Management of behaviours and psychological symptoms of dementia

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Diagnosis of dementia

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Diagnosing Dementia

- **Normal ageing:** Gradual decline in working memory, but reasonable maintenance of vocabulary, general knowledge, occupational expertise. Decreased ability to multitask. Decline in ability to remember names
- **Mild cognitive impairment:** subjective complaints of memory loss with early clear cut deficits on objective examination. Decreased performance in demanding employment and social situations, but no significant changes in day to day function
- **Dementia:** progressive irreversible syndrome of impaired memory, intellectual function, personality and behaviour, **causing significant impairment in function**

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Dementia in Australia

- 2022: 460,000 plus people with dementia
- 2050: 900,000 people with dementia
- at age 65: 1 in 12 people have dementia
- **at age 80: 1 in 4 people have dementia**
- at age 90: 1 in 2 people have dementia
- leading cause of death for women, 2nd highest for men after heart disease
- approx 26,000 people under age 65 with dementia
- Main causes:
  - Alzheimers disease
  - Vascular dementia
  - Mixed dementia
  - Dementia with Lewy bodies
  - Frontotemporal lobar degeneration

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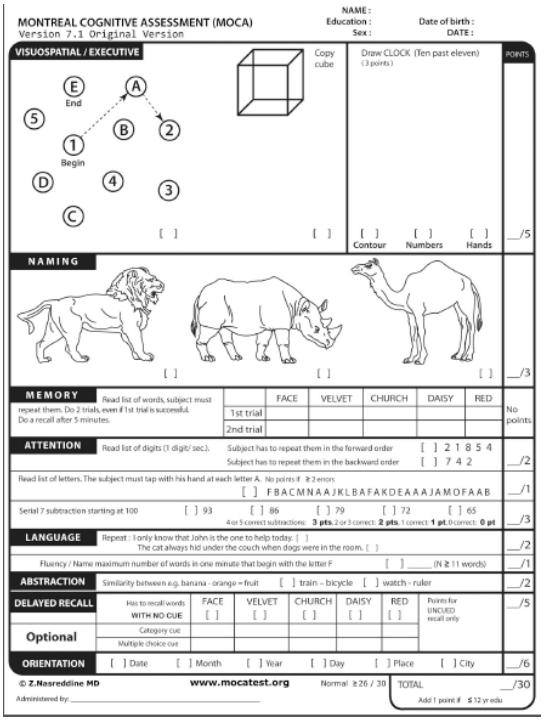

MONTREAL COGNITIVE ASSESSMENT (MOCA)
Version 7.1 Original Version

NAME :
Education :
Sex :
Date of birth :
DATE :

VISUOSPATIAL / EXECUTIVE — POINTS

Copy cube

Draw CLOCK (Ten past eleven) (3 points)

[ ] Contour [ ] Numbers [ ] Hands /5

NAMING /3

MEMORY — Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. 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

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 /1

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

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

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

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

DELAYED RECALL

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

Points for UNCUED recall only /5

ORIENTATION [ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City /6

© Z.Nasreddine MD www.mocatest.org Normal ≥ 26 / 30

TOTAL /30
Add 1 point if ≤ 12 yr edu

Administered by: _____

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Risk factors that can be modified to reduce dementia risk

Lancet 2020

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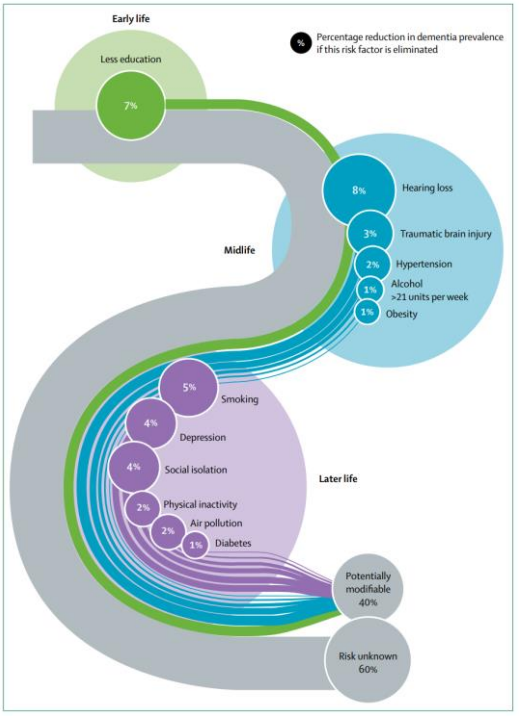

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Behaviours and Psychological Symptoms of Dementia

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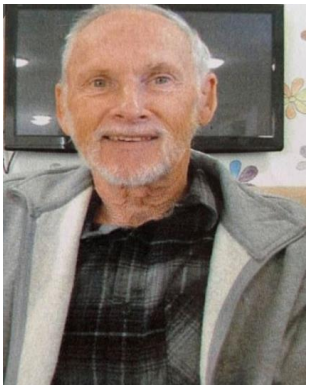
Management of BPSD has been very topical

Terry Reeves before and after use of antipsychotic medication whilst on respite care in a residential aged care facility 2019



abc.net.au

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Royal Commission into Aged Care Quality and Safety: Final Report

- Released February 2021
- 148 recommendations including:
  - Establishment of a post-diagnosis dementia support pathway (REC 15)
  - Review Specialist Dementia Care Units (REC 16)
  - Regulation of use of physical and chemical restraints (REC 17)
    - Be recommended by an independent expert
    - In an emergency to avert risk of immediate harm
    - As a last resort, and for the shortest time possible
    - Need consent from a 'restrictive practices substitute decision maker'

Behaviours and Psychological Symptoms of Dementia (BPSD)

- **Symptoms of disturbed perception, thought content, mood, or behaviour, that frequently occur in patients with dementia** (IPA consensus group1996)

- Up to 95% of people with dementia will experience some behaviours and psychological symptoms associated with their dementia, with around 80% of these lasting up to 18 months
- BPSD are an integral part of dementia although cognition is studied more
- Symptoms can occur at any time during the disease from prodromal stages to severe dementia
- Presence of BPSD predicts functional decline, cognitive decline and institutionalisation
- BPSD are usually manageable, and can respond well to a combination of approaches and therapies

Behaviours and Psychological Symptoms of Dementia (BPSD)

- aggression
- wandering
- restlessness
- agitation
- sexually disinhibited behaviour
- screaming or cursing
- hoarding
- anxiety
- depression
- hallucinations
- delusions
- apathy
- withdrawal
- irritability

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Behaviours and Psychological Symptoms of Dementia (BPSD)

- elation
- confabulation
- perseveration
- misidentification (hallucinations)
- sundowning
- eating disorder (over-eating, or refusing food)
- shadowing (stalking)
- resistiveness to care

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Prevalence of BPSD in Sydney Nursing Home Study

BPSD in Sydney Nursing Home Study (647 subjects in 11 aged care facilities):

- Aggression 52 – 88%
- Anxiety and agitation 22 – 88%
- Delusions 26 – 69%
- Activity disturbance 30 – 63%
- Mood disturbance 25 – 67%
- Diurnal disturbance 4 – 66%
- Also: Hallucinations, resistiveness to care

[1]Brodaty et al 2001

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Behaviours and Psychological Symptoms of Dementia (BPSD)

- Different types of dementia can have different symptoms
  - Depression in Vascular Dementia
  - Hallucinations in Dementia with Lewy Bodies
  - Compulsive behaviours in Fronto-temporal Lobar Degeneration
  - Delusions in Alzheimer's disease
- Pathology in different brain regions can predict symptoms
  - Frontal pathology - behavioural disturbance; disinhibition; depression
  - Basal ganglia lesions - delusions
  - Temporal lobe pathology - delusions, hallucinations
  - Locus coeruleus - psychosis, depression
- Changes in neurotransmitter levels can predict symptoms
  - Decreased serotonin – see aggression, agitation, anxiety, depression
  - Decreased noradrenalin in neocortex – see depression

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Aetiology of Behaviours and Psychological Symptoms of Dementia (BPSD)

- BPSD are multifactorial in aetiology with brain pathology only part of the cause
- Also need to consider:
  - Biological factors
  - Psychological factors
  - Environmental factors
  - Social factors
- Dementia Support Australia (home of DBMAS) has found at least 50 different factors contributing to BPSD
  - Pain 47%
  - Carer approach 34%
  - Over or under stimulation 27%
  - Also memory impairment, communication issues, frontal impairment, boredom

Draper's 6 Rules for Management of BPSD

1. Any new behaviour that develops over hours to days is due to an acute medical problem unless proven otherwise
   - Delirium due to hypoxia, infection, metabolic disturbance, drugs etc
2. Most people get grumpy if they are in pain or discomfort
   - Pain, constipation, incontinence, immobility, pressure injuries, sensory impairment (vision, hearing), hunger, physical restraint, cold, heat
3. Behaviour can reflect how the brain is working ie cognitive impairment influences behaviour
   - Memory impairment causes repetitive questions
   - Frontal lobe damage – apathy, disinhibition
   - Language deficits – poor understanding of instructions
   - Increased incidence of BPSD with more severe cognitive impairment

Draper's 6 Rules for Management of BPSD (cont)

4. The person's behaviour is a way of communication
   - What is the person trying to say to you?
   - aggression or resistive behaviour during personal care may be due to misinterpretation of intentions of carer, embarrassment, fear

5. People tend to react to things they don't like about their environment
   - is it comfortable and pleasant and familiar, is there privacy, does it feel safe?
   - Are staff able to communicate, are they stressed or too busy?
   - Are there activities which are meaningful and purposeful? Can family and friends visit?
   - Are there problems with other residents interacting?

6. Is there a co-morbid mental illness?
   - People with dementia have an increased risk of clinical depression, anxiety or psychosis

Management of BPSD

- **What is the symptom/behaviour of concern?**
  - Define each symptom
  - Why, when, where and with whom
  - What makes it better or worse
  - How frequently does it occur and for how long
  - Decide how to measure it eg diary, scale
- **Does the behaviour require intervention?**
  - Is it distressing to person, family, staff
  - Is it dangerous – is the person, or are family or staff, at risk
- **Assess and correct any physical factors**
  - acute medical illness, pain, constipation, fatigue, hunger, thirst, cold, heat, noise
- **Correct sensory impairments** – vision, hearing
- **Assess and correct psychosocial factors**
  - carer stress and behaviour, boredom
- **Assess and correct environmental factors**
  - Cottage model of care best for people with dementia

Non- pharmacological management of behaviours and psychological symptoms of dementia

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Non-pharmacological management of BPSD

- **Address environmental issues:**
  - Provide a quiet, calm area away from noise or disruption
  - Identify person's room with orienting features
  - Ensure bright day lighting, and a night light
  - Ensure area is safe and secure, with concealed doors if necessary
  - Ensure adequate access to outside areas
- **Address behavioural issues:**
  - Allow person to walk around freely and redirect as needed
  - Have regular interaction with staff or volunteers to reduce feelings of isolation or loneliness
  - Provide regular reassurance and use of name

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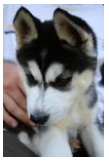
Non-pharmacological interventions for BPSD

- **Good evidence** for:
  - Family carer education
  - Occupational therapy involvement
  - Professional carer education and training
- **Some evidence** for:
  - Physical exercise – can be walking, dancing, simple exercises
  - Music therapy – individualised play lists, singing
  - Hand massage and gentle touch
  - Simulated presence therapy – record a video from family
  - Personally tailored meaningful, purposeful activity – folding clothes, peeling vegetables, working in the garden, hanging out washing
  - Animal assisted therapy – improved physical activity, anxiety, dietary intake
  - Aromatherapy – lavender, lemon balm – reduced agitation

Oyebode 2019; Yakimicki 2019





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Mr Green

- 82 year old man, moderately severe mixed dementia, resident in aged care facility for 3 years
- Minimal language, not recognising family, required assistance with all ADLs, unable to mobilise independently
- Would occasionally call out 'help me' when he was thirsty or uncomfortable and needed repositioning, staff usually able to respond to his needs
- Began calling out constantly every few minutes and was given extra analgesia as staff thought he was in pain from arthritis
- Calling out continued for several days, developed diarrhoea, not eating or drinking much, not responding to attention from family or staff

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Mr Green (cont)

- Reviewed by GP, no evidence of UTI, no obvious source of pain, but noted some bloating and tenderness over abdomen, and queried mild gastroenteritis
- On review 2 days later GP performed rectal examination and noted probable faecal impaction, and reduced then ceased codeine containing analgesics
- Had repeated Fleet enema and aperients with eventual clearing of impaction
- Calling out reduced to previous levels of once or twice a day

Mrs Smith

- 74 year old lady with moderate dementia in residential care.
- Had become quite withdrawn and appeared depressed but a course of antidepressants made very little difference
- Facility started a music therapy program with all residents getting an iPod with an individualised playlist.
- Mrs Smith initially refused to wear the earphones but staff persisted and she began to listen
- Over a few days of music for 2 hours morning and afternoon, she became more interactive and smiling, and one day began to hum along to what she was listening to.
- The improvement has persisted for over a year and she is on her second iPod.

Mrs Jones

- 84 year old lady with moderately severe dementia in residential care, chairfast following unsuccessful internal fixation of hip fracture
- Constantly calling out loudly for son, then not sure what she wants when he or others arrive
- Had lived on a sheep property most of her life
- Discussion about bringing a staff member's kelpie in to visit her
- Mrs Jones eyes lit up and she smiled for the first time in weeks
- Dog was allowed to spend several hours a day in her room and her calling out reduced significantly

Pharmacological management of behaviours and psychological symptoms of dementia

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Pharmacological management of BPSD

- Use medication only after a reasonable trial of non pharmacological management, and use judiciously
- Remember that efficacy of many of the treating drugs is quite modest, but side effects can be serious
- Decide which symptom or symptoms are being targeted for treatment, and measure response

- Make sure that any underlying causes of symptoms are diagnosed and treated
  - Always check for delirium and treat the underlying cause eg UTI
  - Consider analgesics for pain
  - Address constipation with laxatives, fluid etc

- Always involve the carer and other family members and staff

Pharmacological management of BPSD

- **Agitation (and anxiety):**
  - Selective serotonin reuptake inhibitors are as effective as antipsychotics with less side effects. Citalopram has most evidence (start at 10mg mane)
  - Analgesics have been shown to reduce agitation in moderately severe dementia (? Treating undiagnosed pain)
  - Antipsychotics may be effective – risperidone is the only PBS listed drug (start at 0.25mg BD), olanzapine may also be effective
  - Benzodiazepines may be effective short term (lorazepam 0.5mg BD), avoid long acting drugs such as diazepam

- **Depression:**
  - Selective serotonin reuptake inhibitors have shown some benefit (start citalopram 10mg mane increasing to 20mg over 2 weeks)
  - Selective noradrenergic reuptake inhibitors (start venlafaxine 37.5mg mane and increase after 2 weeks)
  - No evidence for use of sertraline or mirtazapine

Pharmacological management of BPSD

- **Aggression**
  - Antipsychotics- risperidone is only one PBS listed for BPSD (start 0.25mg BD titrating dose up for response to max of 3mg/day.) Watch for EPS, review after 1 week, must review within 3 months to continue prescribing
  - Olanzapine can be used IMI in extreme cases (2.5mg stat)

- **Psychotic symptoms** (hallucinations and delusions)
  - Only treat if there is distress to the patient or others
  - Antipsychotics – risperidone. Olanzapine and quetiapine may be useful if there are side effects from risperidone but are used off-label

- **Sleep-wake cycle reversal**
  - Use melatonin to induce sleep, may need short course of short acting sedative-hypnotic such as temazepam, aim to keep awake during day

Pharmacological management of BPSD

- **Apathy:**
  - Cholinesterase inhibitors such as donepezil (used for symptomatic treatment for cognitive symptoms in Alzheimers disease) can improve apathy
  - Antidepressants may be effective if apathy is part of depression

- Symptoms not often helped by medication include inappropriate vocalisations (calling or shouting out), restlessness and wandering, sexually inappropriate behaviours

Pharmacological management of BPSD

Obtaining consent for treatment:

- In NSW, psychotropic medication is a MAJOR medical treatment and hence requires written consent from the 'person responsible' or guardian with function of medical consent for ongoing therapy (if the patient cannot consent themselves)
- URGENT medical treatment is treatment necessary to prevent serious damage to health and does not need consent. In an emergency, use of psychotropic medications is covered by 'duty of care' and does not require prior consent but the 'person responsible' should be informed of the use of emergency sedation as soon as possible – usually within 24 hours
- Where medication is used as chemical restraint, consent should be obtained from the 'restrictive practices substitute decision maker'
- Chemical restraint should not be confused with the appropriate use of psychotropic medications to address symptoms of mental illness or dementia

Mrs Smith

- 68 year old lady, lived with husband in own home, 2 year history of Alzheimers disease, on donepezil
- Was convinced her husband was having an affair and was going to leave her. She followed him around, got angry if he went to golf, stood at door and would not let him out.
- Commenced on risperidone on the basis that she was experiencing delusions
- After 2 weeks, husband reported "I have got my wife back". He was very reluctant to consider reducing dose of the "chill pill" after 3 months.
- Risperidone reduced to morning dose only after 6 months, and was ceased at 12 months (but husband keeps a box in the cupboard)

Mrs Short

- 87 year old lady with mixed dementia (vascular dementia and Alzheimer's disease) moved into residential care after death of husband who was her carer
- Became very agitated and anxious about where her husband was, constantly asked staff and other residents about him, then became extremely distressed when told he was dead
- All attempts at distraction, exercise, music therapy failed
- Commenced on citalopram and gradually increased to 20mg in the morning. Staff noticed reduction in questions (using behaviour chart) after 4 weeks. Has remained on citalopram as one attempt to withdraw it after 6 months led to recurrence of questions

Mrs Long

- 77 year old lady, lived with husband in own home, 5 year history of Alzheimer's disease, still relatively independent in activities of daily living with prompting
- During the 2019 bushfires she was convinced that she was the cause of the fires and they had been sent to punish her. She became extremely distressed and tried to stab herself with scissors
- She was commenced on both risperidone and venlafaxine as the old age psychiatrist was worried about her delusions and depression
- She required 3 weeks inpatient care but was markedly improved at 6 weeks after commencing treatment. Her risperidone was ceased after 6 months and she remains on the venlafaxine

Help with management of BPSD

- **Geri to GP service:**
  - **Ryde Hunters Hill** Dr Linda Xu: 0451 829 527
  - **Lower North Shore** Dr Praveen Sivabalan: 0434 579 132
  - **Hornsby Ku-ring-gai** Dr Radheshan Baskaran 0478 784 215

- **Geriatric Outreach Service**
  - GRACE
  - AART
  - BRACE

- **Dementia Support Australia:**
  - **1800 699 799**

Thank you