



Healthy Ageing
and Geriatrics



TOP 10 GERIATRIC MEDICINE ARTICLES OF 2021

Dr. Barry Goldlist MD, FRCPC

Geriatrician, Sinai Health and UHN

Professor, Department of Medicine, University of
Toronto

DISCLOSURES

1. I have no financial disclosures
2. I will not do a detailed critical analysis of the articles (yes, I know I should, but it is my talk!)
3. I am sick of COVID (but cannot ignore it totally)
4. I do not believe in 'best articles' as it depends on the type of practice the provider has, and the problems of their patients
5. I sometimes have trouble counting to 10
6. I love to promote the work of my colleagues in the University Division of Geriatrics (especially the work of new investigators)

OBJECTIVES

- Discuss important articles published since my talk last year
- Suggest ways those articles can inform practice
- Provide some take away points at the end
- Try not to put people to sleep immediately

COMMENTARY

Should Canadian patients look forward to aducanumab for Alzheimer disease?

Jennifer A. Watt MD PhD, Roger Marple, Brenda Hemmelgarn MD PhD,
Sharon E. Straus MD MSc

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KEY POINTS

- The recent approval of aducanumab by the US Food and Drug Administration was controversial.
- Both phase 3 trials for aducanumab were terminated for futility after a prespecified interim analysis, and the clinical significance of their findings remains unclear.
- Patient and clinicians are worried about aducanumab's uncertain benefit, treatment burden (e.g., needing intravenous infusions of aducanumab every 4 weeks), safety and cost (~\$56,000 US/year).
- Currently, aducanumab is not approved for use in Canada, but it has been submitted to Health Canada for review.

MY ADDITIONAL CONCERNS

- Be wary of secondary end points such as modification of bio markers rather than solid end points (especially function, as questionable cognitive end points that might not be relevant can always be found). I lived through the fluoride for osteoporosis era, a disaster based on relying on secondary end points.
- Be wary of expedited approvals. The NEJM has published commentaries about how this can add cost without benefit in the cancer field.
- If we believe funds are always subject to limits, approval of a drug should not automatically mean formulary funding. How much home care would \$56,000 US/year buy?

REVIEW ARTICLE

A systematic review of long-term care facility characteristics associated with COVID-19 outcomes

R. Tamara Konetzka PhD¹ | Elizabeth M. White APRN, PhD² |
Alexander Pralea³ | David C. Grabowski PhD⁴ | Vincent Mor
PhD^{2,5}

J Am Geriatr Soc. 2021;1–12.
Published online September 24/21

KEY FINDINGS (US study)

- Larger size associated with higher COVID-19 rates (unable to comment on space aspects)
- Local area infection rates were positively associated with LTC infection rates
- Racial composition (Black, Hispanic initially >death rates, later greater death rates in white LTC residents), but most of variance possibly explained by other variables
- More staff=more infection, but might have prevented deaths
- Limited correlation of COVID outcomes with traditional (5 star) quality ratings
- No correlation with ownership (likely similar to Canada after confounders)

IMPLICATIONS

- Preventing outbreaks:
 - Lower community rates (vaccination, public health measures)
 - Vaccination of staff, and appropriate use of PPE
 - Rapid testing as well?
- Design of facility

BMJ Open September 2021

Relationship between environmental factors and responsive behaviours in long-term care homes: a secondary data analysis

Kelsey Holt, Matthias Hoben, Lori Weeks, Carole Estabrooks

Higher scores on home likeness were associated with decreased responsive behaviours.

Effect of Methylphenidate on Apathy in Patients With Alzheimer Disease

The ADMET 2 Randomized Clinical Trial
Jacobco Mintzer, MD, MBA et al for the
ADMET 2 Research Group

JAMA Neurol. Published online September 27, 2021.
doi:10.1001/jamaneurol.2021.3356

PAST USE OF METHYLPHENIDATE

- Reminder that methylphenidate was widely used for depression decades ago
- When I started practice, it was still used in association with tricyclics to ‘kickstart’ treatment of major depression when tricyclic antidepressants were started (not continued long term)
- Has long been used for patients with AD and apathy after a major illness—usually for about 6 weeks

WHAT DID THIS STUDY SHOW?

Question: Does methylphenidate decrease apathy in individuals with Alzheimer disease?

Findings: In this randomized clinical trial of 200 participants, methylphenidate vs placebo was found to be safe and was associated with a decrease in apathy symptoms as measured by the Neuropsychiatric Inventory within 2 months that was sustained for 6 months.

Meaning: Methylphenidate may be useful for the treatment of apathy in individuals with Alzheimer disease, which can reduce symptoms and caregiver burden.

GENERALIZABILITY

Inclusion Criteria

- AD diagnosis
- MMSE 10-28
- Sustained apathy as measured by NPI
- Caregiver spent more than 10 hours/week with participant
- 200 participants randomized

Exclusion Criteria

- Major depression
- Clinically significant agitation/aggression, delusions, hallucinations
- Recent change in AD meds
- Recent change in antidepressants or sedatives
- Past failure of methylphenidate
- Drug interaction potential
- CNS abnormalities, **CVS (heart, brain)**, glaucoma, hyperthyroid,
- Significant weight loss prior 3 months

MY OPINION

- Only 200 patients randomized for a common problem
- Suggests low generalizability
- However, likely a good intervention for suitable patients
- Behavioural symptoms of dementia often change with time, so efforts to wean the medication are important
- Beware of sleep disruption. Medication is given twice a day, but second dose should be relatively early in the day

Frailty implications for exercise participation and outcomes in patients with heart failure

Alison M. Mudge PhD, FRACP,
Anita Pelecanos BSc | Julie A. Adsett PhD, Bphty
JAGS 2021

Key Points

- Frailty is common in people recently hospitalized with heart failure enrolled in a cardiac rehabilitation (CR) program
- Achieving physical activity goals, attendance at exercise training sessions, and improvements in functional exercise capacity is similar for frail and not-frail participants
- Participation in CR may help to reduce frailty, particularly in more frail participants

Why Does this Paper Matter?

Frail participants with heart failure enrolled in cardiac rehabilitation (CR) are able to attend and benefit from exercise training similarly to not-frail participants. Significant improvements in the frailty index at 6 months also confirm that frailty is not a reason to exclude people from CR.

Prevalence of initial orthostatic hypotension in older adults: a systematic review and meta-analysis

Jennifer Tran, Sarah L. Hillebrand, Carel G.M. Meskers, Rebecca
K. Iseli, Andrea B. Maier

Age and Ageing early release July 2021

My Previous Thinking

- Orthostatic hypotension (OH) is common
- Exacerbated by many medications, especially blood pressure lowering medications
- Office measurement is unreliable, as previous studies have shown that OH varies during the day in a totally random manner. This means that demonstrating OH is important, but not finding it in clinic does not exclude it
- If a patient has fallen or has postural symptoms, start slashing drugs regardless of whether OH is demonstrated in the clinic

Findings & Implications of this Study

- When ambulatory BP monitoring is used, many more cases of OH are detected. NO SURPRISE!
- However, many of the frail patients we see are unlikely to want to come back for further testing, and that testing is usually delayed
- Therefore, I will do as I did before: ***If a patient has fallen or has postural symptoms, start slashing drugs regardless of whether OH is demonstrated in the clinic***
- If a patient has falls or postural symptoms, and is not on 'guilty' medications, consider ambulatory BP monitoring, as drugs to treat idiopathic OH have significant toxicity (do a neuro exam)

MODELS OF GERIATRIC CARE , QUALITY
IMPROVEMENT , AND PROGRAM DISSEMINATION

**Quality improvement outcomes from the
introduction
of a geriatrician into a rehabilitation setting**

Sabrina R. Fitzgerald BSc, Richard Norman MD, MASc, MSc,
Samir K. Sinha MD, DPhil, Lindy Romanovsky MD

JAGS 2021

Key Points

- This study was the largest study to date examining the impact of a geriatrician's involvement in an inpatient geriatric rehabilitation setting.
- They were able to conclude that a comprehensive geriatric assessment and ongoing management by a geriatrician improved the functional independence measure and reduced service interruptions.

Why Does this Paper Matter?

They demonstrate that in the rehabilitation setting, an underreported area, geriatricians are a valuable resource that positively contributes to patient and system level outcomes.

Caveat: This is a before and after study, not a randomized trial. However this is the standard methodology to do quality improvement, and little else changed over the study period, so I believe it. AND I love to support the great work of my colleagues!

Temporal Association Between Episodes of Atrial Fibrillation and Risk of Ischemic Stroke

Daniel E. Singer, MD; Paul D. Ziegler, MS; Jodi L. Koehler, MS;
Shantanu Sarkar, PhD; Rod S. Passman, MD, MSCE

JAMA Cardiology

Early Release, September 29, 2021

Key Points

- **Question:** What is the temporal association between episodes of atrial fibrillation (AF) and ischemic stroke in patients with cardiac implantable electronic devices (CIEDs)?
- **Findings:** In this case-crossover study including 891 patients with CIEDs and ischemic stroke, multihour AF episodes raised the odds of stroke 3.7-fold for up to 30 days. The risk of stroke was highest within 5 days of the AF episode and decreased rapidly thereafter.
- **Meaning:** In patients with CIEDs, multihour episodes of AF were temporally associated with a transient increase in the risk of stroke; these findings support a study of time-delimited anticoagulation inpatients with infrequent multihour episodes of AF.

Implications of this Study

- We do not know as much as we thought we did about transient atrial fibrillation (AF)
- Future trials regarding the best way to anticoagulate people with intermittent atrial fibrillation are required

Kratom exposures among older adults reported to U.S. poison centers, 2014–2019

Janessa M. Graves PhD, Julia A. Dilley PhD, Lucia Terpak MA,
Ashley Brooks-Russell PhD, Jennifer M. Whitehill PhD,
Tracy A. Klein PhD, Erica Liebelt MD

JAGS, August 2021

Key Points

- Kratom (*Mitragyna speciosa*) is a herbal supplement and an emerging substance of concern with potential for abuse (used for pain relief).
- Findings indicate that from 2014 to 2019, U.S. poison centers have observed a rapid increase in kratom exposures, with nearly 5% of kratom-related calls among adults over age 60 years.
- Clinical outcomes associated with kratom exposure among older adults include severe effects (49.3% of cases were life-threatening or resulted in significant disability or disfigurement) and eight deaths.

Implications

- Being a 'natural' product does not guarantee safety
- When taking a drug history, ask about supplements and natural products
- Remind patients that natural does not equal safe (arsenic, lead, strychnine, poison ivy)
- We might need better testing for safety of natural products

Association Between Neighborhood Disadvantage and Functional Well-being in Community-Living Older Persons

Thomas M. Gill, MD; Emma X. Zang, PhD; Terrence E. Murphy, PhD¹; et al

JAMA Intern Med. 2021;181(10):1297-1304

Released August 23, 2021

Key Points

- **Question:** Do estimates of active and disabled life expectancy differ on the basis of neighborhood disadvantage after accounting for individual-level socioeconomic characteristics and other prognostic factors?
- **Findings:** In this prospective longitudinal cohort study among 754 nondisabled community-living older persons who were interviewed monthly for up to 22 years, active life expectancy was consistently lower, and the percentage of remaining life disabled was consistently higher in participants from neighborhoods that were disadvantaged vs not disadvantaged.
- **Meaning:** Living in a disadvantaged neighborhood was associated with lower active life expectancy and a greater percentage of projected remaining life with disability.

Implications

Good Health Care

Requires

Social Justice

Lest we forget

Recent editorial in Annals of Internal Medicine

Judging Medicine's Past: A Lesson in Professionalism

In reference to two recent articles:

Fighting Prejudice and Absorbing Refugees from Nazism: The National Committee for the Resettlement of Foreign Physicians, 1939-1945: May 2021 in the Annals

"We do Not Want Him Because He is a Jew": The Montreal Interns' Strike of 1934:

June 2021 in the Annals

In Conclusion

- Do not be in a rush to prescribe Aducanumab
- Be wary of trials that look at secondary end points that patients would not consider important
- Agitate for improvements in LTC and in LTC homes (they are not synonymous), and for social justice in the community
- Frailty does not preclude rehabilitation (in fact might be an added indication)
- Geriatricians are great in rehab (and very good looking)
- Orthostatic hypotension is common and easy to miss, but important
- We still have a lot to learn about Atrial Fibrillation
- Natural does not equal safe

Thank You

QUESTIONS?

Dr. Barry Goldlist MD, FRCPC
Geriatrician, Sinai Health and University Health Network
Professor, Department of Medicine, University of Toronto