
- Frailty
- Dementia

What are interventions to improve outcomes in the highest risk?

- Systemic identification of high-risk patients has an impact as it raises awareness
- Clarifying goals to ensure they align with having surgery
- Interdisciplinary teams to address high-risk patients, complex patients

- Gill, TM et al. JAMA Surg 2022;157(12):e225155 (Yale)

Figure 2. Cumulative Mortality Over 1 Year Following Major Surgery by Surgical and Geriatric Characteristics

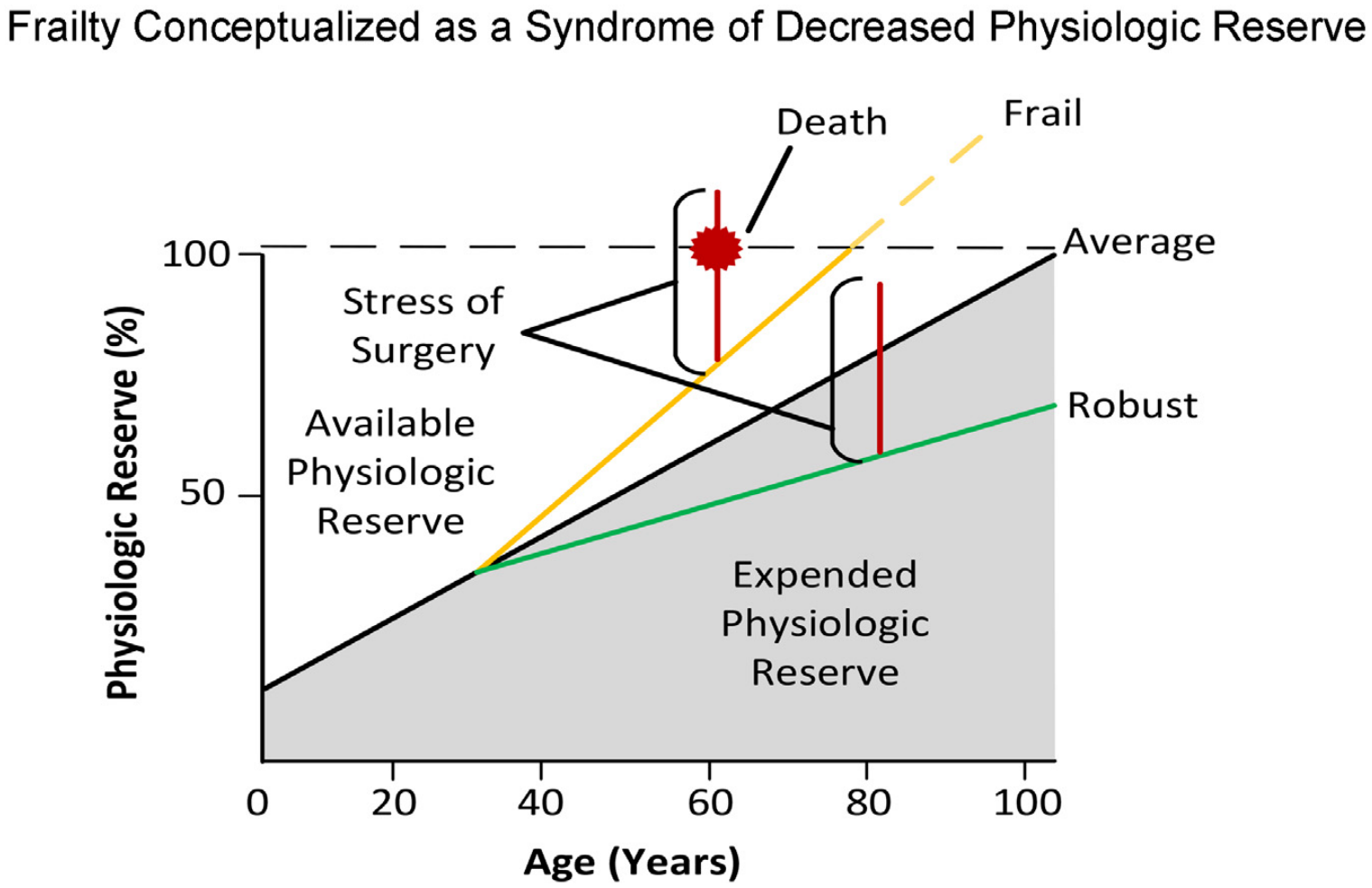


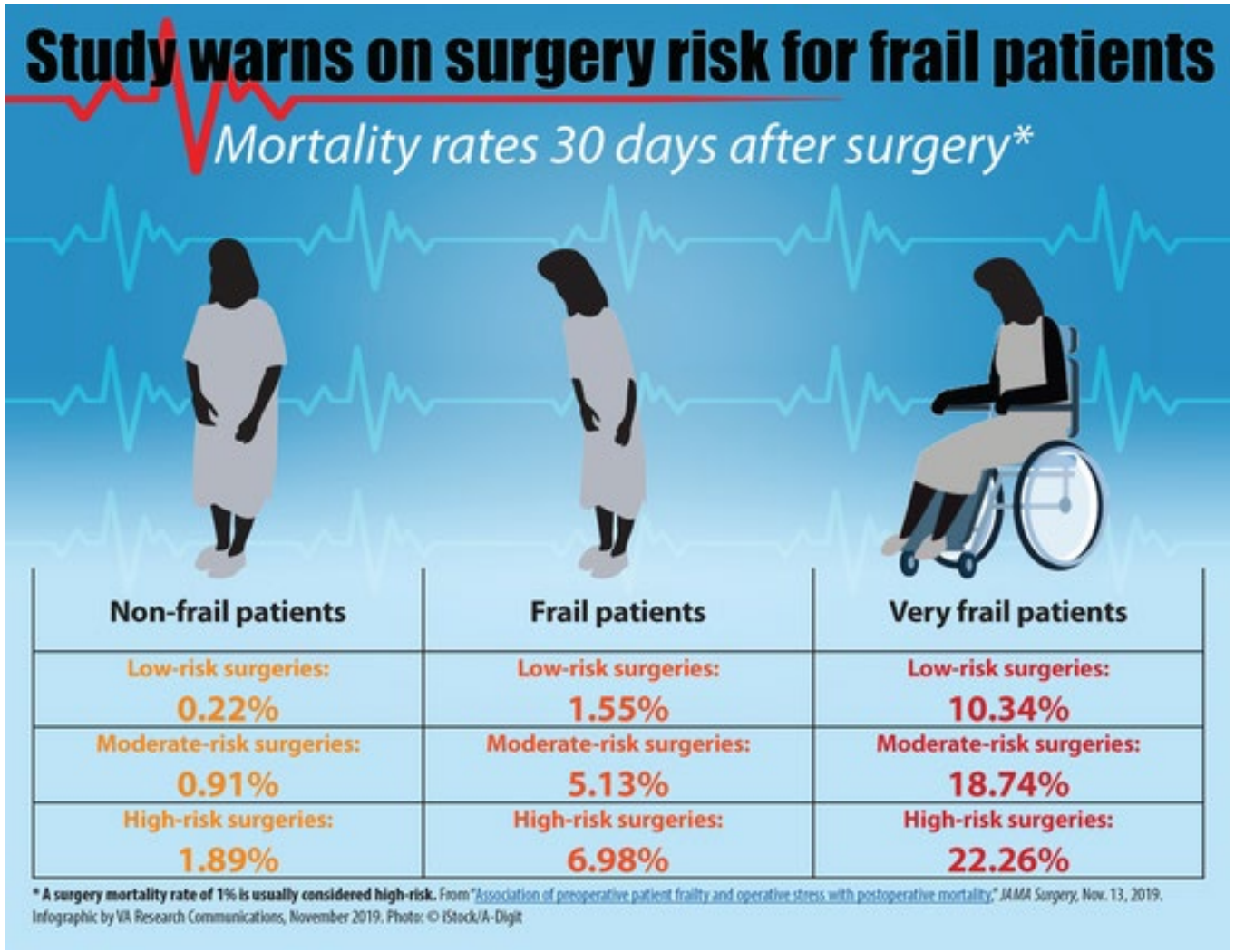
Frailty

“There is not a consensus about the definition of frailty. Frailty reflects the physiologic consequences of aging…By definition, frailty results in poor outcomes. Correlating frailty and surgical outcomes is an area with enormous potential to influence surgical decision-making.”

Robinson TN et al. Ann of Surg 2009; 250 (3): 449-455.

The importance of looking not just at age, but also at frailty




Study warns on surgery risk for frail patients
Mortality rates 30 days after surgery*
Non-frail patients
Low-risk surgeries:
0.22%
Moderate-risk surgeries:
0.91%
High-risk surgeries:
1.89%
Frail patients
Low-risk surgeries:
1.55%
Moderate-risk surgeries:
5.13%
High-risk surgeries:
6.98%
Very frail patients
Low-risk surgeries:
10.34%
Moderate-risk surgeries:
18.74%
High-risk surgeries:
22.26%
* A surgery mortality rate of 1% is usually considered high-risk. From "Association of preoperative patient frailty and operative stress with postoperative mortality," JAMA Surgery, Nov. 13, 2019.
Infographic by VA Research Communications, November 2019. Photo: © iStock/A-Digit

Specific Aspects to Salt Lake City VA COGS

- COGS team: Geriatrician – RN – Surgeon
  - **Embedded in surgery clinics**
  - Patients may be seen together, collaboration at time of visit
  - Option for scheduled or telehealth COGS visits
- Comprehensive in-person geriatric assessment
- Walk-in anesthesia pre-op clinic
- Collaboration with other service lines
  - TPS: Transitional Pain Service
  - TCT: Transitions of Care Team

COGS Team – Initial Design

CORE TEAM

- Surgeon Champion*
- Geriatric Champion*
- Medical Director*
- RN Coordinator*
- Physical Therapist

SUPPORT

- VA CAC*
- Anesthesia*
- Surgical RN Coordinators
- Hospital Pharmacist
- Nutritionist
- Palliative Care Service Chief*
- VASQIP RN Coordinator*

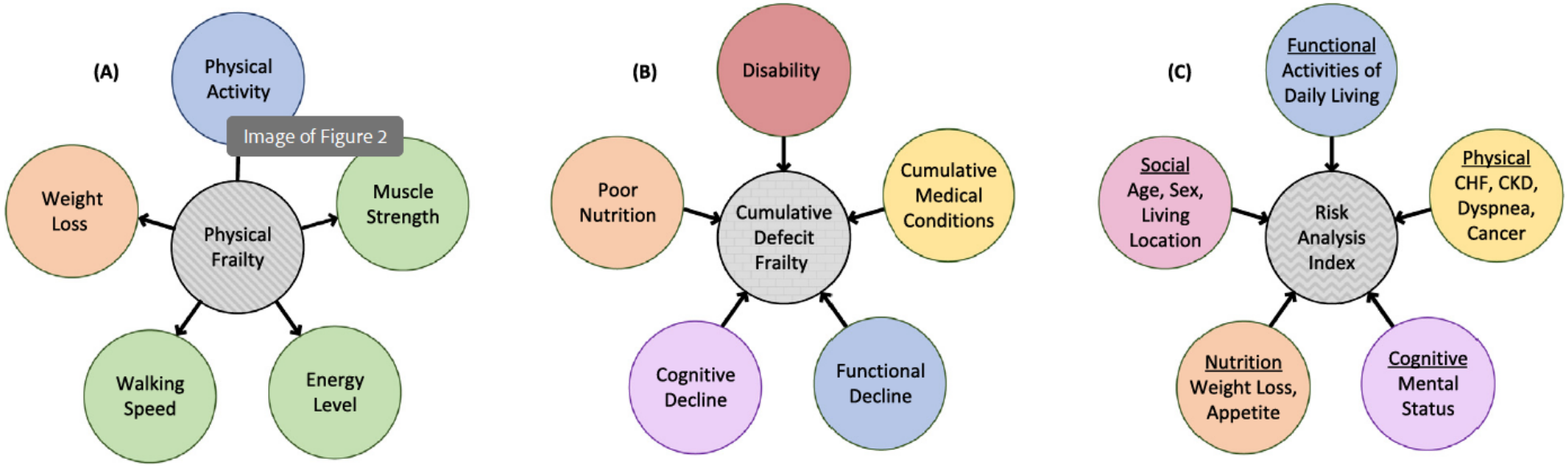
*Planning Committee Members

Risk Analysis Index (RAI)

2012 -Developed by surgeons at the Omaha VA

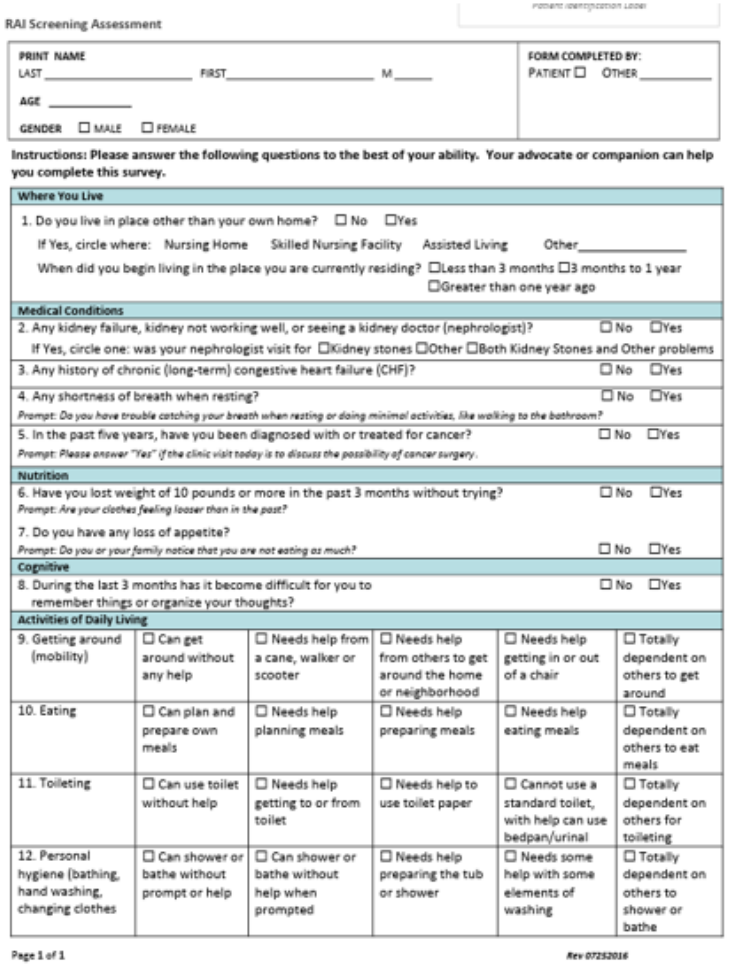
RAI predicts 30, 180 and 365-day mortality based on variables constitutive of frailty

Validated both in and outside the VA setting in men and women


(A)
Physical Activity
Weight Loss
Physical Frailty
Muscle Strength
Walking Speed
Energy Level
(B)
Disability
Poor Nutrition
Cumulative Defecit Frailty
Cumulative Medical Conditions
Cognitive Decline
Functional Decline
(C)
Functional Activities of Daily Living
Social Age, Sex, Living Location
Risk Analysis Index
Physical CHF, CKD, Dyspnea, Cancer
Nutrition Weight Loss, Appetite
Cognitive Mental Status

VA: CPRS Note “RAI FRAILTY TOOL” provides link to online calculator

Non-VA: https://efrailty.hsl.harvard.edu/ToolRiskAnalysisIndex.html



RAI Screening Assessment

PRINT NAME
LAST _____ FIRST _____ M ____

AGE _____

GENDER ☐ MALE ☐ FEMALE

FORM COMPLETED BY:
PATIENT ☐ OTHER _____

Instructions: Please answer the following questions to the best of your ability. Your advocate or companion can help you complete this survey.

Where You Live

1. Do you live in place other than your own home? ☐ No ☐ Yes
   If Yes, circle where: Nursing Home Skilled Nursing Facility Assisted Living Other_____
   When did you begin living in the place you are currently residing? ☐ Less than 3 months ☐ 3 months to 1 year ☐ Greater than one year ago

Medical Conditions

2. Any kidney failure, kidney not working well, or seeing a kidney doctor (nephrologist)? ☐ No ☐ Yes
   If Yes, circle one: was your nephrologist visit for ☐ Kidney stones ☐ Other ☐ Both Kidney Stones and Other problems
3. Any history of chronic (long-term) congestive heart failure (CHF)? ☐ No ☐ Yes
4. Any shortness of breath when resting? ☐ No ☐ Yes
   Prompt: Do you have trouble catching your breath when resting or doing minimal activities, like walking to the bathroom?
5. In the past five years, have you been diagnosed with or treated for cancer? ☐ No ☐ Yes
   Prompt: Please answer "Yes" if the clinic visit today is to discuss the possibility of cancer surgery.

Nutrition

6. Have you lost weight of 10 pounds or more in the past 3 months without trying? ☐ No ☐ Yes
   Prompt: Are your clothes feeling looser than in the past?
7. Do you have any loss of appetite? ☐ No ☐ Yes
   Prompt: Do you or your family notice that you are not eating as much?

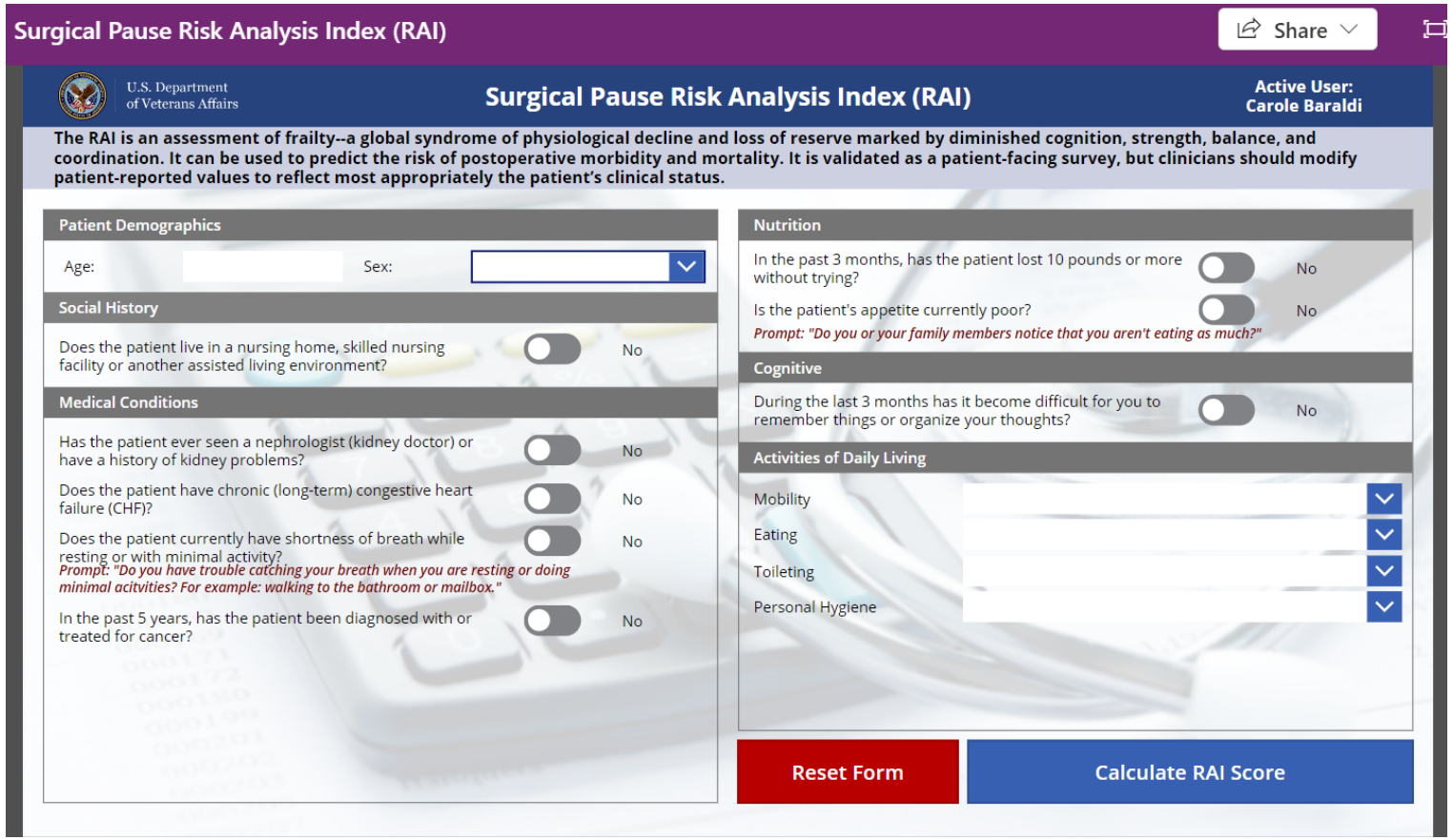
Cognitive

8. During the last 3 months has it become difficult for you to remember things or organize your thoughts? ☐ No ☐ Yes

Activities of Daily Living

9. Getting around (mobility)	☐ Can get around without any help	☐ Needs help from a cane, walker or scooter	☐ Needs help from others to get around the home or neighborhood	☐ Needs help getting in or out of a chair	☐ Totally dependent on others to get around
10. Eating	☐ Can plan and prepare own meals	☐ Needs help planning meals	☐ Needs help preparing meals	☐ Needs help eating meals	☐ Totally dependent on others to eat meals
11. Toileting	☐ Can use toilet without help	☐ Needs help getting to or from toilet	☐ Needs help to use toilet paper	☐ Cannot use a standard toilet, with help can use bedpan/urinal	☐ Totally dependent on others for toileting
12. Personal hygiene (bathing, hand washing, changing clothes	☐ Can shower or bathe without prompt or help	☐ Can shower or bathe without help when prompted	☐ Needs help preparing the tub or shower	☐ Needs some help with some elements of washing	☐ Totally dependent on others to shower or bathe

Page 1 of 1 Rev 07252016



Surgical Pause Risk Analysis Index (RAI) — Share

U.S. Department of Veterans Affairs

Surgical Pause Risk Analysis Index (RAI)

Active User: Carole Baraldi

The RAI is an assessment of frailty--a global syndrome of physiological decline and loss of reserve marked by diminished cognition, strength, balance, and coordination. It can be used to predict the risk of postoperative morbidity and mortality. It is validated as a patient-facing survey, but clinicians should modify patient-reported values to reflect most appropriately the patient's clinical status.

Patient Demographics

Age: Sex:

Social History

Does the patient live in a nursing home, skilled nursing facility or another assisted living environment? No

Medical Conditions

Has the patient ever seen a nephrologist (kidney doctor) or have a history of kidney problems? No

Does the patient have chronic (long-term) congestive heart failure (CHF)? No

Does the patient currently have shortness of breath while resting or with minimal activity? No
Prompt: "Do you have trouble catching your breath when you are resting or doing minimal acitvities? For example: walking to the bathroom or mailbox."

In the past 5 years, has the patient been diagnosed with or treated for cancer? No

Nutrition

In the past 3 months, has the patient lost 10 pounds or more without trying? No

Is the patient's appetite currently poor? No
Prompt: "Do you or your family members notice that you aren't eating as much?"

Cognitive

During the last 3 months has it become difficult for you to remember things or organize your thoughts? No

Activities of Daily Living

Mobility

Eating

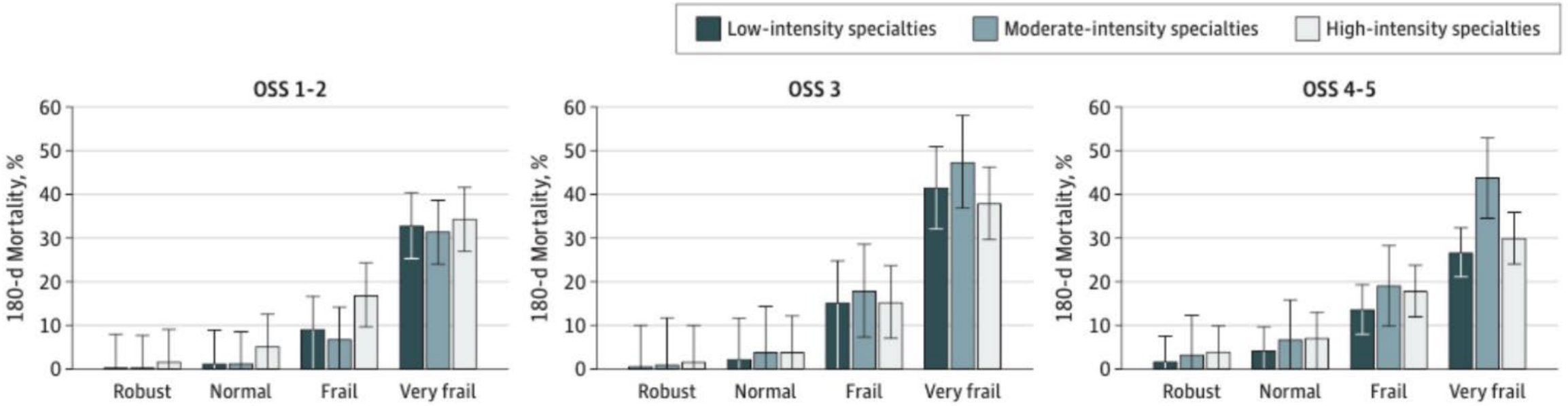
Toileting

Personal Hygiene

Reset Form | Calculate RAI Score

RAI, Operative Stress, Mortality and Specialty

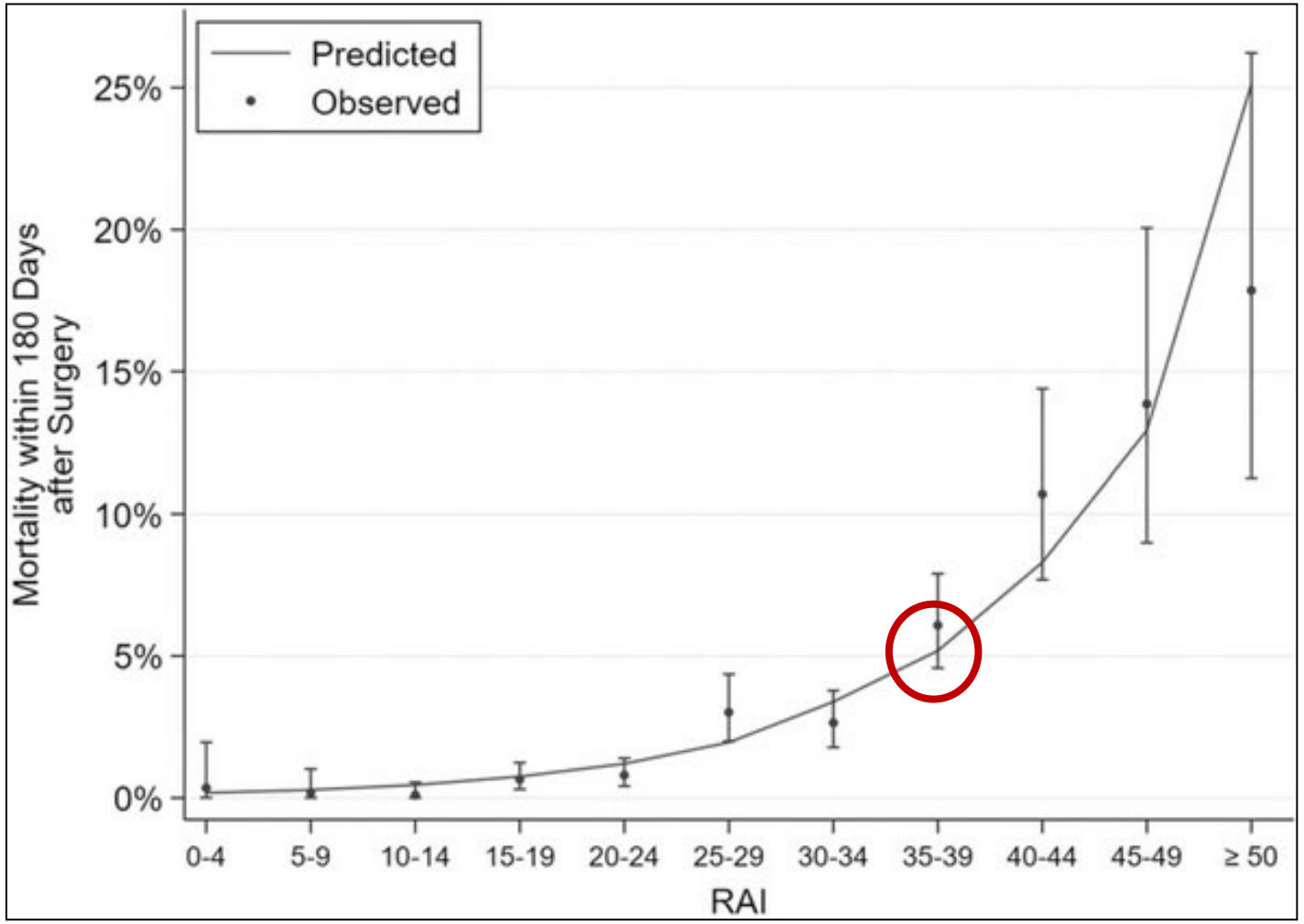
Figure 2. Veterans Affairs Surgical Quality Improvement Program (VASQIP) 180-Day Mortality Following Surgery in 9 Noncardiac Surgical Specialties Stratified by Frailty Status (Risk Analysis Index) and Operative Stress Score (OSS)



Specialties were categorized by the percentage of low-stress (OSS 1 and 2) procedures performed. Frail and very frail patients experienced high mortality rates following low- and moderate-stress procedures in all specialties. Error bars represent the SEs.

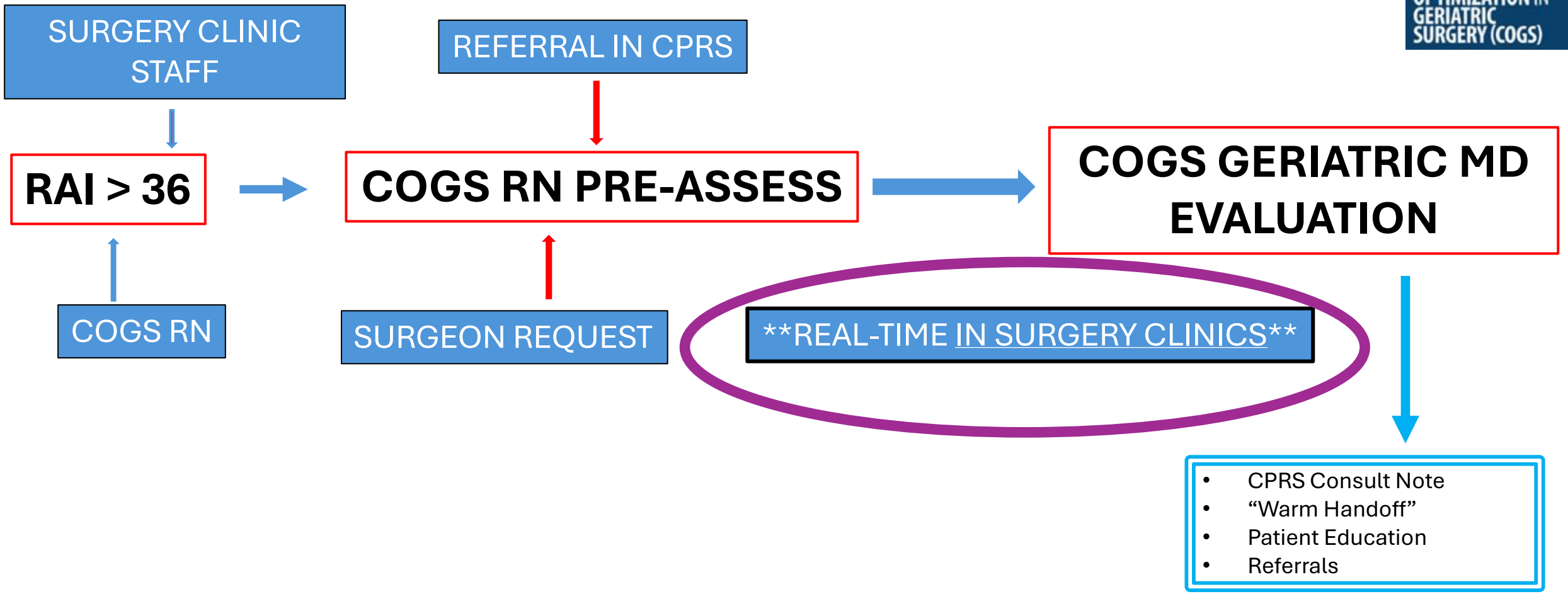
George EL et al JAMA Surgery 2020:e205152. 10.1001/jamasurg.2020.5152

Predicted versus observed mortality by RAI-C Score

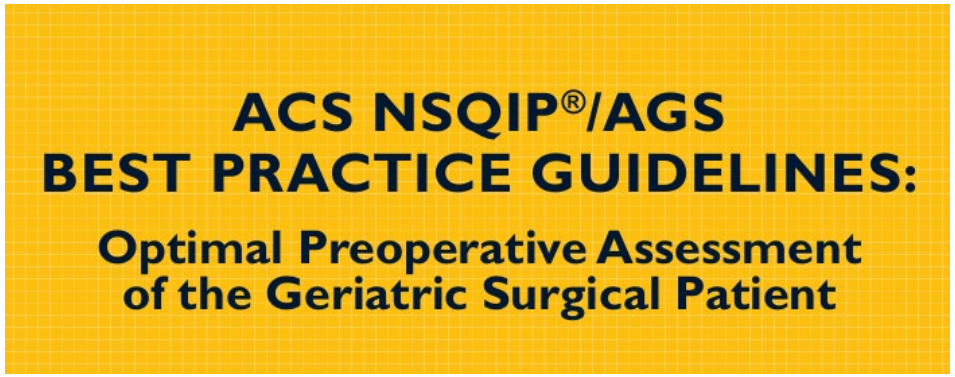


Varley, Patrick; MD, MSc, et al. Clinical Utility of the Risk Analysis Index as a Prospective Frailty Screening Tool within a Multi-practice, Multi-hospital Integrated Healthcare System. Annals of Surgery. 274(6):e1230-e1237, December 2021.

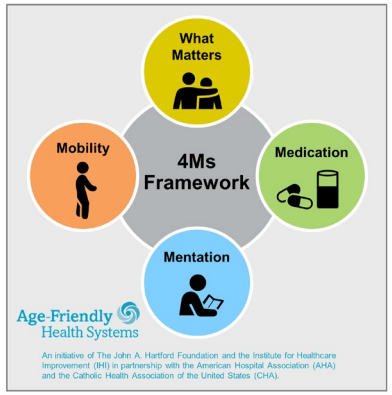
WORKFLOW DIAGRAM



COGS Evaluation



- Cognitive/ Behavioral
- Cardiac Evaluation
- Pulmonary Evaluation
- Functional/Performance Status
  - Support System
- Frailty
- Nutritional Status
- Medication Management, Polypharmacy
- Counseling
- Preoperative Testing



COGS Evaluation and 4Ms Domains

PHQ2
6 CIT
MOCA

High risk
medications
Med Management

ADLs & IADLs
Living Situation
Financial/Food Security
Agency Support

Understanding of Surgery, Risks, and Goals of Surgery; DMC

Cognitive and Depression Screens

Medication Review and Recommendations

Functional Assessment and Support System

Prior Surgeries
Best Case/
Worst Case
NSQUIP
e Prognosis
RAI

METs

Limitations on Care (Code Status, Advanced Directive, Expectations)

Delirium Risk

Mobility Screen
Nutrition screen
Frailty

Identify cardiopulmonary Risks

Code Status
Surrogates
Goals
ICU
SNF

Cognition
Medications
Hearing/Vision
Substance Use

Falls
Mobility aids
TUG
Gait Speed
5x SS
Weight loss
Swallowing Issues

Medical History
Labs

COGS Preoperative Interventions

- Delirium Prevention Education
- Prehabilitation*
- Nutritional Recommendations/Referrals
- Medication Recommendations
- Advance Directives/Goals of Care Discussions
- Lung Strengthening Education
- Social/Functional Support Referrals
- Coordination with Anesthesia and Surgery

*WARM HANDOFFS ARE IMPORTANT: SURGEON, ANESTHESIA, PCP

Ideal outcome of COGS eval is patient-centered

- ER
  - 82 yo newly dx'd renal cell cancer – incidental finding
  - Robust
  - Surgeon recommends no surgery

→ IDT meeting

- BI
  - 94 yo newly dx'd bladder cancer – hematuria
  - Frail, Dementia, in AL setting
  - Son feels QOL is good

→ Adjusted surgery type

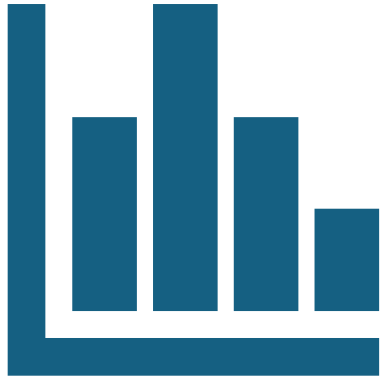
- BD
  - 97 yo dissecting aortic aneurysm
  - Highly functional

→ Had surgery

- LT
  - 76 yo elective shoulder replacement
  - Mildly dependent, recent injury/decline

→ Delay for prehab

STEP 3: PRELIMINARY DATA



PRELIMINARY **COGS** DATA June ‘23 – Nov ‘24

Total Patients: 291

COGS Patients Still Living: 254 (87%)

Had/Scheduled Surgery: 216 (74%)

Total Deferred Surgery: 75 (26%)

- **“TRUE NONSURGICAL deferral: 28 (10%)**
- Consider in future: 29 (10%)
- Surgery not indicated: 13 (4%)
- Surgery planned, but died before: 2 (<1%)

COGS MORTALITY DATA up to 9/1/24

- RAI 41 -> expected 26% mortality at 6 months, 10% mortality at 1 month
- RAI 45 -> expected mortality 45% at 6 months and 20% mortality at 30 days
- Point out very frail, mortality rate at 1 year lower than expected

	Consults	Total Deaths (%)	1-year (%)	6-mo (%)	30-day
Total	249	51 (20)	34 (14)	22 (9)	3
With Surgery	138	18 (13)	10 (7.2)	6 (4.3)	1
No Surgery	111	37 (33)	24 (21.6)	17 (15.3)	2

PRELIMINARY COGS DATA

As of 8/31/2025	Number of consults
Total	431
RAI <37	123 (29%)
RAI 37-44	158 (37%)
RAI >44	150 (35%)
Non-surgical Tx (at time of consult)	176
1st Time LST	116
1st Time surrogate	37
Surrogate changed	11
New impaired decision-making capacity	20
Code status updated Full→DNR	32

Salt Lake City COGS Program Next Steps

In-hospital Consultations for Non-Elective Surgeries

Post-Operative Follow Up - Assess Impact

THANK YOU

CARE COORDINATION AND OPTIMIZATION IN GERIATRIC SURGERY (COGS)

COGS Team:

- Carole Baraldi, Medical Director
- Tiffany Wassom, RN
- Michelle Mueller, Chief of Surgery
- G. Paul Eleazer, MD, GRECC Innovations
- Jake Holland, DPT
- Tania Knight, RN, CAC
- Gabrielle Scannell, Geriatrician
- Rachelle Brenner, Geriatrician

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Geriatric Research, Education, and Clinical Centers

Funded by VISN 19

Thank you/
Acknowledgements

Funding provided by VISN 19
and SLCVAHCS

Significant support from
Michelle Mueller, MD, SLCVA
Chief of Surgery

Utilizing Pre-Operative Therapy Services to Improve Post-Operative Outcomes

OR

Managing Functional Impairment Makes a Huge Difference

Clay Watson, MPT
Western Summit Rehabilitation

Clay Watson, MPT

Western Summit Rehabilitation

clay@wsrehab.com

I have no conflicts of interest or financial gain from this presentation.

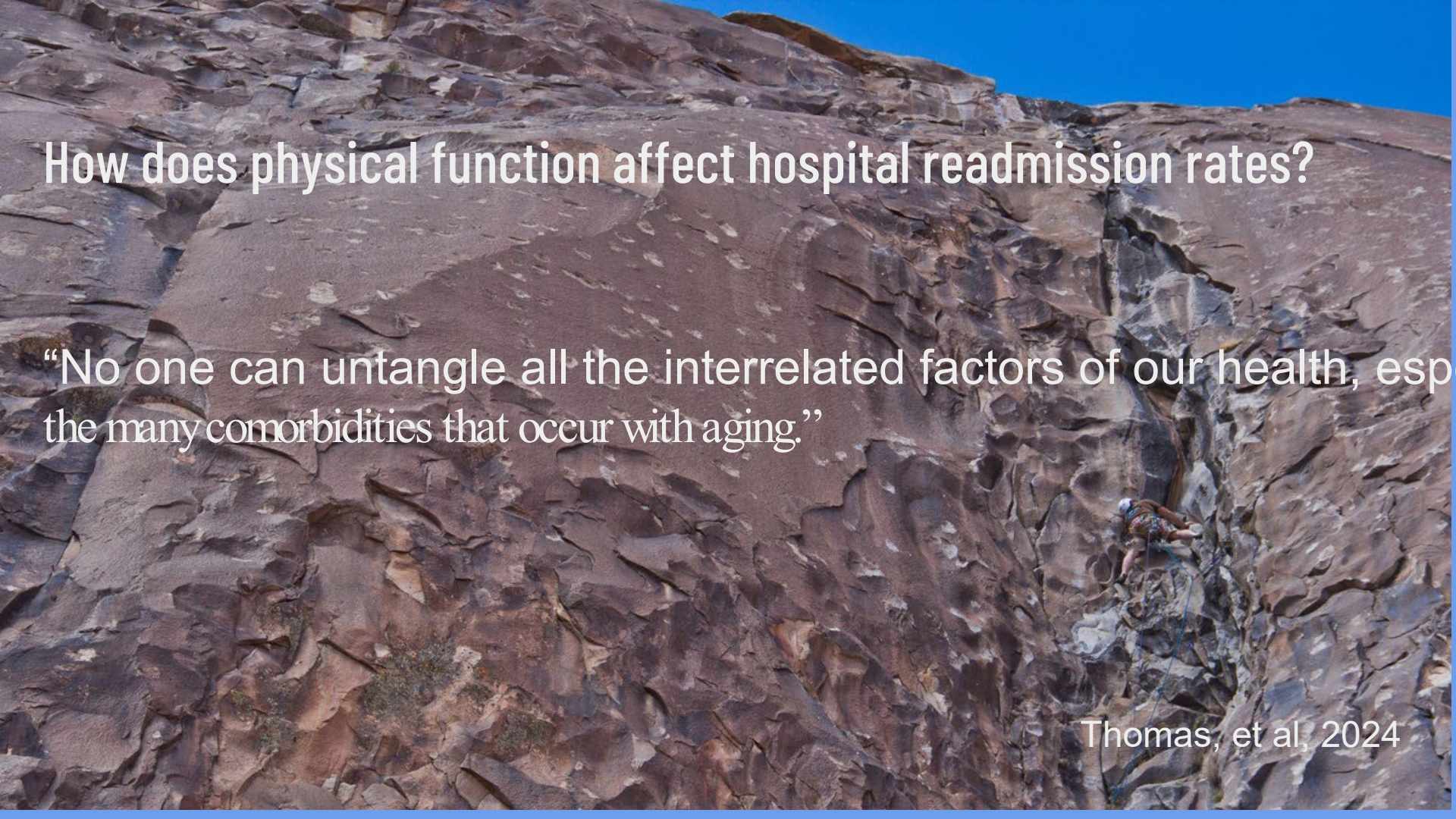
Current hospital readmission rates:

The 30-day all-cause readmission rate for all hospital stays remained stable at 13.9 per 100 index admissions from 2016 to 2020. The readmission rate for each expected payer group (e.g., Medicare, Medicaid, private insurance, self-pay/no charge) also remained stable during this period. Jiang, et al, 2023

Current hospital readmission for all causes within 30 days by principal diagnosis. Jiang, et al, 2023

Which of these are directly the direct effect of physical function?

Rate	Principal diagnosis at index admission	Readmission rate	Number of all-cause readmissions
1	Blood diseases	23.8	79,720
2	Neoplasms	19.0	212,954
3	Endocrine, nutritional and metabolic diseases	17.3	223,149
4	Genitourinary system diseases	17.3	238,130
5	Respiratory system diseases	17	304,627
6	Mental, behavioral, and ND disorders	16.2	303,313
7	Digestive system diseases	16.0	447,677
8	Infections and parasitic diseases	15.6	478,007
9	Circulatory system diseases	15.3	647,861
10	Skin diseases	13.4	61,043
11	Injury, poisoning, and other external causes	13.4	331,496
12	Nervous system diseases	13.3	101,974
13	Eye and adnexa diseases	8.8	2,234
14	Congen malformations, deformities and abn.	8.7	5,173
15	Conditions of newborn, perinatal period	8.6	41
16	Musculoskeletal system diseases	7.4	112,376
17	Ear and mastoid process diseases	6.5	1,886
18	Pregnancy, childbirth and puerperium	3.6	134,260
ALL	Any diagnosis	13.9	3,850,413



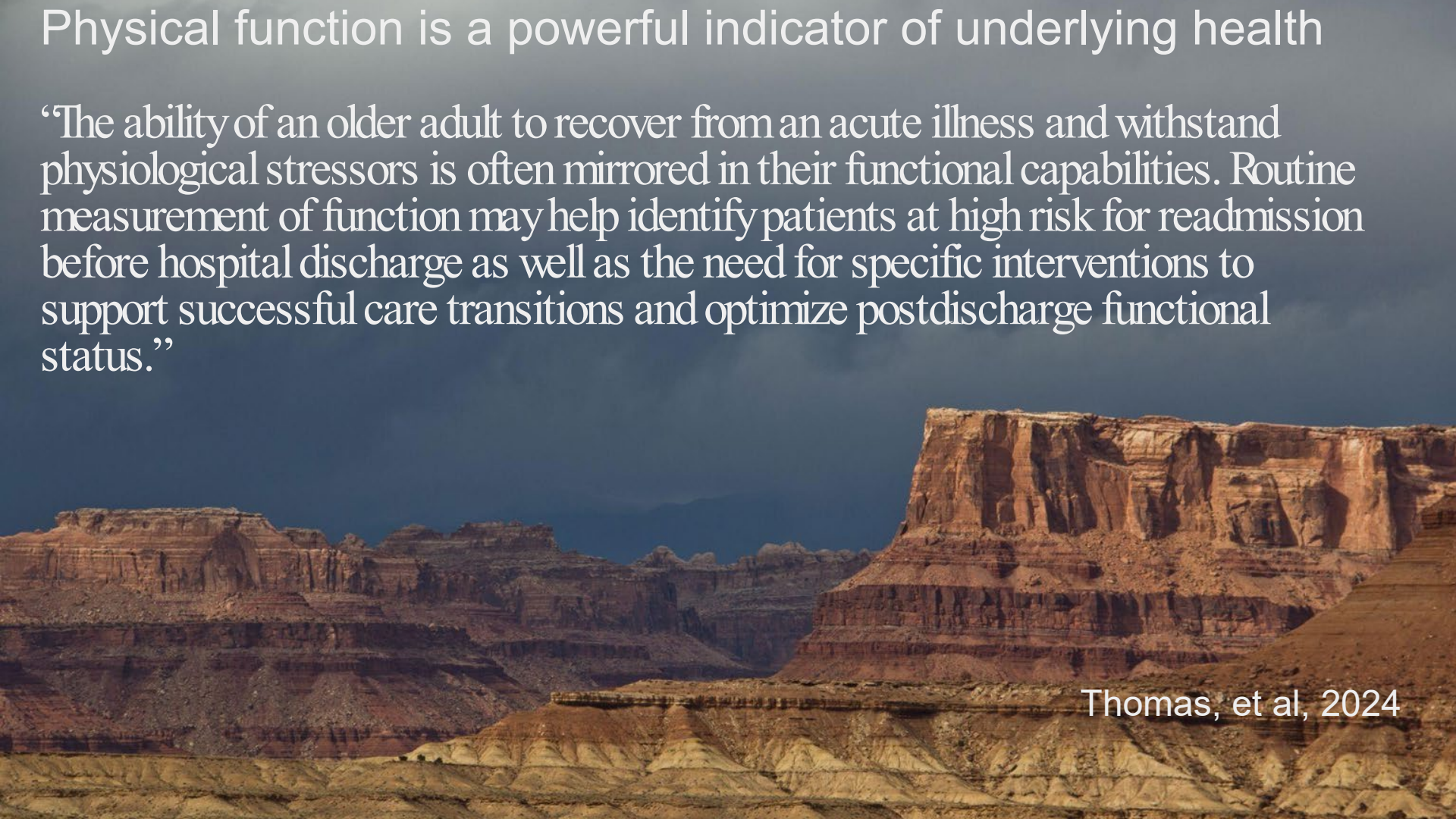
How does physical function affect hospital readmission rates?

"No one can untangle all the interrelated factors of our health, esp
the many comorbidities that occur with aging."

Thomas, et al, 2024

Physical function is a powerful indicator of underlying health

"The ability of an older adult to recover from an acute illness and withstand physiological stressors is often mirrored in their functional capabilities. Routine measurement of function may help identify patients at high risk for readmission before hospital discharge as well as the need for specific interventions to support successful care transitions and optimize postdischarge functional status."

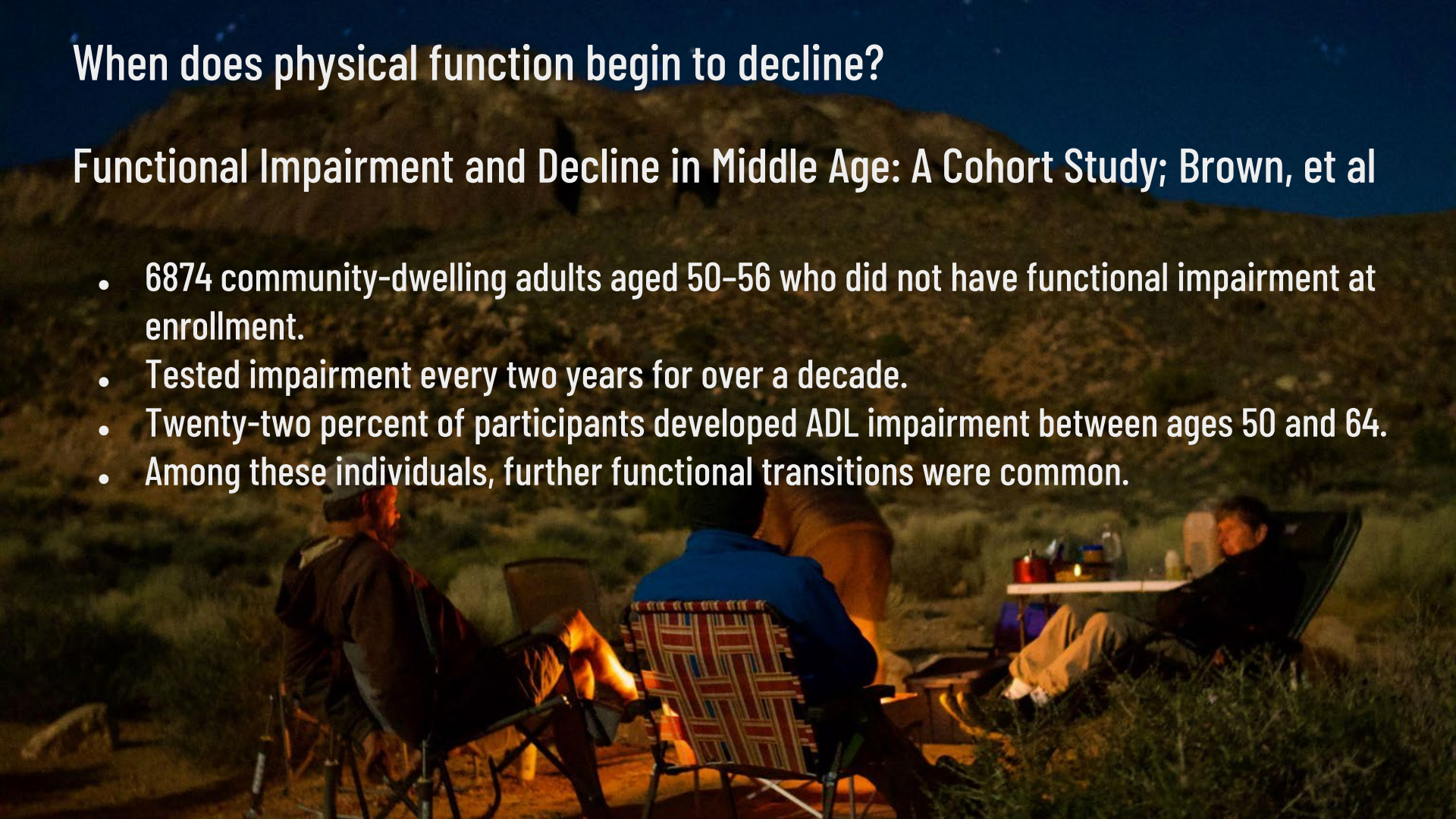


Thomas, et al, 2024

When does physical function begin to decline?

Functional Impairment and Decline in Middle Age: A Cohort Study; Brown, et al

- 6874 community-dwelling adults aged 50–56 who did not have functional impairment at enrollment.
- Tested impairment every two years for over a decade.
- Twenty-two percent of participants developed ADL impairment between ages 50 and 64.
- Among these individuals, further functional transitions were common.



Functional Impairment and Decline in Middle Age: A Cohort Study

Brown, et al.

Two years after the initial impairment was detected (average age 51-56):

- 4% (95% CI, 3%–5%) of participants had died.
- 9% (CI, 8%–11%) had experienced further ADL decline.
- 50% (CI, 48%–52%) had persistent impairment.
- 37% (CI, 35%–39%) had recovered independence.

In the 10 years following the initial impairment (by age 60-66):

- 16% (CI, 14%–18%) had one or more episodes of functional decline.
- 28% (CI, 26%–30%) recovered from their initial impairment and remained independent throughout.
- The pattern of findings was similar for IADLs.

What will your next decade look like?

How will the choices we make now affect our futu
function?

What happens to people who are starting with early
impairment?

The solution??
Keep all the function you can!

2015

vs

What function matters most?

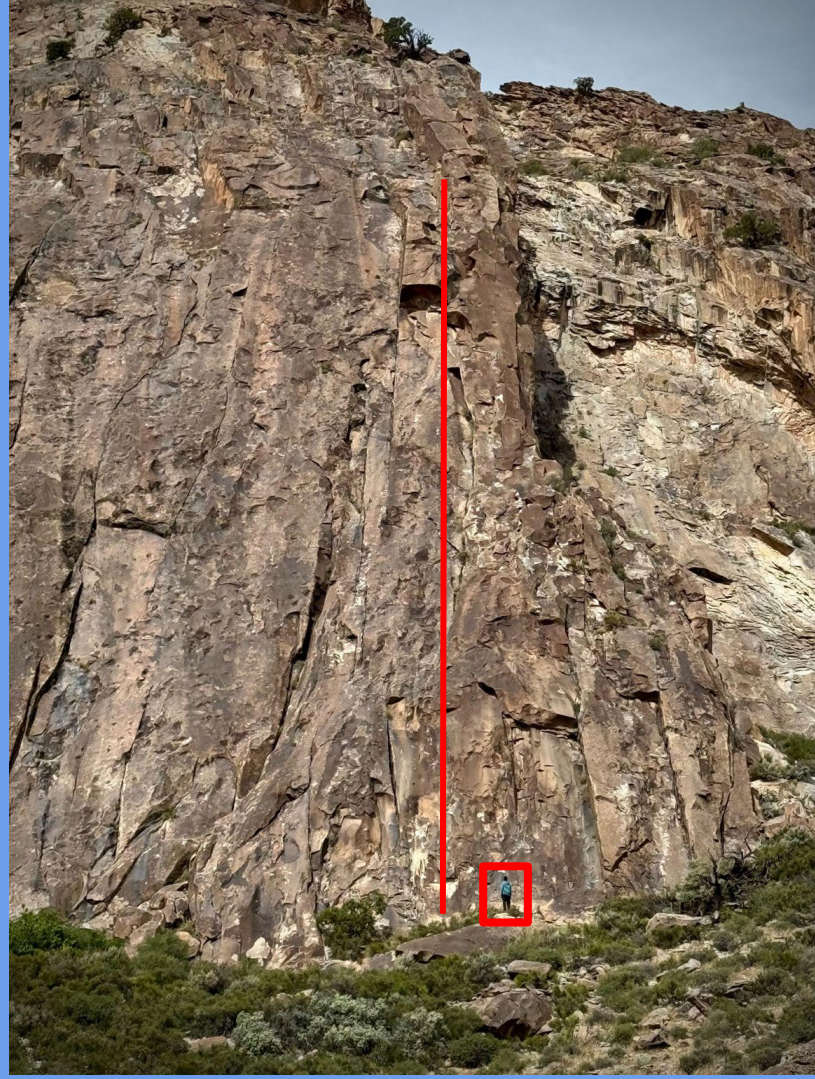
Younger adults may consider function:

Musculoskeletal health
Cardiovascular fitness
Psychosocial well-being
Metabolic health
Cognitive health

Empathy and experience have ways of changing what we consider *functional*

What kind of function
matters most
to CMS,
because they pay for the vast
majority of geriatric care?

FUNCTIONAL IMPAIRMENT



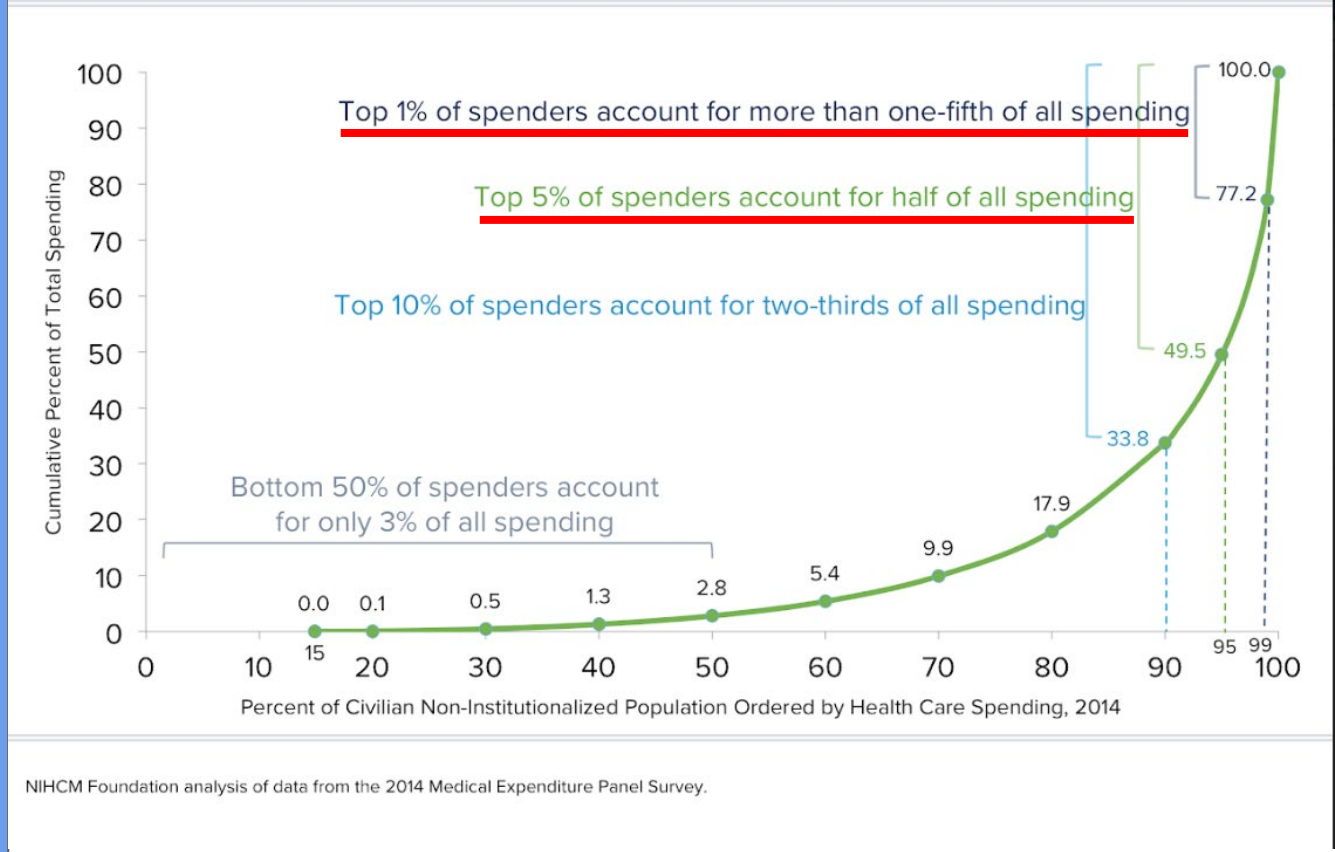
Components of Functional Impairment:

Toileting
Bathing
Cooking
Dressing
Walking
Transfers
Medication management

How can you measure the function of your patients before they are hospitalized?

Why is functional impairment matter important?

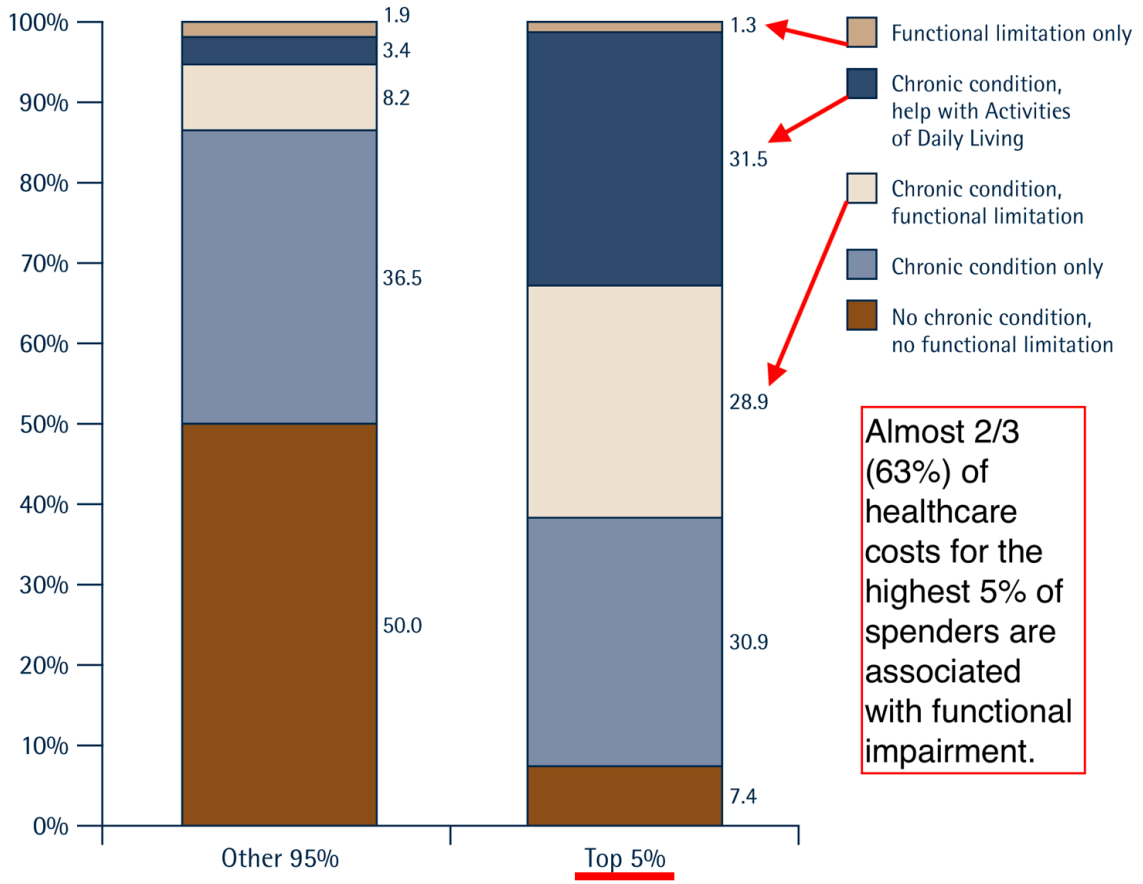
Sick people are far more expensive than healthy people.



People with functional impairment are far more expensive.

Managing functional impairment is one of the primary reasons insurers pays us.

FIGURE 5. CHRONIC CONDITIONS AND FUNCTIONAL LIMITS AMONG LOW VS. HIGH SPENDING GROUPS, 2006



NIHCM Foundation analysis of data contained in The Lewin Group, "Individuals Living in the Community with Chronic Conditions and Functional Limitations: A Closer Look," January 2010.

How does Function affect hospitalization risk?

Physical Function Related Risk Factor for Hospital Readmission	Population Studied	Tool Used	Reference Group	Impact on Readmissions	Primary citation listed in detail below
Slow gait speed before inpatient surgical admissio	Patients at presurgical visits	Gait speed over 6 (20 ft)	Patients who wall <1 m/s	186% increase in readmission risk compared with patients who walk m/s	Odonkor et all 17
Low preadmissio ADL function	Medicare beneficiaries	Health and retirer study interview	Patients with ≥ dependencies	42% increase in odds for readmission compared to patients with no ADL dependencies	Greysen et al 21

Role of Physical Therapists in Reducing Hospital Readmissions: Optimizing Outcomes for Older Adults During Care Transitions From Hospital to Community; Falvey, et al

How does physical function affect hospitalization risk?

Physical Function-Related Risk Factor for Hospital Readmission	Population Studied	Tool Used	Reference Group	Impact on Readmissions	Primary citation listed in detail below
Low functional sta at hospital dischar	Patients admitted Inpatient Rehab Facilities	FIM	Patients with FIM score <60	220% increase in for readmission compared with patients with base FIM score >76	Hoyer et al 4
Low functional sta at hospital dischar	Hospitalized older adults with pneumonia, CHF, COPD, or mild CV	SPPB	Patients with SPP score ≤4/12	438% increase in odds for readmission compared with patients with scores ≥8/12; 163% increase forscores between 5/12 and 7/12	Volpato et al 43

Role of Physical Therapists in Reducing Hospital Readmissions: Optimizing Outcomes for Older Adults During Care Transitions From Hospital to Community; Falvey, et al

How does physical function affect hospitalization risk?

Physical Function–Related Risk Factor for Hospital Readmission	Population Studied	Tool Used	Reference Group	Impact on Readmissions	Primary citation listed in detail below
Low physical activity after hospitalization	Patients with COPD a hospitalization	Self-reported PA (min/d)	Patients reporting 0 min/wk of PA at outpatient physician follow-up	64% increase in odds readmission compare with patients who rep >150 min of PA; 49% increase compared w patients who repo 149 min of PA	Nguyen et al 60
Low physical activity after hospitalization	Older adults after hospitalization	Accelerometer-measure PA	Older adults who wal <4,691 steps/d in the week postdischarge	Approximately 6 time more likely to be readmitted compared patients who walk >4 steps/d	Fisher et al 39

Role of Physical Therapists in Reducing Hospital Readmissions: Optimizing Outcomes for Older Adults During Care Transitions From Hospital to Community; Falvey, et al

What can you do about this?

Assess

Observe

Coordinate

Triangulate

Refer to functional impairment specialists

Assess:

An extremely informal poll of inhome and clinic based clinicians about how they view the mobility of their patients:

Is mobility something that you measure on a routine basis?

> "Our medical assistants assess gait speed during the Medicare Annual Wellness Visit that occurs once yearly (I'd estimate that 30-40% of our patients agree to Medicare AWVs). Aside from that, I'll do the Timed Up and Go fairly often but not at every visit and usually only when there is a concern about mobility."

How often do you watch your patients enter or leave your clinic?

> "As often as I can. This is not always easy to do because the patients are usually roomed and waiting for me, but I can usually catch a glimpse of them walking out of the clinic. At the very least, I will watch how the ambulate from the chair to the exam table."

Assess:

Another respondent says:

> "I do the STEADI fall risk assessment and the Gait speed at my Annual medicare wellness appts. And if abnormal will watch them walk."

Observe:

When you encounter patients in your treatment room at your clinic, are they already sitti
you enter the room?

Were you able to watch them walk in from their car/transport?

How did they transfer from sitting to standing?

How comfortable are they sitting in their chair?

Are they continent?

Do they understand how their mobility changes and will change as they age?

Or are they worried about much more pressing issues when they see you?

Prehospitalization function in the home

Can they access their bed or chair?

Does their chair fit them? (Especially for orthopedic surgeries!)

Can they walk into and out of their home?

Can they transfer in their bathroom?

Is there someone in the home to help if they get stuck on a particular impairment?

How will their pain affect transfers?

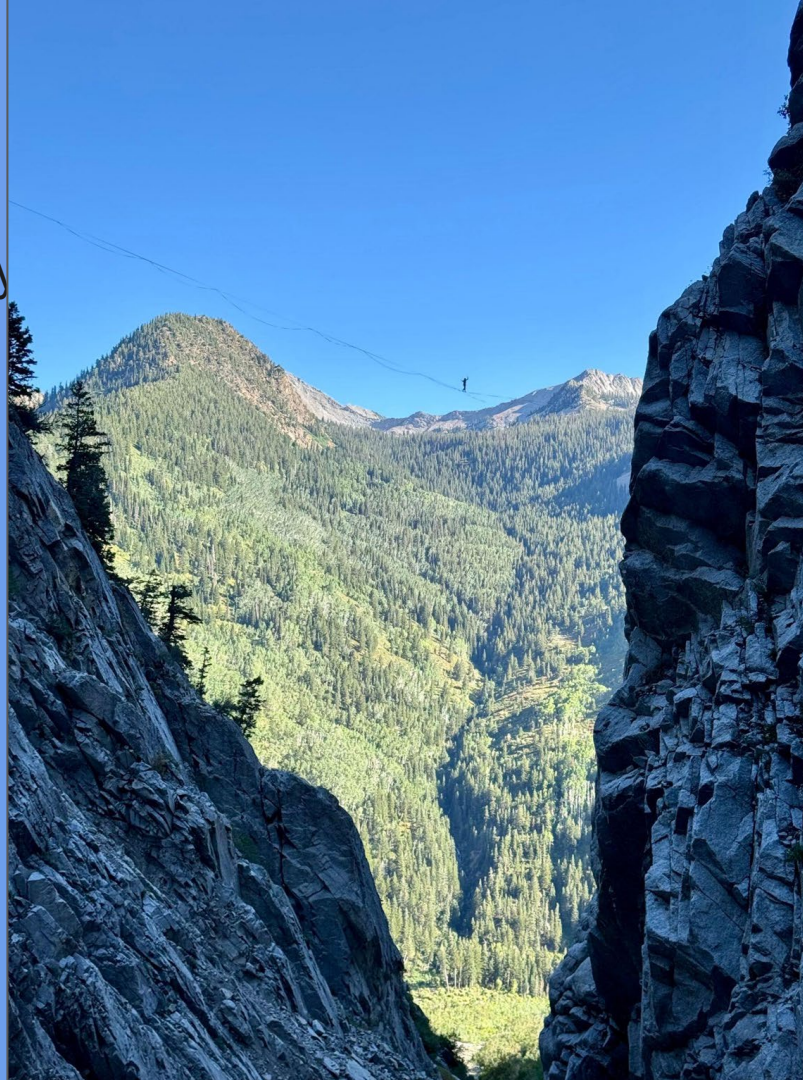
Can they turn on their AC or heat?

How will the choices we make now affect future function?

What happens to people who are starting with early impairment?

What happens to people who are in denial about their current impairments?

What happens to people who are poor self-managers?



Where and how we sit has an enormous effect on function.

As we age, we become the shape of wherever we sit.

An appropriately fitting chair is one of our most important passive management tools

*Used with permission

How well do your patients retain and follow your instructions?

Chronic disease management such as CHF Protocols

Ortho postoperative precautions for hip or spine

Determining the best venue of care for patients who need therapy?

Medicare rules create gaps for patients who are partially homebound.

VA rules can be easier to work with.

Outpatient

Can go to an outpatient clinic if they are ambulatory and have transportation.

Some payers are less restrictive and may receive care whether or not they are homebound.

Private Pay

Once considered only for the wealthy.

Coverage restrictions leave people with no choice.

Can more easily prioritize a patient's goals.

How can do you determine the best venue of care for patients who need therapy?

Home Health

If they are clearly homebound, home health can travel to them.

Home Health patients must be homebound.

They are considered homebound if:

1. They need the help of another person or medical equipment such as crutches, a walker, or a wheelchair to leave the home, or their doctor believes that their health or illness could get worse if they leave your home.
2. And, it is difficult for them to leave their home and they typically cannot do so.

Private Pay

Easier for clinicians go to the patient's home, so rates are usually higher.

Once considered only for the wealthy.

Coverage restrictions leave people with few options, especially when they can't leave their home.

Can more easily prioritize a patient's goals.

What are the effects of physical medicine and rehab interventions?

How do you find out if our work made difference?

We are fairly sure the notes our office sends you rarely give you much to go on.

The reports we receive from hospitals are widely divergent.

What would useful reporting from therapists look like to you?

EMR's don't want to talk to each other.

Clinicians in the field love to know if you have a preferred method for reporting progress.

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Please note citations for graphic are listed in their extensive bibliography.

Rocky Mountain Geriatrics Conference

Dan Mills, PT

Outpatient Physical Therapist

Cottonwood Heights, Utah

Clams, Quid, Bacon, Cabbage…money

- $4.9 Billion
- VC's, non-profit vs for-profit, small vs. large, balancing vertical integration
- Estimated 25-47% of hospital readmissions are preventable
- The paradox of perceiving no profit in healthy people is a complex interplay of societal, systemic, and industry-related factors.
- To break free from this paradox, a paradigm shift is necessary.
- Governments need to invest in preventive healthcare measures and should prioritize long-term well-being over short-term gains and maximum profits.
- Are economic incentives appropriately aligned?


mare

Measures and Study Design

- Sit to rise Test
- FIM, FIM-FAM
- CARE
- Katz Index
- SFGE
- Alusti Test
- RGA
- Geriatric 5M’s

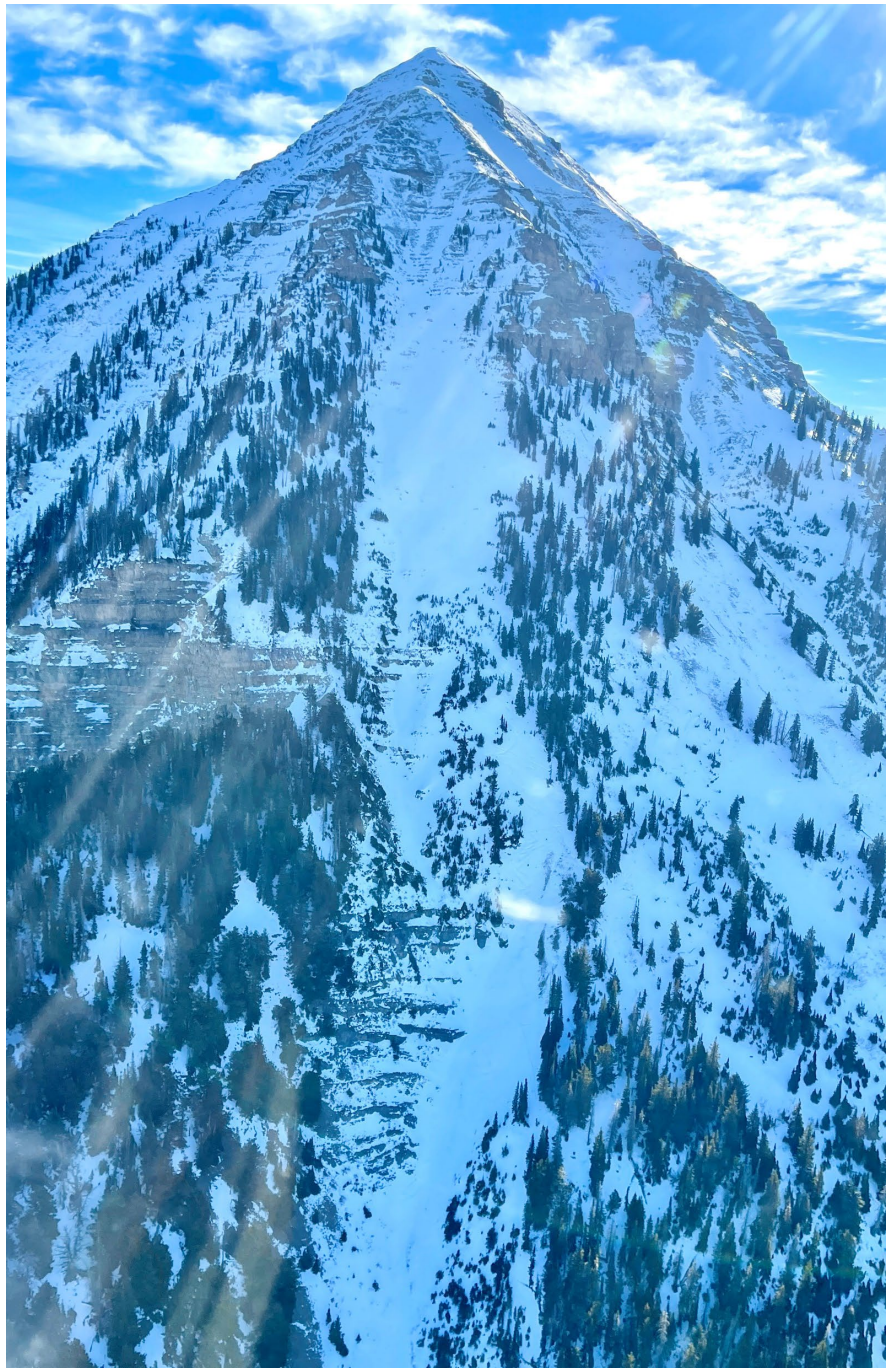
Physical Therapy as a Tool

Pro:

- The data consistently has shown that an orthopedic evaluation by a competent physical therapist is more accurate than any other healthcare provider, excluding an orthopedic surgeon that specializes in that body part.
- PT's are still underutilized for many non-MSK diagnoses that result in decreased mobility or function

Cons:

- PT continues to struggle with unwarranted variation in care



What is the Economic Value of Physical Therapy

- The American Physical Therapy Association has been wrestling with the best way to answer this question for decades
- 2020 APA Australian Physiotherapy Association study with help from the Nous Group
- “This report is the missing link to demonstrate that all the Physiotherapy treatments investigated were clinically effective, and delivered net economic benefits, with improvements in the quality of life experienced by patients. This will form the foundation for our Policy Strategic plan for all stages of life in a patient's health journey.” –Scott Willis APA President 2020

Design

- In this report, net costs aren't simply the billed costs of an intervention; they include direct nonintervention costs and indirect costs as well.
- These costs are weighed against the net benefit of an intervention, which was calculated by multiplying the value of a statistical life year, or VSLY, expressed in U.S. dollars, by the quality of adjusted life years associated with the intervention.
- Viewed in this way — an approach that incorporates the economic benefits of quality-of-life improvements rather than simply comparing costs — physical therapist services were repeatedly found to be more cost-effective than alternative courses of care.

Economic Value of Physical Therapy

Conditions studied initially:

- Knee osteoarthritis.
- Carpal tunnel syndrome.
- Low back pain.
- Stress urinary incontinence.
- Tennis elbow.
- Vascular claudication.
- Falls prevention.
- Cancer rehabilitation.

Study highlights- “The Bottom Line”

- In every case, the use of physical therapy was associated with a net economic benefit to the health system compared with alternative types of care.
- Those benefit estimates include:
  - $4,160 for acute low back pain
  - $10,129 for stress urinary incontinence
  - $39,533 for carpal tunnel syndrome

What Next?

- Novel approaches are being tested in every setting.
- Can PT be utilized earlier or more effectively to land patients back in their homes?
- Are non-MSK diagnosed patients accessing care when it could return them to the home or decrease re-admission?
- Where are the unexplored opportunities for our geriatric population here in Utah?
- Are patient needs taking priority over algorithmic care when we find outliers?

Things that get me excited in 2025!

- Breakthroughs in anti-aging science
- Cellular Reprogramming
- Targeting senescent cells
- NAD+ rejuvenation
- Plasma exchange therapy:
- Rapamycin
- Advances in neurodegenerative disease
- Synaptic resilience
- Epigenetic clocks and aging speed
- Glucagon-like peptide 1 (GLP-1) and dementia risk
- Clinical practice and care delivery
- Advanced primary care: New optional add-on codes for Advanced Primary Care Management (APCM) services
- Impact of care planning
- Disparities in dementia care
- Insights into general aging processes
- New muscular aging clock
- Ovarian aging


LACROSSE

Welcome to the No Falls Zone

Interdisciplinary Care to Outwit Gravity
A PT's Perspective

Nikki D. Pappas, PT, DPT, SCCE, Board Certified Clinical Specialist in Geriatric Physical Therapy

We shall discuss…

- Why falls matter
- How do we prevent falls in the hospital?
- Creating a No Falls Zone Culture
- Call to Action

Who is here?

- MDs? Nursing? Therapists? Other providers?
- How many of you have walked with a patient recently?
- How many have prevented a fall?
- How many are super scared to move patients?

It always bears repeating…

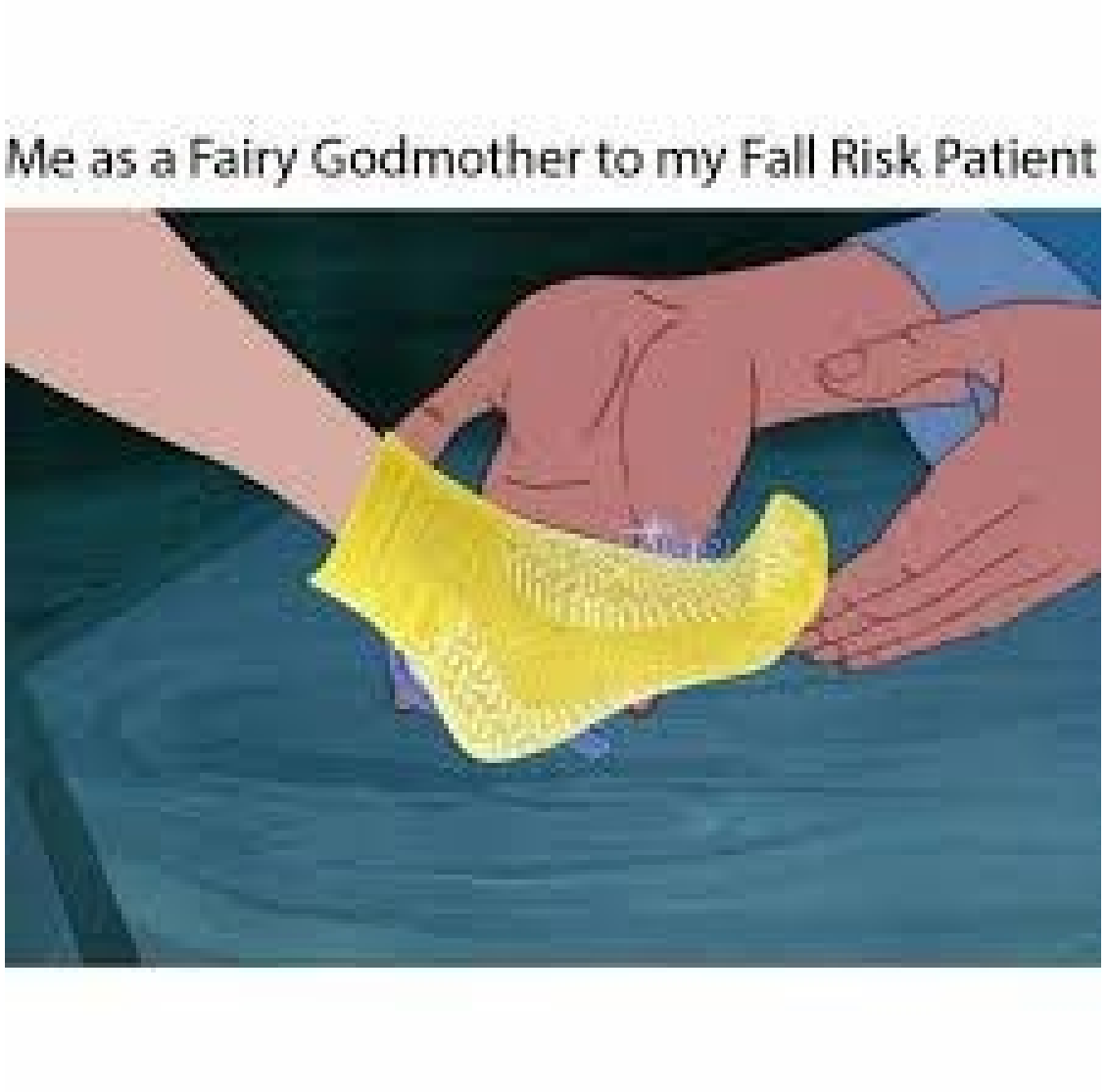
WHY FALLS MATTER

Why Falls Matter: Patients

- 1 in 10 falls result in injury that restrict older adults' mobility.
- Each year, 3 million older adults visit emergency departments.
- Falls lead to fractures or hips/other bones, TBI, and ultimately death.

Why Falls Matter: Healthcare Providers

- Patient falls increase the risk of injury for healthcare staff
- Therapy and nursing staff can injure joints, spine or muscles while attempting to prevent falls



Why Falls Matter: Institutions

- Patient falls are the most common adverse events reported in hospitals.
- Cost: harm, longer stays, reduced quality of life.
  - Associated with ~$80 billion in healthcare costs in 2020

Patient-Centered Strategies to Outwit Gravity

HOW DO WE PREVENT FALLS IN HOSPITALS?

Perception Shift

Patients

- "I'm too weak to get up?
- "I need to rest to get stronger"
- "I just had surgery!"

Providers

- "The patient is too unsteady/sick/tired/painful to get out of bed."

- These ideas are common and incorrect!

Me showing up to my patient's door:
Do you have a moment to talk about the benefits of early mobility?

Early Mobilization: The Antidote to Falls

- You're Good At What You Practice!
- Bed rest leads to 1–5% muscle loss per day.
- Mobility builds strength and improves cardiopulmonary function.
- Mobility prevents delirium, pneumonia, and pressure injuries.

Patient Participation – Let Them Do It!

- If we do it for them, they lose it.
- Encourage walking to bathroom, sitting for meals, and significant time in the bedside chair.
- ADLs like dressing and grooming.
- Independence builds strength and reduces falls.

Delirium Prevention: The Hidden Fall Risk

- Clear minds, steady feet.
- Delirium triples fall risk.

Prevention:

- Lights on
- Regular mobility
- In the chair
- Orientation: clocks, calendars, family presence
- Sleep hygiene

It takes a village

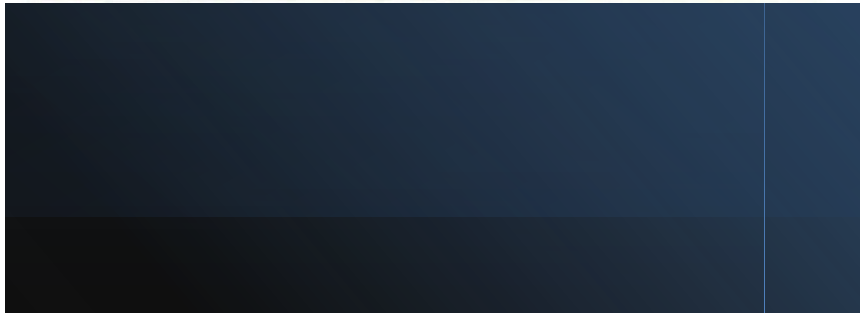
CREATING A NO FALLS ZONE CULTURE

The No Fall Zone Culture

- Preventing falls ≠ restricting mobility.
- Safe mobility is the ultimate prevention strategy.
- What patients do for themselves, they keep.

The Famous 5 P's: Not Just Nursing!

- 💊 Pain – uncontrolled pain leads to unsafe movement.
- 🚽 Potty – toileting needs = fall risk.
- 🛏️ Position – prevents falls & pressure injuries.
- 📱 Possessions – keep objects within reach.
- 🤦‍♂️ Prevent – proactive rounding anticipates needs.



Environmental Management = Safer Spaces

- Lights on
- Walkers/Canes within reach
- Declutter
- Bed/Chair alarms
- Every detail matters.

Morning Rounds: Our Daily Huddle Against Gravity

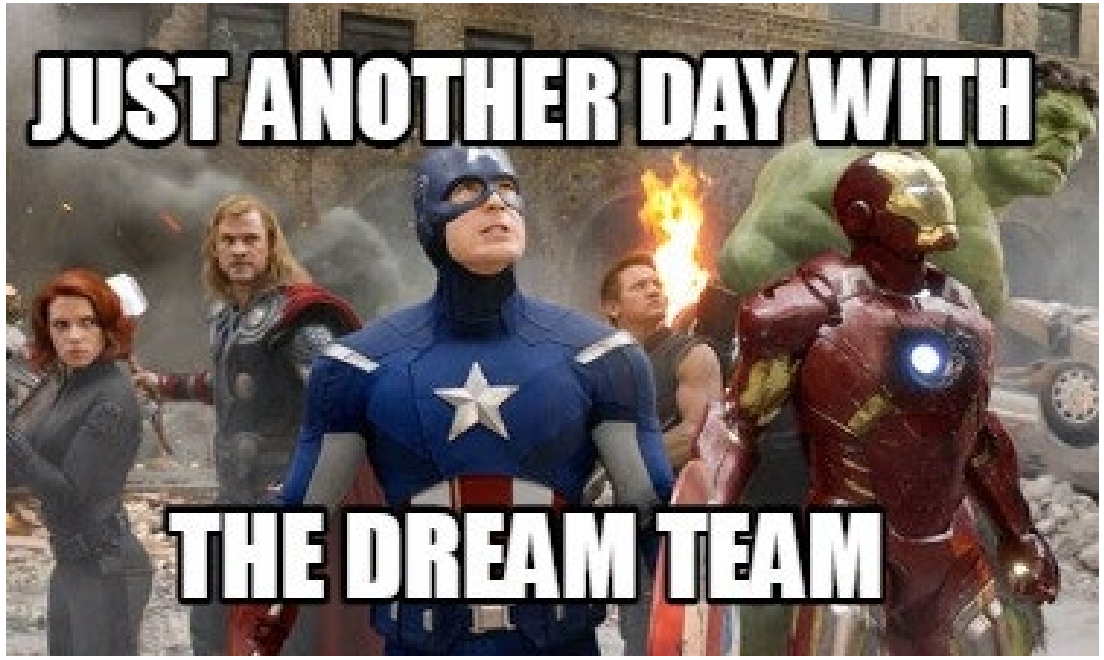
- It takes a village… every morning.
- Short updates: status + discharge plan.
- Team: MD, RN, PT, OT, SW, utilization, discharge planners.
- Opportunities: spot delirium, device needs, new diagnoses, mental health, mobility changes.
- Micro-conversations = macro-prevention.

Nursing Staff Training

- The Use Your Words Program
  1. State the Task
  2. Use Your Words
  3. Use the Equipment
  4. Use Your Body

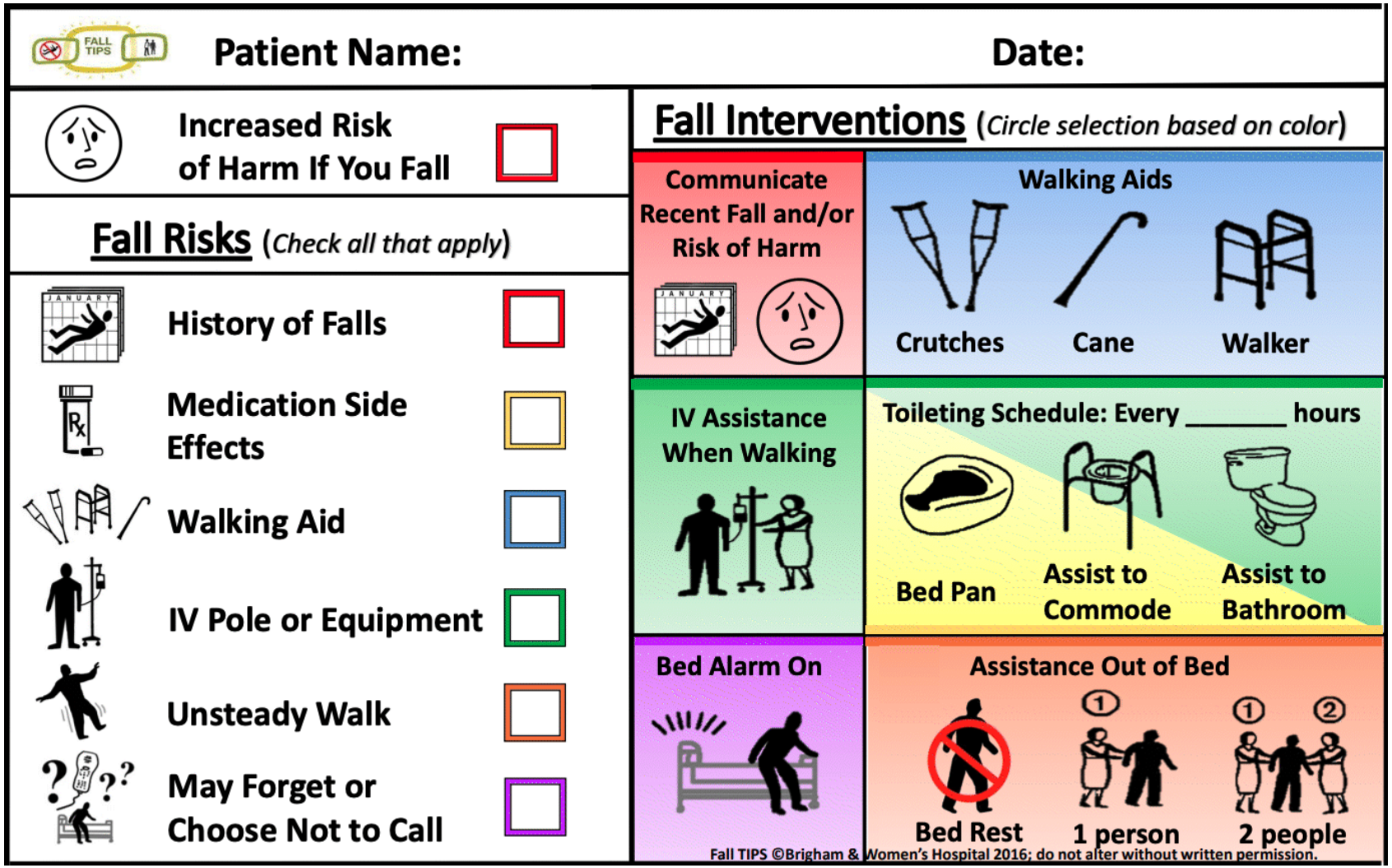
Interdisciplinary Collaboration = Secret Ingredient

- MD, PT, OT, SW, NPL, = Miracle Squad
- Consistent messaging to the patient
- Communication + shared goals = safer patients.



What we can start doing tomorrow to reduce falls

CALL TO ACTION



Install TIPS Boards

Staff Training

- *Independent Patients*
  - Keep moving!
- *Dependent Patients*
  - Use lifts, scooting devices, etc.
- *In-Between Patients*
  - Use Your Words!
  - Train staff to encourage patients to perform as much as they can.
  - Staff safe positioning
  - Strategic equipment use
    - Gait belts, lifts, hospital beds

No Falls Zone

- Create a culture where everyone agrees:
  - Lights should remain on during the day
  - Patients should spend as much time in the chair as possible
  - You are good at what you practice

Any Other Ideas?

Based on the information presented, what else could be done today?

In Conclusion

- We can prevent 100% of falls… if we keep our patients in bed.
- Humans are more complicated.

- We need everyone on board to help keep our patients strong, oriented, and gravity gladiators.

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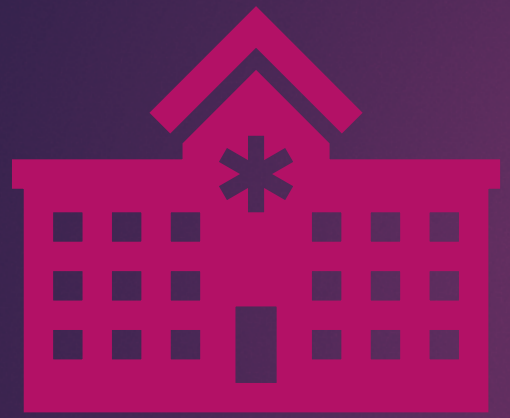


From Hospital to Home: Common Sense Nutrition Strategies for Complex Transitions of Care

KRISTIN HUEFTLE, MD, CMD
ASSOCIATE CLINICAL PROFESSOR, DIVISION OF GERIATRICS, UNIVERSITY OF UTAH
MEDICAL DIRECTOR, WILLIAM E CHRISTOFFERSEN SALT LAKE VETERANS' HOME

LACEY WATSON, BSN, RN, WCC, IP
DIRECTOR OF NURSING, WILLIAM E CHRISTOFFERSEN SALT LAKE VETERANS HOME

KEELAN CUYLER, M.S, CCC-SLP
DIRECTOR OF REHABILITATION, WILLIAM E CHRISTOFFERSEN SALT LAKE VETERANS HOME

Learning Objectives

- Describe common nutrition-related challenges faced by older adults during transitions from hospital to long-term care or home settings.
- Recognize the impact of strict dietary restrictions on patient quality of life, emotional well-being, and compliance.
- Apply patient-centered strategies to liberalize diets while balancing medical risks and goals of care.
- Evaluate the role of interdisciplinary collaboration in managing complex nutrition needs in geriatric patients.
- Document and communicate patient preferences and noncompliance effectively to support ethical and compassionate care planning.

Disclosures

- Some recommendations discussed in this presentation are not evidence-based and may conflict with established treatment guidelines.
- This is intentional, as the focus of this discussion is to highlight that guideline-driven care may not always align with individual patient goals and values.

Ms. B

- 69 y/o F with hx HFpEF 2/2 rheumatic heart disease, s/p multiple valve replacements admitted to VNH for post-acute care following hospitalization for recurrent falls 2/2 syncope.
- **Geriatric Review of Systems:**
  - ADLs: Mod I with ADLs, WC dependent
  - iADLs: Dependent except telephone
  - Code Status: DNR/DNI, limited interventions, no artificial nutrition

Pertinent Meds:

- Bumetanide 4 mg BID, Metolazone 15 mg (Mon/Thu), Spironolactone 25 mg daily, Amiodarone 200 mg daily, Warfarin (INR goal 2.5-3.5), Empagliflozin 12.5 mg daily
- Numerous psychotropic and centrally acting medications: oxycodone, aripiprazole, prazosin, baclofen, venlafaxine, pregabalin, hydroxyzine, pramipexole, trazodone

Other PMHx:

- HFpEF with CardioMEMS
- COPD on 3L O2
- Insulin-dependent T2DM (HgbA1c 9.1%)
- Chronic pain
- Psych: Depression, PTSD, Bipolar D/O
- MCI (MoCA 25/30)

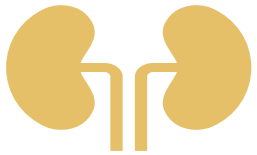
Nursing Facility Course….

- Numerous acute visits for SOB, fluid overload, weight gain
- Patient noncompliant with fluid and salt restriction
  - Applies **copious** amounts of ketchup during meal-times
  - Requests **2 glasses of V8 juice** with every meal, despite frequent education
  - Snacks in between meals, requests extra portions at meals
  - Staff note that patient becomes tearful and makes self-deprecating comments with repeated staff education
  - Signs risk vs benefit form acknowledging non-compliance with 2 L fluid and 2 gm Na restriction, understanding potential harms. Family aware

Facility course

- Frequent correspondences from cardiology team, expressing frustration with patient's volume status and diet noncompliance
  - Frequently request facility to "enforce cardiac diet" and restrict food options
  - Numerous lab draws and cardiology clinic follow ups
- Multiple hospitalizations within 3 months for acute decompensated heart failure
  - Discharge orders place emphasis on adherence to fluid and sodium restrictions, statements in hospital records suggesting "facility noncompliance with diet"
  - Patient usually adheres to diet for a couple days then reverts to old habits
  - Seen ~1x/week by providers d/t weight gain, SOB…

Panel Discussion



Hospitalized again in April 2023 volume overload requiring aggressive diuresis from 4/17-5/1

Fluid and sodium restriction removed to mimic home settings. Required hypertonic saline x 3 days

Medication changes:

- Spironolactone was increased from 25 mg BID to 100mg BID
- Bumex increased from 8mg BID to 10 mg BID
- Metolazone 10mg daily continued
- Started on 500mg Diamox daily

Discharged on hospice, passed away 2 months later

Mr. M

- 68 y/o M with hx Parkinson's disease, PD-associated dementia with visual hallucinations, anxiety. Initially admitted 4 yrs ago from ALF, now resides in memory care unit. Seen multiple time over last few months d/t frequent aspiration episodes, treated several times for aspiration pneumonia.
  - WC bound, dependent requires assistance with all ADLs
  - Cognitive/Mood: Hx anxiety, +VH, + delusions
  - Frequent falls, tries to pick up imaginary objects. Panic attacks when he "needs to meet his girlfriend for a date," impulsivity
  - Known dysphagia, on mechanical soft diet, eats at restorative table, keeps a lot of snacks in his room

- PMHx:
  - HTN/HLD
  - Insomnia
  - BPH
  - GERD
  - recurrent falls
  - TIA/CVA
  - chronic pain

Medications (18):

- Venlafaxine ER 225mg qam and 150mg qpm
- Mirtazapine 7.5mg qhs
- Melatonin qhs
- Clonidine 0.1mg qhs
- Tylenol 500mg TID
- Sinemet 25mg/250mg 1.5 tablets 5x/day
- Entacapone 200mg 5x/day
- Amantadine 100mg BID
- Tamsulosin 0.4mg daily, Finasteride 5 mg daily
- Cholecalciferol 2000 IU daily
- Simvastatin 20mg daily
- Plavix 75mg daily
- Omeprazole 20mg daily
- Bowel Regimen: Doc/senna 1 tab BID, MiraLAX daily
- PRNs: Mucinex 400mg q6h prn, Tramadol 50mg q6h prn

- SLP evaluates, downgraded to pureed diet with thin liquids
- Noncompliant with diet, often found with oreo cookie crumbs on beard. Frequently requesting regular texture foods
- ~30 lb weight loss over 4 months (170 lbs→138 lbs)
  - Poor PO intake, requires frequent IV fluids
- POLST form (completed on admission) states FULL CODE, trial of artificial nutrition
- Family meeting held to discuss goals of care…

Panel Discussion

Multiple Family Meetings Later….

- Patent able to state that he would prefer to be allowed to drink liquids as he desires and to be upgraded to mechanical soft diet.
- Risks vs benefits of not adhering to aspiration precautions explained, patient signs RvB acknowledging understand, family present
- POLST form updated to reflect limited interventions/comfort-based approach
  - NO artificial nutrition or chronic IV fluids
- Admitted to hospice

Final Med List

- Oxycodone 2.5 mg Q 8 hrs prn pain
- Zyprexa 15 mg QHS
- Paxil 40 mg daily
- APAP 1gm q TID
- Bisacodyl suppository 1 PR daily prn
- Carbidopa levodopa 25-250 mg 1 tablet p.o. 5 times daily
- Cholecalciferol 2000 units daily
- Entacapone 200 mg p.o. 5 times daily
- Zofran 4 mg every 4 hours as needed nausea vomiting
- MiraLAX 17 g p.o. 3 times daily scheduled
- Docusate senna 1 tablet p.o. twice daily
- Tamsulosin 0.4 mg p.o. nightly
- Total: 12 meds (11 PO)

Notable Med changes:

- Tapered off clonazepam
- Venlafaxine and mirtazapine switched to Paxil 40 mg daily (sexual inappropriateness)
- Sinemet reduced from 1.5 tablets 5x/day→ 1 tab 5x/day
- Tapered off clonidine
- Statin, PPI, melatonin, amantadine, Plavix, finasteride DC'd
- Trialed on escalating doses of Seroquel for distressful hallucinations leading to falls, no improvement

  → switched to Olanzapine ODT, behaviors, falls decrease
- Tramadol switched to Oxycodone

Hospice Course

Enrolled May 2023

- *Admit weight 131 lbs (5/2023)*

Weight plateaus at 151 lbs (12/2023)

Falls decrease from multiple falls/month→ <1/month

Passes away August 2024

Take Home Points

- Clarify and respect **patient goals and values**.
- Liberalize diets to improve **satisfaction**, reduce **dehydration**, and prevent **sarcopenia**.
- Consider **home logistics** when recommending strict diets.
- Simplify **medication regimens** to reduce pill burden.
- **Aspiration risks** may persist despite restrictions.
- Document **refusals and noncompliance**; involve families.
  - Document informed consent with diet risks versus benefits form
- Remember: **Guidelines are just guidelines**—patient-centered care is paramount.

Thank You!!!

GERIATRIC SURGERY VERIFICATION

Jessica Cohan, MD, MAS, FACS, FASCRS
Associate Professor of Surgery
Department of Surgery
University of Utah and Huntsman Cancer Institute

UNIVERSITY OF UTAH HUNTSMAN CANCER INSTITUTE

U HEALTH UNIVERSITY OF UTAH

Rocky Mountain Geriatrics Conference SLC, UT 2025

DISCLOSURES…

I AM GOING TO TELL YOU ABOUT A PROGRAM I HAVE NEVER IMPLEMENTED

However, I am:

- Passionate about improving care for older adults
- A proud member of the Age-Friendly Collaborative team at U of U

Data Quality Partners
Kencee Graves MD, Steven Johnson MHA
Nurse Quality: Lori Larsen RN, Jen Simmons RN, Danielle Perrine RN, Hilarey Mills RN
MGA: Ashley Clark
DFCM: Chanda Sundara MBA

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Geriatrics Division Associate Chief for Age-Friendly Care
Timothy Farrell, MD, AGSF

IHI Collaborative co-lead
Andrea Harris, RN, MS

Program Manager
Heather Podolan

Inpatient Data Quality Lead
Michael Ormsby

Research Lead
Jorie Butler, PhD

Ambulatory Data Quality Lead
Chanda Sundara, MBA

Institute for Healthcare Improvement

Age-Friendly System-Wide Spread Collaborative
Begins April 2024

Images curtesy of
Dr. Tim Farrell, U of U

Age-Friendly Health Systems
Committed to Care Excellence for Older Adults

CMS Age Friendly Hospital Measure Domains

- Eliciting patient healthcare goals
- Responsible medication management
- Frailty screening and intervention
- Social vulnerability
- Age friendly care leadership

Collaborative Team Members

Geriatric Pharmacy: Melissa Green, PharmD
Physical Therapy: Tyson Field, Jenny Sinclair RN, Whitney Meier PT, DPT
Patient Experience: Mari Ransco, MA
Geriatric Psychiatry: Anne Asman MS, Karina Rasmussen, Briana Velarde MS
Nurse Care Management: Tiffany Noss RN
Surgery: Jess Cohan MD, Cali Johnson MD
ED: Aimee Mclean RN, Micah Ownbey MD
Guest Communications: Kimberly Holland, Angela Valerio, Janess Wood
Hospital Elder Life Program (HELP): Lauren Chamberlain, Chelsee Marshall RN
Inpatient Geriatric Consult Service: Megan Puckett MD
Eccles Health Sciences Library (EHSL): Nena Schvaneveldt MSLS, Elaine Thornton MS EdD MA, Catherine Soehner MLS BSN
Geriatrics Division Administration: Ashley Cadiz, MS
Dentistry: Alberto Varela, DDS

Hospital Elder Life Program HELP

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS ACCREDITED GERIATRIC EMERGENCY DEPARTMENT

AGS | OLDER ADULTS VACCINE INITIATIVE

Guiding an Improved Dementia Experience (GUIDE) Model

AFU Age-Friendly University Global Network

DISCLOSURES…

I AM GOING TO TELL YOU ABOUT A PROGRAM I HAVE NEVER IMPLEMENTED

However, I am:

- A daughter of aging parents

DISCLOSURES…

I AM GOING TO TELL YOU ABOUT A PROGRAM I HAVE NEVER IMPLEMENTED

However, I am:

- A daughter of aging parents

OVERVIEW

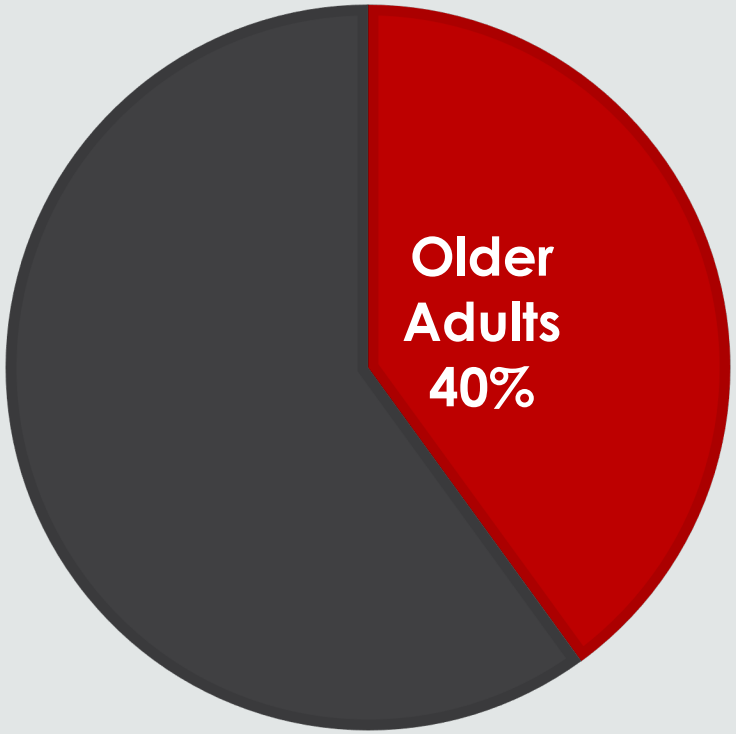
1 Overview of GSV

2 Evidence for use

3 Benefits, barriers, opportunities


GSV is a playbook that is valuable no matter where your institution is on the **Age-Friendly journey**

INPATIENT SURGICAL CASES IN THE US



OUTCOMES AFTER MAJOR SURGERY IN OLDER ADULTS

Death 4%

Nursing Home 14%

Functional Decline 45%

Complications 25%

Delirium 18%

Cognitive Decline 25%

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ACS GSV Website; Watt et al. BMC Med 2018; Kown et al. Am Surg 2012; Zhang et al. JAMA Surg 2020

OPTIMAL PERIOPERATIVE MANAGEMENT OF THE GERIATRIC PATIENT:

Best Practices Guideline from ACS NSQIP®/American Geriatrics Society

J Am Coll Surg 2016 PMID: 27049783

Preoperative Assessment in Older Adults: A Comprehensive Approach

Chandrika Kumar, MD, Yale University School of Medicine, New Haven, Connecticut
Brooke Salzman, MD, Thomas Jefferson University, Philadelphia, Pennsylvania
Jessica L. Colburn, MD, Johns Hopkins University School of Medicine, Baltimore, Maryland

Am Fam Phys 2018 PMID 30215973

ASCRS
American Society of Colon & Rectal Surgeons

CLINICAL PRACTICE GUIDELINES

Evaluation and Management of Frailty Among Older Adults Undergoing Colorectal Surgery

Dis Col Rec 2022 PMID: 35001046

2016

Age-Friendly Health Systems

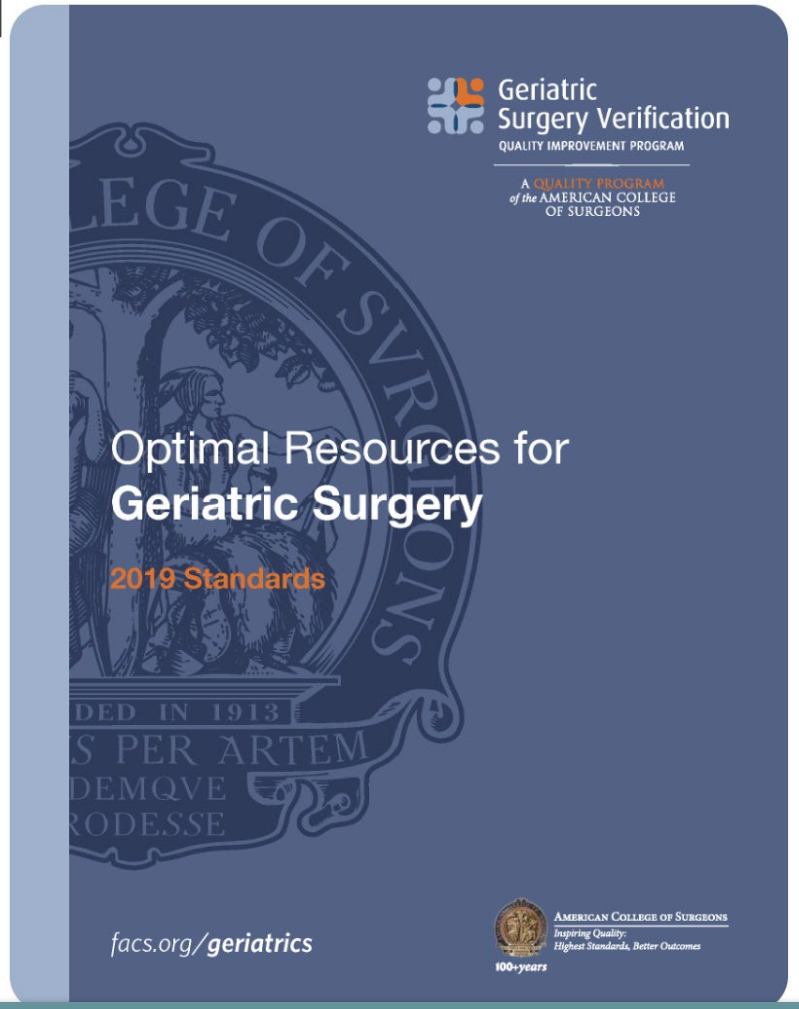
CMS.gov | Centers for Medicare & Medicaid Services

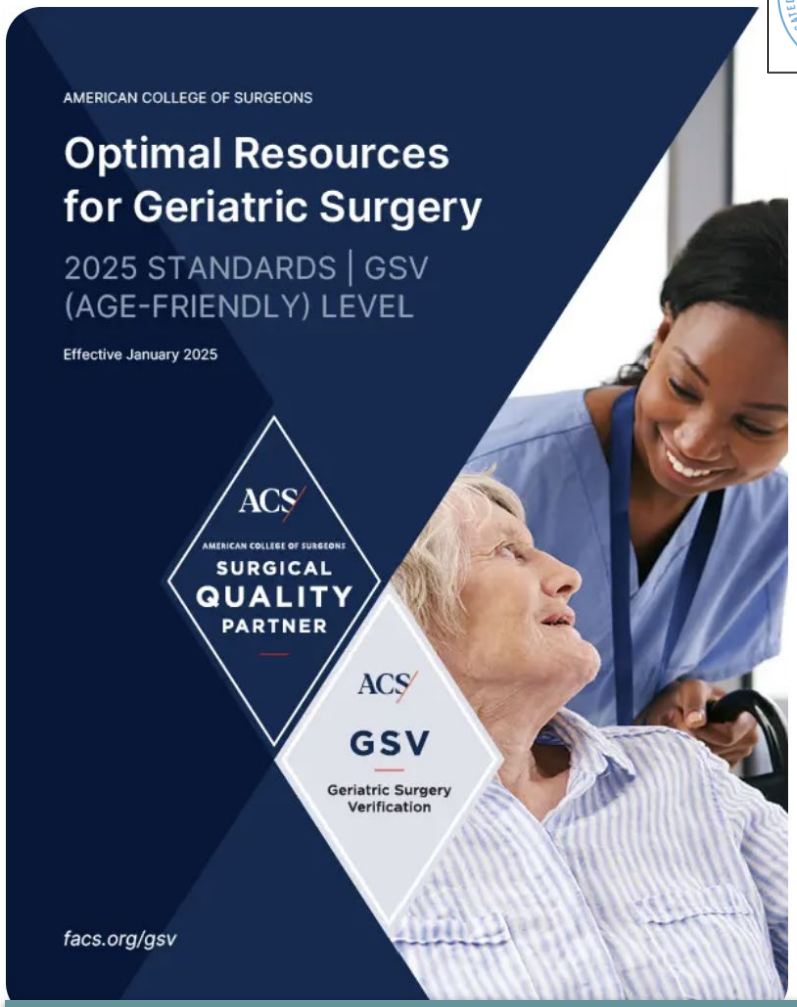
2025

New CMS Age-Friendly Hospital Measure Approved

GERIATRIC SURGERY VERIFICATION

2 PROGRAMS



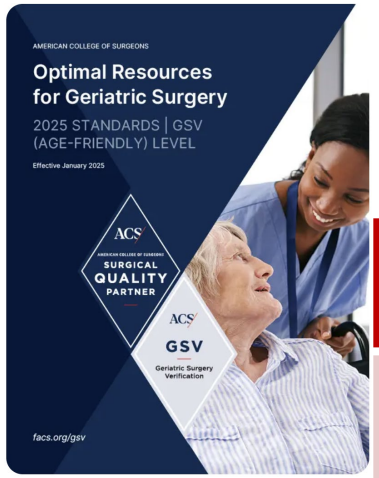


Original GSV: 25 accredited hospitals

Age Friendly Level: Pilot Program

https://www.facs.org/quality-programs/accreditation-and-verification/geriatric-surgery-verification/standards/

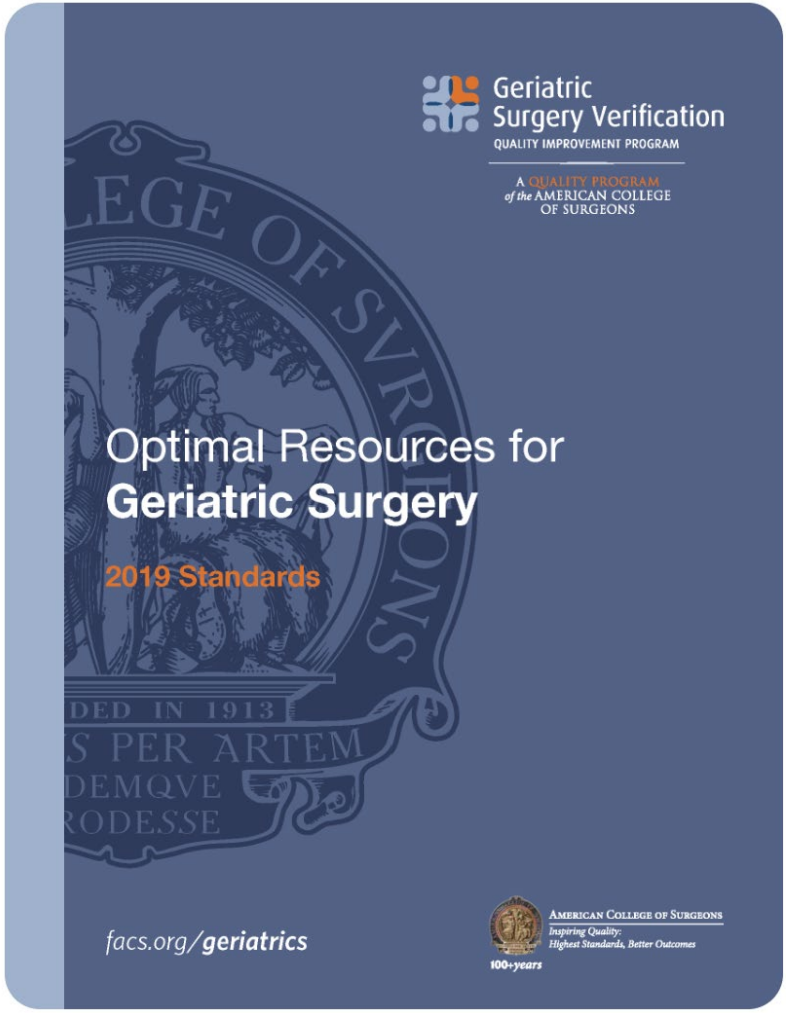
https://www.facs.org/find-a-hospital/?nearMe=off&companyType=GSV&orderBy=a-z

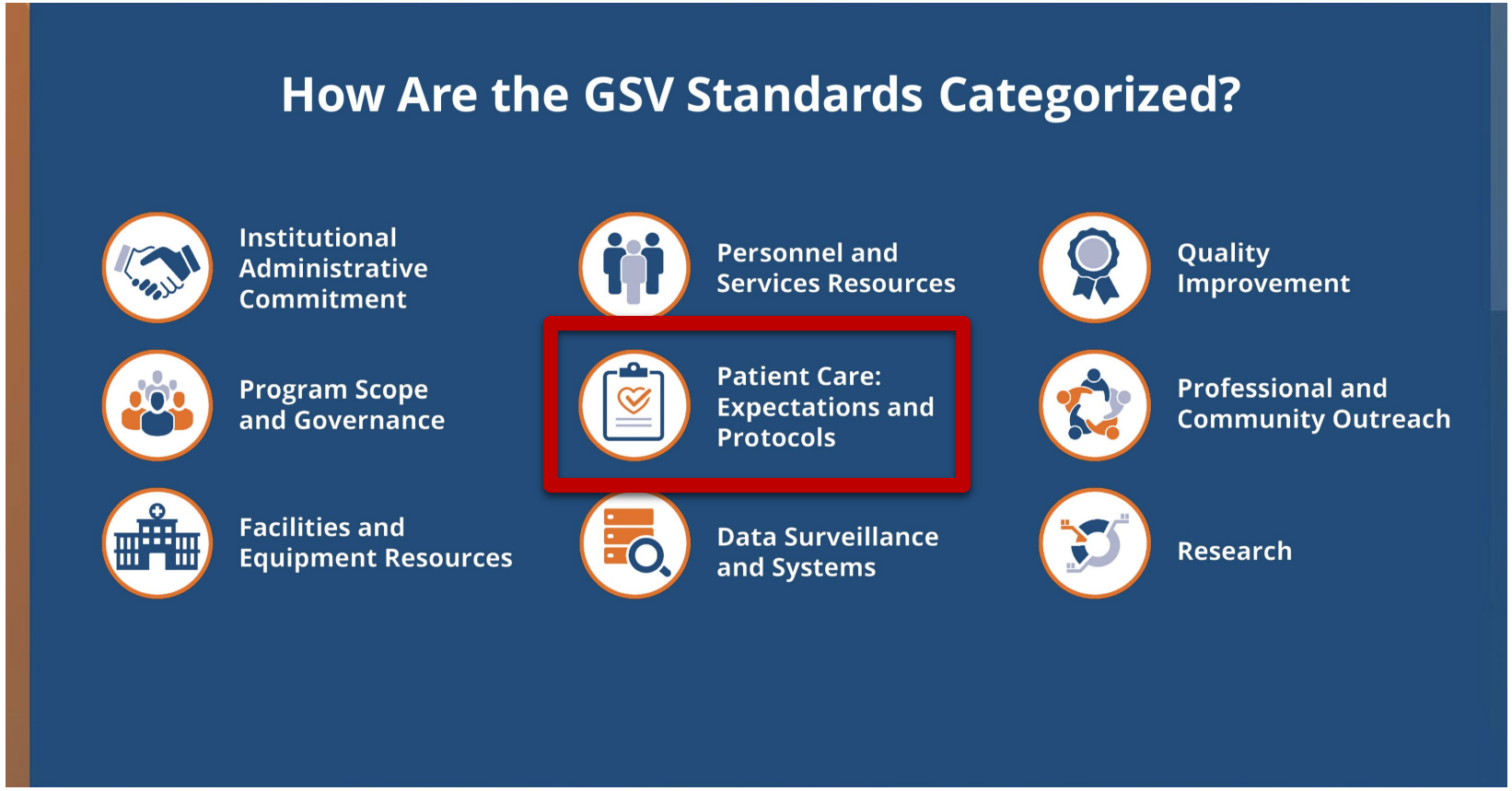


GSV Program	# Standards	Patient age	% Reach	Certification	Cost
Age Friendly Level	6	≥65	100%	3-hour virtual	$10,000/year ($5,000 rural/govt)

https://www.facs.org/quality-programs/accreditation-and-verification/geriatric-surgery-verification/levels-of-participation/

GSV: ORIGINAL PROGRAM





https://www.facs.org/quality-programs/accreditation-and-verification/geriatric-surgery-verification/standards/
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GSV PATIENT CARE STANDARDS

Preoperative | Surgery | Inpatient | Transitions of Care

Patient Identification
- ❑ ≥ 75 years
- ❑ Inpatient elective surgery

Preop Evaluation
- ❑ Screen for:
  - ❑ Cognition & Delirium risk
  - ❑ Functional status & Mobility
  - ❑ Nutrition & Swallowing
  - ❑ Need for Palliative Care
- ❑ Surgeon discuss/document patient health and treatment goals
- ❑ Advance Directive, Proxy

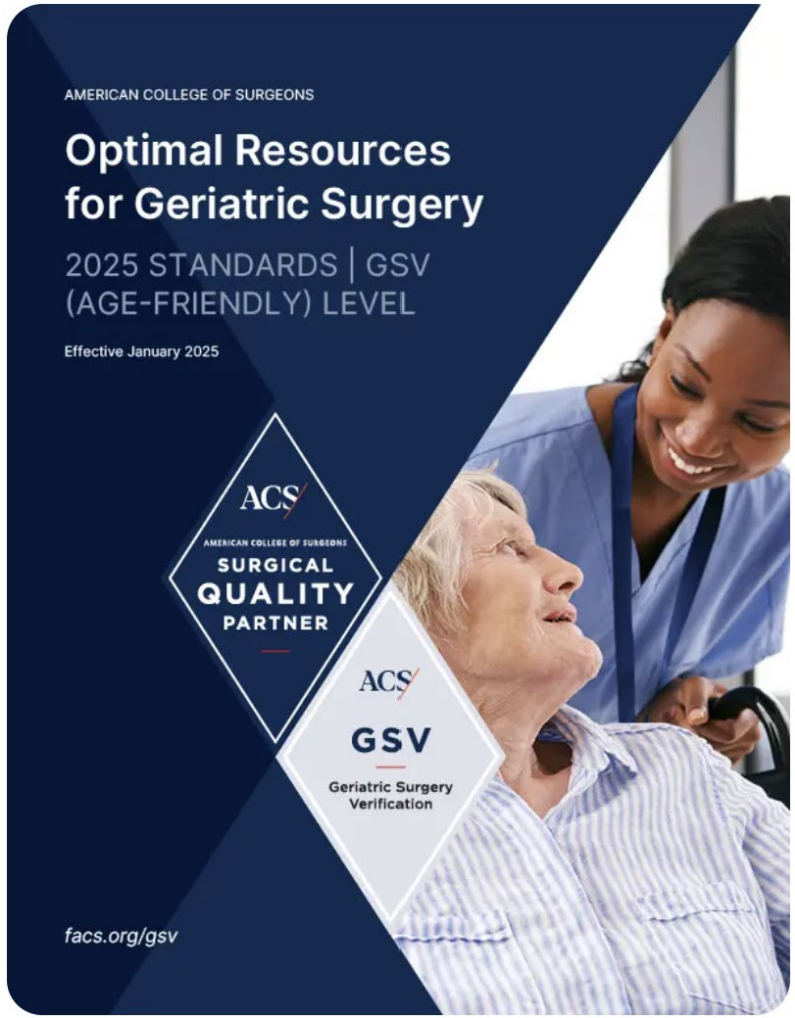
Preop Optimization
- ❑ Plan of care for positive screens
- ❑ Interdisciplinary Conference
- ❑ Revisit surgical decision
- ❑ Surgeon-PCP communication

Postoperative Care
- ❑ Standardized Postoperative Care (ERAS) with opioid sparing pain regimen
- ❑ Avoid high risk medications
- ❑ Delirium screening, prevention, management
- ❑ Function and mobility preservation
- ❑ Return personal sensory equipment
- ❑ Interdisciplinary rounding
- ❑ Age-friendly rooms
  - ❑ Large clock, daily goals names of care team
- ❑ Revisit goals of care for ICU patients q3 days

Discharge Transition
- ❑ Screen for:
  - ❑ Cognition & Delirium risk
  - ❑ Functional status & Mobility
  - ❑ Nutrition & Swallowing
- ❑ Plan of care for positive screens
- ❑ Plan of care communicated to:
  - ❑ Patient and caregiver(s)
  - ❑ PCP
  - ❑ Post-Acute Facility

Slide adapted from Dr. Gabby Poles at URMC

GSV: AGE-FRIENDLY LEVEL

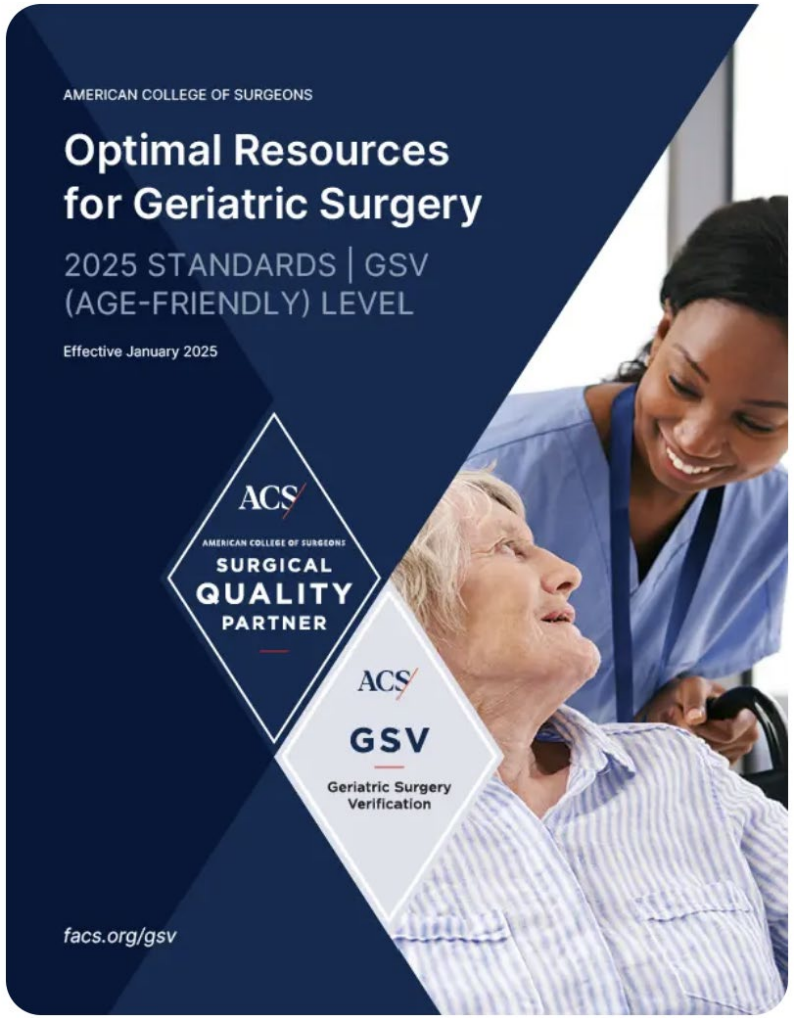


Standards align with CMS Age Friendly Hospital Measure

1. Age-Friendly Care Leadership
2. Treatment and Overall Health Goals
3. Geriatric Vulnerability Screens
4. Management Plan for Patients with Positive Geriatric Vulnerability Screens
5. Age-Friendly Postoperative Protocol
6. Data Review

https://www.facs.org/quality-programs/accreditation-and-verification/geriatric-surgery-verification/levels-of-participation/

GSV: AGE FRIENDLY LEVEL STANDARDS



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How Are the GSV Standards Categorized?

- Institutional Administrative Commitment
- Program Scope and Governance
- Facilities and Equipment Resources
- Personnel and Services Resources
- Patient Care: Expectations and Protocols
- Data Surveillance and Systems
- Quality Improvement
- Professional and Community Outreach
- Research

32 Standards -> 6 Standards

GSV AGE FRIENDLY LEVEL STANDARDS

Preoperative | Surgery | Inpatient | Transitions of Care

Patient Identification

- ❑ ~~≥ 75 years~~
- ❑ Inpatient elective surgery

~~Preop Evaluation~~

- ❑ Screen for:
  - ❑ Cognition & Delirium risk
  - ❑ Functional status & Mobility
  - ❑ Nutrition & Swallowing
  - ~~Need for Palliative Care~~
  - ❑ Social Determinants of Health
- ~~Surgeon discuss/document~~
- ❑ Health and treatment goals
- ❑ Advance Directive, Proxy
- ~~Discuss life sustaining rx~~

~~Preop Evaluation~~

- ❑ Plan of care for positive screens
- ~~Interdisciplinary Conference~~
- ~~Revisit surgical decision~~
- ~~Surgeon-PCP communication~~

Postoperative Care

- ❑ Standardized Postoperative Care (ERAS) with opioid sparing pain regimen
- ❑ Avoid high risk medications
- ❑ Delirium screening, prevention, management
- ❑ Function and mobility preservation
- ~~Return personal sensory equipment~~
- ~~Interdisciplinary rounding~~
- ~~Age-friendly rooms~~
  - ~~Large clock, daily goals names of care team~~
- ~~Revisit goals of care for ICU patients q3 days~~

Discharge Transition

- Screen for:
  - ~~Cognition & Delirium risk~~
  - ~~Functional status & Mobility~~
  - ~~Nutrition~~
  - ❑ Social Determinants of Health
- ❑ Plan of care for positive screens

—

- ~~Plan of care communicated to:~~
  - ~~Patient and caregiver(s)~~
  - ~~PCP~~
  - ~~Post-Acute Facility~~

Slide adapted from Dr. Gabby Poles at URMC

GSV AGE FRIENDLY LEVEL STANDARDS

Preoperative | Surgery | Inpatient | Transitions of Care

Patient Identification
- ❑ ≥ 65 years
- ❑ Inpatient elective surgery

Day of Surgery/Admission
- ❑ Screen for:
  - ❑ Cognition & Delirium risk
  - ❑ Functional status & Mobility
  - ❑ Nutrition & Swallowing
  - ❑ Social Determinants of Health
- ❑ Health and treatment goals
- ❑ Advance Directive, Proxy

Day of Surgery/Admission
- ❑ Plan of care for positive screens

Postoperative Care
- ❑ Standardized Postoperative Care (ERAS) with opioid sparing pain regimen
- ❑ Avoid high risk medications
- ❑ Delirium screening, prevention, management
- ❑ Function and mobility preservation

Discharge Transition
- Screen for:
  - ❑ Social Determinants of Health
- ❑ Plan of care for positive screens

Slide adapted from Dr. Gabby Poles at URMC

GSV: BENEFITS (STANDARD PROGRAM)

Patients go home earlier

1-2 day reduction in median LOS[1-4]

Patients do better

Non-home discharge ↓ 16-18%[4,5]
Loss of independence ↓ 15%[3]
Major complications ↓ 8-24%[1,3,5]
Readmission ↓ 10%[1]

Care costs less[6]

All older adults: ↓ $2,000 per patient
Frail older adults: ↓ $8,000 (total); $4,000 (direct)

Caveats

Complex, heterogeneous programs

Historical Controls:
-Retrospective vs prospective
-Changes in practice

Inclusion Criteria:
-Heterogeneous
-Most included adults age ≥65

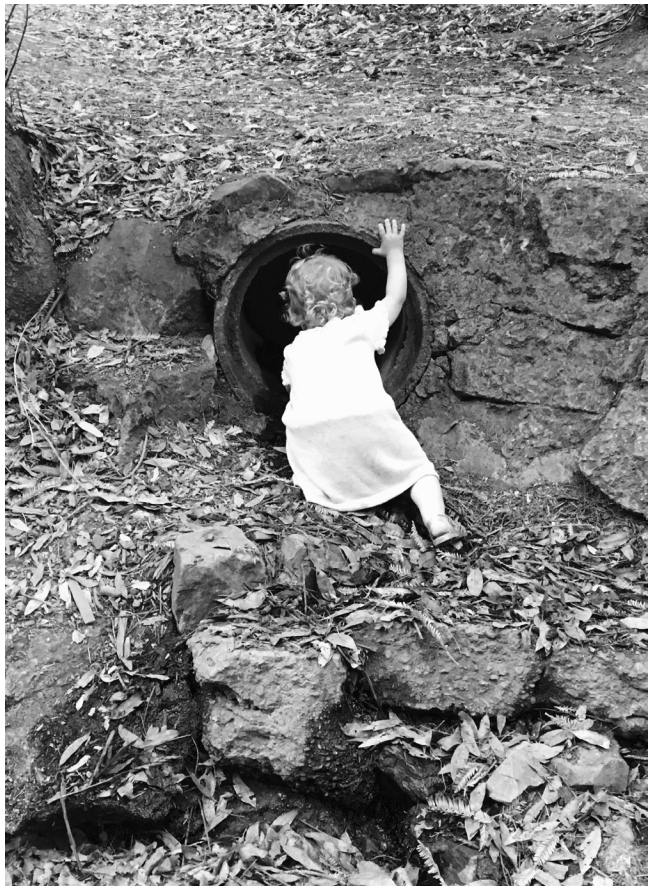
1. McDonald SR, Heflin MT, Whitson HE, et al. JAMA Surg. 2018; 153:454-462. (Duke POSH clinic)
2. Jones TS, Jones EL, Richardson V, et al. J Am Geriatric Soc. 2021;69:1993–1999. (Rocky Mountain Regional VAMC)
3. Ehrlich AL, Owodunni OP, Mostales JC, et al. Ann Surg. 2022;277:e1254-e1261. (Johns Hopkins Bayview GSP)
4. Jimenez M, Salehi O, Somasundar P, et al. J Am Coll Surg. 2025 May 1;240(5):749-757. (Roger Williams Medical Center)
5. Salehi O, Zhao I, Abi Chebl J, et al. J Geriatr Oncol. 2025 Mar;16(2):102189 (Roger Williams Medical Center)
6. Ehrlich, AL, Owodunni, OP, Mostales, JC, et al. Ann Surg 2023 278(4):p e726-e732. (Johns Hopkins Bayview GSP)

Costs and Benefits of Geriatric Surgery Verification Program

Costs	Benefits
GSV program fee	↓ Length of stay
Program coordinator salary and benefits	↓ Postoperative delirium
Nursing time	Program coordinator revenue
Information technology time	↓ Readmission
	↓ Complications
	Patient satisfaction
	↑ Staff morale
	↓ Loss of independence
	Palliative care discussions
	Marketing

Katlic et al. Ann Surg Open. 2024 May 13;5(2):e439.

GSV: BARRIERS



- Cost (program coordinator, clinician to do assessments, program fees)
- IT infrastructure for data collection
- Implementing screening (What screen? Who does it? How to do it?)
- Asking more of frontline staff (additional screens, additional training)
- Management plans for screens (Do you have personnel? Capacity?)

BARRIERS

GSV Standards
Feeling "Boxed In"

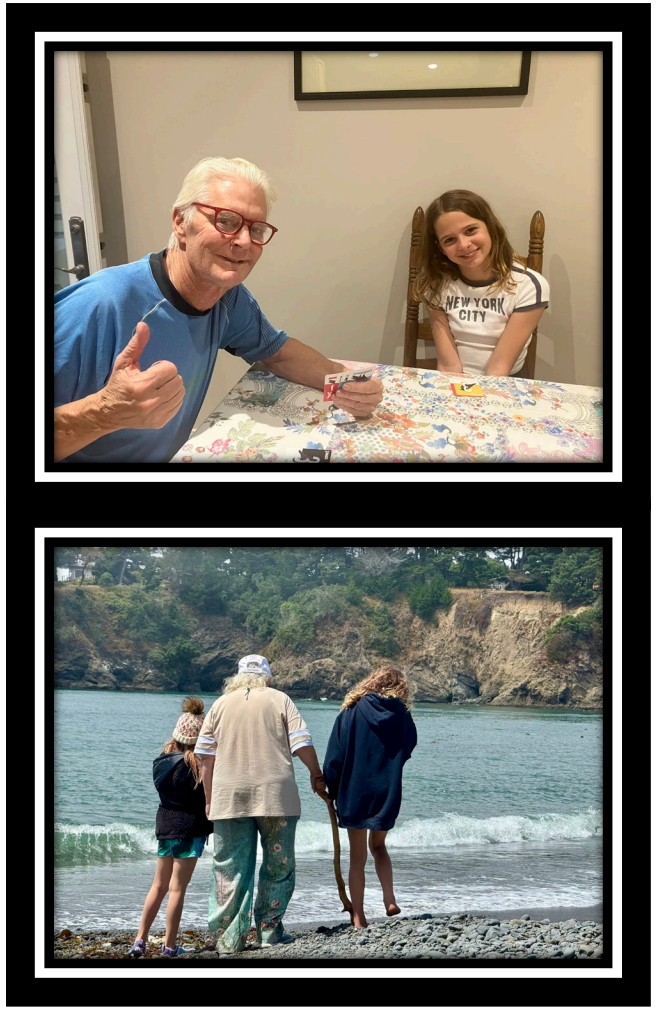
Real Life
Think "Outside the Box"

OPTIMIZING AGE FRIENDLY CARE IN SURGERY: OPPORTUNITIES

- Review your data
- Talk to patients, families, front line staff, and leadership
  - What matters? What bothers?
- Understand the gaps:
  - Where is the low hanging fruit?
  - What would be really meaningful?
  - What needs to be prioritized?
- Use resources like GSV, AFHS, and successful institutions for ideas about how to implement and measure outcomes

This work is important.

I wish you adventure, success and joy!



Jessica.Cohan@hsc.Utah.edu

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Name	Institution	Year/Journal	Sample Size	Design	LOS	Readmission	Complications	Non-home dc	Delirium	Loss of indep	Costs
Salehi	Roger Williams Medical Center	JGO 2025	95 age ≥65 (cancer)	Historical Controls			Composite Adverse Outcome 8 vs 29 p=0.01	6% vs 22% p=0.01			
Jimenez	Roger Williams Medical Center	JACS 2024	110 age ≥65 (cancer)	Historical Controls	4.4 vs 6.5 p<0.01		53 vs 28 *favoring control! P<0.01	7 vs 24% p=.03	No diff		
Ehrlich	Johns Hopkins Bayview	Annals 2022	533 age ≥65	Historical Controls (Prop matched)	2 vs 3 p=0.001		No diff			12 vs 27 p< 0.001	
Ehrlich	Johns Hopkins Bayview	Annals 2023	460 age ≥65	Historical Controls (Prop matched)	No diff		8 vs 24 p=0.02			*if multiplied by all pts in GSP savings of 165*2K =$330k = $165k/yr Frail N=65 $357,500 = $179k/yr total Direct $195k = $97.5k/yr	Direct and total costs decreased by $2k p<0.001; among frail total $5.5k direct $3k p<0.001
Jones	Rocky Mountain Regional VAMC	JAGS 2021	470 age ≥75	Single site vs VASQIP	4 vs 5 p<0.01		No diff (incl mortality)				
McDonald	Duke	Annals Open 2018	326 age ≥65	Historical Controls	4 vs 6 p<0.001 (1-day diff when strat by lap vs open)	8 vs 18 p<0.001	45 vs 59 p=0.01	Home w self care 62 vs 51 p=0.04 dc to snf not sig	28 vs 6 p<0.001 *favors control		

Enhancing Elder Care in the Peri-Operative Period: Inpatient Geriatric Consult Service

Shaun Chatelain, DO

University of Utah Health

Assistant Professor, Geriatrics

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I have no disclosures

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Case

- 87-year-old gentleman with medical history significant for Alzheimer's Disease Dementia, Vision Loss, Depression and GERD that presented for GLF with resultant hip fracture. Geriatrics consulted for behavioral disturbances at his memory care unit (prior to admission).
- Patient fell out of bed at Memory Care facility and landed on his L hip. Had difficulty standing up and EMS was called. L hip deformity was noted, and a traction splint was applied in the field.
- Imaging in the ED was remarkable for L IT femur fx. Patient was taken for intramedullary nail to repair fx. Tolerated this well.

Case continued

- At his memory care facility, he was having increased behaviors associated with his Alzheimer's disease dementia. These included verbal outbursts, excrement smearing (scatolia) and public exposure/urination.

Facility Rx list:

<u>Scheduled</u>
Buspirone 5 mg bid
Quetiapine 25 mg bid
Fluoxetine 20 mg daily
Memantine 5 mg bid
Trazodone 50 mg qhs

<u>PRN</u>
Morphine 20mg/ml PRN for agitation
Lorazepam 0.5 mg PRN for agitation
Diphenhydramine 25 mg PRN for agitation
Acetaminophen 650 mg q6h PRN for pain

Case continued

- Interestingly, on admission several of these Rx were held d/t surgery and needing to verify a med rec. According to patient's family he was doing much better without these Rx. His mental status was closer to his baseline, and he did not have the behaviors noted at his Memory Care Facility.

- Where to go from here?

Why an Inpatient Consult Service?

- Extend our expertise to the inpatient setting, especially in the peri-operative period
- But why?
    - Surgical risk increases with age (intra-op and post-op)
    - To optimize LOS and inpatient outcomes
    - Lower risk of adverse events (medication side effects, acute kidney injury)
    - Educate primary teams on Geriatric syndromes
    - Identify patients in need of Geriatric medicine PCP

What does the literature say?

Received: 5 February 2024 | Revised: 25 April 2024 | Accepted: 2 May 2024

DOI: 10.1111/jgs.18977

CLINICAL INVESTIGATION

Journal of the
American Geriatrics Society

Impact of inpatient geriatrics consultation on hospital outcomes in older adults with trauma

Sara Tyree MD[1] | Karen Fischer MPH[2,3] | Daniel Stephens MD[4] |
M. Caroline Burton MD[1] | Sandeep Pagali MD, MPH, AGSF[1,5]

Consultation outcomes

- Lower incidence of delirium
- Lower in-hospital mortality
- Increased length of stay
- Lower readmission rates (not statistically significant)

	No consult ($n = 984$)	Geriatrics consult ($n = 984$)	*P*-value
Patient characteristics			
Age, mean (SD)	80.2 (8.57)	80.9 (8.13)	0.113[a]
Median (range)	80 (65, 100)	81 (65, 101)	
Female, *n* (%)	479 (48.7%)	479 (48.7)	1.000[b]
Race/ethnicity, *n* (%)			0.470[b]
White	967 (98.3%)	960 (97.6%)	
Black or African American	3 (0.3%)	3 (0.3%)	
Hawaiian Native or Pacific Islander	2 (0.2%)	0 (0.0%)	
Hispanic	3 (0.3%)	4 (0.4%)	
Asian	2 (0.2%)	7 (0.7%)	
Unknown	7 (0.7%)	10 (1.0%)	
Injury severity score			0.292[a]
Mean (SD)	11.2 (7.59)	11.2 (6.96)	
Median (range)	9.0 (1.0, 51.0)	10.0 (1.0, 50.0)	
CCI, mean (SD)	3.8 (3.22)	4.6 (3.69)	<0.001[a]
Mechanism of injury, *n* (%)			<0.001[b]
MVA	212 (21.5%)	160 (16.3%)	
Fall	666 (67.7%)	760 (77.2%)	
Other	106 (10.8%)	64 (6.5%)	
ICU stay, yes, *n* (%)	261 (26.5%)	572 (58.1%)	<0.001[b]
Delirium, yes, *n* (%)	103 (10.5%)	29 (2.9%)	<0.001[b]
Outcomes			
In-hospital mortality, *n* (%)	56 (5.7%)	16 (1.6%)	<0.001[b]
30-Day mortality, *n* (%)	33 (3.6%)	33 (3.4%)	0.862[b]
90-Day mortality, *n* (%)	65 (7.0%)	73 (7.5%)	0.653[b]
Hospital length of stay			<0.001[a]
Mean (SD)	6.1 (6.71)	7.4 (7.25)	
Median (range)	4 (1, 97)	6 (1, 82)	
Discharge disposition, *n* (%)			<0.001[b]
SNF	514 (55.4%)	535 (55.3%)	
Home	375 (40.4%)	353 (36.5%)	
Other[c]	39 (4.2%)	80 (8.3%)	
30-Day readmission, *n* (%)	145 (15.6%)	146 (15.1%)	0.743[b]
90-Day readmission, *n* (%)	215 (23.2%)	243 (25.1%)	0.325[b]

Preventing Delirium in Older Adults with Recent Hip Fracture Through Multidisciplinary Geriatric Consultation

Mieke Deschodt, RN, MSN,† Tom Braes, RN, MSN,*‡ Johan Flamaing, MD, PhD,† Elke Detroyer, RN, MSN,* Paul Broos, MD, PhD,§ Patrick Haentjens, MD, PhD,¶ Steven Boonen, MD, PhD,†** and Koen Milisen, RN, PhD*†*

J Am Geriatrics Soc 60:733–739, 2012.

Intervention participants received an additional IGCT consultation. The team consisted of a geriatrician, a nurse, a social worker, an occupational therapist, and a physiotherapist, all with extensive experience in geriatric care.

The IGCT's intervention started with a Preoperative comprehensive geriatric assessment by the team's nurse, who reviewed all relevant domains—functional, cognitive, social, nursing, and medical.

The proportion of participants with delirium at any point postoperatively was significantly higher in the control group (53.2%, n = 41) than in the intervention group (37.2%, n = 35; P = .04, odds ratio (OR) = 1.92)

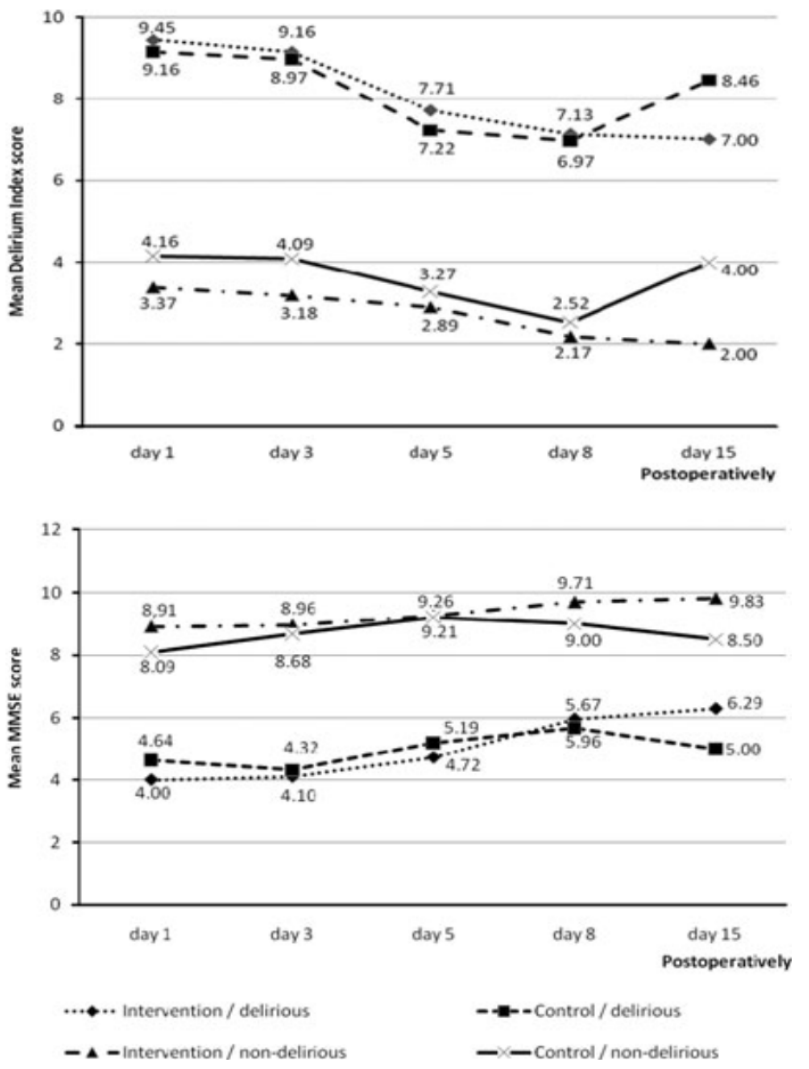

Figure 2. Severity of delirium and overall cognitive functioning. MMSE = Mini-Mental State Examination.

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Patient population

- University Hospital
  - Trauma/general surgery patients (think falls, SBOs and other intra-abdominal pathology)
  - Other primary services (Cardiology, IM, Neurosurgery, Vascular Surgery)

- Huntsman Cancer Hospital
  - Colorectal surgery, BMT, Medical Oncology

- Inpatient Rehab Hospital

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Reasons for Consult

- Delirium management
- Polypharmacy
- Recurrent falls
- Peri-operative optimization
- Dementia
- Frailty (more commonly referred to as failure to thrive)
- GOC discussion

Peri-operative optimization

- Medication review
- Frailty assessment
- Further cardiac testing or risk optimization
- Lab follow up post-op
- Delirium prevention and or treatment if delirious post-op

Team Structure

- Attending physician
- APRN several days per week
- Learners
  - Geriatric Medicine Fellow
  - PGY-2
  - MS-IV

Inpatient Comprehensive Geriatric Assessment

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Inpatient 4M's

Medications

- Polypharmacy
- Deliriogenic Rx
- Resume home Rx
- Symptoms (pain/sleep)

Mentation

- Baseline cognition (Mini-cog)
- CAM (UB-2 CAM)
- Delirium management
- Delirium prevention

Mobility

- Pre-hospitalization functional status
- Frailty/pre-op assessment
- Fall assessment
- Living situation/support
- Activity orders for mobility

What matters most

- Review code status
- ACP if appropriate
- GOC
- Expectations

Sample A/P:

Mind:

- **Patient's risk factors for delirium include age, pain, pre-morbid Alzheimer's disease with behavioral disturbances, post-anesthesia and inpatient hospitalization**
- Consider "up in chair for meals" if appropriate to stimulate wakefulness and mobility
- **Continue scheduled Tylenol, recommend switch to PO 1g TID while awake to minimize nighttime interruptions**
- **Recommend scheduled melatonin at 1800 for physiologic dosing**
- **Increase Fluoxetine to 40 mg daily for behaviors associated with dementia**
- **Start Trazodone 25 mg q6h PRN for agitation**
- **Stop Quetiapine (has not been helping with behaviors at facility per family)**
- utilize white board for date/team members/plan of care
- start sleep protocol:
- - change VS and care to "only while awake" if clinically appropriate
- - draw morning labs after 6am
- **Avoid physical restraints if possible.**
- Continue delirium prevention protocol

Mobility:

- Multiple recent falls, high risk; Uses manual wheelchair for ambulation
- **Continue to work with PT/OT**

Medications:

- **Reviewed Rx list from facility that was provided by patient's family. Several concerning Rx seen on this list including PRN Ativan, Benadryl and Morphine. Further Tylenol is PRN and not scheduled at this facility**
- **Continue scheduled Tylenol, recommend switch to PO 1g TID while awake to minimize nighttime interruptions**
- **Recommend scheduled melatonin at 1800 for physiologic dosing**
- **Increase Fluoxetine to 40 mg daily for behaviors associated with dementia**
- **Start Trazodone 25 mg q6h PRN for agitation**
- **Stop Quetiapine (has not been helping with behaviors at facility per family). Antipsychotics would not be unreasonable in the future, but SSRI dose ought to be maxed first.**
- **For pain control on discharge, recommend scheduled Tylenol as uncontrolled pain may be contributing to behaviors described by family and facility Rx list had Tylenol PRN**

Matters Most:

- **Recommend higher level of acuity for memory care on discharge/completion of SNF course**
- Will reach out to Geriatric scheduling department to establish with Geriatric PCP. Current memory care has been acting as PCP, however, they are unable to handle patient's level of behavioral disturbances. Per family he may be "kicked out" of this facility to a MCU with better ability to care for him. We hope that

Other post-operative complications

- Uncontrolled pain
- Acute blood loss anemia (goal Hgb > 8 in older adults)
- Poor appetite/PO intake
- Withdrawal from home Rx that have not been resumed
  - Think centrally acting medications
  - For example, delirium risk with abrupt cessation of Donepezil

Case revisited

- As part of our inpatient consultation, we reviewed his home Rx list and discussed with his family that his mental status had improved.
- We were concerned that his Rx milieu was not optimized, and we recommended the following:
  - Increase Fluoxetine to 40 mg daily
  - Scheduled melatonin at 1800
  - Scheduled Tylenol for pain control with PRN Oxycodone for breakthrough pain
  - Trazodone 25 mg q6h PRN for agitation (he was given this nightly on review of MAR)
  - Stop Quetiapine, taper off Memantine
  - Avoid physical restraints if possible
  - Outpatient Geriatric follow up

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ACUTE CARE FOR ELDERS (ACE) UNIT

ROXANNE WEISS, MD

SEPTEMBER 11TH, 2025

OVERVIEW

- Background
- What is an ACE unit?
- What are the benefits to older adults?
- What are the benefits to the health system?
- Why doesn't every hospital have one?

BACKGROUND

The **hazards of hospitalization** for older adults

- Functional decline
- Delirium & cognitive decline
- Hospital-acquired infections
- Malnutrition, dehydration
- Psychological stress
- Medication-related complications

Schattner A. The spectrum of hospitalization-associated harm in the elderly. Eur J Intern Med. 2023 Sep;115:29-33.

THE SOLUTION: THE ACE UNIT

- Introduced by Landefeld et al (NEJM 1995)
- Specialized unit that provides patient-centered, interdisciplinary care tailored to the needs of hospitalized older adults
- Designed prevent functional decline

Landefeld CS, Palmer RM, Kresevic DM, Fortinsky RH, Kowal J. A randomized trial of care in a hospital medical unit especially designed to improve the functional outcomes of acutely ill older patients. N Engl J Med. 1995 May 18;332(20):1338-44.

OVERVIEW OF ACE UNIT

4 key elements

- Prepared environment
- Patient-centered care
- Early planning for discharge
- Medical care review

Landefeld CS, Palmer RM, Kresevic DM, Fortinsky RH, Kowal J. A randomized trial of care in a hospital medical unit especially designed to improve the functional outcomes of acutely ill older patients. N Engl J Med. 1995 May 18;332(20):1338-44.

PREPARED ENVIRONMENT

- Reduce fall risk – grab bars/handrails, uncluttered halls, high contrast colors to aid in those with impaired depth perception
- Large clocks & calendars, diffuse lighting
- Elevated toilet seats in bathrooms, door handle levers
- Designated space to encourage socialization (dining hall, shared PT space)

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

PATIENT-CENTERED CARE

Interdisciplinary team rounding

- Physician, APP
- Nurse Manager
- Pharmacist
- Bedside RN, Charge RN
- PT/OT/SLP
- Dietician
- CM, Care Coordinator

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

PATIENT-CENTERED CARE

- Daily assessment by nurses on physical, cognitive, and psychosocial functioning
- Protocols to improve self-care, mobility, sleep, skin care, augmenting hearing and vision

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

EARLY PLANNING FOR DISCHARGE

- Early, ongoing emphasis on the goal of returning home
- Early involvement of social worker/case manager and home health nurse, if indicated

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

MEDICAL CARE REVIEW

- Daily review of high-risk medications by Geriatrician or pharmacist
- Focus on "what matters most" – ensuring patient preferences guide hospital care
- Implementation of protocols to minimize iatrogenic complications (falls, pressure injury, CAUTI)

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

PATIENT POPULATION

- Older adults requiring hospitalization
- Variations in inclusion/exclusion criteria
  - Most units select patients using inclusion criteria (79%), age most common (94%)
  - 40% have exclusion criteria -> total cares/low rehab potential, end of life, admitted from LTC
- Average daily census : 18 patients

Table 1:

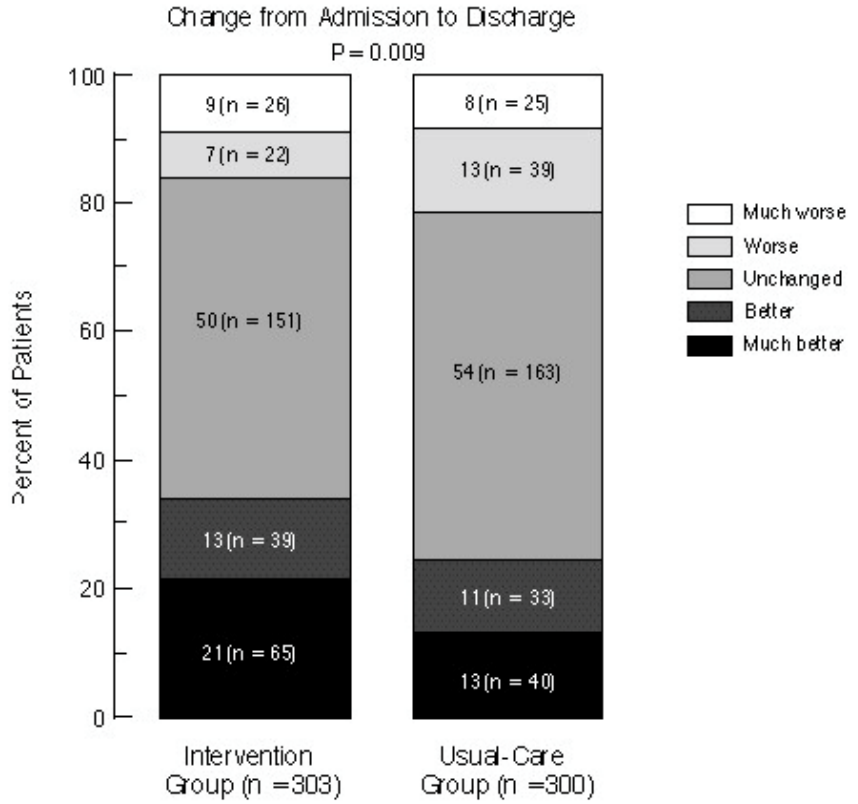
Characteristics of Open ACE Units at the Time of Survey (n=43)

	n (%)
Affiliation	
Academic medical center	29 (67)
Community hospital	8 (19)
Integrated health system	3 (7)
Public or safety net hospital	3 (7)
Volume >1000 patients annually	12 (37)
Average daily census	18 (range 5–39)
Use of Age-based inclusion/admission criteria	32
≥ 50 years	1 (3)
≥ 65 years	23 (72)
≥ 70 years	4 (13)
≥ 72 years	1 (3)
≥ 75 years	3 (9)
Use of Other inclusion/admission criteria	
Cognitive or functional ability	13 (38)
Community dwelling	10 (29)
Frailty status	5 (12)
Certain medical diagnosis	3 (9)
Exclusion criteria	
Admitted from long-term care	5 (12)
End of life or on comfort care protocols	5 (12)
Patient is total care or has a low rehabilitation Potential	7 (16)
Severe dementia	4 (9)
Primary psychiatric issue	3 (7)
Excluding a specific admitting team	3 (7)
Funding sources (partial or full sources)	
Hospital or Health System	36 (84%)
Billing Reimbursements	12 (28%)
Philanthropy	3 (7%)
Grants	1 (2%)

Rogers SE, Flood KL, Kuang QY, Harrison JD, Malone ML, Cremer J, Palmer RM. The current landscape of Acute Care for Elders units in the United States. J Am Geriatr Soc. 2022 Oct;70(10):3012-3020.

BENEFITS FOR OLDER ADULTS

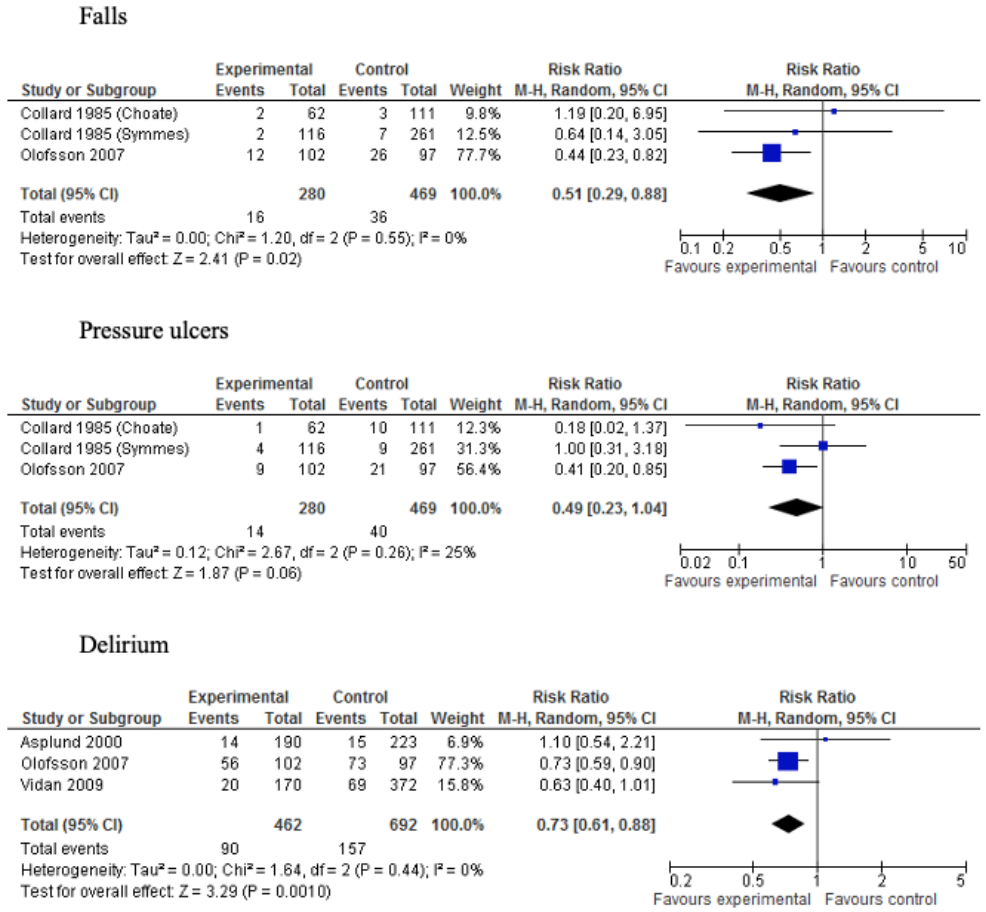
- More patients improved in their ability to perform ADLs and fewer got worse



Landefeld CS, Palmer RM, Kresevic DM, Fortinsky RH, Kowal J. A randomized trial of care in a hospital medical unit especially designed to improve the functional outcomes of acutely ill older patients. N Engl J Med. 1995 May 18;332(20):1338-44.

BENEFITS FOR OLDER ADULTS

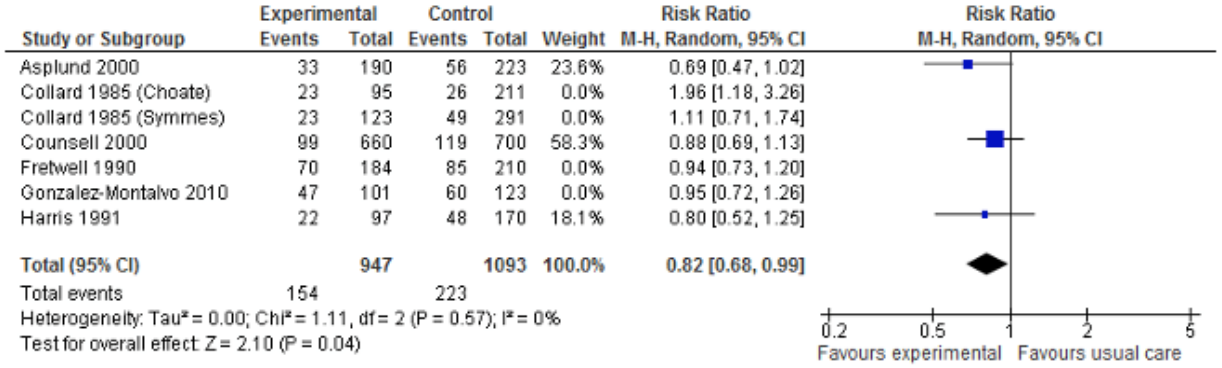
- Reduced iatrogenic complications
  - Falls (RR =0.51, p=0.02)
  - Pressure ulcers (RR=0.49, p=0.06)
  - Delirium (RR=0.73, p=0.001)



Fox MT, Persaud M, Maimets I, O'Brien K, Brooks D, Tregunno D, Schraa E. Effectiveness of acute geriatric unit care using acute care for elders components: a systematic review and meta-analysis. J Am Geriatr Soc. 2012 Dec;60(12):2237-45.

BENEFITS FOR OLDER ADULTS

- Less likely to be discharged to LTC (RR=0.82, p=0.04)



Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Risk Ratio M-H, Random, 95% CI
Asplund 2000	33	190	56	223	23.6%	0.69 [0.47, 1.02]
Collard 1985 (Choate)	23	95	26	211	0.0%	1.96 [1.18, 3.26]
Collard 1985 (Symmes)	23	123	49	291	0.0%	1.11 [0.71, 1.74]
Counsell 2000	99	660	119	700	58.3%	0.88 [0.69, 1.13]
Fretwell 1990	70	184	85	210	0.0%	0.94 [0.73, 1.20]
Gonzalez-Montalvo 2010	47	101	60	123	0.0%	0.95 [0.72, 1.26]
Harris 1991	22	97	48	170	18.1%	0.80 [0.52, 1.25]
Total (95% CI)		**947**		**1093**	**100.0%**	**0.82 [0.68, 0.99]**
Total events	154		223			

Heterogeneity: Tau² = 0.00; Chi² = 1.11, df = 2 (P = 0.57); I² = 0%
Test for overall effect: Z = 2.10 (P = 0.04)

Fox MT, Persaud M, Maimets I, O'Brien K, Brooks D, Tregunno D, Schraa E. Effectiveness of acute geriatric unit care using acute care for elders components: a systematic review and meta-analysis. J Am Geriatr Soc. 2012 Dec;60(12):2237-45.

BENEFITS FOR OLDER ADULTS

- Fewer restraints used (2% vs 6%, p=0.001)
- Higher satisfaction with care among caregivers, physicians, and nurses (P<0.05)
- More frequent & earlier involvement of PT
- Fewer high-risk medications prescribed
- Depression more commonly identified (38% vs 26%, p=0.02)

Counsell SR, Holder CM, Liebenauer LL, Palmer RM, Fortinsky RH, Kresevic DM, Quinn LM, Allen KR, Covinsky KE, Landefeld CS. Effects of a multicomponent intervention on functional outcomes and process of care in hospitalized older patients: a randomized controlled trial of Acute Care for Elders (ACE) in a community hospital. J Am Geriatr Soc. 2000 Dec;48(12):1572-81.

BENEFITS TO HOSPITAL SYSTEM

- Lower cumulative costs ($9,477 vs $10,451, p=0.001)
- Decreased 30-day readmissions (7.9% vs 12.8%; p=0.02)
- Shorter mean LOS (6.7 vs 7.3, p=0.004)

Barnes DE, Palmer RM, Kresevic DM, Fortinsky RH, Kowal J, Chren MM, Landefeld CS. Acute care for elders units produced shorter hospital stays at lower cost while maintaining patients' functional status. Health Aff (Millwood). 2012 Jun;31(6):1227-36. doi: 10.1377/hlthaff.2012.0142. PMID: 22665834; PMCID: PMC3870859.

Flood KL, Maclennan PA, McGrew D, Green D, Dodd C, Brown CJ. Effects of an acute care for elders unit on costs and 30-day readmissions. JAMA Intern Med. 2013 Jun 10;173(11):981-7. doi: 10.1001/jamainternmed.2013.524. PMID: 23609002.

CMS AGE-FRIENDLY MEASURE ATTESTATION

CMS Age-Friendly Hospital Measure: 10 Items in 5 Domains	
Domains	**Attestation Requirements**
Eliciting Patient Healthcare Goals	• Protocols in place to ensure health/treatment goals, living wills, identification of healthcare proxies, and advanced care planning are obtained/reviewed and documented in the medical record and updated before major procedures and upon significant changes in clinical status.
Responsible Medication Management	• Medications reviewed and potentially inappropriate medications (PIMs) identified upon admission, before major procedures, and/or upon significant changes in clinical status. PIMS should be considered for discontinuation and/or dose adjustment.
Frailty Screening and Intervention	• Patients screened for risks regarding mentation, mobility, and malnutrition using validated instruments upon admission, before major procedures, and/or upon significant changes in clinical status. • Positive screens result in management plans including but not limited to reducing risk for delirium, encourage early mobility, and implementing nutrition plans. These plans should be included in discharge instructions and communicated to post-acute facilities. • Data are collected on the rate of falls, decubitus ulcers, and 30-day readmissions for patients 65 and over and stratified by demographic and/or social factors. • Protocols exists to reduce the risk of emergency department delirium by reducing length of emergency department stay. Goal set to transfer a targeted percentage of patients out of the emergency department within 8 hours of arrival and/or within 3 hours of the decision to admit.
Social Vulnerability	• Patients screened for social isolation, economic insecurity, limited access to healthcare, caregiver stress, and elder abuse. Assessments are performed on admission and prior to discharge. • Positive screens for social vulnerability are addressed through intervention strategies that include appropriate referrals and resources for patients upon discharge.
Age-Friendly Care Leadership	• Hospital designates a point person and/or interprofessional committee to ensure age-friendly care issues are prioritized, oversee quality related to older patients, identify opportunities to provide education to staff, and update hospital leadership on needs. • Hospital compiles quality data related to the Age-Friendly Hospital Measure and data are stratified by demographic and/or social factors and used to drive improvement cycles.

https://www.cms.gov/newsroom/fact-sheets/fy-2025-hospital-inpatient-prospective-payment-system-ipps-and-long-term-care-hospital-prospective

BENEFITS TO LEARNERS

- Exposure to comprehensive geriatric care, age-friendly care
- Interprofessional education and collaboration
- Improved attitudes towards older adults
- Pipeline for training all learners (RN, pharmacist, medical students) about Geriatric principles

IF ACE UNITS ARE SO GREAT, WHY AREN'T THEY EVERYWHERE?

| BY CCLARK@HEALTHLEADERSMEDIA.COM | APRIL 25, 2013

https://www.healthleadersmedia.com/clinical-care/if-ace-units-are-so-great-why-arent-they-everywhere

SO WHY DOESN'T EVERY HOSPITAL HAVE ONE?

UPFRONT COSTS – STAFFING & TRAINING PERSONNEL, UNIT MODIFICATION

BUY-IN FROM HOSPITAL LEADERSHIP

SHORTAGE OF GERIATRICIANS/GERIATRIC CHAMPIONS

Palmer RM. The Acute Care for Elders Unit Model of Care. Geriatrics (Basel). 2018 Sep 11;3(3):59. doi: 10.3390/geriatrics3030059. PMID: 31011096; PMCID: PMC6319242.

BARRIERS & SOLUTIONS

- Benefits limited to a single hospital unit
  - Mobile ACE Unit (MACE)
    - Geriatrician-led hospitalist team caring for patients throughout the hospital
    - Included Geriatrics fellow, social worker, clinical nurse specialists
    - Focus on reducing risks of hospitalization, improving care coordination with outpatient practice, discharge planning, and patient/caregiver education

Hung WW, Ross JS, Farber J, Siu AL. Evaluation of the Mobile Acute Care of the Elderly (MACE) Service. *JAMA Intern Med*. 2013;173(11):990–996. doi:10.1001/jamainternmed.2013.478

BARRIERS & SOLUTIONS

- Hospitals without Geriatrician on staff
  - ACE tracker and e-Geriatrician
    - Computer program to synthesizes EMR data to create daily report on all hospitalized patients older than 65
    - Interdisciplinary "ACE team" reviews list daily
    - E-Geriatrician participates 2 x per week

Malone ML, Vollbrecht M, Stephenson J, Burke L, Pagel P, Goodwin JS. AcuteCare for Elders (ACE) tracker and e-Geriatrician: methods to disseminate ACE concepts to hospitals with no geriatricians on staff. J Am Geriatr Soc. 2010 Jan;58(1):161-7. doi: 10.1111/j.1532-5415.2009.02624.x. PMID: 20122048; PMCID: PMC4018651.

ACE TRACKER AND E-GERIATRICIAN

Example of Printout from ACE Tracker Summarizing Risk Factor for Patients Aged of 65 or Older on a Hospital Unit

Patient Room/ Bed	Age	Length of Stay	History of Dementia	CAM	Number of Meds	Beers	Morse	HX of Falls	Bed Rest	P/T	O/T	RES	ADL	Cath	Press Ulcer	Wound Care	Braden Scale	Albumin	Social Services	Advance Directives
Patient A	76	2	N	N	13	N	60	Y	N	Y	Y	N	8	Y	Y	Y	17	ND	Y	N
Patient B	74	1	Y	N	7	N	50	Y	Y	N	N	N	6	Y	Y	Y	9	2.9	N	Y
Patient C	78	12	Y	Y	10	Y	50	Y	N	Y	Y	N	7	N	N	Y	14	3.9	Y	Y
Patient D	72	1	N	N	5	N	50	N	N	N	N	N	12	N	N	N	15	ND	N	N
Patient E	91	6	Y	N	8	N	60*	N	N	Y	Y	N	6*	N	N	N	14	ND	Y	N
Patient F	78	1	N	N	7	N	70	Y	Y	N	N	N	6	Y	N	N	16	ND	N	N
Patient G	75	1	N	N	0	N	45	N	N	Y	Y	N	12	N	N	N	14	4.3	N	N
Patient H	93	1	Y	N	12	N	65	Y	N	Y	Y	N	6	N	N	N	15	ND	Y	Y
Patient I	91	1	Y	N	1	N	95	Y	N	Y	Y	N	7	N	N	N	12	3.5	N	Y
Patient J	74	5	N	N	20	N	45	Y	N	Y	Y	N	7	Y	Y	Y	12*	ND	Y	Y
Patient K	72	6	N	Y	14	N	20	N	N	Y	Y	N	8	N	N	N	17	3.2	Y	Y

Malone ML, Vollbrecht M, Stephenson J, Burke L, Pagel P, Goodwin JS. AcuteCare for Elders (ACE) tracker and e-Geriatrician: methods to disseminate ACE concepts to hospitals with no geriatricians on staff. J Am Geriatr Soc. 2010 Jan;58(1):161-7. doi: 10.1111/j.1532-5415.2009.02624.x. PMID: 20122048; PMCID: PMC4018651.

RESOURCES

- AGS/ADGAP: Making the Case for Geriatrics Toolkit

https://geriatricscareonline.org/toc/ags-adgap-making-the-business-case-for-geriatrics-toolkit/TK022/

QUESTIONS?