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Early detection. Better care.

MAYO CLINIC

“Tried and True” and the New – Insights into Behavior Management in Dementia

Sandeep Pagali, MD, MPH
Associate Professor of Medicine, Medical Director,
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Dementia Care Aware was established, funded and supported by the California Department of Health Care Services (DHCS) from 2022-2024. The contents of this webinar may not necessarily represent the official views or policies of the State of California.

Logistics

Please use the chat and Q&A functions to enter your questions throughout.

A recording and materials will be available on **dementiacareaware.org** at the end of this webinar.

CE/CME information will be available at the end of the hour.

Today's speakers

Presenter
Sandeep Pagali, MD, MPH
Associate Professor of Medicine
Medical Director, Inpatient Geriatrics
Mayo Clinic, Rochester

Moderator
Anna Chodos, MD, MPH
Executive Director,
Dementia Care Aware
Division of Geriatrics, UCSF

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Review: the cognitive health assessment

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Begin~ Detection: the Cognitive Health Assessment

Screen patients older than age 65 annually (who don't have a pre-existing diagnosis of dementia)

Part 1

Take a Brief Patient History

Part 2

Use Screening Tools

Part 3

Document Care Partner Information

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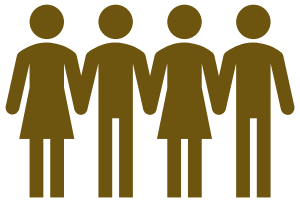
Next steps after a positive screen: a care pathway



Think about your population at risk and screen.

Objectives

1. Discuss methods and tools to identify, and quantify BPSD symptoms
2. Review evidence for non-pharmacological and pharmacological approaches to manage BPSD effectively
3. List effective care transitions that optimize BPSD management across care settings

BPSD – Impact

BPSD causes significant stress to patient, family caregivers, healthcare team, and the overall healthcare system

Diagnosing BPSD can be challenging, without a reliable collateral history

Prompt diagnoses minimizes unnecessary medical testing, and improves patient outcomes

BPSD: Prevalence

- More than 75% dementia patients
- Higher in care settings, than community
- Varies based on dementia type and stage

Dementia	BPSD
Mild	Apathy, depression
Mod- Severe	Agitation, aggression, and psychosis
Alzheimer's	Anxiety/depression, agitation, repetition& wandering
Lewy Body	Hallucinations, delusions
Fronto Temporal	Apathy, compulsive behaviors, violent aggression

Watt JA, et al. J Am Med Dir Assoc. 2024

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BPSD: Prevalence

Apathy: Most common, affecting more than 75%

Depression: 10–30%

Anxiety: 20–30%

Agitation and Aggression: 30–70%

Delusions & Hallucinations: About 20–30% (delusions more common than hallucinations)

Sleep Disturbances: 30–70%

BPSD: Manifestations

Agitation Definition Work Group (ADWG)

- Has Dementia
- Persistent or recurrent behaviors for 2 weeks Excessive motor, verbal or physical aggression
- Results in significant impairment in
  i. Interpersonal relationships
  ii. Social functioning
  iii. Daily living activities

- Not attributable to another psychiatric disorder, or substance use

Jeffrey Cummings et.al, IPA 2015

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BPSD: Assessment & Management

- Safety FIRST – Check & mitigate any immediate danger, assessment in tandem with management
- Review medical hx, psychiatric hx, cognitive and functional baseline
- Characterize BPSD – Describe: timing, onset, severity, precipitants and consequences
- Medication review, physical exam, and targeted medical evaluation

BPSD: RISK FACTORS

Dementia Progression: Imbalances in **Serotonin, Dopamine, AchE**

ENVIRONMENTAL	COMORBIDITES
New or unfamiliar	Pain, Infections
Lack of stimulation	Sensory impairments
Caregiver stress	Polypharmacy

MODELS FOR ASSESSING AND MANAGING BPSD

D- Describe
I – Investigate
C- Create
E- Evaluate

Wecareadvisor

Kales HC, Alzheimer Dis Assoc Disord. 2017

Medical
Medication
Social
Personal
Behavioral

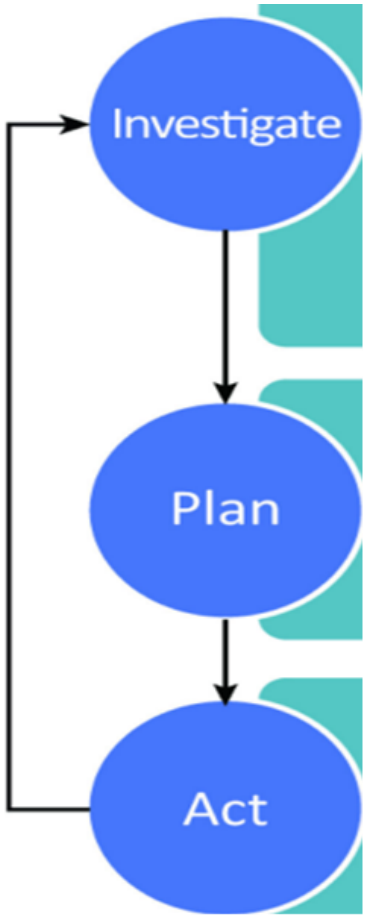
Wisconsin STAR

https://wgpi.wisc.edu/wisconsin-star-method/

Register & assess
Reflect (case conferences)
Act & evaluate

Targeted Interdisciplinary Model for Evaluation and Treatment of Neuropsychiatric Symptoms (**TIME**)

Lichtwarck B, BMC Psychiatry 2016



Jeffrey Cummings et.al, IPA 2023

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BPSD: ASSESSMENT SCALES

"You can't manage what you can't measure"

- Peter Drucker

BPSD: ASSESSMENT SCALES

More than 83 different scales do exist to measure and quantify BPSD

BPSD scale	Care location	Time
CMAI: Cohen Mansfield Agitation Inventory	Any	10-20mt
NPI: Neuropsychiatric Inventory	Office	7-10mts
Dementia Observation System	Care facility	5mts/ day

van der Linde RM, Int J Methods Psychiatr Res. 2014

CMAI

Name:_____ Dates: From_____to_____

Cohen-Mansfield Agitation Inventory (CMAI)[1] – Short

Instructions: For each of the behaviours below, check the rating that indicates the average frequency of occurrence over the last 2 weeks.

	1-Never	2-Less than once a week	3-Once or twice a week	4-Several times a week	5-Once or twice a day	6-Several times a day	7-Several times an hour
Physical/Aggressive							
1. Hitting (including self)	1	2	3	4	5	6	7
2. Kicking	1	2	3	4	5	6	7
3. Grabbing onto people	1	2	3	4	5	6	7
4. Pushing	1	2	3	4	5	6	7
5. Throwing things	1	2	3	4	5	6	7
6. Biting	1	2	3	4	5	6	7
7. Scratching	1	2	3	4	5	6	7
8. Spitting	1	2	3	4	5	6	7
9. Hurting self or others	1	2	3	4	5	6	7
10. Tearing things or destroying property	1	2	3	4	5	6	7
11. Making physical sexual advances	1	2	3	4	5	6	7
Physical/Non-Aggressive							
12. Pace, aimless wandering	1	2	3	4	5	6	7
13. Inappropriate dress or disrobing	1	2	3	4	5	6	7
14. Trying to get to a different place	1	2	3	4	5	6	7
15. Intentional falling	1	2	3	4	5	6	7
16. Eating/drinking inappropriate substance	1	2	3	4	5	6	7
17. Handling things inappropriately	1	2	3	4	5	6	7
18. Hiding things	1	2	3	4	5	6	7
19. Hoarding things	1	2	3	4	5	6	7
20. Performing repetitive mannerisms	1	2	3	4	5	6	7
21. General restlessness	1	2	3	4	5	6	7
Verbal/Aggressive							
22. Screaming	1	2	3	4	5	6	7
23. Making verbal sexual advances	1	2	3	4	5	6	7
24. Cursing or verbal aggression	1	2	3	4	5	6	7
Verbal/Non-aggressive							
25. Repetitive sentences or questions	1	2	3	4	5	6	7
26. Strange noises (weird laughter or crying)	1	2	3	4	5	6	7
27. Complaining	1	2	3	4	5	6	7
28. Negativism	1	2	3	4	5	6	7
29. Constant unwarranted request for attention or help	1	2	3	4	5	6	7

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Dementia Observation System

Name: _____ Dates: From _____ to _____

Use corresponding numbers to record behaviours in ½ hour intervals:

1. Sleeping in Bed 3. Awake/Calm 5. Restless/Pacing 7. Aggressive – verbal 9. Other: _____

2. Sleeping in Chair 4. Noisy 6. Exit Seeking 8. Aggressive – Physical 10. Other: _____

Dates:							
Time							
0730							
0800							
0830							
0900							
0930							
1000							
1030							
1100							
1130							
1200							
1230							
1300							
1330							
1400							
1430							
1500							

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Management

- Non-pharmacological interventions
- TMS/ tES/ ECT
- Pharmacological interventions

Non-pharmacological approaches & BPSD

REVIEW ARTICLE

International Journal of Mental Health Nursing

Comparative efficacy of multiple non-pharmacological interventions for behavioural and psychological symptoms of dementia: A network meta-analysis of randomised controlled trials

Zihan Yin[1,2] | Yaqin Li[1] | Qiongnan Bao[1,2] | Xinyue Zhang[1,2] | Manze Xia[1,2] | Wanqi Zhong[1,2] | Kexin Wu[1,2] | Jin Yao[1,2] | Zhenghong Chen[1,2] | Mingsheng Sun[1,2] | Ling Zhao[1,2] | Fanrong Liang[1,2]

other outcomes. In conclusion, non-pharmacological treatments are effective for overall symptoms, depression, and agitation. Exercise plus treatment as usual may be an optimal non-pharmacological intervention for improving the overall BPSD. This may help to guide patients, doctors, and policymakers.

TMS: Transcranial Magnetic Stimulation

International Psychogeriatrics (2024), 36:10, 880–928 © The Author(s), 2024. Published by Cambridge University Press on behalf of International Psychogeriatric Association
doi:10.1017/S1041610224000085

REVIEW

Efficacy and safety of transcranial magnetic stimulation on cognition in mild cognitive impairment, Alzheimer's disease, Alzheimer's disease-related dementias, and other cognitive disorders: a systematic review and meta-analysis

Sandeep R. Pagali,[1,2] Rakesh Kumar,[8] Allison M. LeMahieu,[3] Michael R. Basso,[4] Bradley F. Boeve,[5] Paul E. Croarkin,[4] Jennifer R. Geske,[3] Leslie C. Hassett,[6] John Huston III,[7] Simon Kung,[4] Brian N. Lundstrom,[5] Ronald C. Petersen,[5] Erik K. St. Louis,[5] Kirk M. Welker,[7] Gregory A. Worrell,[5] Alvaro Pascual-Leone,[9,10] and Maria I. Lapid[2,4]

Conclusion: The reviewed studies provide favorable evidence of improved cognition with TMS across all groups with cognitive impairment. TMS was safe and well tolerated with infrequent serious adverse events.

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TMS & BPSD

International Psychogeriatrics (2023), 35:11, 611–622 © International Psychogeriatric Association 2023
doi:10.1017/S1041610223000091

REVIEW

Treatment of behavioral and psychological symptoms of dementia using transcranial magnetic stimulation: a systematic review

Kayla Murphy,[1,†] Amber Khan,[2,†] Anil Bachu,[3] and Rajesh Tampi[4,5]

[1]*University of Texas Southwestern Medical Center, Dallas, TX, USA*
[2]*Montefiore Medical Center, Bronx, NY, USA*
[3]*Department of Psychiatry, Baptist Health-UAMS, North Little Rock, AR, USA*
[4]*Department of Psychiatry, Creighton University School of Medicine, Omaha, NE, USA*
[5]*Department of Psychiatry, Yale School of Medicine, New Haven, CT, USA*

Conclusion: Available data from this review indicate that rTMS is beneficial for individuals with BPSD, especially among individuals with apathy, and is well tolerated. However, more data are needed to prove the efficacy of tDCS and iTBS. Additionally, more randomized controlled trials with longer treatment follow-up and standardized use of BPSD assessments are needed to determine the best dose, duration, and modality for effective treatment of BPSD.

TES: Transcranial Electrical Stimulation

JAMA Network Open

Original Investigation | Psychiatry

Transcranial Electrical Stimulation in Treatment of Depression
A Systematic Review and Meta-Analysis

Caili Ren, MD; Sandeep R. Pagali, MD, MPH; Zhen Wang, PhD; Simon Kung, MD; Renu Bhargavi Boyapati, MBBS; Karimul Islam, MBBS; John W. Li, MD, PhD; K. Maureen Shelton, MD; Anne Waniger, MD; Ann M. Rydberg, MD; Leslie C. Hassett, MLS, AHIP; Paul E. Croarkin, DO, MS; Brian N. Lundstrom, MD, PhD; Alvaro Pascual-Leone, MD, PhD; Maria I. Lapid, MD

CONCLUSIONS AND RELEVANCE In this systematic review and meta-analysis, tDCS was associated with improvement in depression among patients with DMC and DPC (with smaller benefits in MDD), tACS was associated with improved MDD outcomes (while tRNS had insufficient evidence) in smaller samples, and combined tDCS and medication was associated with improvement in depression. These findings suggest that tES is well-tolerated overall, with only mild to moderate adverse events, and that future research should optimize stimulation parameters and individualize tES interventions.

ECT: Electroconvulsive Therapy

REVIEW

Implementing Electroconvulsive Therapy for Patients Experiencing Behavioral and Psychological Symptoms of Dementia

A Systematic Review

Aditya Nidumolu, MD, FRCPC,† Daniel Kapustin, MD,† Tarek Benzouak, BA (Hons),‡§*
Sanjay Rao, MBBS, MD, FRCPsych, FRCPC, MBA,‡
*Sameh Hassan, MSc, MRCPsych,**
and Shabbir Amanullah, DPM, MD, FRCPsych, CCT, FRCPC, FIIOPM, DFCPA†//¶

Conclusions: ECT holds promise in the treatment of BPSD. Although further research is needed to establish optimal treatment parameters, this review can be used by clinicians to identify potential approaches to using ECT.

Antidepressants - BPSD

Contents lists available at ScienceDirect

Journal of Psychiatric Research

journal homepage: www.elsevier.com/locate/jpsychires

Efficacy and tolerability of antidepressants monotherapy for behavioral and psychological symptoms of dementia: A meta-analysis of randomized controlled trials

Meng Dong [a], Chang Liu [a], Haiyan Luo [a], Dongyun Su [b], Gongbo Li [a], Fenghua Xu [c], Min Song [a,**,1], Yuqing Zhang [a,*,1]

cognition. Currently there is no clear evidence of a beneficial effect of currently available antidepressants on overall BPSD and in particular agitation. Notably, clinician should be cautious of the potential risk of arrhythmias, dizziness and diarrhea when prescribing an antidepressant.

Antipsychotics and MACCE in BPSD

Drugs & Aging (2024) 41:847–858
https://doi.org/10.1007/s40266-024-01134-9

ORIGINAL RESEARCH ARTICLE

Check for updates

The Relationship Between Antipsychotics, Cognitive Enhancers, and Major Adverse Cardiovascular/Cerebrovascular Events (MACCE) in Older Adults with Behavioral and Psychological Symptoms of Dementia

Haylie M. DeMercy[1] · Colleen A. Brenner[1]

Conclusion The use of APs at high doses was associated with the greatest risk of an adverse medical outcome in older adults with dementia with concurrent behavioral symptoms. Use of AP medications in this population should include close monitoring for cardiovascular/cerebrovascular events.

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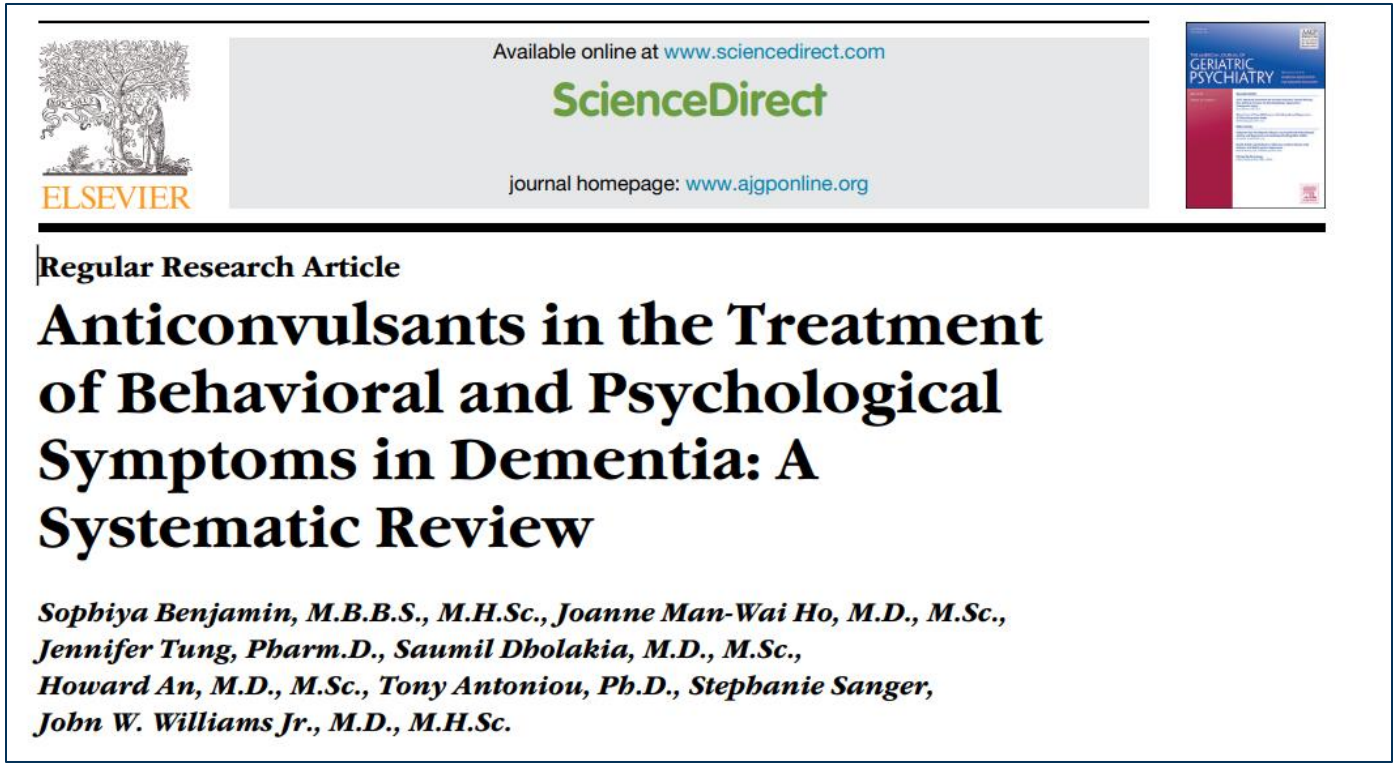
Anticonvulsants BPSD



Available online at www.sciencedirect.com
ScienceDirect
journal homepage: www.ajgponline.org

Regular Research Article

Anticonvulsants in the Treatment of Behavioral and Psychological Symptoms in Dementia: A Systematic Review

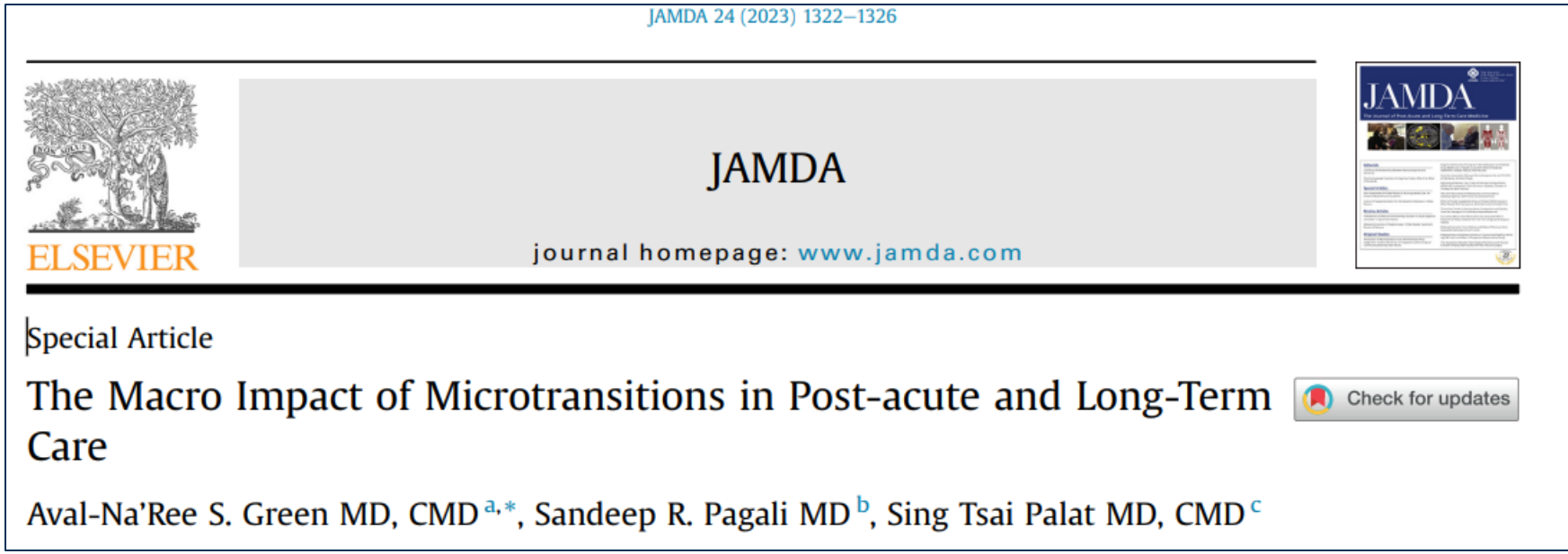
Sophiya Benjamin, M.B.B.S., M.H.Sc., Joanne Man-Wai Ho, M.D., M.Sc., Jennifer Tung, Pharm.D., Saumil Dholakia, M.D., M.Sc., Howard An, M.D., M.Sc., Tony Antoniou, Ph.D., Stephanie Sanger, John W. Williams Jr., M.D., M.H.Sc.

mate may be comparable to risperidone. ***Conclusion:*** *Anticonvulsants are unlikely to be effective in BPSD, although the quality of existing evidence is low.*
(Am J Geriatr Psychiatry 2024; 32:1259–1270)

EFFECTIVE CARE TRANSITIONS

COMMUNICATION IS THE KEY:

- Across care facilities
- Across care providers
- Microtransitions



JAMDA 24 (2023) 1322–1326

ELSEVIER

JAMDA

journal homepage: www.jamda.com

Special Article

The Macro Impact of Microtransitions in Post-acute and Long-Term Care

Aval-Na'Ree S. Green MD, CMD [a,*], Sandeep R. Pagali MD [b], Sing Tsai Palat MD, CMD [c]

EFFECTIVE CARE TRANSITIONS

AFHS 4M approach:

What Matters, Medication management, Mentation, Mobility

Care plan based on “What Matters”

Documentation across care locations

EFFECTIVE CARE TRANSITIONS

Promptly identify behaviors

Baseline, Triggers, What helps and what doesn't

Patient-centered, caregiver focused – Assess burden/ fatigue

Community resources/ CMS Guide

Take Home Messages

Quantifying and assessing BPSD is important and has several benefits

Structured models include DICE, IPA, Wisconsin STAR, & TIME

Many BPSD scales exist, and some common tools are: CMAI, NPI, DOS

Take Home Messages

- BPSD management should be based on specific symptoms
- Individualized strategies – Non-pharmacological approaches are First line
- Medication use monitoring is important

Take Home Messages

- Ongoing research to leverage TMS/tES/ ECT as treatment options
- Effective care transitions – centered around AFHS, and communication is crucial

THANK YOU

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Training and support for providers and clinics

Education and Training:

- Core: CHA training
- More on-line training modules
- Bi-Monthly Webinars and Podcasts

Warmline:

1-800-933-1789

- A provider support and consultation service staffed by Dementia Care Aware experts

Practice change support:

- UCLA Alzheimer's and Dementia Care program
- Alzheimer's Association Health Systems team
- Implementation guide

dementiacareaware.org DCA@ucsf.edu

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Clarity

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PlanForClarity.org
peterselizabeth@uclawsf.edu

FREE CE/CME

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CarePartners.ucsf.edu
capct@ucsf.edu

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