Incorporating Geriatric Principles into Subspecialty Care: A Nephrologist's Perspective

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Financial Disclosures

None

Goals and Objectives

1. Recognize the significant burden of comorbidities and geriatric syndromes among older adults with chronic kidney disease.

2. Learn about the role of geriatric principles in delivering individualized, patient-centered care to older adults with kidney disease.

Roadmap

1. Describe the burden of comorbidities and geriatric syndromes among older adults with chronic kidney disease

2. Clinical cases illustrating geriatric syndromes in older adults with kidney disease

Background

VIEWPOINT

VITAL DIRECTIONS FROM THE NATIONAL ACADEMY OF MEDICINE

Preparing for Better Health and Health Care for an Aging Population

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Editorial

The number and proportion of older persons in the United States is rapidly increasing. Significant deficiencies are projected in the country's capacity to deliver the medical, public health, and support services needed for the future frail and ill older population, and the nation is not investing sufficiently in keeping people healthy late in life. Valuable advances are needed in 4 vital directions central to the health and well-being of older persons, especially those at greatest risk owing to medical conditions or social disadvantage.

Enhancing Care Delivery for Chronic Conditions

Patients with multiple comorbidities present special challenges with respect to both clinical management and control of costs. Coordination of all clinicians in setting goals and sharing information is essential to effective care. Evidence-based strategies are available to improve the care management of frail older persons with comorbid conditions, but wide dissemination of these models has often been hindered by organizational limitations,

Training a sufficient number of board-certified geriatricians has long lagged far behind the national goals, and similar deficiencies exist in all other relevant components of the elder care workforce, including nurses, social workers, and other health care and public health providers. While there are many reasons for this, it is hard to ignore the role of compensation. For instance, the income of geriatricians is well below that of general internists or family physicians, despite the additional training required to become certified in geriatrics. Nursing also has a shortage in geriatrics; less than 1% of registered nurses and less than 3% of advanced practice registered nurses are certified in geriatrics.

Perhaps of greater significance than the dearth of trained specialists in geriatrics is the lack of sufficient training and demonstrated competence of all health care and public health practitioners who care for older patients or populations and provide diagnosis and management of common geriatric problems.

In addition, more than 1 million direct care workers,

Summary Recommendations for Vital Directions

Although many opportunities exist for improving the health and health care of current and future older persons, 4 distinct vital directions are identified that require immediate attention and will yield significant benefits, including

- **Develop new models of care delivery.** Existing strategies for care delivery that add value require broader dissemination and new approaches are needed that address the clinical and financial challenges presented by multiply impaired frail patients.
- **Augment the elder care workforce.** The cadre of specialists in geriatric medicine, across all health professions including public health, must be strengthened to conduct research, provide specialized care as needed, and, perhaps most important, lead educational efforts to enhance the geriatric competence of all health care practitioners who manage the care of older persons or populations.
- **Promote the social engagement of older persons.** Enhancement of public and private programs to incent engagement of older persons in the labor force and in volunteerism will yield substantial benefits in health and well-being. Specific efforts are needed to reverse the decades-long trend toward disengagement of older individuals.
- **Transform advanced illness and care at the end of life.** Current widespread weaknesses in the care received by people with advanced illness, especially those near death, can be improved through the use of available evidence-based approaches. Such efforts will maintain dignity and improve care quality while reducing the waste of precious resources.

These realistic and affordable recommendations blend greater dissemination of existing proven strategies with development of targeted new approaches. Given the substantial increases in the number and proportion of older persons in the United States, this is a critical task, and the health care system and the nation cannot afford to fail.

JAMA. 2016 Sep 26. doi: 10.1001/jama.2016.12335. [Epub ahead of print]

Background: Aging Kidney Disease Population

- CKD is increasingly common among older adults
- Prevalence is expected to expand with the aging U.S. population
- ESKD population is older
  - In 2013, ~40% were ≥65 years of age
  - By 2030, projected to increase to 55-61%
- Affects decision-making and types of care

- Coresh J, Selvin E, Stevens LA, et al. Prevalence of chronic kidney disease in the United States. JAMA 2007;298:2038-47.
- Bowling CB, Sharma P, Fox CS, O'Hare AM, Muntner P. Prevalence of reduced estimated glomerular filtration rate among the oldest old from 1988-1994 through 2005-2010. JAMA 2013;310:1284-6.
- USRDS. 2018 USRDS annual data report: Epidemiology of kidney disease in the US. Bethesda, MD: NIH, NIDDK; 2018.

Chronic Kidney Disease: Model of Accelerated Aging

Patients with Kidney Disease

- High burden of comorbidities and one of the most medically complex patient populations
- Pill burden amongst the highest of any of the chronic diseases
- Higher risk for functional decline and mobility-related disability

- Tonelli M, Wiebe N, Manns BJ, et al. Comparison of the Complexity of Patients Seen by Different Medical Subspecialists in a Universal Health Care System. JAMA Netw Open 2018;1:e184852.
- Burnier M, Pruijm M, Wuerzner G, Santschi V. Drug adherence in chronic kidney diseases and dialysis. Nephrol Dial Transplant 2015;30:39-44.
- Roshanravan B, Patel KV, Robinson-Cohen C, et al. Creatinine clearance, walking speed, and muscle atrophy: a cohort study. American journal of kidney diseases 2015;65:737-47.

Contributors to Poor Functional Status

- Comorbidities
- Low levels of physical activity
- Muscle wasting (sarcopenia)
- Frailty
- Fractures
- Cognitive Impairment

Cognitive Impairment in Chronic Kidney Disease

- High rates of cognitive impairment
- Even when mild can have a substantial impact on function and survival
- Affects ability to engage in medical care and interventions

Cognitive Impairment in Chronic Kidney Disease

- Vascular pathology
- Altered cerebral blood flow
- Microvascular cerebrovascular disease affects:
  - Attention
  - Processing speed
  - Memory
  - Executive Function

Veterans with Chronic Kidney Disease

- Veterans have higher prevalence of CKD compared with general population
- Higher risk for functional decline compared to civilian counterparts
  - Greater burden of comorbid conditions (vascular disease, diabetes, hypertension)
  - Mental health
- Older veterans with CKD at higher risk for inappropriate medication prescribing (contraindicated or prescribed at an excessive dose)

- Chang F, O'Hare AM, Miao Y, Steinman MA. Use of Renally Inappropriate Medications in Older Veterans: A National Study. J Am Geriatr Soc 2015;63:2290-7.
- Patel N, Golzy M, Nainani N, et al. Prevalence of various comorbidities among veterans with chronic kidney disease and its comparison with other datasets. Ren Fail 2016;38:204-8.

Veterans with End-stage Kidney Disease

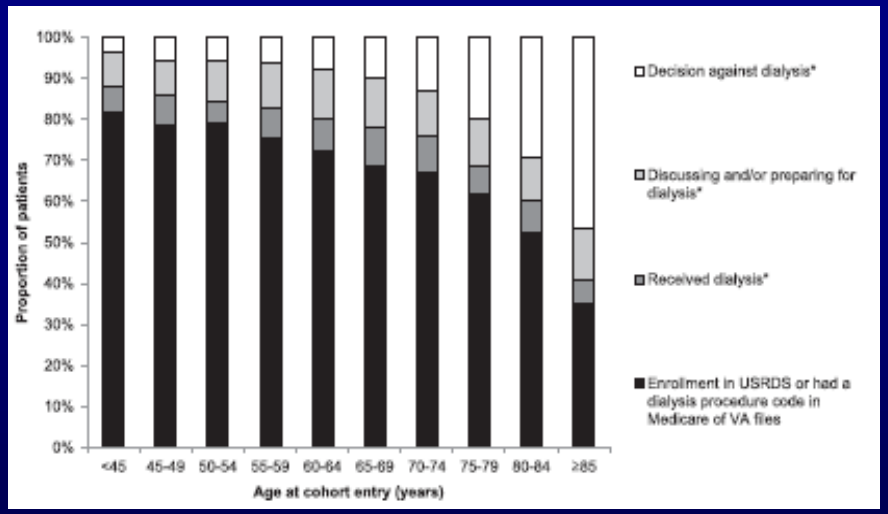
- Each year, ~13,000 veterans transition to renal replacement therapy
- Veteran ESKD population: mean age 70.2 years
- Those who progress to ESKD are one of the most resource-intensive patient populations receiving care within the VHA

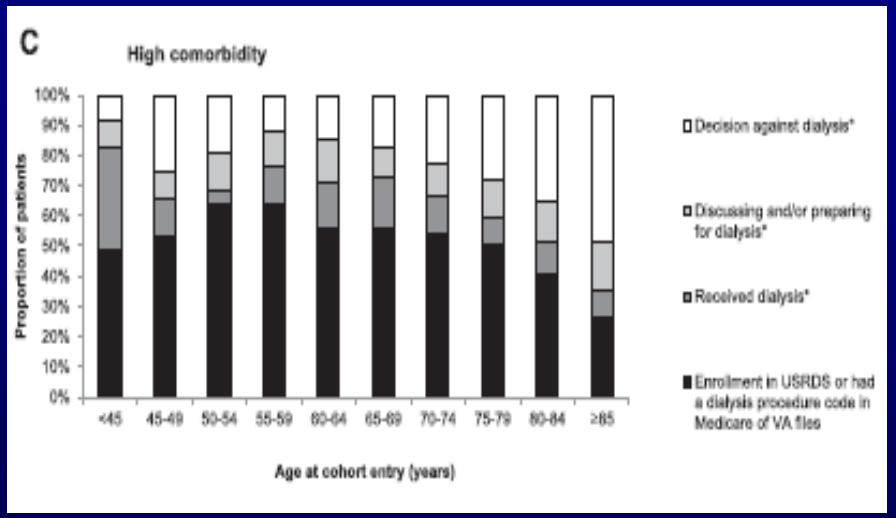
- Streja E, Kovesdy CP, Soohoo M, et al. Dialysis Provider and Outcomes among United States Veterans Who Transition to Dialysis. Clin J Am Soc Nephrol 2018;13:1055-62.
- USRDS. Chapter 9: Transition of Care in Chronic Kidney Disease. Bethesda, MD: NIH, NIDDK; 2018.
- Hynes DM, Stroupe KT, Fischer MJ, et al. Comparing VA and private sector healthcare costs for end-stage renal disease. Medical care 2012;50:161-70.

Decisions about Renal Replacement Therapy among Veterans with Chronic Kidney Disease

Decisions about Renal Replacement Therapy in Patients with Advanced Kidney Disease in the US Department of Veterans Affairs, 2000–2011

Susan P.Y. Wong, Paul L. Hebert,†‡ Ryan J. Laundry,† Kenric W. Hammond,§‖ Chuan-Fen Liu,†‡ Nilka R. Burrows,¶ and Ann M. O'Hare*†*





Wong et al. Clin J Am Soc Nephrol. 2016 Oct 7;11(10):1825-1833

End-of-Life Care

JAMA Internal Medicine | Original Investigation

Quality of End-of-Life Care Provided to Patients With Different Serious Illnesses

Melissa W. Wachterman, MD, MSc, MPH; Corey Pilver, PhD; Dawn Smith, MS; Mary Ersek, PhD, RN; Stuart R. Lipsitz, ScD; Nancy L. Keating, MD, MPH

IMPORTANCE Efforts to improve end-of-life care have focused primarily on patients with cancer. High-quality end-of-life care is also critical for patients with other illnesses.

OBJECTIVE To compare patterns of end-of-life care and family-rated quality of care for patients dying with different serious illnesses.

DESIGN, SETTING, AND PARTICIPANTS A retrospective cross-sectional study was conducted in all 146 inpatient facilities within the Veteran Affairs health system among patients who died in inpatient facilities between October 1, 2009, and September 30, 2012, with clinical diagnoses categorized as end-stage renal disease (ESRD), cancer, cardiopulmonary failure (congestive heart failure or chronic obstructive pulmonary disease), dementia, frailty, or other conditions. Data analysis was conducted from April 1, 2014, to February 10, 2016.

MAIN OUTCOMES AND MEASURES Palliative care consultations, do-not-resuscitate orders, death in inpatient hospices, death in the intensive care unit, and family-reported quality of end-of-life care.

RESULTS Among 57 753 decedents, approximately half of the patients with ESRD, cardiopulmonary failure, or frailty received palliative care consultations (adjusted proportions, 50.4%, 46.7%, and 43.7%, respectively) vs 73.5% of patients with cancer and 61.4% of patients with dementia ($P < .001$). Approximately one-third of patients with ESRD, cardiopulmonary failure, or frailty (adjusted proportions, 32.3%, 34.1%, and 35.2%, respectively) died in the intensive care unit, more than double the rates among patients with cancer and those with dementia (13.4% and 8.9%, respectively) ($P < .001$). Rates of excellent quality of end-of-life care reported by 34 005 decedents' families were similar for patients with cancer and those with dementia (adjusted proportions, 59.2% and 59.3%; $P = .61$), but lower for patients with ESRD, cardiopulmonary failure, or frailty (54.8%, 54.8%, and 53.7%, respectively; all $P \leq .02$ vs patients with cancer). This quality advantage was mediated by palliative care consultation, setting of death, and a code status of do-not-resuscitate; adjustment for these variables rendered the association between diagnosis and overall end-of-life care quality nonsignificant.

CONCLUSIONS AND RELEVANCE Family-reported quality of end-of-life care was significantly better for patients with cancer and those with dementia than for patients with ESRD, cardiopulmonary failure, or frailty, largely owing to higher rates of palliative care consultation and do-not-resuscitate orders and fewer deaths in the intensive care unit among patients with cancer and those with dementia. Increasing access to palliative care and goals of care discussions that address code status and preferred setting of death, particularly for patients with end-organ failure and frailty, may improve the overall quality of end-of-life care for Americans dying of these illnesses.

Wachterman et al. JAMA Intern Med. 2016;176(8):1095-1102

Characterizing Approaches to Dialysis Decision Making with Older Adults

A Qualitative Study of Nephrologists

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Dialysis versus Medical Management at Different Ages and Levels of Kidney Function in Veterans with Advanced CKD

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End of Life, Withdrawal, and Palliative Care Utilization among Patients Receiving Maintenance Hemodialysis Therapy

Joy Chieh-Yu Chen,[1] Bjorg Thorsteinsdottir,[2,3] Lisa E. Vaughan,[4] Molly A. Feely,[1,5] Robert C. Albright,[6] Macaulay Onuigbo,[7] Suzanne M. Norby,[6] Christy L. Gossett,[6] Margaret M. D'Uscio,[6] Amy W. Williams,[6] John J. Dillon,[6] and LaTonya J. Hickson[6,8]

Abstract

Background and objectives Withdrawal from maintenance hemodialysis before death has become more common because of high disease and treatment burden. The study objective was to identify patient factors and

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Original Article

End-of-Life Experience of Older Adults Dying of End-Stage Renal Disease: A Comparison With Cancer

Melissa W. Wachterman, MD, MSc, MPH, Stuart R. Lipsitz, ScD, Karl A. Lorenz, MD, MSHS, Edward R. Marcantonio, MD, SM, Zhonghe Li, MS, and Nancy L. Keating, MD, MPH

VA Boston Healthcare System (M.W.W.), Boston, Massachusetts; Brigham and Women's Hospital (M.W.W., S.R.L., N.L.K.), Boston,

Questions

In this complex, challenging patient population:

- How can we deliver more individualized, patient-centered care?
- How can we improve the coordination of care?

Geriatrics-Renal Collaborative Clinic at VA Boston Healthcare System

In partnership with

the New England GRECC

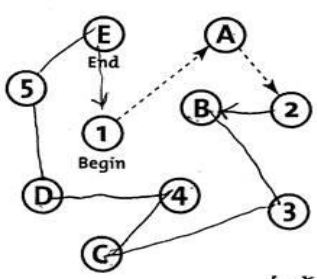
Case 1

- 83 year old female with nephrotic-range proteinuria
- Recurrent hospitalizations over the past year – CHF exacerbations, perforated diverticulitis
- Delirium while an inpatient
- Daughter had noted short-term memory problems

MONTREAL COGNITIVE ASSESSMENT (MOCA)

NAME :
Education :
Sex :

VISUOSPATIAL / EXECUTIVE



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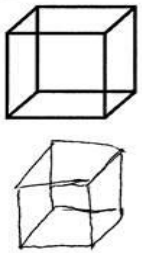


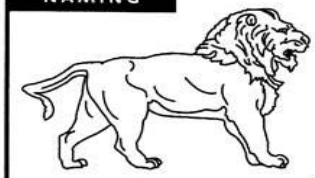
[✓] [✓]

Draw CLOCK (Ten past eleven)
(3 points)

[✓] Contour [✓] Numbers [ ] Hands

POINTS 4/5

NAMING



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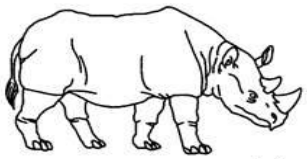
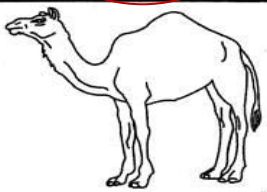


[✓]



[✓] 3/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial	✓	✓	✓	✓	✓
2nd trial					

No points

ATTENTION

Read list of digits (1 digit/ sec.).
Subject has to repeat them in the forward order [✓] 2 1 8 5 4
Subject has to repeat them in the backward order [✓] 7 4 2 — 2/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors
[ ] F B A C M ~~N~~ A A J K L B A F A K D E A A A J A M O F A ~~A~~ B — 0/1

Serial 7 subtraction starting at 100
[✓] 93 [✓] 86 [✓] 79 [✓] 72 [✓] 65 — 3/3
4 or 5 correct subtractions: **3 pts**, 2 or 3 correct: **2 pts**, 1 correct: **1 pt**, 0 correct: **0 pt**

LANGUAGE

Repeat : I only know that John is the one to help today. [✓]
The cat always hid under the couch when dogs were in the room. [✓] — 2/2

Fluency / Name maximum number of words in one minute that begin with the letter F [✓] 11 (N ≥ 11 words) — 1/1

ABSTRACTION

Similarity between e.g. ~~banana - orange = fruit~~ [ ] train – bicycle [ ] watch - ruler — 0/2

DELAYED RECALL

	Has to recall words WITH NO CUE	FACE	VELVET	CHURCH	DAISY	RED
		[ ]	[ ]	[ ]	[ ]	[ ]
Optional	Category cue				✓	✓
	Multiple choice cue	✓		✓		

Points for UNCUED recall only — 0/5

ORIENTATION

[ ] Date [✓] Month [✓] Year [✓] Day [✓] Place [✓] City — 5/6

 Version November 7, 2004
www.mocatest.org

Normal ≥ 26 / 30

TOTAL 20/30
Add 1 point if ≤ 12 yr edu

Case 1

- Notable functional and cognitive decline over the past year, accelerated by multiple illnesses and hospitalizations
- Mild dementia, vascular type
- Sensorineural hearing loss – hearing aids don't fit

Case 1

- All information about her health and changes are communicated to her children
- Written document summarizing visit
- Referral for refitting of hearing aids
- Physical therapy referral – falls risk
- Medication adjustment
- Communication with primary care provider

Case 2

- 84 year old African-American male
- ESRD on HD from membranous glomerulonephritis
- Recently widowed (married for over 60 years)
- Concerns about ability to manage his own medications:
  - refills were not picked up
  - high phosphorus levels (? adherence to phosphorus binder)

Montreal Cognitive Assessment

- Limited predictive value in discerning levels of cognitive impairment in African Americans

Table 2: Montreal Cognitive Assessment (MoCA) scores by age and education in 414 African Americans.

Age (years)	Education								All	
	<12 years		12 years		13–15 years		16+ years			
	N	Mean (SD) median	*N*	Mean (SD) median	*N*	Mean (SD) median	*N*	Mean (SD) median	*N*	Mean (SD) median
<55	15	18.8 (3.1) 19.0	50	19.3 (3.9) 19.5	66	20.7 (3.4) 20.0	28	23.4 (3.1) 24.0	159	20.5 (3.8) 20.0
55–65	15	18.0 (3.0) 18.0	38	18.4 (3.7) 18.5	74	19.8 (3.3) 20.0	36	22.3 (3.6) 23.0	163	19.8 (3.7) 20.0
>65	15	14.4 (3.3) 15.0	13	17.7 (4.2) 19.0	46	19.2 (2.9) 19.5	18	21.6 (3.1) 21.0	92	18.7 (3.9) 19.0
All	45	17.1 (3.6) 17.0	101	18.7 (3.8) 19.0	186	19.9 (3.3) 20.0	82	22.5 (3.4) 23.0	414	19.8 (3.8) 20.0

Note: MoCA scores are raw scores, with no extra point given for education ≤12 years. $N = 414$, not 415, because age was missing for one person. Range for age <55 is 35–54; range for >65 is 66–83 years. For participants with <12 years of education, 11 had 5–8 years and 34 had 9–11 years.

Sink et al. Montreal cognitive assessment and modified mini mental state examination in African Americans. J Aging Res 2015

Case 2

- Low health literacy

  -Finished high school, some trade school

- Independent in ADLs

- Coping adequately with good social support and involvement of children

Case 2

- “Thank you for this information. I wasn’t aware that my father might be having trouble taking his medication”

- “I discussed his medicine with him last night…Until recently, my dad was very secretive about his health. He wouldn’t even let my mother know or assist him with his medical health. But I believe he may have changed his mind recently”

Case 2

- Pictorial medication sheet
- Referral to PACT pharmacy
- Enlist help of family member to fill pill box
- Updating of advanced directive
- Communication with primary care provider

Medication Sheet

Geriatrics/Renal Collaborative Clinic
VA Boston Healthcare System

October 10, 2016 Name: _____

Names of pills	What It's For	 Morning/ breakfast	 Afternoon/ lunch	 Evening/ dinner	 Night/ bedtime

Case 3

- 89 year old African-American male with advanced kidney disease
- Had dialysis access placed earlier in the year
- Polypharmacy
- Concern over cognitive impairment and clarification of patient's wishes

Case 3

"My medications and pacemaker are my albatross"

"Ah! Well a-day! What evil looks
Had I from old and young!
Instead of the cross, the albatross
About my neck was hung."

"Rime of the Ancient Mariner"
Samuel Taylor Coleridge

Case 3

- Significant inconsistency in the patient's stated preferences about whether to pursue dialysis
- Concern about cognitive function
  - Difficulty with recall
  - Defensive when asked to recall information
- Longstanding mental illness with recent exacerbation of his chronic suicidality

Case 3

- “If I feel the kidney failure coming on when I’m at home, I’ll just fold my arms and go to sleep”
- Not want to be “on my back for four hours” with “six needles stuck in my arm”
- Willing to undergo dialysis
  - Once a week which he brought up repeatedly
  - “If I really need it – if my kidneys are really failing”
- Priorities for his life:
  1) his family
  2) being at home and independent
  3) staying alive

Case 3

- Demonstrated inconsistent preferences regarding dialysis
- Difficulty manipulating information about how his preferences would be impacted by different circumstances
- Unable to make connections between various pieces of information

Case 3

- Executive Dysfunction – Lack of ability to:
  - Plan
  - Problem solve
  - Relate actions to consequences
- Impaired decision-making capacity

Case 3

Family meeting with health-care proxy and family to discuss preferences and goals of care

Enlisting help of family to assist with medications

Communication with primary care provider

Most Common Findings

- Adverse medication effects
- Cognitive impairment
- Functional impairment
- Mental health conditions
- Low health literacy

Other Examples

- Incontinence and Nocturia related to Diuretics
- Falls Risk and Impaired Mobility
- Sensory Impairment (Vision, Hearing)
- Chronic Pain
- Polypharmacy
- Caregiver Burden
- Depression and Anxiety with Anticipated Transition to Dialysis
- Social Isolation of Patient with Anticipated Transition to Dialysis

Incorporating Geriatric Principles into Renal Practice

INNOVATIVE GERIATRIC PRACTICE MODELS: PRELIMINARY DATA

Incorporating Geriatric Assessment into a Nephrology Clinic: Preliminary Data from Two Models of Care

Rasheeda K. Hall, MD, MBA, MHS,[†‡] Carol Haines, MSN,[†] Steven M. Gorbatkin, MD, PhD,[§‖] Lynn Schlanger, MD,[§‖] Hesham Shaban, MD,[‡] Jane O. Schell, MD, MHS,[#] Susan B. Gurley, MD, PhD,[†‡] Cathleen S. Colón-Emeric, MD, MHS,[*‡] and C. Barrett Bowling, MD, MSPH[‖**]*

Incorporating geriatric assessment into routine nephrology care for older adults is a novel approach to CKD management. Two innovative programs were imple-

Geriatric Assessment

1. Lead to more individualized, individual goal-directed approach to care

2. Recommend solutions (e.g. assistive device)

3. Customize management goals (blood pressure targets)

4. Prognostic concerns regarding survival on dialysis to make informed decisions regarding conservative management

Results

At least 25% of veterans had functional limitations identified by geriatric assessment

1. ADLs
2. IADL
3. Fall history
4. Impaired mobility
5. Cognitive impairment

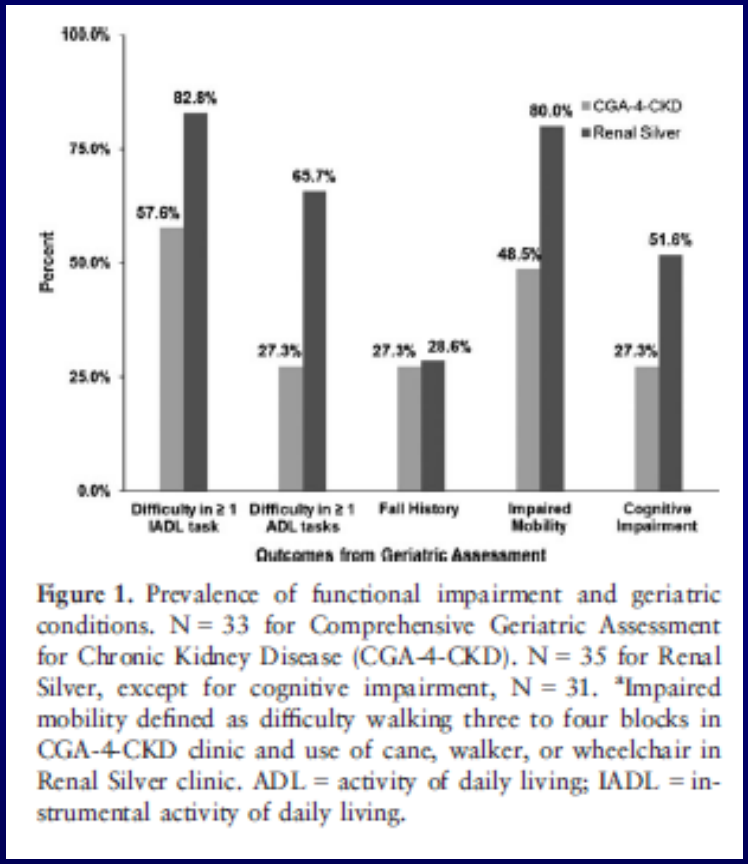


Figure 1. Prevalence of functional impairment and geriatric conditions. N = 33 for Comprehensive Geriatric Assessment for Chronic Kidney Disease (CGA-4-CKD). N = 35 for Renal Silver, except for cognitive impairment, N = 31. [a]Impaired mobility defined as difficulty walking three to four blocks in CGA-4-CKD clinic and use of cane, walker, or wheelchair in Renal Silver clinic. ADL = activity of daily living; IADL = instrumental activity of daily living.

Role of Geriatric Assessment in Patients with Chronic Kidney Disease

1. Allows providers to anticipate risks and prioritize individuals' concerns

2. Helps individuals and caregivers recognize and discuss preference-sensitive treatment decisions

3. Identify older adults experiencing healthy aging

NEGRECC Clinical Innovation: Interprofessional Models of Care

SCIENCE AND PRACTICE

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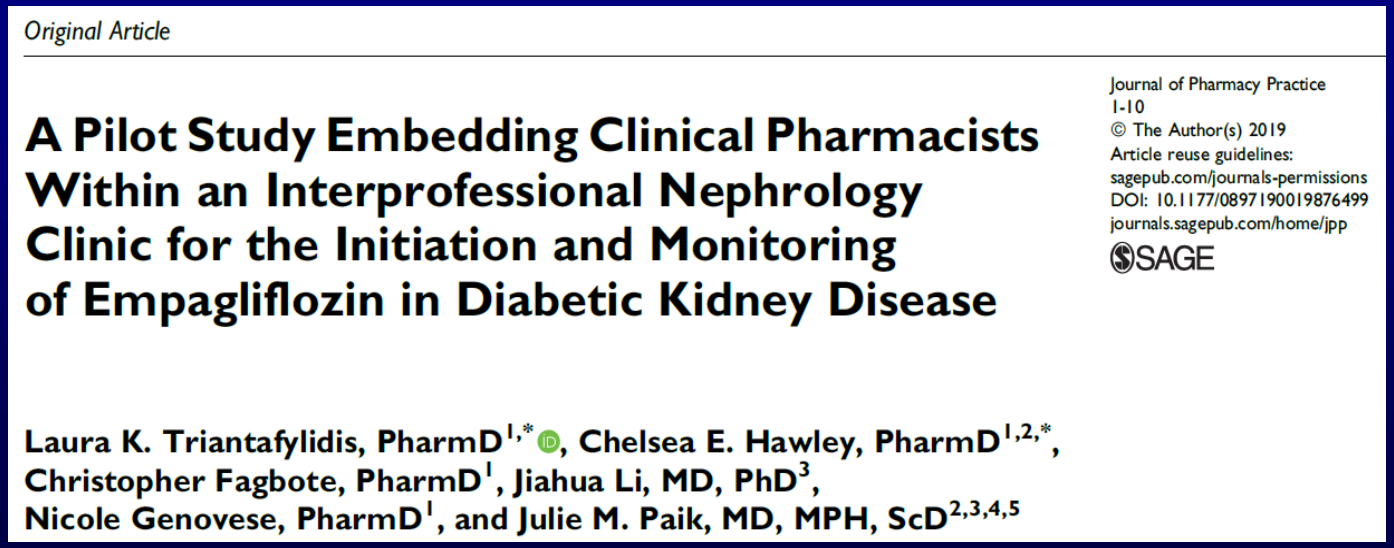
ADVANCES IN PHARMACY PRACTICE

The missing piece: Clinical pharmacists enhancing the interprofessional nephrology clinic model

Chelsea E. Hawley*, Laura K. Triantafylidis, Julie M. Paik



Original Article

A Pilot Study Embedding Clinical Pharmacists Within an Interprofessional Nephrology Clinic for the Initiation and Monitoring of Empagliflozin in Diabetic Kidney Disease

Journal of Pharmacy Practice
1-10

DOI: 10.1177/0897190019876499
journals.sagepub.com/home/jpp
SAGE

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Medication Management in Older Adults with Kidney Disease

Drugs & Aging
https://doi.org/10.1007/s40266-018-0593-8

REVIEW ARTICLE

The Role of Deprescribing in Older Adults with Chronic Kidney Disease

Laura K. Triantafylidis[1] · Chelsea E. Hawley[1,2] · Laura P. Perry[2,3,4] · Julie M. Paik[2,3,5,6]

ARTICLE IN PRESS

REVIEW

The American Journal of Medicine®

Opioid Management in Older Adults with Chronic Kidney Disease: A Review

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REVIEW ARTICLE

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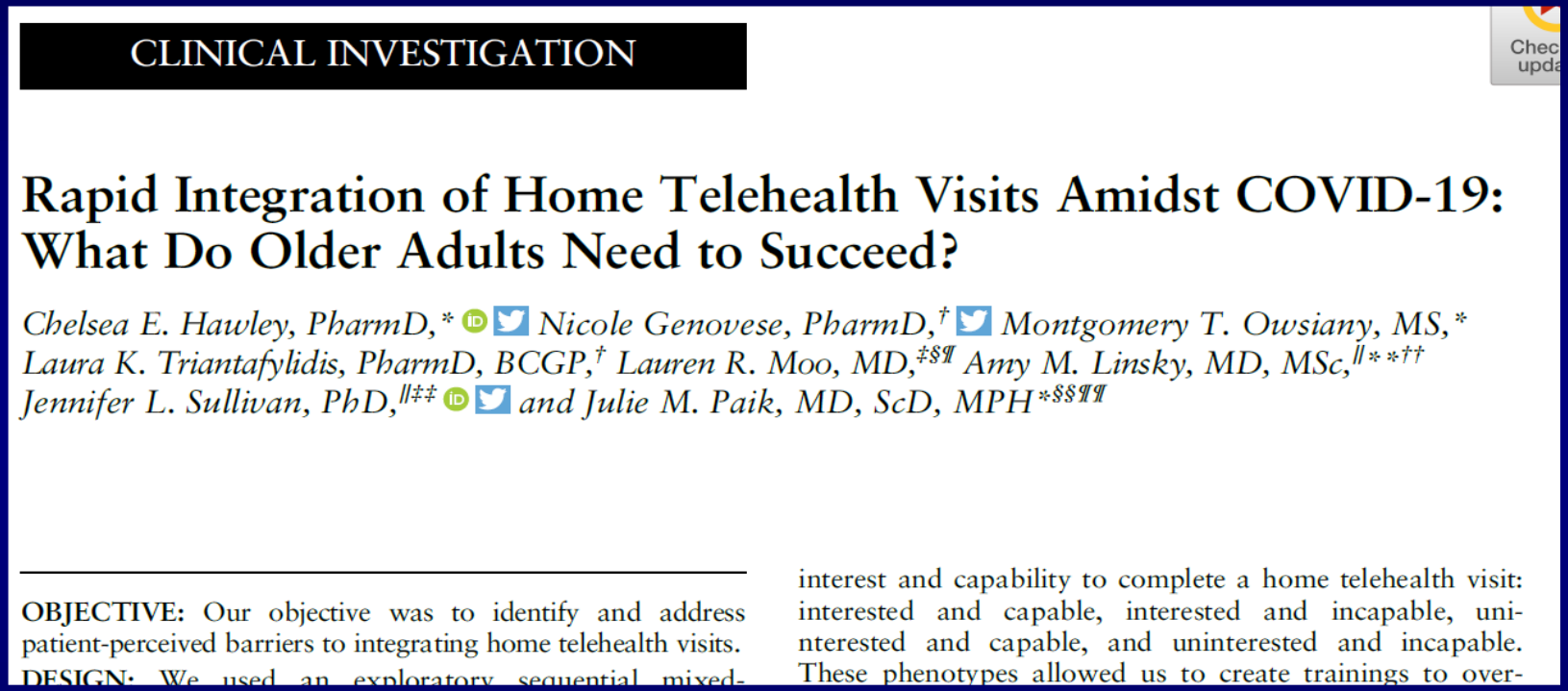
Differential Diagnoses and Clinical Implications of Medication Nonadherence in Older Patients with Chronic Kidney Disease: A Review

Montgomery T. Owsiany[1] · Chelsea E. Hawley[1] · Julie M. Paik[1,2,3,4]

NEGRECC Clinical Innovation: Home Telehealth Visits



CLINICAL INVESTIGATION

Rapid Integration of Home Telehealth Visits Amidst COVID-19: What Do Older Adults Need to Succeed?

Chelsea E. Hawley, PharmD, Nicole Genovese, PharmD,† Montgomery T. Owsiany, MS,* Laura K. Triantafylidis, PharmD, BCGP,† Lauren R. Moo, MD,‡§¶ Amy M. Linsky, MD, MSc,‖**†† Jennifer L. Sullivan, PhD,‖‡‡ and Julie M. Paik, MD, ScD, MPH*§§¶¶*

OBJECTIVE: Our objective was to identify and address patient-perceived barriers to integrating home telehealth visits.

DESIGN: We used an exploratory sequential mixed-

interest and capability to complete a home telehealth visit: interested and capable, interested and incapable, uninterested and capable, and uninterested and incapable. These phenotypes allowed us to create trainings to over-

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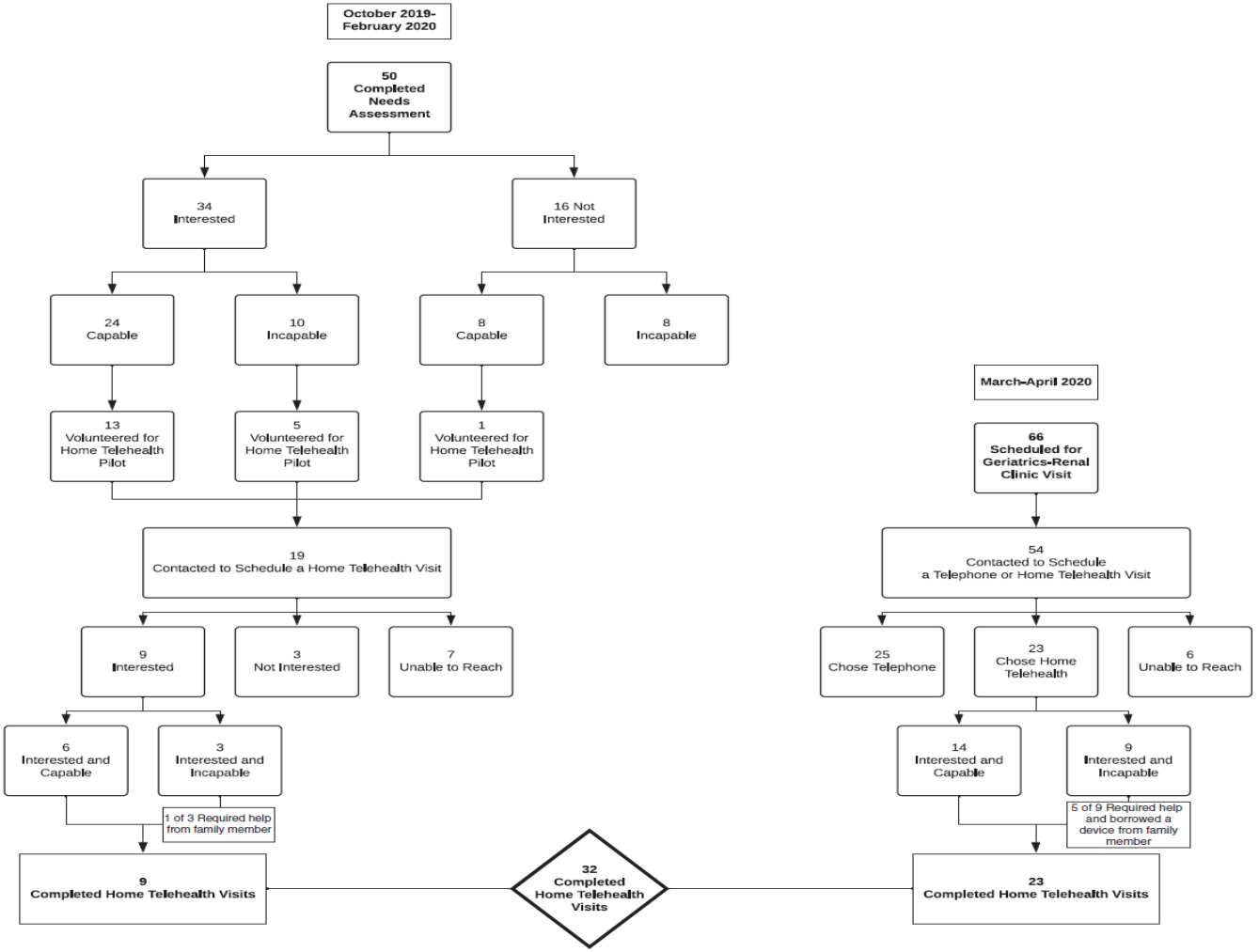

Figure 1. Patient phenotypes from our needs assessment. Four distinct patient phenotypes emerged from our needs assessment. A total of 34 (68%) were interested in completing a home telehealth visit. The Interested and Capable phenotype included 24 (48%) older patients who were interested in completing a home telehealth visit, had access to internet and a device, and felt confident that they could participate. The Interested and Incapable phenotype included 10 (20%) patients who were interested in completing a home telehealth visit but lacked the technology or confidence to do so. The Uninterested and Capable phenotype included 8 (16%) patients who were not interested in completing a home telehealth visit but had the technology and the confidence. We targeted these 42 (84%) patients for our home telehealth pilot. We did not target the 8 (16%) patients who were Uninterested and Incapable. Starting in March 2020, we offered the choice between a home telehealth or telephone visit for all patients with scheduled visits in the clinic, in line with the state's stay-at-home advisory: 66 patients were scheduled for a visit during that time period. We contacted the 54 (82%) patients whose visits were considered clinically urgent by geriatrics-renal personnel to schedule a home telehealth or telephone visit. We reached 48 (89%) of these: 25 chose a telephone visit, and 23 chose a home telehealth visit. The phenotypes of the 23 patients who chose home telehealth were: Interested and Capable, 14 (61%); and Interested and Incapable, 9 (39%).

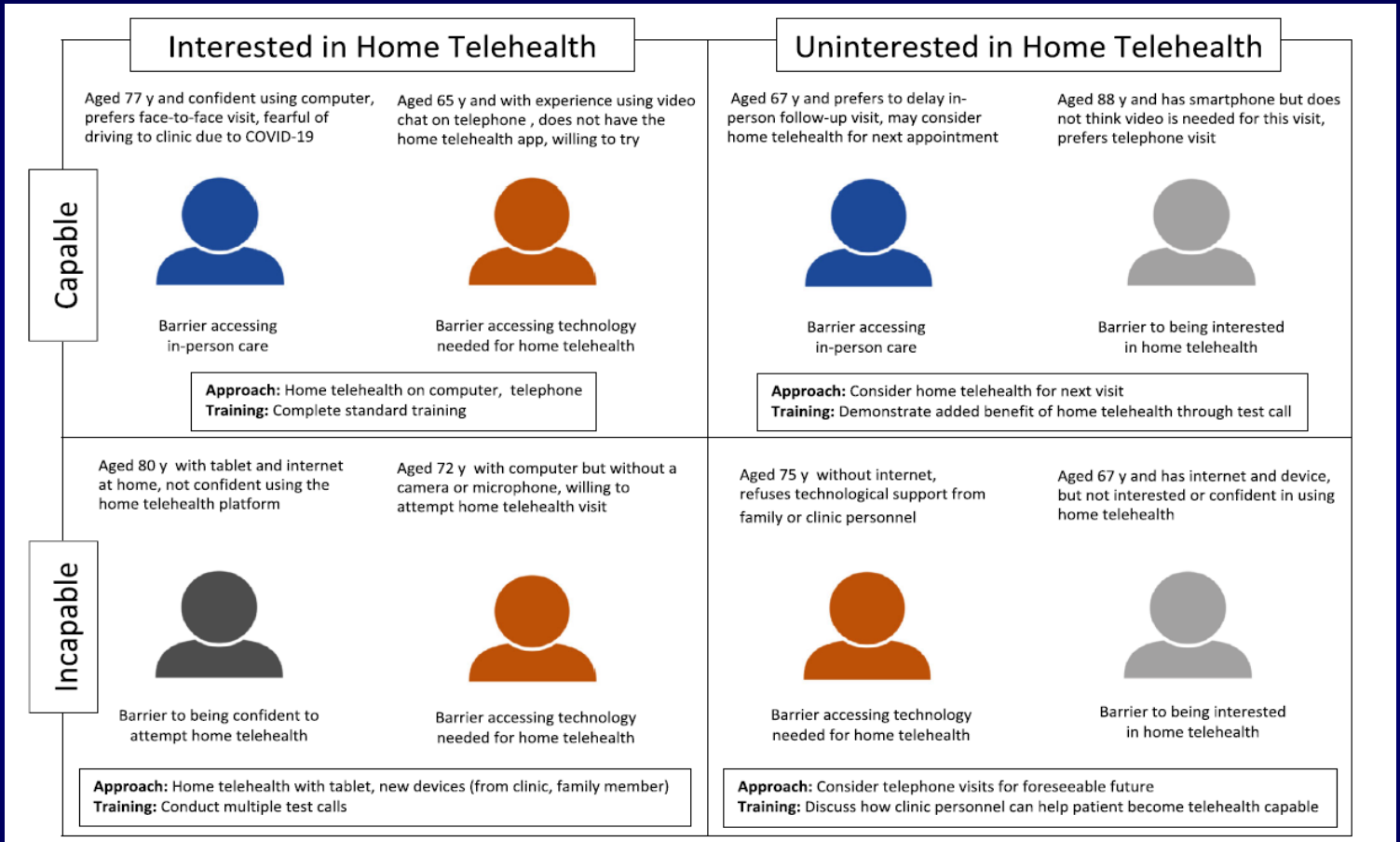

Figure 2. Exemplar patient cases. Our patients identified barriers in four areas: interest, access to care, access to technology, and confidence. Our patients also could be classified into four distinct phenotypes based on their interest and ability to engage in a home telehealth visit: Interested and Capable, Interested and Incapable, Uninterested and Capable, and Uninterested and Incapable. We applied individualized approaches and tailored training to individual patient needs based on their phenotype. Clinicians may consider these patient phenotypes and our exemplar scenarios to guide their approach to home telehealth visits for certain clinical scenarios. With this individualized training, all 32 patients in our home telehealth pilot successfully completed a home telehealth visit.

Conclusions

- Burden of comorbidities and geriatric syndromes in older adults with kidney disease
  - Model of accelerated aging
- Paradigm for individualizing subspecialty care for older adults
  - Functional assessment
  - Geriatric principles
- Critical role of communication and coordination among providers

- “Geriatrics is a ‘metadiscipline’ – perhaps the only one—that transcends and informs all other disciplines. Its knowledge base and principles should guide all care.”

Tinetti M. J Am Geriatr Soc. 2016 Jul;64(7):1400-4.

tions. Let's be the ones who define value, particularly for the most complex older patients. Defining value-based care not by one-size-fits- all disease or event metrics such as blood pressure or glycosylated hemoglobin levels or readmissions but as care appropriate to the priorities and needs of each older adults.[35] To accomplish this move to person-centered value, let's lead the effort in developing and implementing person-centered measures such as ascertainment and achievement of patient outcome goals, consideration of patient treatment preferences and care burden, and person-centered and reported outcomes such as symptoms and function.[22,36]

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Thank You

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competent in geriatric principles and practices. In the 1990s, we debated whether geriatrics was a primary care or specialty discipline.[30] It is neither. Geriatrics is a "metadiscipline"—perhaps the only one—that transcends and informs all other disciplines. Its knowledge base and principles should guide all care. The right metric for success should not be the number of fellowship slots filled, but rather the number of health professional trainees with geriatric skills and behaviors and, most importantly, the number of older adults that clinicians care for using geriatric principles.

Tinetti M. J Am Geriatr Soc. 2016 Jul;64(7):1400-4.