Approaches to Behavioral Problems in Dementia

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Objectives

- Recognize the prevalence, cause and impact of behavioral and psychological symptoms of dementia
- Discuss treatment strategies for behavioral and psychological symptoms of dementia that target the individual, caregiver, and environment
- Articulate the importance of a collaborative team, including both health care professionals and family caregivers, within these treatment.
- Mobilize participants to take action to improve the delivery of care for patients with behavioral and psychological symptoms of dementia and their caregivers

What is Dementia?

"Dementia" is acquired cognitive decline in one or more areas caused by a variety of underlying neuropathologies[1] (e.g. Alzheimer's, vascular, lewy bodies, Pick, Parkinson, Huntington, etc.) that affects between 4 to 5 million older adults in the United states[2].

1 DSM-5 American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders. *Arlington: American Psychiatric Publishing*.

2 Plassman, B. L., Langa, K. M., Fisher, G. G., Heeringa, S. G., Weir, D. R., Ofstedal, M. B., ... & Steffens, D. C. (2007). Prevalence of dementia in the United States: the aging, demographics, and memory study. *Neuroepidemiology*, *29*(1-2), 125-132.

Behavioral Problems in Dementia?

Unfortunately, dementias often lead to behavioral and psychological symptoms of dementia (BPSD) or Inappropriate behaviors.[3]

In fact, 80-97% of individuals with dementia have at least 1 BPSDs at the onset of their cognitive symptoms.[4,5,6]

3 Finkel SI, Costa e Silva J, Cohen G. et al. Behavioral and psychological signs and symptoms of dementia. *Int Psychogeriatr*.1996;8(suppl 3):497-500.
4 Lyketsos, C. G., Lopez, O., Jones, B., Fitzpatrick, A. L., Breitner, J., & DeKosky, S. (2002). Prevalence of neuropsychiatric symptoms in dementia and mild cognitive impairment: results from the cardiovascular health study. Journal of the American Medical Association, 288(12), 1475-1483.
5Jost, B. C., & Grossberg, G. T. (1996). The evolution of psychiatric symptoms in Alzheimer's disease: a natural history study. *Journal of the American Geriatrics Society*, *44*(9), 1078-1081.
6 Steinberg, M., Shao, H., Zandi, P., Lyketsos, C. G., Welsh-Bohmer, K. A., Norton, M. C., ... & Tschanz, J. T. (2008). Point and 5-year period prevalence of neuropsychiatric symptoms in dementia: the Cache County Study. *International journal of geriatric psychiatry*, *23*(2), 170-177.

Behavioral and psychological symptoms of dementia?

Types of behavioral and psychological symptoms of dementia*

- Delusions (distressing beliefs)
- Hallucinations
- Agitation:
  - Easily upset
  - Repeating questions
  - Arguing or complaining
  - Hoarding
  - Pacing
  - Inappropriate screaming, crying out, disruptive sounds
  - Rejection of care (for example, bathing, dressing, grooming)
  - Leaving home
- Aggression (physical or verbal)
- Depression or dysphoria
- Anxiety:
  - Worrying
  - Shadowing (following care giver)
- Apathy or indifference
- Disinhibition:
  - Socially inappropriate behavior
  - Sexually inappropriate behavior
- Irritability or lability
- Motor disturbance (repetitive activities without purpose):
  - Wandering
  - Rummaging
- Night-time behaviors (waking and getting up at night)

*Based on modified neuropsychiatric inventory-Q categories. Some behaviors under agitation need more research to determine whether they are part of agitation or their own entity (for example, rejection of care).

7 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2015). Assessment and management of behavioral and psychological symptoms of dementia. bmj, 350(7), h369.

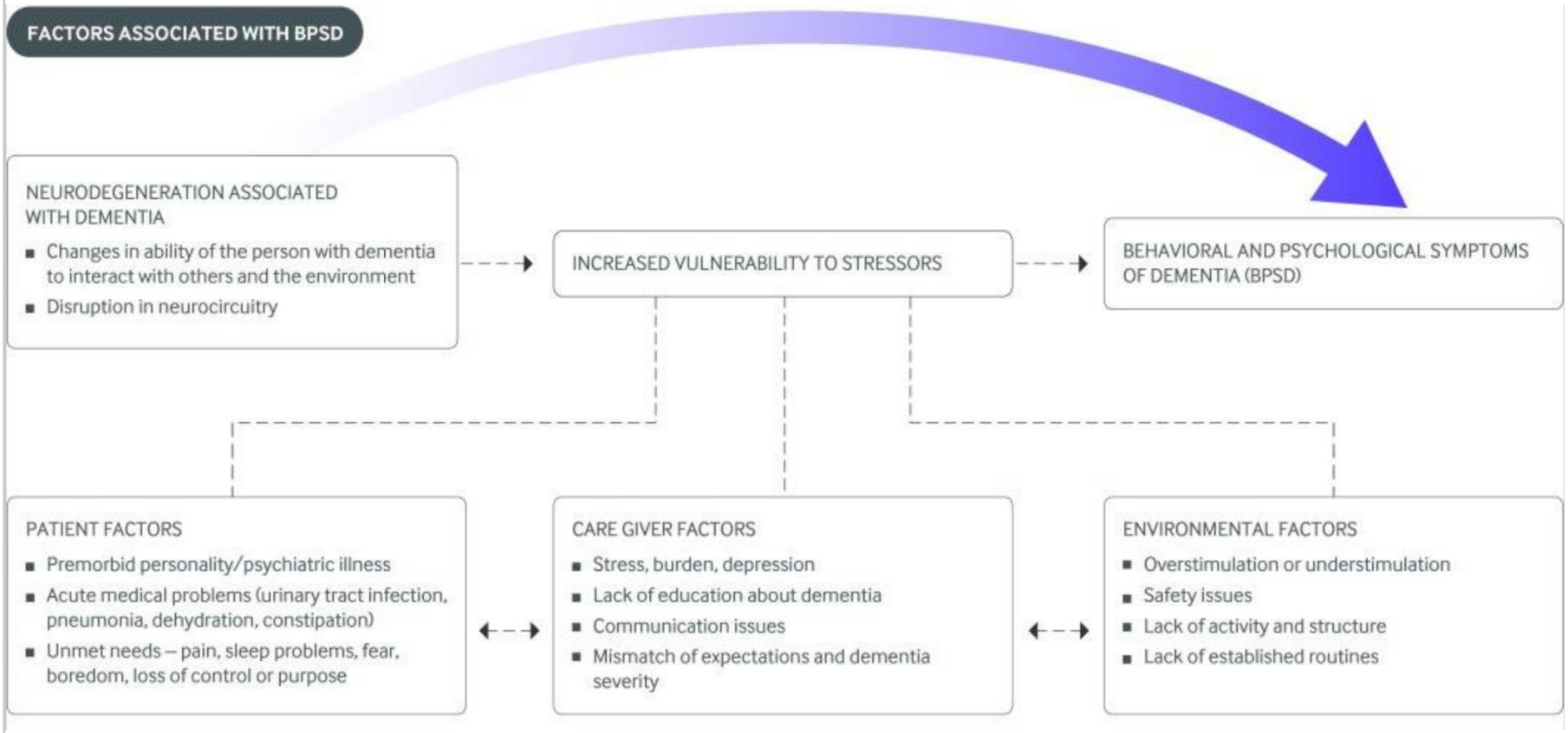
What does this look like?

Inappropriate behaviors have been divided into four main subtypes[8]:

1. Physically aggressive behaviors (hitting, kicking or biting)
2. Physically nonaggressive behaviors (pacing, wandering, hoarding, inappropriately handling objects, resisting help with care)
3. Verbally nonaggressive agitation, (constant repetition of sentences or requests)
4. Verbal aggression (cursing or screaming)

8 Cohen-Mansfield, J., Werner, P., Watson, V., & Pasis, S. (1995). Agitation among elderly persons at adult day-care centers: the experiences of relatives and staff members. *International Psychogeriatrics, 7*(3), 447-458.

Why does this happen?



36% had undetected illness[9]

Are caregivers are "ready"?

AKA: Progressively lowered stress threshold model

7 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2015). Assessment and management of behavioral and psychological symptoms of dementia. bmj, 350(7), h369.
9 Hodgson, N., Gitlin, L. N., Winter, L., & Czekanski, K. (2011). Undiagnosed illness and neuropsychiatric behaviors in community-residing older adults with dementia. *Alzheimer disease and associated disorders*, *25*(2), 109.

What is the **impact**?

These behavioral and psychological symptoms of dementia cause a great deal of suffering for individuals with dementia and their family members.

Contributing to:[3]

- Increased health care costs (~30% of the total annual $14,420)[10]
- Increased likelihood for nursing home placement[11,12]
- Excess morbidity, mortality and hospital stays[13]
- Loss of quality of life for the patient and his or her family[14]
- Caregiver Burden, Depression[15] and decreased health[16]

3 Finkel SI, Costa e Silva J, Cohen G. et al. Behavioral and psychological signs and symptoms of dementia. *Int Psychogeriatr*.1996;8(suppl 3):497-500.
10 Beeri, M. S., Werner, P., Davidson, M., & Noy, S. (2002). The cost of behavioral and psychological symptoms of dementia (BPSD) in community dwelling Alzheimer's disease patients. International Journal of Geriatric P8 sychiatry, 17(5), 403-408. doi: 10.1002/gps.490
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What do we do?

Prevention?

Unfortunately to date there has been NO research on the impact of prevention on the development of BPSD.

Future research should tackle progression of symptoms, and the effects of screening and monitoring.

So, What do we do?

The causes of Behavioral and psychological symptoms of dementia are complex often involving both family and professional caregivers, as well as patient centered care.

Non-pharmacological treatment, are the preferred first line approach of many organizations and expert groups[17,18,19,20] (except in emergencies or where safety is a concern) but these recommendations have not been translated to the real world[21]

17 Workgroup, A. C. W. (2013). American Geriatrics Society identifies five things that healthcare providers and patients should question. J Am Geriatr Soc, 61(4), 622-631.
18 National Institute for Health and Clinical Excellence (Great Britain). (2006). *Dementia: Supporting people with dementia and their carers in health and social care*. London, England: National Institute for Health and Clinical Excellence.
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20 American Psychiatric Association. (2013). Five things physicians and patients should question. *choosing wisely. ABIM Foundation*.
21 Molinari, V., Chiriboga, D., Branch, L. G., Cho, S., Turner, K., Guo, J., & Hyer, K. (2009). Provision of psychopharmacological services in nursing homes. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *65*(1), 57-60.

Non-pharmacological treatments

- In line with the previously discussed factors, this presentation will review three categories of non-pharmacological treatments, those targeting the:
  - Person with dementia
  - Caregiver
  - Environment.

Non-pharmacological treatments: Targeting the person with dementia

- "Well Established" Evidenced Based Practice
  - Behavioral Techniques[7,22,23,24,25,26,27,28] (Identify and modify antecedents and consequences of problem behaviors, increase pleasant events, individualized interventions based on progressively lowered stress threshold models that include problem solving and environmental modification:) Reduce BPSD and depression

- Limited support [23, 24]
  - Cognitive Stimulation Therapy[29] (Stimulating thinking, memory and connections by discussing current events, music, word games)
  - Music Therapy[30,31] (symptoms of aggression, agitation and wandering, more RCT needed)
  - Snoezelen[32] (placing the person with dementia in a soothing and stimulating environment known as a "snoezelen room"), some short term benefits
  - Massage and Touch Therapy[33] (reduced agitation in the short term, but more RCT needed)

22 Logsdon, R. G., McCurry, S. M., & Teri, L. (2007). Evidence-based psychological treatments for disruptive behaviors in individuals with dementia. *Psychology and aging*, *22*(1), 28.
23 Opie, J., Rosewarne, R., & O'Connor, D. W. (1999). The efficacy of psychosocial approaches to behaviour disorders in dementia: a systematic literature review. *Australian and New Zealand journal of psychiatry*, *33*(6), 789-799.
24 O'Neil, M. E., Freeman, M., Christensen, V., Telerant, R., Addleman, A., & Kansagara, D. (2011). *A systematic evidence review of non-pharmacological interventions for behavioral symptoms of dementia*. Washington, DC: Department of Veterans Affairs.
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7 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2015). Assessment and management of behavioral and psychological symptoms of dementia. bmj, 350(7), h369.
28 Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioral treatment of depression in dementia patients: a controlled clinical trial. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *52*(4), P159-P166.
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33 Birkett, D. P. & Boltuch, B. (1973). Remotivation therapy. Journal of the American Geriatrics Society, 21, 368–371.

Non-pharmacological treatments: Targeting the person with dementia

- Insufficient Evidence[22, 24]
  - Emotion-Oriented approached [25,29, 34]
    - •Validation/Psychodynamic therapy (working through unresolved conflicts/maintain the self)
    - •Reminiscence therapy[35,] (discussion of past experiences), 1 study improved mood, some evidence of decrease in behavior problems
    - •Simulated presence therapy[27] (use of audiotaped recordings of family members' voices), Mixed results PBSDs improved in some, but worsen in others
  - Cognition-orientation approaches [34]
    - •Reality Orientation Therapy
    - •Memory training and rehabilitation[37]
  - Aromatherapy[38] (use of fragrant plant oils), limited evidence for agitation
  - Light therapy[39] some support for reduced agitation
  - Transcutaneous Electrical Nerve Stimulation[40] (TENS, application of an electrical current through electrodes attached to the skin), short-lived neuropsychological improvements

23 Opie, J., Rosewarne, R., & O'Connor, D. W. (1999). The efficacy of psychosocial approaches to behaviour disorders in dementia: a systematic literature review. *Australian and New Zealand journal of psychiatry, 33*(6), 789-799.
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39. Forbes, D., Morgan, D. G., Bangma, J., Peacock, S., Pelletier, N., & Adamson, J. (2004). Light therapy for managing sleep, behaviour, and mood disturbances in dementia. *Cochrane Database Syst Rev, 2.*
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Non-pharmacological treatments: Targeting the person with dementia

- What do Behavioral Strategies look like?

Examples of Specific Behavioral Targets	Possible Targeted Strategies
Hearing voices	• Evaluate hearing or adjust amplification of hearing aids • Assess quality and severity of symptoms • Determine whether they present an actual threat to safety or function
Wandering/Elopement	• Identify triggers for elopement and modify them • Notify neighbors and police of patient's condition and potential for elopement • Outfit with ID (e.g. Alzheimer's Association Safe Return program)
Nighttime wakefulness	• Evaluate sleep routines and sleep hygeine • Assess environment for possible contributions (e.g. temperature, noise, light, shadows) • Eliminate caffeine • Create a structure that includes daily activity and exercise and a quiet routine for bedtime (e.g. calming activity or music) • Limit daytime napping • Use a nightlight • Nighttime respite for caregiver
Repetitive questioning	• Respond with a calm reassuring voice • Use of calm touch for reassurance • Inform patient of events only as they occur • Structure with daily routines • Use of distraction and meaningful activities
Aggression	• Determine and modify underlying cause of aggression (e.g. psychosis, pain, particular caregiver interaction), evaluate triggers and patterns • Warn caregiver not to confront or return physicality • Discuss other self-protection strategies with caregiver (e.g. distract, backing away from patient, leaving patient alone if they are safe, and seeking help) • Limit access to or remove dangerous items • Create a calmer, more soothing environment

41 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2014). Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. Journal of the American Geriatrics Society, 62(4), 762-769.

Non-pharmacological treatments: Targeting the Family Caregiver

- Most approaches provide psychoeducation and tailored problem solving training to a family care giver to identify and modify precipitating causes of BPSD.[7, 42]
- For example
  - Tailored Activity Program (TAP)[43]: Home-based Occupational therapists trained to educate caregivers and problem solve BPSDs
  - Care of Persons with Dementia in their Environments (COPE)[44]: Health professionals assess underlying medical problems and train caregivers
  - Advancing Caregiver Training (ACT)[45]:Health professionals train to identify and modify potential triggers of problem behaviors

7 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2015). Assessment and management of behavioral and psychological symptoms of dementia. bmj, 350(7), h369.
42 Corcoran, M. A., & Gitlin, L. N. (1992). Dementia management: An occupational therapy home-based intervention for caregivers. *American Journal of Occupational Therapy*, *46*(9), 801-808.
43Gitlin, L. N., Winter, L., Burke, J., Chernett, N., Dennis, M. P., & Hauck, W. W. (2008). Tailored activities to manage neuropsychiatric behaviors in persons with dementia and reduce caregiver burden: a randomized pilot study. *The American Journal of Geriatric Psychiatry*, *16*(3), 229-239.
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Non-pharmacological treatments: Targeting the Family Caregiver

- These psychoeducational, problem solving, supportive, behavioral treatment programs have effectively:
  - Decrease
    - BPSDs (Shadowing, repetitive questioning, agitation, argumentation)[43,45,47,48] more effectively than medication[51]
    - Caregivers distress due to BPSDs[43,45,46,49,50]
    - Depression in both patients and Family Caregivers[28,48]
    - Patient placement [45]
    - Caregiver burden[43,45,47]
    - Negative Communicaiton[45]
    - IADL dependence[49]
  - Increase
    - Caregiver confidence/mastery[43,45,48,49] and skills[43,47]
    - Patient engagement/mood[42]
    - Caregiver wellbeing[45]

28 Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioral treatment of depression in dementia patients: a controlled clinical trial. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *52*(4), P159-P166.
43 Gitlin, L. N., Winter, L., Burke, J., Chernett, N., Dennis, M. P., & Hauck, W. W. (2008). Tailored activities to manage neuropsychiatric behaviors in persons with dementia and reduce caregiver burden: a randomized pilot study. *The American Journal of Geriatric Psychiatry*, *16*(3), 229-239.
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Non-pharmacological treatments: Targeting the Family Caregiver

- What types of psychoeducation?[7,41,42,43,44,45]
  - Behaviors are not intentional but caused by dementia
  - Disease progression (decreased executive functioning, planning) so guidance is helpful
  - Avoid confrontation through clear communication and relaxed rules (calm voice, simple directions, limited choices, closed questions)
  - Importance of self-care (exercising, eating right, respite, stress reduction, attending their own medical appointments)
  - Identifying and utilizing a support network

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41 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2014). Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. Journal of the American Geriatrics Society, 62(4), 762-769.
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Non-pharmacological treatments: Targeting the Environment

- Environment approaches are "well established" treatments that utilize collaborative care to improve patients surroundings and reduce:[7,27,52]
  - Overstimulation (for example, excess noise, people, or clutter in the home) or Understimulation (for example, lack of anything of interest to look at)
  - Safety problems (for example, access to household chemicals or sharp objects or easy ability to exit the home)
  - Lack of activity and structure (for example, no regular exercise or activities that match interests and capabilities)
  - Lack of established routines (for example, frequent changes in the time, location, or sequence of daily activities)
- And appear effective in preventing and reducing behavioral symptoms, (i.e. wandering, agitation, elopement) and improving patient well being and acceptance of care in both facilities[53] and the home[48,54].

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27 Gatz, M., Fiske, A., Fox, L. S., Kaskie, B., Kasl-Godley, J. E., McCallum, T. J., & Wetherell, J. L. (1998). Empirically validated psychological treatments for older adults. *Journal of Mental Health and aging*.
52 Callahan, C. M., Boustani, M. A., Unverzagt, F. W., Austrom, M. G., Damush, T. M., Perkins, A. J., ... & Hendrie, H. C. (2006). Effectiveness of collaborative care for older adults with Alzheimer disease in primary care: a randomized controlled trial. *Jama*, *295*(18), 2148-2157.
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54 Gitlin, L. N., Belle, S. H., Burgio, L. D., Czaja, S. J., Mahoney, D., Gallagher-Thompson, D., ... & Ory, M. G. (2003). Effect of multicomponent interventions on caregiver burden and depression: the REACH multisite initiative at 6-month follow-up. *Psychology and aging*, *18*(3), 361.

Non-pharmacological treatments: Targeting the Environment

- Environment "well established" treatments solutions:[7,27,52]

Overstimulating or understimulating environment	Regulate the amount of stimulation in the home by decluttering the environment, limiting the number of people in the home, and reducing noise by turning off radios and television sets
Unsafe environment	Make sure the person does not have access to anything (e.g. sharp objects) that could cause harm to themselves or others
Lack of activity	• Keep the person engaged in activities that match interests and capabilites • Relax the rules – there is no right or wrong way to perform an activity if the person is safe
Lack of structure or established routines	• Establish daily routines • Changing the time, location, or sequence of dialy activities can trigger outbursts • Allow enough time for activities • Trying to rush activities can also trigger behaviors

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Non-pharmacological treatments: Targeting the Environment

- What might this look like?
  - Case Example:
    - Community Living Centers & Climate Change

- Collaborative care?
  - Interdisciplinary teams : Nursing (CAN, LPN, RN), Speech, Occupational, Social Work, Recreational, Physical, Dietician, Chaplin, Music, Psychologist, Physician

When Safety is a concern:
Pharmachological approaches

Note: Currently no medications have been approved by the Food and Drug Administration for BPSDs in the US, so all drugs are used off label for agitation and aggression

- Atypical antipsychotics (risperidone, aripiprazole, olanzapine, haloperidol) have the strongest evidence base, but benefits are only modestly[55,56,57,58] and don't appear to outweigh adverse effects (i.e. stroke, metabolic syndrome, extrapyramidal symptoms, cognitive worsening, seizures, sedation, abnormal gait) [7,54] and mortality risk (1.7-fold increase)[59,60]

- Tricyclic antidepressants (sertraline, citalopram) have been shown to have limited benefit depression[61,62] and agitation[63] but also hold adverse effects (i.e. orthostatic hypotension, seizures, glucose dysregulation, anticholinergic effects, weight changes, sexual dysfunction, falls)[64]

- Cholinesterase inhibitors and memantine (donepezil, rivastigmine) demonstrated mixed findings[7] but again hold adverse effects (diarrhea, nausea, and vomiting, and less commonly with symptomatic bradycardia and syncope)[65]

- Mood stabilizers (valproic acid, carbamazepine) also demonstrated mixed findings[7] but again hold adverse effects (i.e. alopecia, thrombocytopenia, hyperammonemia, pancreatitis, liver injury, cognitive changes, and mortality)[66]

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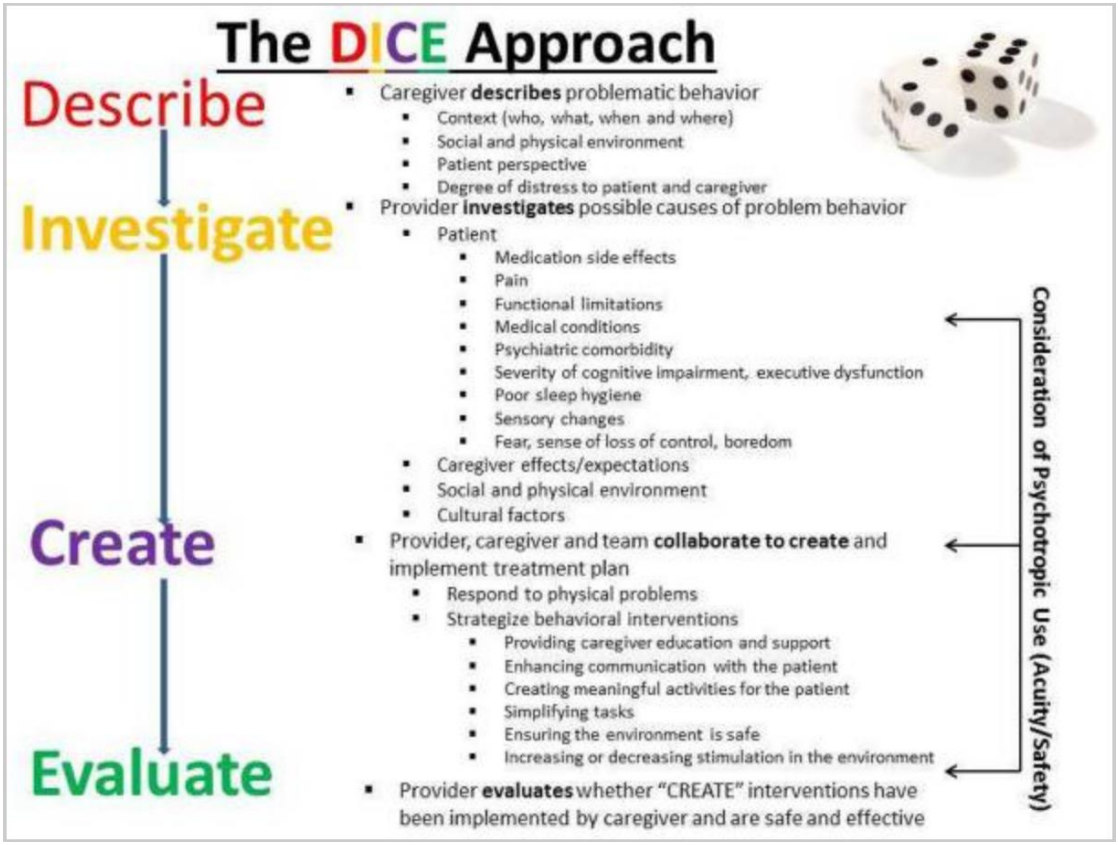
So what can we do?: Putting it all together

- 1st step: Education (Congrats you've already taken a step!)
- 2nd Step:

  Mobilize for action to improve care delivery, consider DICE!



41 Kales, H. C., Gitlin, L. N., & Lyketsos, C. G. (2014). Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. Journal of the American Geriatrics Society, 62(4), 762-769.

So what can we do?: Takeaways

- Behavioral and psychological symptoms of dementia (BPSD) are prevalent and harmful (to patients and treatment providers)
- Non-pharmacological interventions are the frontline treatment, specifically behavioral techniques for patients, problem-solving strategies for caregivers, and environmental interventions; but medication may be necessary.
- Collaborative care (like DICE) can reduce BPSD but, It takes a village!

Questions?
Comments?
Concerns?

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