Why is Comprehensive Geriatric Assessment the Gold Standard?

Barbara Liu
Executive Director, RGP of Toronto
Associate Professor, Medicine, University of Toronto

RGP REGIONAL GERIATRIC PROGRAM OF TORONTO

RGP

Disclosures

- No relationships with commercial interests

Acknowledgement

- Several slides adapted from Drs. Jo-Anne Clarke and Camilla Wong

RGP

2

Outline

1. CGA – What is it? Who needs it?
2. It's a process, not a tool
3. Still the gold standard? – The evidence
4. Some weighty questions

RGP

3

" It is surprising that the medical profession has been so long in awakening to its responsibilities towards the chronic sick and the aged, and that the country at large should have been content to do so little for this section of the community.

Today, owing to the ageing of the population, the general shortage of nurses and domestic help both for hospitals and for private homes, and the fact that more women are employed in industry, the problem has reached enormous dimension which are still increasing…To all who have studied the subject it is obvious that the specialised care and treatment of these folk is of great economic importance and calls for immediate attention."

RGP

4

THE LANCET] ORIGINAL ARTICLES [JUNE 8, 1946

CARE OF THE CHRONIC AGED SICK

MARJORY W. WARREN
M.R.C.S.
DEPUTY MEDICAL DIRECTOR, WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

RGP

5

History of Geriatrics

- Marjorie Warren, 1897-1960
- Introduced the idea that systematic assessment of complex older patient can results in improved outcomes
- Co-founder of the British Geriatrics Society

RGP

Warren's classification of her patients

1. Chronic up-patients—that is, patients who get up part or whole days and can get about with some help, but who cannot manage stairs.
2. Chronic continent bed-ridden patients.
3. Chronic incontinent patients—such wards are allocated only on the female side.
4. Senile, quietly restless and mentally confused or childish patients requiring cot beds for their own safety, but not noisy or annoying to others.
5. Senile dements—requiring segregation from other patients.

RGP

Warren MW, BMJ 1943;Dec 25:822

7

What is Comprehensive Geriatric Assessment (CGA)?

- Comprehensive Geriatric Assessment (CGA) guides a multidimensional specialized geriatric team approach to care that determines a frail older person's biomedical, psychosocial, functional, and environmental needs, and initiates an appropriate treatment and follow-up plan
- Coordinated and integrated

RGP

AE Stuck 1993, BGS

What is the comprehensive part of the CGA?

1. Screening
2. Assessment

Geriatric Assessment

3. Goal-directed intervention
4. Follow-up

Comprehensive Geriatric Assessment

RGP

Wieland D Cancer Control 2003;10:454

9

Who benefits from CGA?

- Frail older people
- No criteria have been validated

RGP

10

Frailty – Phenotype model

- unintentional weight loss
- reduced muscle strength
- reduced gait speed
- self-reported exhaustion
- low energy expenditure

RGP

11

Frailty Cumulative Deficit Model

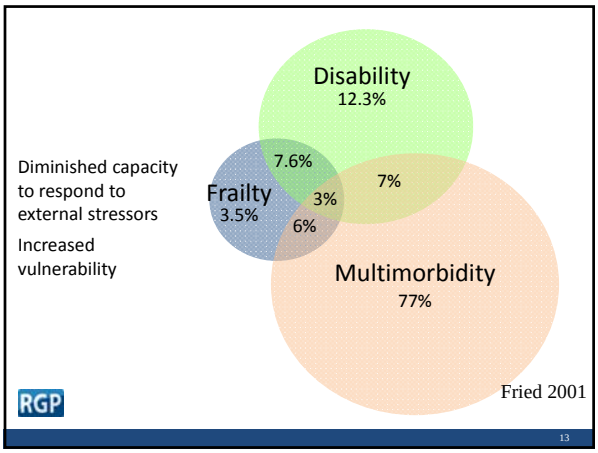
- accumulation of deficits
- broader than the phenotype approach
- Includes co-morbidity and disability as well as cognitive, psychological and social factors.

Images and titles courtesy of Clinical Frailty Scale Geriatric Medicine Research, Dalhousie University, Halifax, Canada

DALHOUSIE UNIVERSITY

RGP

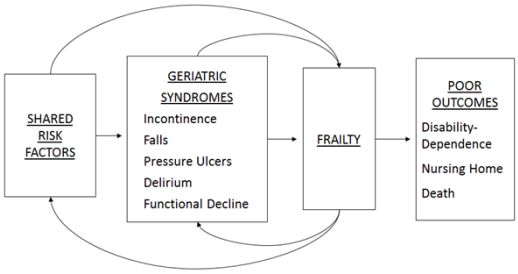
12



Who benefits from CGA?

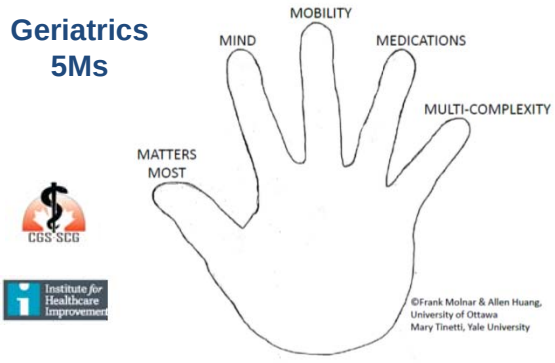
- Problems in multiple domains
- At risk for hospitalization or requiring increased home resources
- Admitted with a specific medical or surgical reason (e.g., fractures, "failure to thrive", recurrent pneumonia, pressure sores)
- Impaired functional status, fall risk, cognitive problems, and mood disorders, (geriatric syndromes).
- Age criteria
- Exclusions – unlikely to benefit
  - terminal illness, severe dementia, complete functional dependence, and inevitable nursing home placement
  - "too healthy" to benefit, such as those who are completely functional without any medical comorbidities.

Frailty and Functional Decline are geriatric syndromes



Inouye, 2007

Geriatrics 5Ms



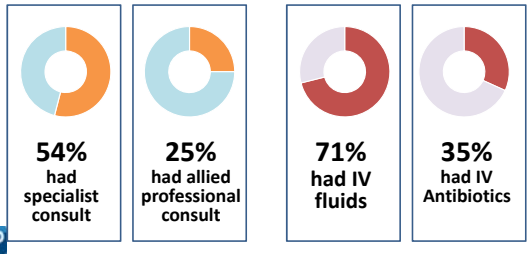
J Am Geriatr Soc. 2017 Sep;65(9):2115

ORIGINAL RESEARCH

Evaluation of Older Adults Hospitalized with a Diagnosis of Failure to Thrive

Linas Kumeliauskas, MD[1], Karen Fruetel, MD, MEd[2], Jayna M. Holroyd-Leduc, MD[2]

N=603



2

CGA
It's a process not a tool

seniors care network

RGP REGIONAL GERIATRIC PROGRAM OF TORONTO

UOIT

RGPs OF ONTARIO

A Competency Framework for Interprofessional Comprehensive Geriatric Assessment

Project Team
Kelly Kay, MA
Faculty of Health Sciences, UOIT
Seniors Care Network
e. kkay@nhh.ca
t. 905-376-3331

Stacey A. Hawkins, BA, MA, CPG
Seniors Care Network
shawkins@nhh.ca

Final Report

Revised October 25, 2017

CGA – Practice Areas

1. Core Geriatric Knowledge	Demonstrate fundamental understanding of physiological and biopsychosocial mechanisms of the aging processes, age-related changes to functioning, and the impact of frailty.
2. Screening, Assessment, and Risk Identification	Gather patient medical and social history and clinical data in sufficient depth to inform care planning and effective clinical decision making.
3. Analysis and Interpretation	Conduct accurate analysis of assessment findings and clinical information to develop a complete understanding of the patient's story. Integrate assessment findings within and across domains to formulate a cohesive clinical impression.

CGA – Practice Areas

4. Care planning and intervention	Demonstrate expertise in treatment, education, goal setting, future and advance planning. Formulate comprehensive, collaborative care plans focused on optimization of function and quality of life. Demonstrate knowledge of community resources. Conduct iterative review and revision of the care plan.
5.Interprofessional Practice	Demonstrate and support interprofessional geriatric practice. Recognize and engage in inter-organizational collaboration
6. Professional Practice	Demonstrate core values, behaviours and skills required to provide comprehensive, team-based geriatric care. Demonstrate confidence in evaluating and maximizing own professional scope to optimize geriatric practice.

Domains of CGAssessment

- Introduction
- Medical/surgical history
- Medications
- Social History
- Functional status
- Physical assessment
- Falls/mobility
- Cognition
- Mood/Mental health
- Sleep
- Pain
- Nutrition
- Continence

RGP

Toenails as the "Hemoglobin A_{1c}" of Functional Independence

JAMA Internal Med May 2018

RGP

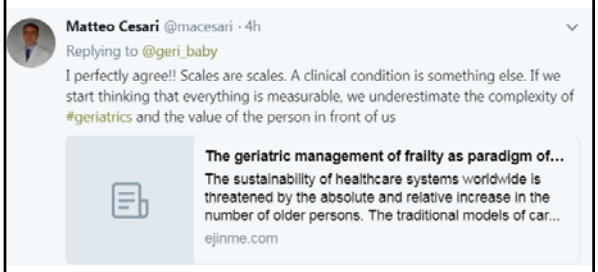
CGA Process

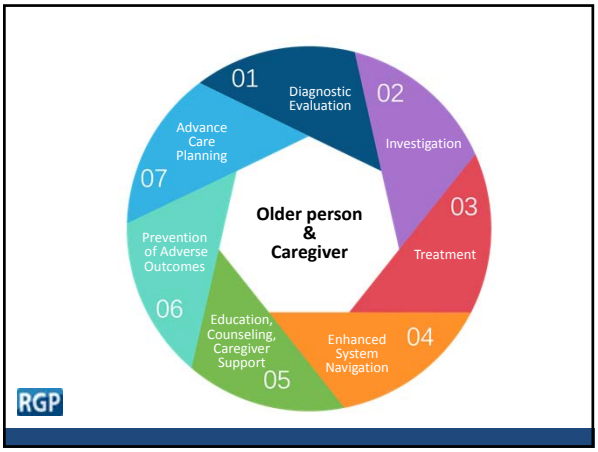
1. Data gathering
2. Discussion among team and patient/family
3. Develop treatment plan
4. Implement treatment plan
5. Monitor and revise treatment plan

RGP

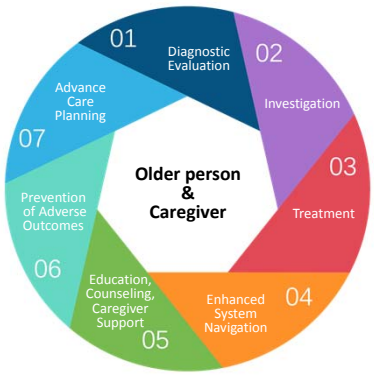
24

Twitter: "Are there too many scores and scales? Is it not just better to ask some appropriate questions (aka taking a history), and then tailor investigations, treatments, management according to what you find (i.e. a CGA)?"





Integrated chronic disease management of multimorbidity



Collaborative/Shared care with primary care and other providers

Assessment has no value if it does not yield a care plan

Care plan has no value if not implemented

RGP Wieland 2003

1. CGA – What is it? Who needs it?
2. It's a process, not a tool
3. Still the gold standard? – The evidence
4. Some weighty questions

RGP

29

Reporting of complex interventions

1. Patient population
2. Intervention recipient
3. Intervention content
4. Delivery personnel
5. Method of communication
6. Intensity and complexity
7. Environment
8. Clinical outcomes

RGP Krumholz et al 2006

What's The Evidence For CGA In Hospital?

Geriatrics in 1980s and 90s

- Many studies that demonstrated positive impact of geriatrics
- Rubenstein et al NEJM 1984 311(26):1664
  - RCT – Geriatric Evaluation Unit versus usual care
  - 24% vs 48% mortality at 1 year
  - 13% vs 30% discharged to NH
  - Better function, morale, fewer hospital admissions

32

Comprehensive Geriatric Assessment is the Gold Standard

- **NNT=33** for one more older adult to be alive and living in their own home at 1 year
- 22 trials, n=10,315, hospital-based
- Updated in 2017, 29 trials, n=13,766
- High certainty evidence

Ellis BMJ 2011
Ellis Cochrane Database Syst Rev 2017

RGP

What's the evidence for CGA In the Outpatient Setting?

RGP

Home visits

- Interprofessional home visits and follow up, telephone follow-up also routinely performed
- Multiple systematic reviews show CGA with home visits are consistently effective:
  - ↓ functional decline
  - ↓ mortality
  - ↓ admissions to LTC

RGP

Stuck et al . Lancet 1993; 342:1032| Van Haastregt et al. Syst Review BMJ 2000; 320:754 | Elkan et al. BMJ 2001;323:719 | Huss et al J Gerontol A Biol Sci Med Sci 2008;63:298 | Stuck et al JAMA 2002;287:1022

"Complex Interventions" in community-dwelling older adults

- 89 RCTs trials, n=97,984 >=65 years, living at home, at least 6 months follow up
- ↓ number of falls (RR 0.90, 0.86 to 0.95)
- ↑ physical function (-0.08, -0.11 to -0.06)
- ↓ hospital admissions (0.94, 0.91 to 0.97)
- ↓ NH admission (0.87, 0.83 to 0.90)

NNT	Community dwelling	Post D/C
Living at home @ 1 year	263	40

RGP

Beswick et al. the Lancet 2008;371:725-35

Day Hospital

- Provide CGA with outpatient medical treatment and rehabilitation
- Interprofessional teams
  - Address geriatric syndromes
  - Enable independent living
  - Reduce, delay or prevent disability
- Essential Feature: Interprofessional goal-setting and team reviews

RGP

- Peitsch et al CGS J of CME; 2016 (6)

Day Hospital reduces functional decline vs usual care

- Cochrane review, 16 RCTs, n=3689 pts, mean F/U 1 yr
- GDH vs other comprehensive care or usual care

Day Hosp vs Usual Care	
↓ Death, poor outcome or deterioration in ADL	OR = 0.72; (0.53 to 0.99)
↓ Deterioration in ADL	OR = 0.61 (0.38 to 0.97)

No difference between GDH and other forms of comprehensive care for death, death or deterioration, or requiring institutional care

RGP

- Brown et al 2015, Cochrane Database of Systematic Review

Evidence for CGA in the

EMERGENCY DEPARTMENT

RGP

CGA in the ED reduces admission rates

- DEED II Study - RCT of CGA and 28-day outreach follow-up
  - ↓ ED visits and hospital admission
- RCT discharge support post ED, n=2063
  - ↑ discharge rates from ED
  - ↓ hospital admission, especially > age 85 (Conroy 2014)
- Meta-analysis: no clear effect of CGA on mortality, readmission, NH admission, Function, QOL, cognition (Conroy 2011)
- Systematic review - consultant geriatrician teams in the ED (5 studies, n= 28,434)
  - ↓ admission rates (2.6 to 19.7%), but variable with respect to readmission and LOS

Conroy et al Age Ageing 2011; 40:436-443.
Caplan et al J Am Geriatr Soc; 2004: 52:1417-23
Conroy et al Age Ageing 2014 ;43:109-114.

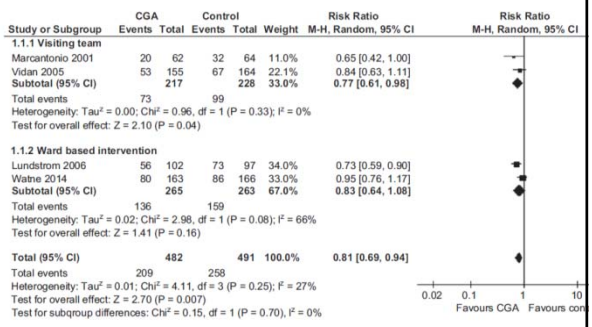
RGP

CGA IN OTHER SETTINGS

RGP

41

CGA in Hip Fracture Patients Reduces Delirium

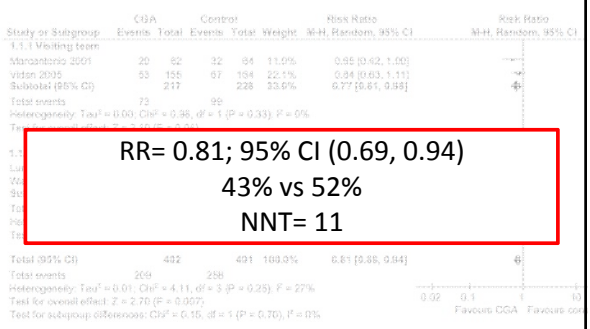


RGP

Shields et al J Am Geriatr Soc 2017 July; 65:1559–1565

42

CGA in Hip Fracture Patients Reduces Delirium



RR= 0.81; 95% CI (0.69, 0.94)
43% vs 52%
NNT= 11

Shields et al J Am Geriatr Soc 2017 July; 65:1559–1565

43

Other studies

Elective orthopedics	↓ LOS, delirium, pneumonia, catheter
CV surgery	↓ LOS, delirium, complications
Urology	↓ LOS, complications
Trauma	↓ delirium, discharge to LTCH
General Surgery	↓ LOS, readmissions, complications

Age Ageing 2007;36:190 | Br J Surg 2017;104:679
BJU Int 2017;120:123 | Ann Surg 2012;256:1098
JAMA Surg 2018

44

Common Characteristics of High Yield CGA

- Targeting persons at highest risk
- Having direct influence over implementation of interventions
- Longer follow-up duration
- Individualized interventions (rather than standardized protocols)
- Multi-component /Interdisciplinary intervention
- Integration with primary and palliative care, goals of care being at the fore front

Rubenstein JAMDA 2015
Rockwood BMC Medicine 2012 10:121

Negative trials – cast doubts on the gold standard?

46

Variable Selection of Patients

OR

Real-world heterogeneity of older population

Complexity of the intervention limits standardization

OR

Diverse clinical objectives

Person-centred, individualized care plan

Contamination of the control group

OR

Successful education and capacity building

RGP

Let's take credit for

- Interprofessional team approach
- Person-centred care
- Integrating multidimensional assessment – appreciation of the broader determinants of health
- Understanding function, complexity, frailty
- Tackling the geriatric syndromes
- Tackling safety and quality issues relevant to older people

RGP

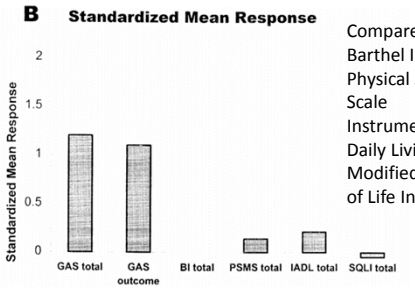
50

Have we chosen the right outcomes How do older people define benefit?

- Value of a consultation is measure by the opinion of those who request it and those who receive it
- Person-centred, individualized care plan
- Patient defines goals of treatment
- Getting the right outcomes
  - Negotiate with patient and obtain their preference
  - may lead to individual outcomes that differ from those that are desired for a population

RGP

Goal Attainment Scaling most responsive measure in CGA



Compared to
Barthel Index
Physical Self-Maintenance Scale
Instrumental Activities of Daily Living
Modified Spitzer Quality of Life Index

RGP

Rockwood et al. J Clin Epi 2003;56(8):736

52

Patient Experience Survey © RGPs of Ontario

You can help the *[name of Specialized Geriatric Service]* improve. Please think about your experience with us when you circle or check your answers below. Your answers will help us know what we do well and how we can improve. Your answers will be kept confidential.

PATIENT EXPERIENCE SURVEY

This survey was completed by: □ Patient □ Family / Caregiver □ Both (Patient & Family/Caregiver) □ Other:

	I FELT THAT...	
1.	the time I had to wait for my first appointment was reasonable	1 2 3 4 5
2.	someone was available to talk to me if I needed it	1 2 3 4 5
3.	my concerns were addressed	1 2 3 4 5
4.	information was given in a way I could understand	1 2 3 4 5
5.	I was treated with respect	1 2 3 4 5
6.	I was included in making decisions about my care	1 2 3 4 5
7.	time was taken to learn about me as a person	1 2 3 4 5
8.	I had confidence in the people I saw	1 2 3 4 5
9.	I could achieve the goals that were agreed to	1 2 3 4 5
10.	the *(program name)* met my needs	1 2 3 4 5
11.	I was referred to other programs and/or services that I needed	1 2 3 4 5
12.	It was clear who would receive information about my care	1 2 3 4 5
13.	Overall, I felt that the care and services I experienced were: (0=Poor Experience)	0 1 2 3 4 5 6 7 8 9 10 (10= Excellent experience)
14.	I would recommend this program to family or friends, if they needed it:	□ Definitely No □ Somewhat No □ Somewhat Yes □ Definitely Yes
15.	What could be improved?	
16.	What worked well?	

© RGPs of Ontario

	I FELT THAT...
1.	the time I had to wait for my first appointment was reasonable
2.	someone was available to talk to me if I needed it
3.	my concerns were addressed
4.	information was given in a way I could understand
5.	I was treated with respect
6.	I was included in making decisions about my care
7.	time was taken to learn about me as a person
8.	I had confidence in the people I saw
9.	I could achieve the goals that were agreed to
10.	the *(program name)* met my needs
11.	I was referred to other programs and/or services that I needed
12.	it was clear who would receive information about my care
13.	Overall, I felt that the care and services I experienced were: 0 1 2 (0=Poor Experience)
14.	I would recommend this program to family or friends, if they needed it: □ Definitely No □ Somew
15.	What could be improved?
16.	What worked well?

1. What should we measure as evidence of the value of CGA?
2. If other services have interprofessional teams and pay attention to functional and social issues, what is the added value of geriatrics?
3. What can you do to enhance the implementation of your management plan?

RGP

55

Summary

- CGA is a process not a tool
- Not just assessment, includes management plan and implementation
- Robust evidence in the hospital setting that it increases likelihood of living at home NNT=33
- In other settings – prevents functional decline, ↓ LOS
- Let's take credit for many advances in care of older people and improvements in healthcare

Acknowledgements

RGP

RGPs OF ONTARIO

Ontario Local Health Integration Network

Marlene Awad
David Ryan
Caitlin Brandon
Jesika Contreras
Kerri Fisher
Liis-Ann Klein
Shirley Li
Ning Ning Ong
Ken Wong
Wendy Zeh