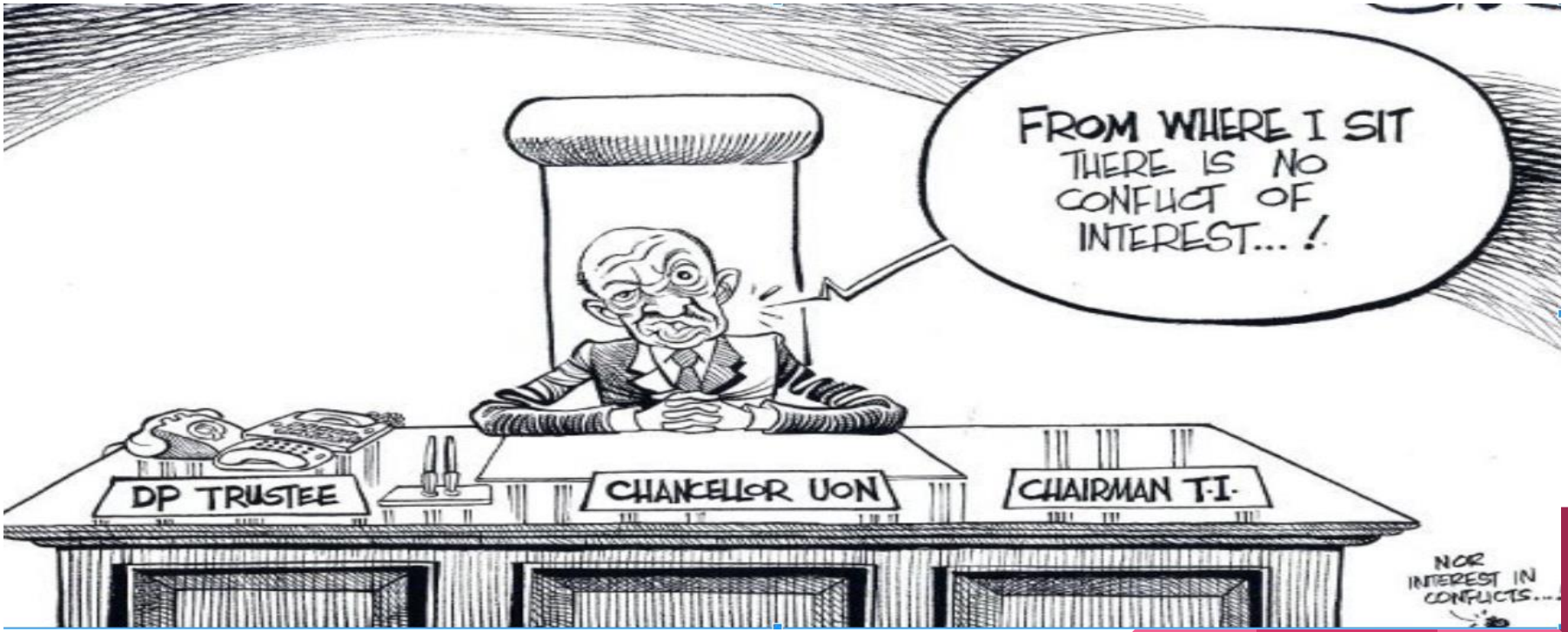
Geriatrics Assessment in General Practice

Dr. Naser AlQurini

Disclosures



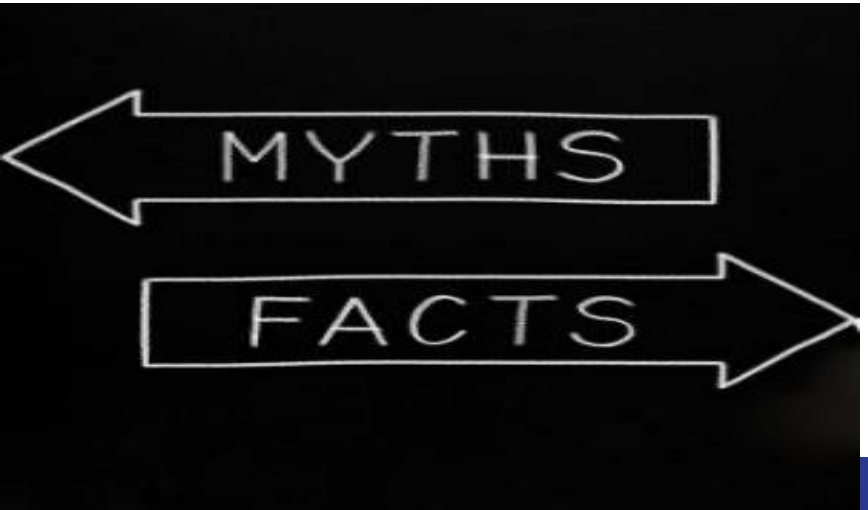
Objectives

- **Comprehensive Geriatric Assessment in General Practice.**
  - Importance
  - Domains & elements
  - Common tools used for screening and assessment.
- **Geriatric Giants**
  - Common Geriatric presentation in General Practice
- **Social resources available in the community for the elderly population.**
  - Elderly abuse and neglect.


Old is gold

COMMON MYTHS ABOUT AGING

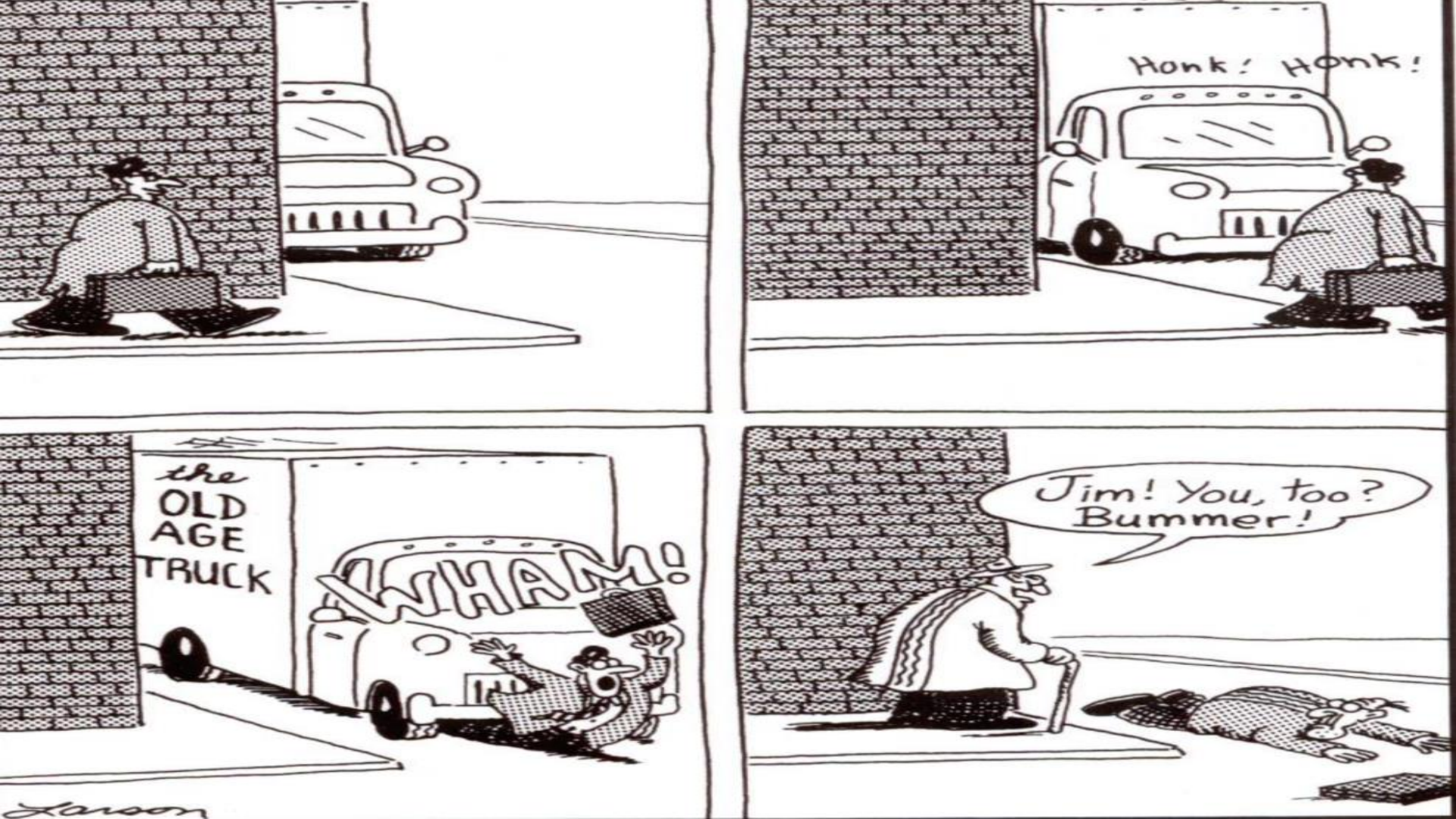
- *Older adults can’t learn new things*
- *Older Adults should take it easy and avoid exercises so they don’t get injured*
- *If a family member has Alzheimer's, I will have it,too*



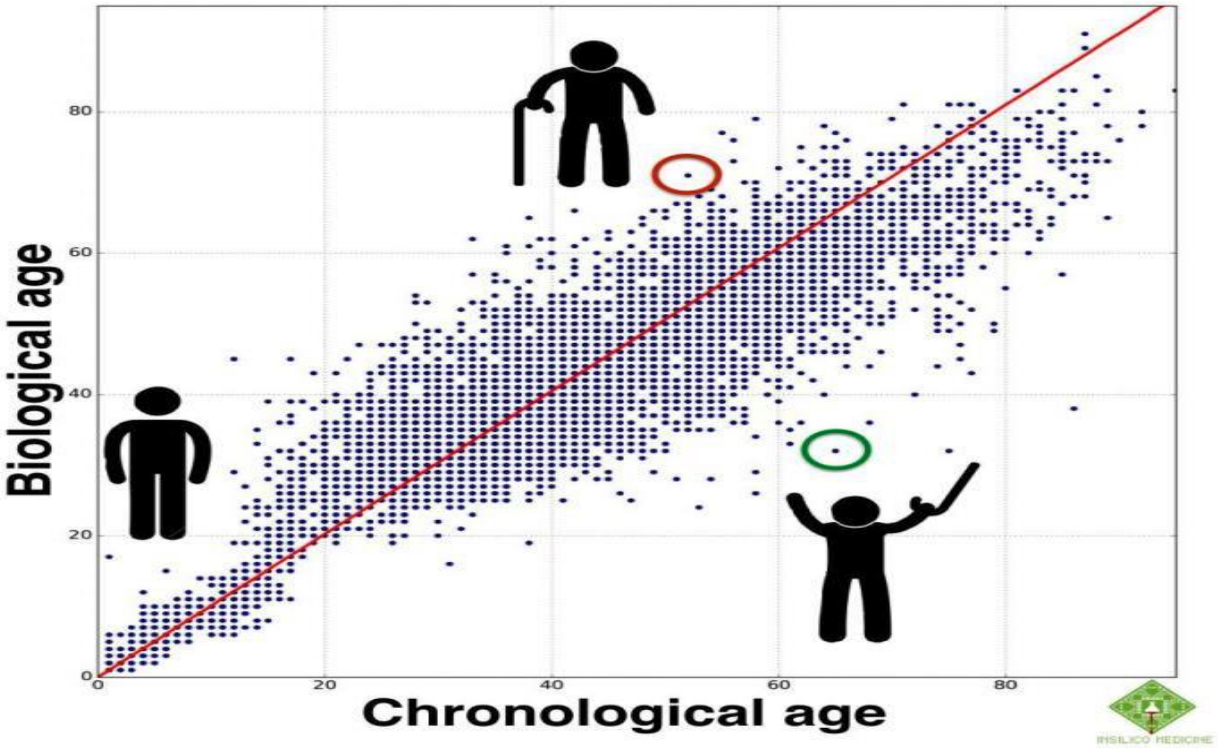
Not always

What’s so special about growing old?


THE TIP
OF THE
ICEBERG


Honk! Honk!
the OLD AGE TRUCK
WHAM!
Jim! You, too? Bummer!
Larson

Chronological vs Physiological

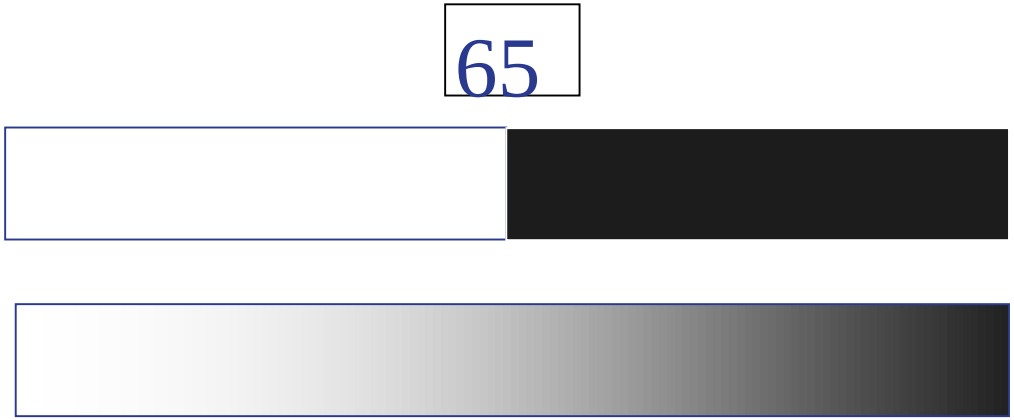


There Are Two Ages:
YOUR CHRONOLOGICAL AGE
(Which you can't do anything about)
&
YOUR PHYSIOLOGICAL AGE
(Which you can)

THESE MEN ARE ABOUT THE SAME AGE
but,
WHICH ONE IS YOUNGER?

?

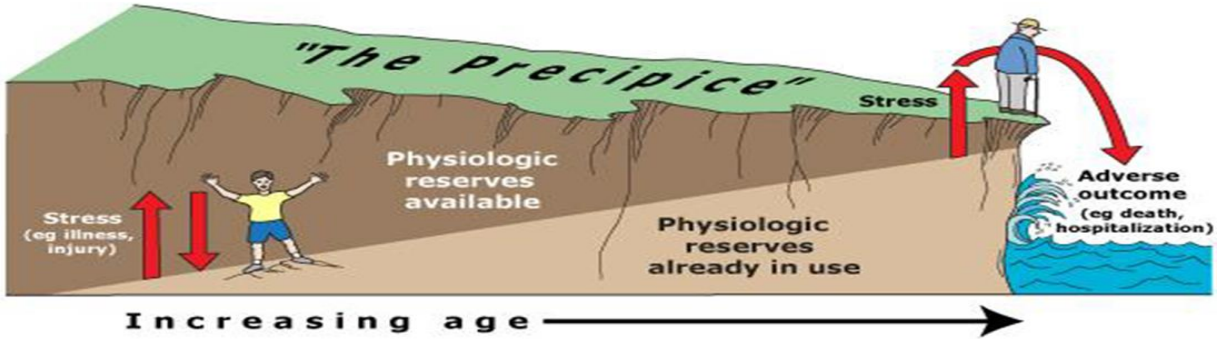
What is old?



- Physiology of aging
- Disease
- Cognitive decline
- Functional Decline

Courtesy of Dr. A. Hurria, City of Hope

Physiology of Aging: homeostenosis



- *Aging affects virtually all organs and tissues and leads to reduced reserves*
- **Reduced:**
  - *Bone marrow function*
  - *Renal function*
  - *Hepatic oxidation*
  - *Skin and mucosal integrity and reparative ability*

Geriatricians were referred to as members of "a second-rate specialty, looking after third rate patients in fourth-rate facilities

St. John, Philip D. and Hogan, David B., The Relevance of Marjory Warren's Writings Today, The Gerontologist. 2014 Feb;54(1):21-9

History of Geriatrics

- Marjorie Warren (1897-1960)
- Introduced the idea that systematic assessment of complex older adults can lead to results improvement.
- Co-founder of the british Geriatric Society.

Warren health care goals

- **To prevent disease whenever possible.**
- **To reduce medical disability to a minimum.**
- **To obtain and maintain maximum independence.**
- **To teach the patient to adjust himself intelligently to his residual disability.**

History of Geriatrics Specialty

- First geriatric unit in the UK.
- Discharges were planned process
- Attracted the attention of a health minister, her discharge rate reached **25%.**
- Published 27 scientific papers on her approaches to rehabilitation (1940s-1950s)
- Advocated for chronically sick patients of older ages, and treated in a separate geriatric assessment unit within the general hospital. (**Specialty of Geriatrics**)
- Pioneer in teaching and health education. (**Special interest of Nursing staff education**)
- Many of her ideas remain central to the practice of modern geriatric medicine.

A Barton, G Mulley J2003; 79:229-234

doi:10.1136/pmj.79.930.229

History of Geriatrics Specialty

- **Joseph Sheldon (1893–1972)**
  - The father of community geriatric medicine.
  - **Interest** in elderly people was prompted by an outbreak of food poisoning.
  - Realised the importance of good self-care, continence, hearing, and footwear.
  - **Documented**: 11% of elderly people were housebound.
  - Recommended **Home Physiotherapy.**
  - Advocated for falls prevention strategies, such as adequate lighting at home and the benefits of stair rails. (**Home Safety Assessment)**

A Barton, G Mulley J2003; 79:229-234 doi:10.1136/pmj.79.930.229

History of Geriatrics Specialty

- **Norman Exton-Smith (1920–90) and Lord Amulree (1900–83)**
  - **Amulree** worked at UCH, become a civil servant at the Ministry for Health 1936
  - His influence in the House of Lords lead to improving conditions for chronic sick patients for whom he cared deeply.
  - Following his consultant appointment, elderly services expanded and UCH attracted some of the brightest and keenest junior doctors.1948
  - **Exton-Smith** worked with Doreen Norton, who later became the first professor of gerontological nursing.
  - Developed geriatric research and became the first professor of the specialty in London at UCH 1973.
  - **Interest**: pressure sores (pioneered pressure mattresses,design of the modern Ripple Mattress).
  - Temperature regulation, the autonomic nervous system, nutrition, and osteomalacia.
  - His interest in cognitive impairment resulted in the establishment of one of **the first memory clinics.**

A Barton, G Mulley J2003; 79:229-234 doi:10.1136/pmj.79.930.229

History of Geriatrics Specialty

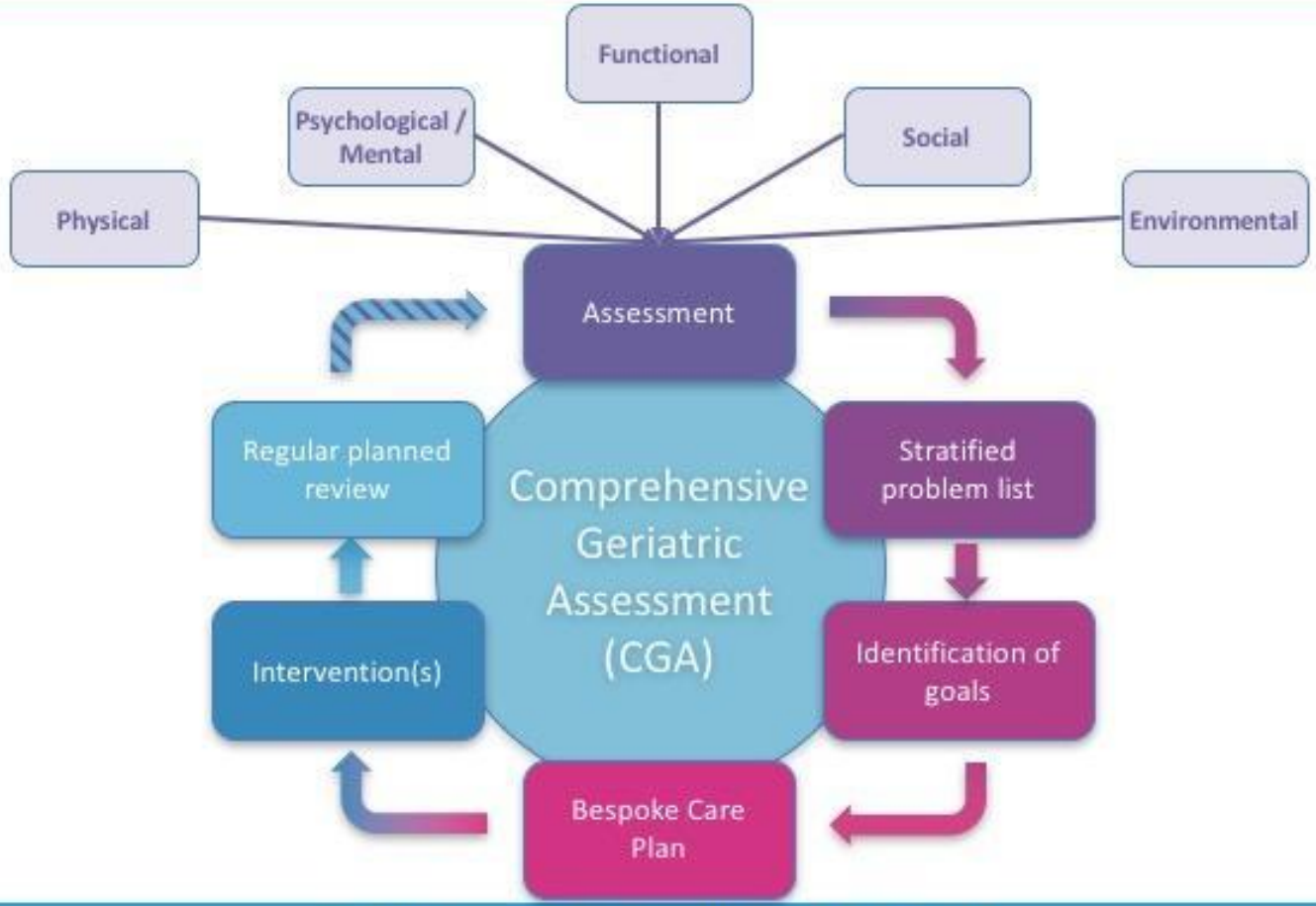
- **George Adams (1916–2012)**
  - **First geriatrician to teach geriatric medicine to undergraduates.**
  - **Met Marjory Warren and attended one of her ward rounds.**
  - **“*she gave me a practical illustration of what we might one day hope to achieve with the human wreckage in the overcrowded wards of the City Hospital.*”**
  - **Opened the first purpose-built elderly rehabilitation unit in the UK,**
  - **Research and clinical interests being cerebrovascular disease and disability.**
  - **Appointed to the chair of geriatrics in Belfast in 1971, only the second geriatrician at that time to occupy such a position, and served as president of the British Geriatrics Society.**

A Barton, G Mulley J2003; 79:229-234

doi:10.1136/pmj.79.930.229

Comprehensive Geriatric Assessment

Comprehensive Assessment: Gold Standard



Multi-agency and multi-professional

Comprehensive Geriatric Assessment

Multi-disciplinary diagnostic and treatment process that identifies medical, psychosocial, and functional limitations of a frail older person in order to develop a coordinated plan to maximize overall health with aging. The healthcare of an older adult extends beyond the traditional medical management of illness. It requires evaluation of multiple issues, including physical, cognitive, affective, social, financial, environmental and spiritual components that influence an older adult's health and well-being.

Stuck AE, Siu AL, Wieland GD, et al. Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet 1993; 342:1032.


Family
Community support
Nurses
Speech therapist
Social worker
Pharmacist
Dietician
Multi-disciplinary team
Geriatrician
Physiotherapist
Family doctor
Occupational therapist
Psychologist

Multidisciplinary Geriatric Team

- Physician
- Nurses
- Social worker
- Physiotherapist and occupational therapist
- Psychotherapist
- Nutritionist or dietitian
- Speech and language therapist
- Receptionist or administrative
- Clinical Pharmacist
- Dentist
- Audiologist
- Podiatrist.
- Optician.

Importance

- NNT 17 *For every 17 OA undergo CGA, death/ significant deterioration prevented for 1 person*
- Improve detection and documentation of geriatric problems.
- Multiple setting:
  - *Home geriatric assessment*
  - *Acute geriatric care units*
  - *Post- hospital discharge*
  - *Outpatient consultation*
  - *Inpatient consultation*
- Multiple meta-analyses have found home assessments to be consistently effective in reducing functional decline as well as overall mortality

Stuck AE, Siu AL, Wieland GD, Adams J, Rubenstein LZ. Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet. 1993;342(8878):1032.
Stuck AE, Egger M, Hammer A, Minder CE, Beck JC; Home visits to prevent nursing home admission and functional decline in elderly people: systematic review and meta-regression analysis. JAMA. 2002;287(8):1022.
Elkan R, Kendrick D, Dewey M, Hewitt M, Robinson J, Blair M, Williams D, Brummell K; Effectiveness of home based support for older people: systematic review and meta-analysis. BMJ. 2001;323(7315):719.

Importance

- 17 trials with 4780 people comparing the effects of general or orthopaedic geriatric rehabilitation programmes with usual care.
- Meta-analyses of effects indicated
    - Overall benefit in outcomes at discharge (OR 1.75 (95% CI 1.31 to 2.35) for function.
    - RR 0.64 (0.51 to 0.81) for nursing home admission.
    - RR 0.72 (0.55 to 0.95) for mortality.
    - At end of follow-up (1.36 (1.07 to 1.71), 0.84 (0.72 to 0.99), 0.87 (0.77 to 0.97), respectively).

Bachmann S, Finger C, Huss A, Egger M, Stuck AE, Clough-Gorr KM; Inpatient rehabilitation specifically designed for geriatric patients: systematic review and meta-analysis of randomised controlled trials. BMJ. 2010;340:c1718. Epub 2010 Apr 20.

Importance

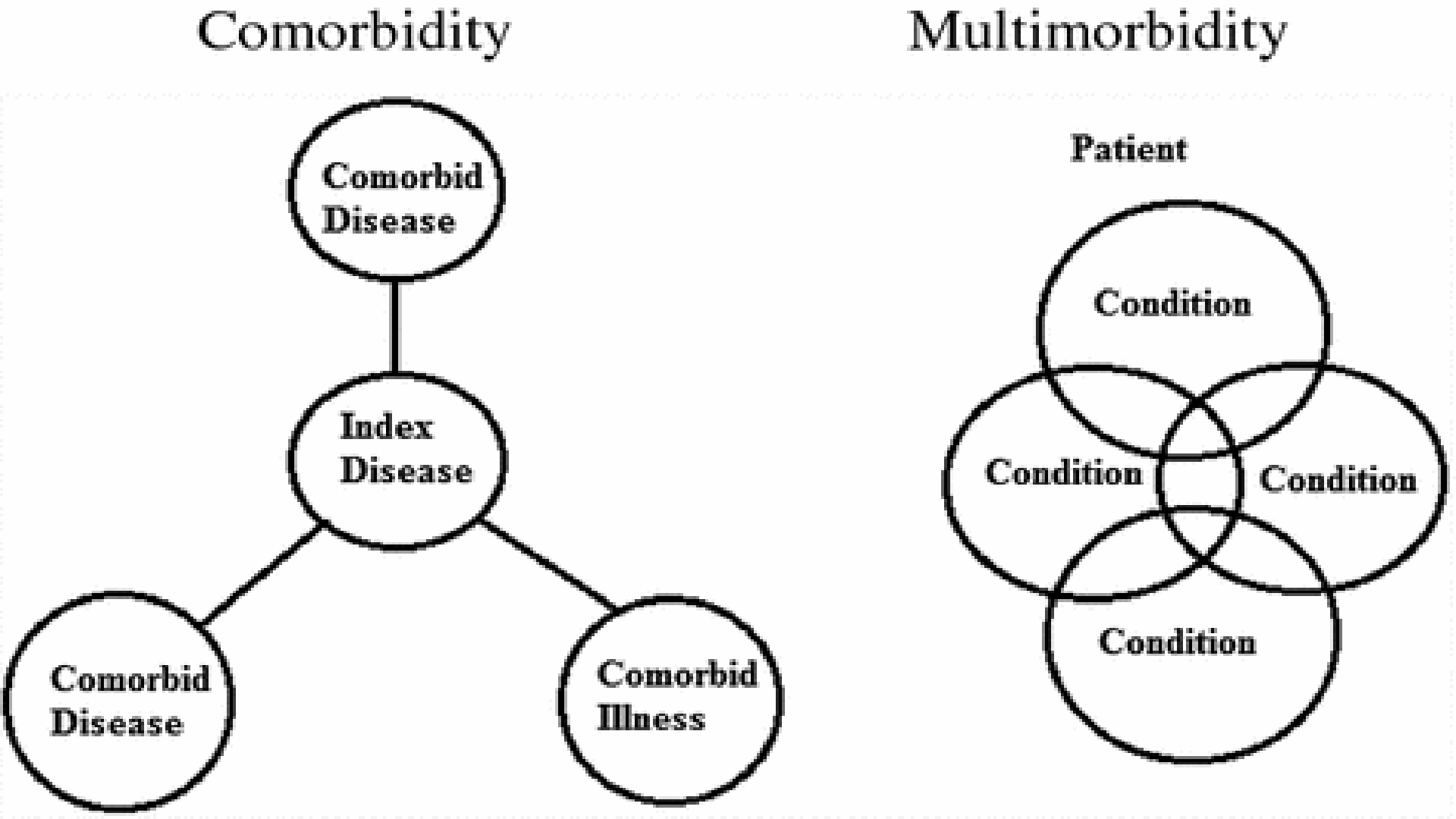
- A meta-analysis of 29 randomized trials involving nearly 14,000 participants found that patients who received CGA were
  - > likely to be ***living at home*** [RR] 1.06, 95% CI 1.01-1.10)
  - < likely to be ***admitted to a nursing home*** up to a year after hospital admission (RR 0.80, 95% CI 0.72-0.89)
- Older patients are more likely to be **alive and in their own homes** at follow-up if they received CGA on admission to hospital.

Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, Somme D, Saltvedt I, Wald H, O'Neill D, Robinson D, Shepperd S: Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev. 2017;9:CD006211. Epub 2017 Sep 12.

Domains & Tools

Main Domains

- Multimorbidity/ Comorbidities
- Medication optimization
- Social support & financial concerns
- Functional status and capacity
- Falls risk
- Nutrition & weight changes
- Pain & Fatigue
- Sleep
- Bowel & Bladder
- Mood
- Cognition
- Vision & hearing
- Goals of care & advance care preferences


Comorbidity
Comorbid Disease
Index Disease
Comorbid Disease
Comorbid Illness
Multimorbidity
Patient
Condition
Condition
Condition
Condition

Multimorbidity & Past Medical History

Definition

- Concurrent, independent health condition which may be a predictor of survival and resource requirements
- Co-occurrence of two or more medical or psychiatric conditions, which may or may not directly interact with each other within the same individual

Epidemiology

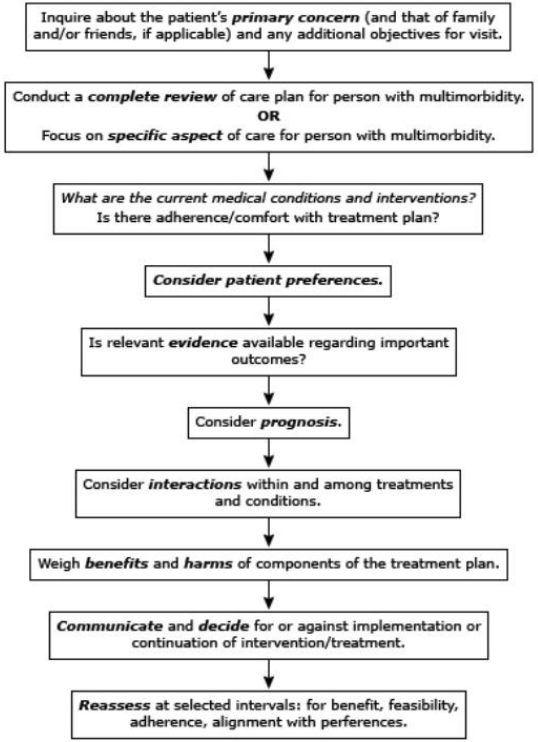
- 1 in 4 have at least 2 chronic conditions
- 35% 65- 79 years, 70% at 80 years and above
- 3 morbidities 34 %, rose to 50 % in 9 years

Mercer SW, Smith SM, Wyke S, O'Dowd T, Watt GC; Multimorbidity in primary care: developing the research agenda. Fam Pract. 2009;26(2):79. Uijen AA, van de Lisdonk EH; Multimorbidity in primary care: prevalence and trend over the last 20 years. Eur J Gen Pract. 2008;14 Suppl 1:28. Fortin M, Hudon C, Haggerty J, Akker My, Almirall J; Prevalence estimates of multimorbidity: a comparative study of two sources. BMC Health Serv Res. 2010;10:111. Epub 2010 May 6.

Adverse Health Outcomes

- *Death*
- *Functional limitation and disability*
- *Frailty*
- *Nursing home placement*
- *Diminished quality of life*
- *Treatment complications*
- *Emergency department visits*
- *Avoidable inpatient admissions*

Approach to the evaluation and management of the older adult with multimorbidity



From: Guiding Principles for the Care of Older Adults with Multimorbidity: An Approach for Clinicians: American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity. J Am Geriatr Soc 2012. Reproduced with permission from the American Geriatrics Society. For more information, please visit www.americangeriatrics.org.

Geriatrics 5Ms Pocket Card for Medical and Dental Students

Mobility

History related to falls and mobility

Functional status assessment

Activities of Daily Living (ADLs or Basic ADLs)	Instrumental Activities of Daily Living (IADLs)
- Feeding - Bathing - Grooming - Dressing - Toilet use, incontinence - Transfers (bed to chair) - Mobility	- Telephone use - Grocery shopping - Food preparation - Housekeeping, laundry - Mode of transportation - Medications - Finances

Falls risk factors from head to toe
Intrinsic Factors
Extrinsic Factors

Medications

History on medication management

Physiology of aging
pharmacokinetics & pharmacodynamics

Avoiding high risk medications

Tools for deprescribing

Prescribing cascades and how to prevent them

Safe choices for pain medications and bowel regimens

Mind

History on cognitive status

Delirium screening

Mini-cog evaluation

Montreal Cognitive Assessment

Fast scale for dementia staging

Depression screening

Communication tips for speaking to patients with hearing impairment

Multicomplexity

History of a typical day in the life

Exam of dentition and toes

Caring for caregivers

Post-discharge care settings

Matters Most

History of what the patient wants more of and what is most important

Health care proxy

Advanced care planning
Patient-facing resources

Orders for life-sustaining treatment
and how to document

Prognostication tools

Goals of Care conversation guides

What is it?
Synthesis of validated tools on a pocket card, grouped based on the Geriatrics 5M's
(Tinetti et al, JAGS 2017)

Why was it developed?
To teach a holistic approach to caring for older adults to medical and dental students

Is it effective?
- 91% of learners ranked the card as useful
- 73% used the card in clinical practice

Where can I get one?
Download the Geriatrics 5M's Pocket Card here !
[https://onlinelibrary.wiley.com/doi/10.1111/jgs.16226]

Holliday AM. Hawley CE. Schwartz AW.
J Am Geriatr Soc. Dec 5, 2019. [DOI 10.1111]

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

AGS

Medications optimization

Medications optimization

- **Thorough medication review** (*prescribed, over the counter and herbal*)
- **Dispensing form**: Bottles, bill box (dosette), blister pack
- **Adherence concerns:** missing doses, needing assistance, methods.
- **Allergies:** Medications, food and reactions.
- **ETOH & drug of abuse**.
- **Every visit**

Tools

AGS-BEERS *Potentially Inappropriate Medication (PIM)*

a. *Medications that are potentially* ***inappropriate in most older adults***
b. *Medications that are potentially inappropriate in older adults* ***with certain conditions***
c. *Medications that should be* ***used with caution***
d. *Potentially clinically important* ***drug-drug interactions to be avoided*** *in older adults.*
e. *Medications that should be avoided or have their dosage reduced based* ***on kidney function***
f. *Drugs With Strong* ***Anticholinergic Properties***
g. *Medications/Criteria* ***Removed*** *Since 2015 American Geriatrics Society Beers Criteria*
h. *Medications/Criteria* ***Added*** *Since 2015 American Geriatrics Society Beers Criteria*
i. *Medications/Criterion* ***Modified*** *Since 2015 American Geriatrics Society Beers Criteria*

Tools

- **STOPP (*screening tool of older persons' prescriptions*) & START(*screening tool to alert doctors to right treatment*)**
  - Updated version from **2008 done on 2015**
  - **80 STOPP** criteria and **34 START criteria**.
  - **31% increase** in STOPP/START criteria compared with version 1.
  - Several new STOPP categories were created in version 2, namely ***antiplatelet/anticoagulant drugs***, drugs affecting, or affected by, **renal function** and drugs that **increase anticholinergic burden**; new START categories include ***urogenital system drugs, analgesics and vaccines***.

D. O'Mahony et al. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2; Age and Ageing 2015; 44: 213–218

Tools

Medication Appropriateness Index

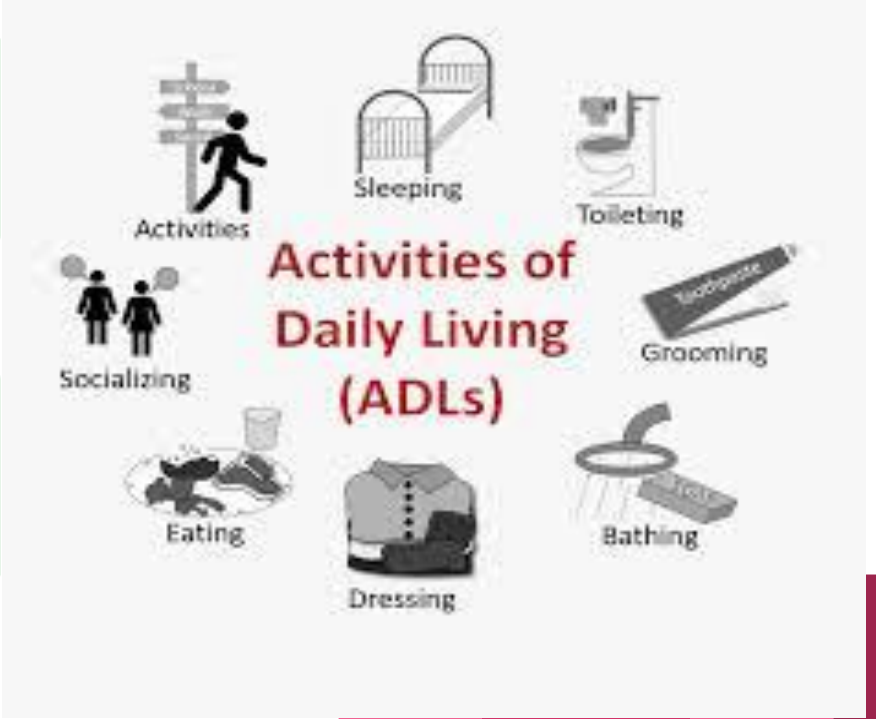
Item	Weight
Is there an indication for the drug?	3
Is the medication effective for the condition?	3
Is the dosage correct?	2
Are the directions correct?	2
Are the directions practical?	1
Are there clinically significant drug-drug interactions?	2
Are there clinically significant drug-disease/condition interactions?	2
Is there unnecessary duplication with other drug(s)?	1
Is the duration of therapy acceptable?	1
Is this drug the least expensive alternative compared to others of equal utility?	1

Hanlon JT, Schmader KE, Samsa GP, et al. A method for assessing drug therapy appropriateness. J Clin Epidemiol 1992;45(10):1045–51 and Samsa GP, Hanlon JT, Schmader KE, et al. A summated score for the medication appropriateness index: development and assessment of clinimetric properties including content validity. J Clin Epidemiol 1994;47(8):891–96.

Social support and Financial concerns

- **Living situation**
  - Housing type and companion
  - Safety assessment
- **Brief Biography**
  - Number of siblings
  - Level of education
  - Working history
- **Caregiver**
  - Screening for burnout, depression
  - Financial stress and concerns
- **Community support services**
- **Elderly neglect and abuse**

Functional status and capacity



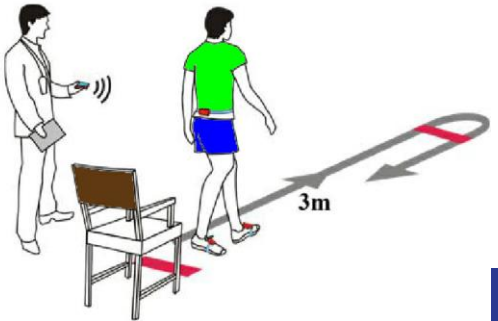
Appendix 1 The GADL (General Activities of Daily Living Scale)

General Activities of Daily Living Scale (GADL)			Score
ADLs Self-care ___/10	**1**	The patient is able to choose and change clothes (dress and undress) by himself/herself.	
	2	The patient is able to make his/her way to the toilet, undress, clean him/herself properly, and dress again.	
	3	The patient is able to use the shower, soap, and bath sponge properly.	
	4	The patient is able to transfer from his/her bed or chair unaided.	
	5	The patient is able to feed himself/herself with tableware.	
ADLs Domestic ___/8 Cutoff for age > 74 (7/8)	**6**	The patient is able to do minor household chores.	
	7	The patient is able to use the telephone (make and receive calls).	
	8	The patient is able to prepare his/her own meals.	
	9	The patient is able to do his/her own washing and ironing.	
ADLs Complex ___/8 Cutoff for age < 74 (6/7) Cutoff for age > 74 (6/7)	**10**	The patient is able to manage his/her own money or financial matters.	
	11	The patient is able to run simple errands by himself/herself.	
	12	The patient is able to take his/her medication at the correct dose and time by himself/herself.	
	13	The patient is able to go to distant places by himself/herself using some form of transportation.	
Global functioning = ADLs Self-care + ADLs Domestic + ADLs Complex Cutoff for age ≤ 74 (23/24) / Cutoff for age > 74 (23/24)			__/26

Independent (2 points): *performs the activities spontaneously, independently, without help or supervision from other persons or special equipment.* ***Partially dependent (1 point):*** *needs supervision, help, or special equipment to perform the activity safely and correctly.* ***Dependent (0 points):*** *needs constant help or supervision to perform the activity safely and correctly. The cutoffs are based on the distinction between amnestic mild cognitive impairment and mild Alzheimer's disease, and may not be valid for other comparisons. [www.labineurociencia.com].*

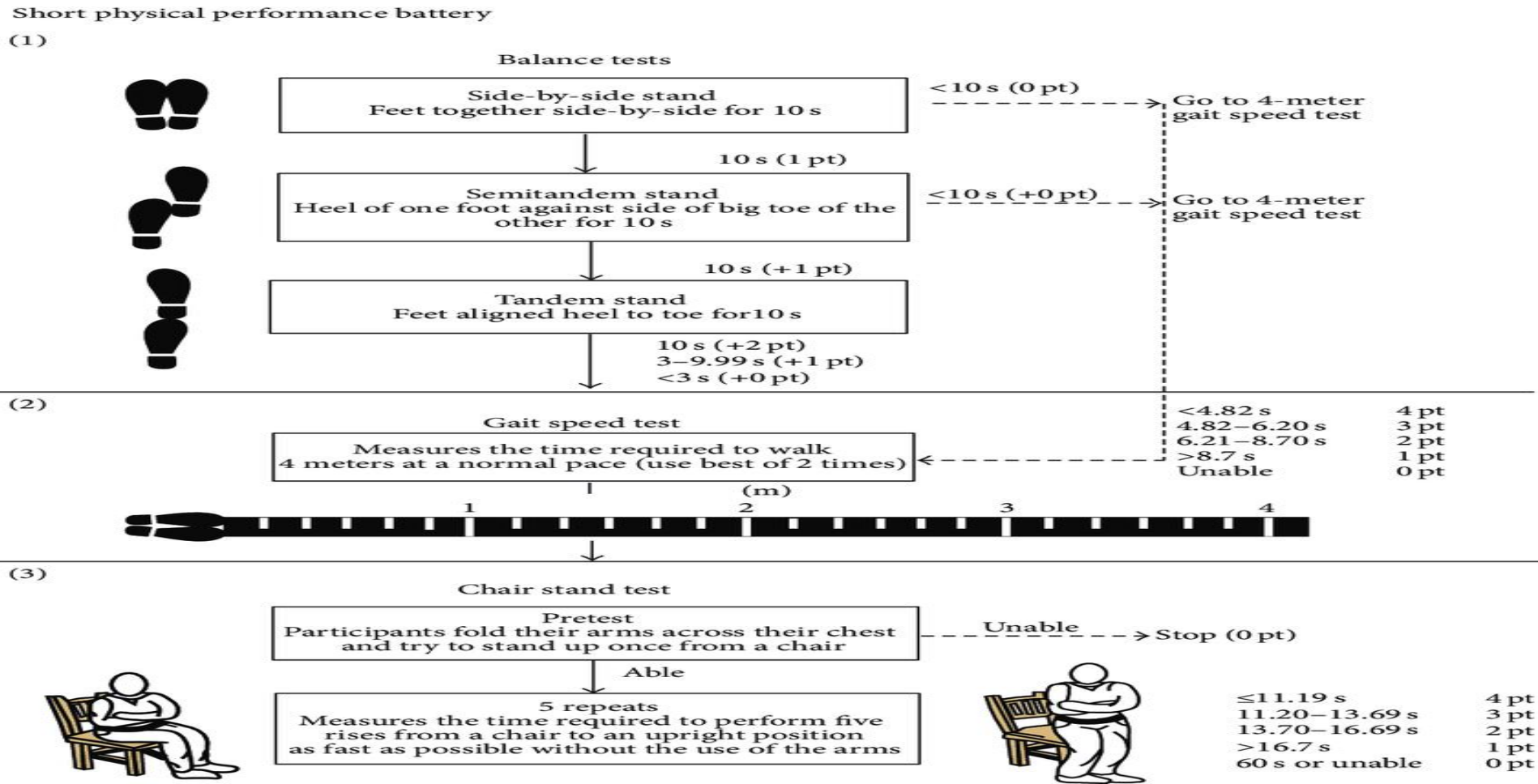
Timed Up & Go (TUG)

- Observing the subject rising from a standard arm chair, walking for 3 metres, turning around, walking back to the chair, and sitting back down
- **Factors to be noticed**
  - Sitting balance
  - Transfer from sitting to standing
  - Pace and stability of walking
  - Ability to turn without staggering
- Any adult who takes longer than 12 seconds to complete is at high risk of falling



Centers for Disease Control and Prevention; National Center for Injury Prevention and Control. Timed Up & Go (TUG). https://www.cdc.gov/ steadi/pdf/TUG_Test-print.pdf. Accessed August 31, 2017.
Mathias S, Nayak US, Isaacs B. Balance in elderly patients: the "get-up and go test." Arch Phys Med Rehabil. 1986;67(6):387-389.

Short Physical Performance Battery (SPPB)



Short Physical Performance Battery (SPPB)

- Systematic review and meta-analysis of 17 studies (*n* = 16,534, mean age 76 ± 3 years).
- Compared to SPPB scores 10–12 (Normal):
  - 0–3 (OR 3.25, 95%CI 2.86–3.79)
  - 4–6 (OR 2.14, 95%CI 1.92–2.39)
  - 7–9 (OR 1.50, 95%CI 1.32–1.71)
  - were each associated with an increased risk of all-cause mortality.
- The association between poor performance on SPPB and all-cause mortality remained highly consistent independent of follow-up length, subsets of participants, geographic area, and age of the population.
- Random effects meta-regression showed that OR for all-cause mortality with SPPB values 7–9 was higher in the younger population, diabetics, and men.

Pavasini et al; Short Physical Performance Battery and all-cause mortality: systematic review and meta-analysis.BMC Medicine (2016) 14:215

Falls Risk

FACTS ABOUT OLDER ADULT FALLS

Every **20 minutes** an older adult dies from a fall.

1 in 4 Older Americans fall every year.

1 in 5 falls results in head injury or broken bones.

2x Older adults who have fallen have twice the chance of falling again.

$744 million Total amount spent for acute care hospital charges associated with older adult falls in 2014.

Falls Risk

- A simple open-ended question asking about falls history.
- **Have you fallen in the past year** is highly effective.
- A positive response is associated with a **2.8-times higher** likelihood of falling in the next year
- Common and often unreported
- AAFP does not recommend an automatic comprehensive fall assessment, but it should be considered in the context of individual patient needs

Ganz DA, Bao Y, Shekelle PG, Rubenstein LZ. Will my patient fall? JAMA. 2007;297(1):77-86.
American Academy of Family Physicians. Clinical preventive service recommendation. Fall prevention in older adults. 2012. https://www. aafp.org/patient-care/clinical-recommendations/all/fall-prevention. html. Accessed August 14, 2017

EFFECTS OF AGING ON NUTRITION

Change	→ ***Effect***
Sensory Impairment	
• Decreased sense of taste	→ Reduced appetite
• Decreased sense of smell	→ Reduced appetite
• Loss of vision and hearing	→ Decreased ability to purchase and prepare food
• Oral health / dental problems	→ Difficulty chewing, inflammation, poor quality diet
Altered energy need	→ Diet lacking in essential nutrients
Decreased physical activity	→ Progressive depletion of LBM and loss of appetite
Muscle loss (sarcopenia)	→ Decreased functional ability, assistance needed with ADLs
Psychosocial (isolation)	→ Decreased appetite
Environmental (financial)	→ Limited access to food; poor quality diet
Cumulative Effect	→ ***Progressive Undernutrition***

Nutrition

- **Have you lost weight in the past six months?**
- **Undernutrition** is associated with increased need for health care services and mortality.
- Among older adults receiving home health care, 12% were malnourished and 51% were at risk of malnourishment.
- BMI < 23 is associated with increased mortality. (**weight and height**)
- Mini Nutritional Assessment (*MNA by trained staff*)

Yang Y, Brown CJ, Burgio KL, et al. Undernutrition at baseline and health services utilization and mortality over a 1-year period in older adults receiving Medicare home health services. J Am Med Dir Assoc. 2011; 12(4):287-294. Winter JE, MacInnis RJ, Wattanapenpaiboon N, Nowson CA. BMI and all-cause mortality in older adults: a meta-analysis. Am J Clin Nutr. 2014;99(4):875-890

Mini Nutritional Assessment

MNA®

Nestlé Nutrition Institute

Last name: First name:

Sex: Age: Weight, kg: Height, cm: Date:

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

Screening

A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?
0 = severe decrease in food intake
1 = moderate decrease in food intake
2 = no decrease in food intake ☐

B Weight loss during the last 3 months
0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C Mobility
0 = bed or chair bound
1 = able to get out of bed / chair but does not go out
2 = goes out ☐

D Has suffered psychological stress or acute disease in the past 3 months?
0 = yes 2 = no ☐

E Neuropsychological problems
0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems ☐

F1 Body Mass Index (BMI) (weight in kg) / (height in m)^2 ☐
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater ☐

IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.
DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.

F2 Calf circumference (CC) in cm
0 = CC less than 31
3 = CC 31 or greater ☐

Screening score ☐☐
(max. 14 points)

12-14 points: ☐ Normal nutritional status
8-11 points: ☐ At risk of malnutrition
0-7 points: ☐ Malnourished

Save Print Reset

Mood

- Screening for depression can be performed with a brief two-item screen, **the Patient Health Questionnaire-2 (PHQ-2)**, very sensitive 97%.
- A positive result (**score of 3 or greater**) on the simple screen should be followed by the Patient Health Questionnaire-9, which has been validated as a reliable measure of depression severity in older adults.
- The **USPSTF and the AAFP** recommend screening adults for depression only when staff-assisted depression care supports are available for accurate diagnosis, effective treatment, and follow-up

Siu AL, Bibbins-Domingo K, Grossman DC, et al. Screening for depression in adults: US Preventive Services Task Force recommendation statement. JAMA. 2016;315(4):380-387.
American Academy of Family Physicians. Clinical preventive service recommendation. Depression. 2016. https://www.aafp.org/patientcare/clinical-recommendations/all/depression.html. Accessed August 14, 2017.

Mood

	Not at all	Several days	More than half the days	Nearly every day
Lost interest or had little pleasure in doing things	0	1	2	3
Felt down, depressed, or hopeless	0	1	2	3

Total score = sum of two items.
PHQ-2 score ≥ 3 is suggestive of elevated symptoms of depression.
*The PHQ-2 was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues, with an educational grant from Pfizer Inc.

Thibault JM, Steiner RW. Efficient identification of adults with depression and dementia. Am Fam Physician. 2004;70(6):1101-1110.

Mood

PHQ-9 depression questionnaire

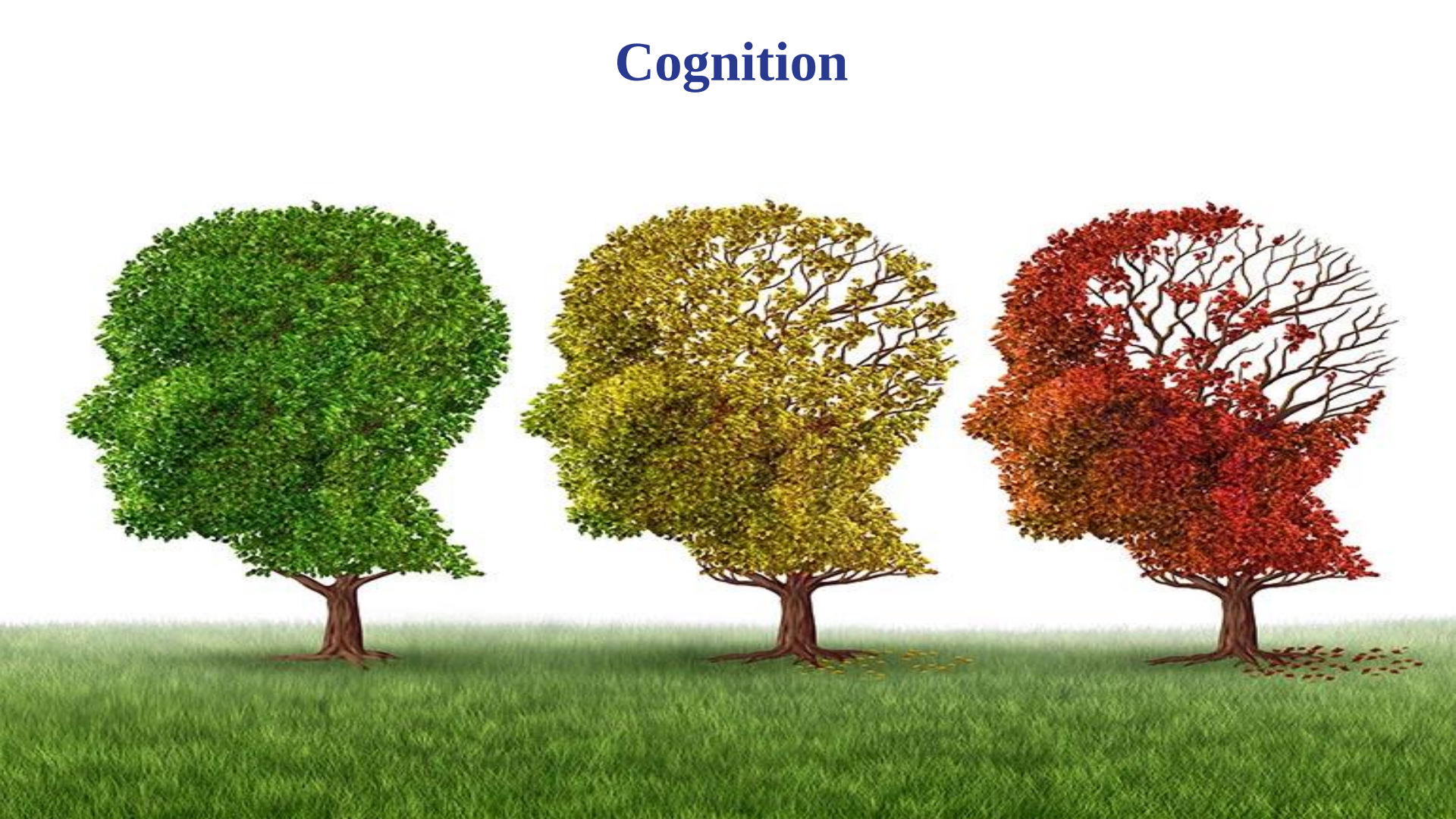
Name:	Date:			
Over the last 2 weeks, how often have you been bothered by any of the following problems?	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Poor appetite or overeating	0	1	2	3
Feeling bad about yourself, or that you are a failure, or that you have let yourself or your family down	0	1	2	3
Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
Moving or speaking so slowly that other people could have noticed? Or the opposite, being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3
Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3
Total ___ =	___	+ ___	+ ___	+ ___
PHQ-9 score ≥10: Likely major depression				
Depression score ranges:				
5 to 9: mild				
10 to 14: moderate				
15 to 19: moderately severe				
≥20: severe				

Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16(9):606-613.

Screening instruments for late-life depression for use in primary care

	Sensitivity percent	Specificity percent	Inpatient	Outpatient	Physically ill	Cognitively impaired
Two-question screen	97	67	Unknown	Yes	Unknown	No
Geriatric Depression Scale (5-item)	94	81	Yes	Yes	Yes	Unknown
Patient Health Questionnaire-9 (9-item)	88	88	Unknown	Yes	Yes	Unknown
Cornell Scale for Depression in Dementia (19-item)	90	75	Yes	Yes	Unknown	Yes
Center for Epidemiologic Studies - Depression Scale (20-item)	93	73	No	Yes	Unknown	No

Cognition



Cognition

- In primary care, impaired cognition may go unrecognized in up to 81% of affected patients.
- The **USPSTF and AAFP** concluded that there is insufficient evidence for screening for cognitive impairment, but the USPSTF advises clinicians to assess cognition when there is suspicion of impairment.
- Annual Wellness Visit requires assessment of cognitive function by direct observation, self-report, and concerns raised by family members, caregivers, or others.

Cordell CB, Borson S, Boustani M, et al.; Medicare Detection of Cognitive Impairment Workgroup. Alzheimer's Association recommendations for operationalizing the detection of cognitive impairment during the Medicare Annual Wellness Visit in a primary care setting. Alzheimers Dement. 2013;9(2):141-150

Cognition

- A brief, structured cognitive assessment using the **Mini-Cog tool improves primary care physicians** spontaneous detection of mild cognitive impairment or dementia from **59% to 83%.**
- The Mini-Cog test combines **three-item recall and clock drawing**.
- Validated against the Mini-Mental State Examination.
- Medical staff can administer the Mini-Cog **in five minutes or less**.
- ***The Mini-Mental State Examination, although well known and well studied, has fallen out of favor because of copyright fees***

Borson S, Scanlan JM, Watanabe J, Tu SP, Lessig M. Improving identification of cognitive impairment in primary care. Int J Geriatr Psychiatry. 2006;21(4):349-355.
Borson S, Scanlan JM, Chen P, Ganguli M. The Mini-Cog as a screen for dementia: validation in a population-based sample. J Am Geriatr Soc. 2003;51(10):1451-1454.

Mini-Cog©

Instructions for Administration & Scoring

ID: _____ Date: _____

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.[1-3] For repeated administrations, use of an alternative word list is recommended.

Version 1	Version 2	Version 3	Version 4	Version 5	Version 6
Banana	Leader	Village	River	Captain	Daughter
Sunrise	Season	Kitchen	Nation	Garden	Heaven
Chair	Table	Baby	Finger	Picture	Mountain

Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

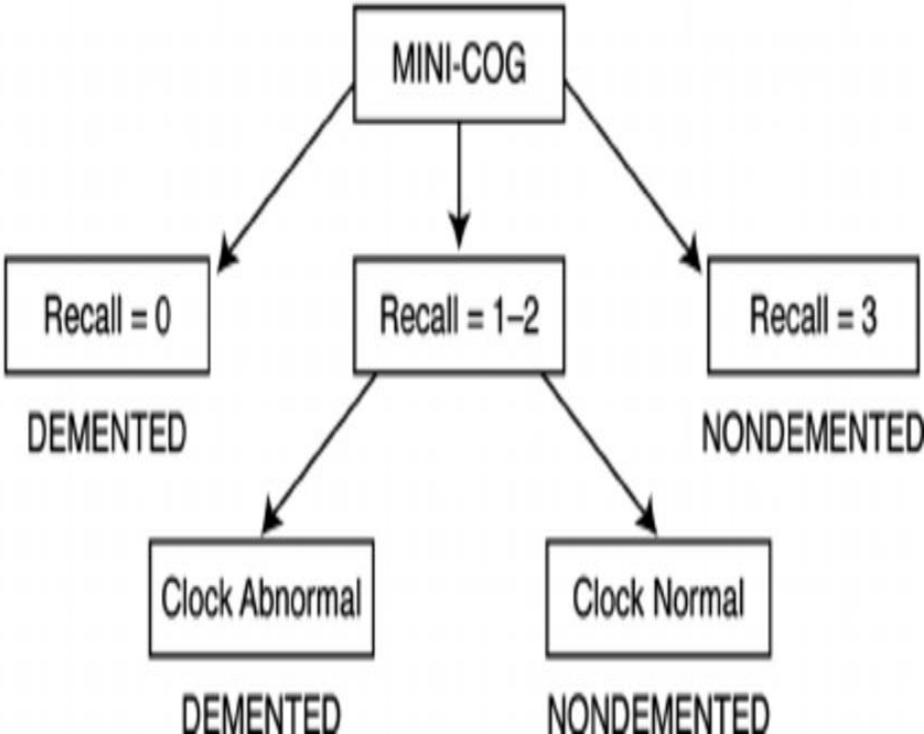
Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

Word List Version: _____ Person's Answers: _____ _____ _____

Scoring

Word Recall: _____ (0-3 points)	1 point for each word spontaneously recalled without cueing.
Clock Draw: _____ (0 or 2 points)	Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points.
Total Score: _____ (0-5 points)	Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status.

The Mini-Cog scoring algorithm. The Mini-Cog uses a three-item recall test for memory and the intuitive clock-drawing test. The latter serves as an "informative distractor," helping to clarify scores when the memory recall score is intermediate.



Geriatric Review of Systems

- **Pain:**
  - Onset**,** location, duration, radiation, severity, aggravating and relieving factors, treatment tried.
  - 50 % of community-dwelling older adults report pain that interferes with normal function, and at least half of nursing home residents report pain on a daily basis
- **Fatigue:** *in managing ADLs & IADLs*
- **Sleep:** Evaluation the nature, frequency, evolution, and duration of symptoms. (*Sleep hygiene*)

Won AB, Lapane KL, Vallow S, et al. Persistent nonmalignant pain and analgesic prescribing patterns in elderly nursing home residents. J Am Geriatr Soc 2004; 52:867.

AGS Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. J Am Geriatr Soc 2002; 50:S205.

Geriatric Review of Systems

- **Bowel:** *Change in bowel habits, frequency and duration.*
- **Bladder:** In the past year;
  - *Have you ever lost your urine and gotten wet?*
  - *If so, have you lost your urine on at least six separate days*?
  - *Positive responses to both questions should lead to a more in-depth assessment of transient and established factors that are contributing to the incontinence.*
- **Hearing:**
  - *Do you feel you have hearing loss?*
  - *Audiometry*
- ***Vision:***
  - *Do you have difficulty driving, watching television, reading, or doing any of your daily activities because of your eyesight, even while wearing glasses?*
  - *Snellen chart*

American Academy of Family Physicians. Clinical preventive service recommendation. Hearing, screening loss in older adults. 2012. https:// www.aafp.org/patient-care/clinical-recommendations/all/hearing. html. Accessed August 14, 2017
Siu AL, Bibbins-Domingo K, Grossman DC, et al. Screening for impaired visual acuity in older adults: US Preventive Services Task Force recommendation statement. JAMA. 2016;315(9):908-914.

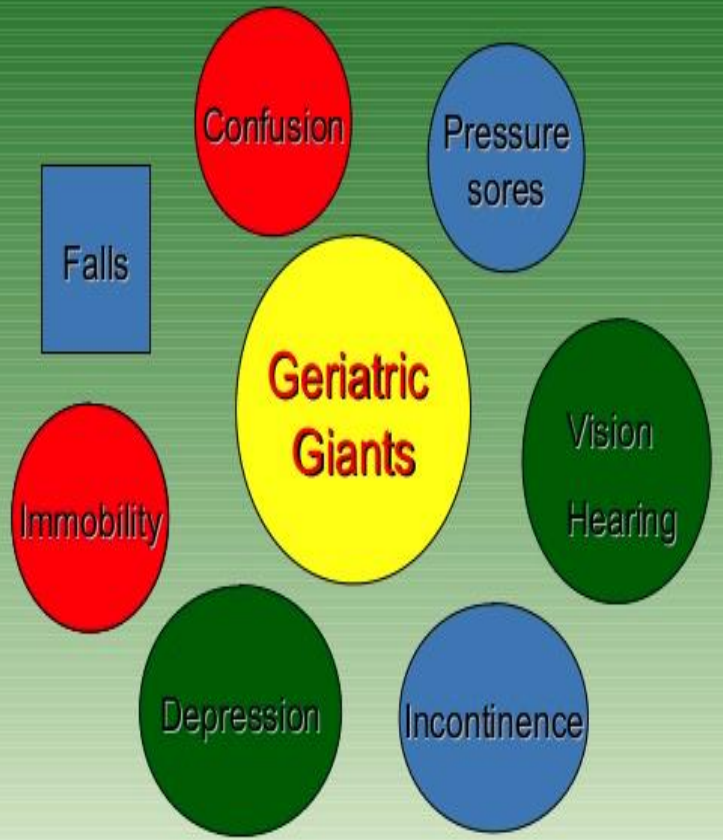
Advanced Care Planning (ACP)

- Opportunity to review preferences for medical care, such as prolonging life, maintaining independence, preventing illness, relieving suffering, and maximizing time with family and friends.
- Preferences for preventive care and decisions regarding life-sustaining treatments.
- Surrogate decision maker (Dementia)

Immunization

- An opportunity to identify older adults who have not received recommended vaccinations.
- 60% of tetanus cases and more than 90% of influenza deaths, and the morbidity of pneumonia and zoster greatly increases after 65 years of age.
- The Advisory Committee on Immunization Practices (ACIP) recommends
    i. Annual influenza vaccination.
    ii. Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine and the tetanus and diphtheria toxoids (Td) booster vaccine every 10 years thereafter
    iii. 13-valent pneumococcal conjugate vaccine (Prevnar 13) at 65 years of age and the 23-valent pneumococcal polysaccharide vaccine (Pneumovax 23) one year later.
    iv. Two doses of recombinant herpes zoster vaccine (Shingrix) administered two to six months apart for immunocompetent adults 50 years or older.

THE GERIATRIC GIANTS



(Cape, 1978)

THE 5 GERIATRIC GIANTS

FALLS | INCONTINENCE | CONFUSION | IMPAIRED HOMEOSTASIS | IATROGENIC DISORDERS

Most common problems amongst older people relate back to one of these giants, which are not necessarily a normal part of the ageing process. Early multidisciplinary intervention should be introduced o optimize quality of life and prevent functional decline.

Falls:

- Main reason why older people loose their independence and functional ability
- Functional ability: to perform activities of daily living, i.e.
  - -To be able to use the toilet
  - -To be able to eat unaided
  - -To be able to dress oneself
  - -To be able to transfer from one point toanother independently
  - -To be able to wash or shower oneself.
- It is often the fear of falling that contributes to the loss in functio-nality, because older people are too scared to walk and go out.

Iatrogenic disorders:

- Iatrogenesis refers to any unintended and untoward consequence of well-intend-ed healthcare interventions
- The impact of poly-pharma-cy (using many prescribed medications) can cause other health related issues, that may again impact on functionality, fall risk and lead to malnutrition
- Iatrogenic disorders may present in a multitude of appearances

Incontinence:

- Muscle loss (due to a decrease in mobility and functionality – as a result of the fear of falling) can contribute to an increased risk in incontinence
- Older people often do not talk to their doctors, and doctors do not ask about incontinence, hence a transient problem might become a chronic illness
- Incontinence wear will take away independence and lead to other emotional and social problems
- Urinary tract infection (UTI) risk is now 100%, and often goes unno-ticed if incontinence wear is used
- UTI can cause severe confusion (and even delirium) which may be misdiagnosed as / mistaken for dementia.

Confusion:

- UTI may lead to a state of confusion (or even a delirium), which may present with very similar symptoms to dementia
- Confusion may increase the risk of fall-ing (due to disorientation)
- In a confused state older people will be even more scared of falling
- To medicate inappropriately for a state of confusion could lead to very serious iatrogenic disorders

Impaired homeostasis:

- Malnutrition is but one form of impaired homeostasis, which in turn may lead to:
  - Unintentional weight loss and subsequent muscle loss;
  - Increased fall risk;
  - Increased risk of infections;
  - Longer hospital stays;
  - Increased risk of skin integrity loss (pressure ulcers, skin tears, etc.);
  - More acute state of confusion and delirium;
  - Lower mood.

Polypharmacy & Medications optimization

- ***Definitions***
  - *Simultaneous use of five or more prescription drugs, is more common in an aging population where multiple coexisting chronic conditions often occur; however, safety concerns may arise (CDC, AFP)*
  - *Potentially Inappropriate Medication (PIM) (BEER-AGS)*
  - *Numerical definitions of polypharmacy did not account for specific comorbidities present and make it difficult to assess safety and appropriateness of therapy in the clinical setting.*

CDC
Tierney. A et.al; Polypharmacy: evaluating risks and deprescribing; American Family Physician; Volume 100, Number 1
Masnoon et.al; What is polypharmacy? A systematic review of definitions, BMC Geriatr. 2017; 17: 230

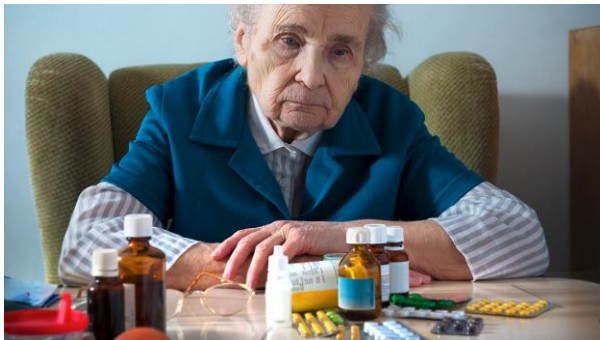
Polypharmacy Negative Consequences

- **Patient**
  - Decreased quality of life
  - Increased mobility issues
  - Increased mortality
  - Increased risk of
    - Adverse drug events
    - Disability
    - Falls
    - Frailty
    - Inappropriate medication use
    - Long-term care placement
    - Medication nonadherence
  - Increased use of the health care system (clinic visits, emergency department visits, hospitalizations)
- **Health care system**
  - Decreased physician functionality (workflow impairment, decreased quality of care)
  - Decreased physician productivity
  - Increased burden on the health care system
  - Increased medication errors

Risk Factors

- Age > 62 years
- Cognitive impairment
- Developmental disability
- Frailty
- Lack of a primary care physician
- Mental health conditions
- Multiple chronic conditions (pain conditions, DM, CAD, CVA, cancer)

- Residing in a long-term care facility
- Seeing multiple subspecialists
- Health care system
- **Poor medical record keeping Poor transitions of care**
- **Prescribing to meet disease-specific quality metrics**
- **Use of automated refill systems**



Geriatrics FOR PEOPLE OVER 35

[1] **Wards Security Geriatric Capsules.** One capsule—10 times daily need B_1, more than 4 times B_2, 3⅛ times A, D; 2½ times C, 1½ Iron, full Iodine need.

Vitamins Per Extra High Potency Capsule.

A—12,500 USP Units	Biotin—25 mcgs.
D—1,250 USP Units	Choline Bit.—25 mgs.
B_1—10 mgs.	dl-Methionine—15 mgs.
Riboflavin—5 mgs.	Inositol—15 mgs.
B_6—0.5 mg.	Rutin—5 mgs.
B_{12}—3 mcgs.	Calcium—83 mgs.
C—75 mgs.	Cobalt—0.05 mg.
E—2 International Units	Copper—0.5 mg.
Cal. Pantothenate—5 mgs.	Iodine—0.1 mg.
Folic Acid—0.75 mg.	Iron—15 mgs.
Niacinamide—50 mgs.	Magnesium—3 mgs.
Liver Desiccated—50 mgs.	Manganese—0.5 mg.
Safflower Oil—510 mgs.	Phosphorus—84 mgs.
Betaine—10 mgs. Zinc—0.5 mg.	Potassium—5 mgs.

53 A 3057—**250-Capsule Econ. Size.** Wt. 1 lb. 14 oz. **$11.98**

53 A 3063—**100 Capsules.** Ship. wt. 15 oz. **5.98**

[2] **Now! Brand New Fortified Geriatrics.** Each Capsule **higher potency** A, D, B_1, B_2, B_6, B_{12}, Calcium, others. 1 Capsule gives 18 times daily need B_1, 8 times B_2.

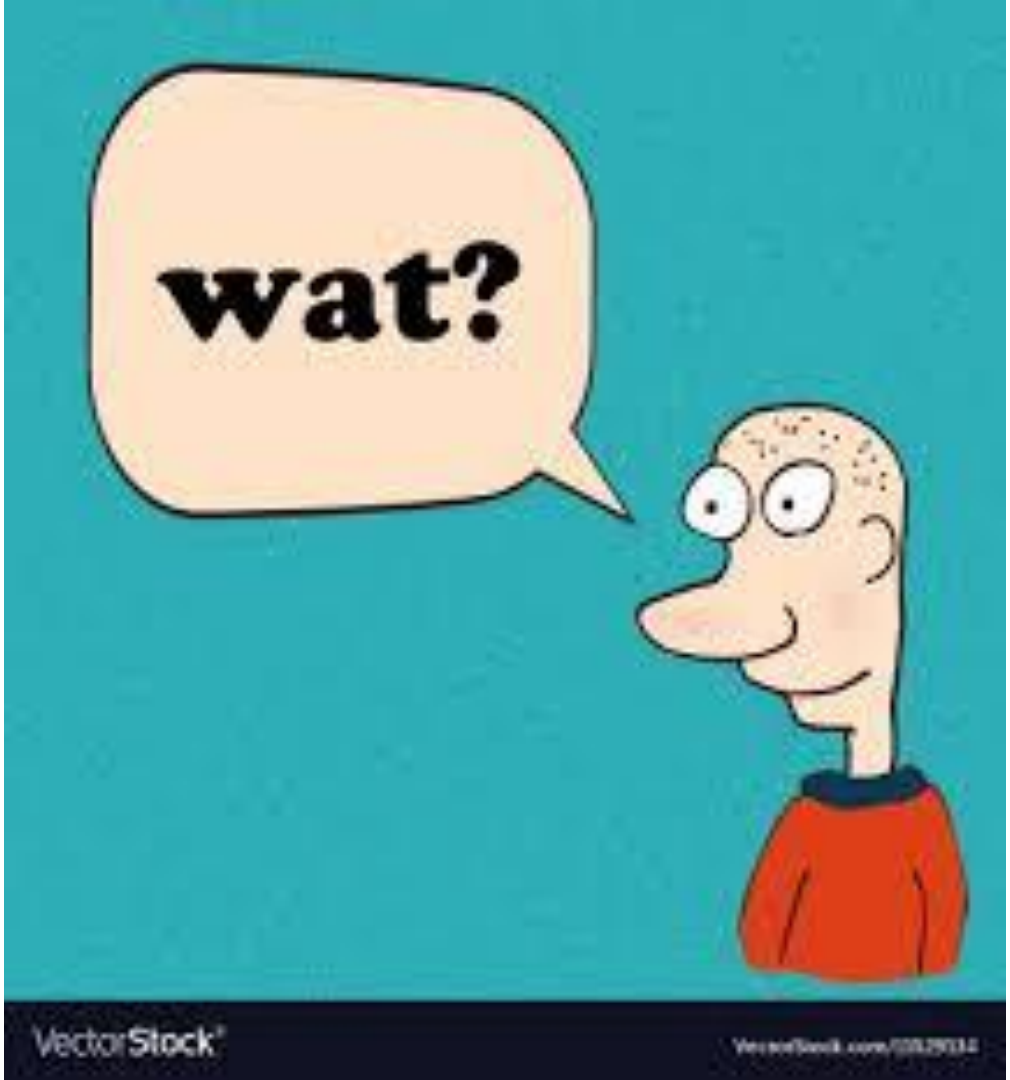
Vitamins Per Fortified Capsule.

A—20,000 USP Units	Biotin—50 mcgs.
D—1,600 USP Units	Choline Bit.—35 mgs.
B_1—18 mgs.	dl-Methionine—25 mgs.
Riboflavin—10 mgs.	Inositol—25 mgs.
B_6—2 mgs.	Rutin—15 mgs.
B_{12}—5 mcgs.	Calcium—100 mgs.
C—75 mgs.	Cobalt—.05 mg.
E—5 International Units	Copper—1 mg.
Cal. Pantothenate—6 mgs.	Iodine—0.1 mg.
Folic Acid—0.75 mg.	Iron—15 mgs.
Niacinamide—50 mgs.	Magnesium—3 mgs.
Hesperidin 25 mgs.	Manganese—0.5 mg.
L-Lysine—20 mgs.	Molybdenum—0.2 mg.
L-Glutamic Acid—30 mgs.	Safflower Oil—440 mgs.
Betain—10 mgs. Zinc—1 mg.	Potassium—5 mgs.

B_{12} with Intrinsic Factor—1/15 Oral U.S.P. Unit

53A3089—**250-Capsule Econ. Size.** Wt. 1 lb. 13 oz. **$15.95**

53A3069—**100 Capsules.** Ship. wt. 15 oz. **6.65**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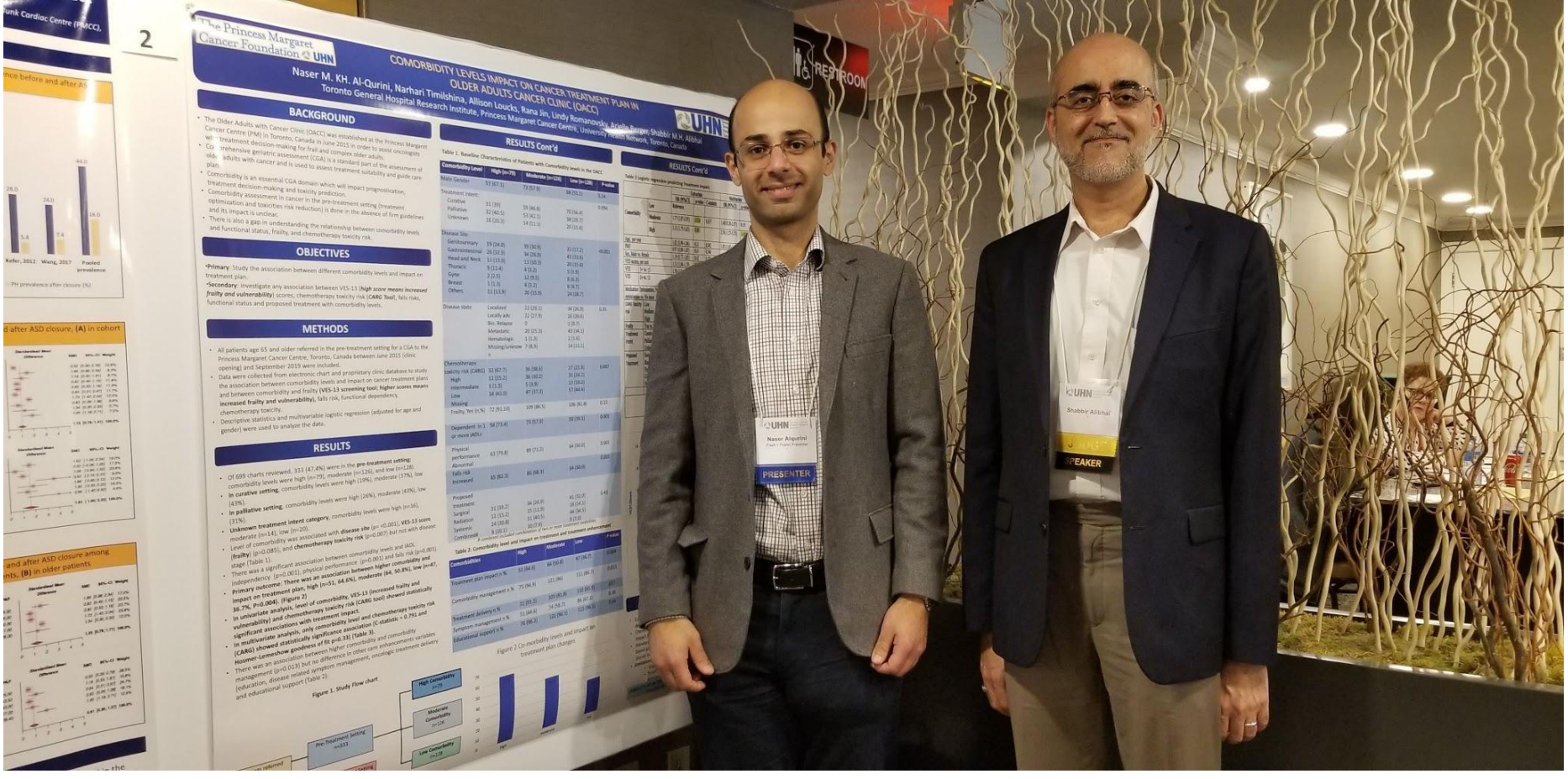
The Princess Margaret Cancer Foundation UHN
COMORBIDITY LEVELS IMPACT ON CANCER TREATMENT PLAN IN OLDER ADULTS CANCER CLINIC (OACC)
Naser M. KH. Al-Qurini, Narhari Timilshina, Allison Loucks, Rana Jin, Lindy Romanovsky, Arielle Berger, Shabbir M.H. Alibhai
Toronto General Hospital Research Institute, Princess Margaret Cancer Centre, University Health Network, Toronto, Canada
BACKGROUND
OBJECTIVES
METHODS
RESULTS
RESULTS Cont'd
Figure 1. Study Flow chart
Figure 2 Co-morbidity levels and impact on treatment plan changes
UHN
Naser Alqurini
PRESENTER
Shabbir Alibhai
SPEAKER
RESTROOM