Brodaty, Draper, Low Triangle in 2017

Henry Brodaty
What does BPSD mean?

Behavioural and Psychological Symptoms of Dementia

- Aggression
- Agitation
- Anxiety
- Apathy
- Depression
- Disinhibition
- Nocturnal disruption

- Psychotic symptoms
- Vocally disruptive behaviours (calling out)
- Wandering
- Sometimes included...resistance to care
Avoid language of blame or stigma

Impede good quality care

- Challenging Bs → Changed behaviours
- Expressions of unmet needs
- Behavioural expression of need
- Responsive behaviours
- Behaviours of concern
- Behavioural & psychological changes of dementia
- Neuropsychiatric Symptoms (NPS)

Prevalence of BPSD

- BPSD common in dementia
- ~90% in residential care\(^1\)
- Apathy ~50% AD\(^2\), 100% severe FTDbv\(^2\)
- Delusions, hallucinations, apathy, sleep disturbance ≥ 50% in DLB\(^2\)
- Agitation, sleep disturbance > 50% in moderate-severe in VaD\(^2\)
- Depends on type & severity of dementia
- Depends on context

\(^1\)Edvardsson (2008); \(^2\)Kazui et al. (2016)
What is the Triangle?

• 7 tiers based on severity of symptoms
• Tier 1 = no dementia; most frequent
• Tier 7 = very severe BPSD; most rare
• Each tier = different model of intervention
• Persons move up & down tiers depending on symptoms & intervention
• Intervention cumulative from bottom up

Seven-tiered model of management of behavioural and psychological symptoms of dementia (BPSD)

**Tier 7:**
Dementia with extreme BPSD (e.g., physical violence)
Prevalence: Rare
Management: In intensive specialist care unit

**Tier 6:**
Dementia with very severe BPSD (e.g., physical aggression, severe depression, suicidal tendencies)
Prevalence: <1%
Management: In psychogeriatric or neurobehavioural units

**Tier 5:**
Dementia with severe BPSD (e.g., severe depression, psychosis, screaming, severe agitation)
Prevalence: 10%
Management: In dementia-specific nursing homes, or by case management under a specialist team

**Tier 4:**
Dementia with moderate BPSD (e.g., major depression, verbal aggression, psychosis, sexual disinhibition, wandering)
Prevalence: 20%
Management: By specialist consultation in primary care

**Tier 3:**
Dementia with mild BPSD (e.g., night-time disturbance, wandering, mild depression, apathy, repetitive questioning, shadowing)
Prevalence: 30%
Management: By primary care workers

**Tier 2:**
Dementia with no BPSD
Prevalence: 40%
Management: By selected prevention, through preventive or delaying interventions (not widely researched)

**Tier 1:**
No dementia
Management: Universal prevention, although specific strategies to prevent dementia remain unproven

* Prevalence is expressed as estimated percentage of people with dementia who currently fall into this category.
† Estimate based on clinical observations. ‡ Estimate based on Lyketsos et al.²

BPSD: Natural History

- Some behaviours become more prevalent with time & severity – apathy, agitation
- Some peak then decrease as dementia progresses – depression, hallucinations

Brodaty et al. (2015) JAMDA, 5: 380-387
What’s changed in research?

- Pharmacotherapy
- Psychosocial interventions
- Quality and quantity of research
Public Health Advisory: Deaths with Antipsychotics in Elderly Patients with Behavioral Disturbances

The issues described in this communication have been addressed in product labeling (see Drugs@FDA).
Adverse Effects of Antipsychotics

- Sedation
- Dizziness
- Extra pyramidal Sx
- Falls
- Metabolic syndrome
- Weight gain
- Orthostatic hypotension

$\uparrow$ Prolactin, gynaecomastia

Anticholinergic (eg urinary outflow, glaucoma)

Stroke

Death
Antidepressants

• Sertraline for treatment of depression in AD
• Wk-24 Outcomes (DIADS-2)
• 67 Sertraline, 64 placebo; 12 wk RCT + 12 wk
• No between-groups diff in:
  • CSDD score
  • remission rates
  • secondary outcomes
• SSRI associated > adverse events of diarrhoea, dizziness, dry mouth, pulmonary SAE (pneumonia)

**HTA-SADD Trial**

- Mirtazapine 15 mg & sertraline 50 mg; 1→3/day

### CSDDD Score

- Placebo
- Sertraline
- Mirtazapine

### DEMQOL

- Proxy Score

### N = 507
CitAD RCT – citalopram & agitation

- Significant better with citalopram
- Cognitive & cardiac adverse effects may limit effectiveness at 30mg/day

Porsteinsson et al. (2014) JAMA;311(7):682-691
The HALT study
Halting Antipsychotic use in Long-Term care

- A single-arm 12-month longitudinal study in 23 aged care facilities of at least 60 beds in urban and rural NSW
- Residents assessed \( \approx 4 \) wks & 1wk prior to deprescribing
- Re-assessed 3, 6 & 12 months later
The HALT study

Halting Antipsychotic use in Long-Term care

Education for GPs, nursing staff, families

Sustained antipsychotic deprescribing in 75% of 133 residents over 12 months….

- Without re-emergence of behaviours
- Without substitution regular medication & minimal prn benzodiazepine use
- LTC staff are significant drivers of AP prescribing
- 20-25% stayed on antipsychotics; benefit??
- Questions remain about identifying who benefits from continuing antipsychotics
Novel Drugs
Cannabinoids

- Several cannabinoids being researched
- **Dronabinol**: ↓ agitation, aberrant motor & night-time behaviours\(^1\)
- **Delta-THC**: ↓ delusions, agitation, aggression, irritability, apathy\(^2\)
- **Nabilone**: ↓ behavioural Sx (case study only)\(^3\)
- **RCT for agitation underway**\(^4\)

\(^{1}\text{Walther et al. (2006); }^{2}\text{Shelef et al. (2016); }^{3}\text{Passmore (2008); }^{4}\text{https://clinicaltrials.gov/ct2/show/NCT02351882}
Dextromethorphan-quinidine

- Double-blind RCT in AD patients
- 2x5-week treatment stages
- Dextromethorphan-quinidine=152; Placebo=127
- DV: NPI Agitation/Aggression scores
- Stage 1: ↓NPI for treatment vs control (LSM = -1.5; 95%CI: -2.3 to -0.7; p<.001)
- Stage 1: ↓NPI for treatment vs control (LSM = -1.6; 95%CI: -2.9 to -0.3; p =.02)

Cummings et al. (2015) JAMA; 314(12):1242-1254
Stimulants for apathy

- Double-blind RCT in AD patients with mild-mod apathy
- Methylphenidate (MPH) (10mg BD) vs placebo; administered for 6 wks, N = 57
- 17 patients = apathy (≥3.3 points on AES)
- NPI apathy score improved on MPH 1.8 points (95%CI: 0.3-3.4) > placebo (p = .02)

Rosenberg P et al (2013); Lanctot K et al (2014)
Person centred care
Caring for Aged Dementia Care Resident Study (CADRES)

- Cluster RCT, urban RACFs
- 15 sites with 289 residents
- 3 groups: Dementia-care mapping; Person-centred care; usual care (control)
- f/u = 4mths
- ↓ CMAI score for DCM (mean diff=10.9, 95%CI: 0.7–21.1, p=0.04) & and PCC (13.6, 3.3–23.9; p=0.01) at f/u

PerCEN: a cluster RCT of person-centered residential care and environment

- Confirmed benefit of PCC in reducing agitation
- PCE not effective but difficult to implement within strictures of RCT

Chenoweth L et al  *Int Psychogeriatrics*. 2014, 26:1147-60
Tailored Activity Program (TAP)

Home-based occupational therapy intervention
Wait-list control RCT, N=60
At 4mths: problem behaviours↓, activity engagement↑
Fewer CGs reported agitation or argumentativeness
Caregiver benefits:
• ↓ hours “doing things” & being “on duty”
• ↑ mastery, self-efficacy & skill enhancement

Tailored Activity Program (TAP)

- Beneficial for FTD (O’Connor CM et al, in press; Gitlin L et al, 2017)
- Adaptation for Australia trial (Bennett S, Clemson L et al)
CG interventions in the Community

• Meta-analysis of nonpharmacological Interventions for BPSD
• 23 RCTs or pseudo-RCTs included
• eg: ↑ CG skill training/education, ↑ CG support/self-care
• Outcome: ↓ BPSD, effect size=0.34
  (95%CI: 0.20–0.48; z=4.87; p=0.01)
• CG Outcome: ↓ CG reactions, effect size=0.15
  (95%CI:0.04–0.26; z=2.76; p=0.006)

Novel strategies

Humour therapy
Volunteers, Montessori
Music, singing, dance therapy
Integrating kindergarten/ babies
Humor therapy: SMILE study

• 20% reduction in agitation
• Effect size = antipsychotic medications for agitation
• Adjusting for dose of humour therapy
  • Decreased depression
  • Improved quality of life

Low LF et al BMJ Open 2013
Brodaty et al Am J Ger Psych 2014
Low LF et al JAMDA 2014
Quality and Quantity of Research

• Large ↑ in quality of research
• Large ↑ in number of studies
• ~Doubling in papers rated as “strong”
  • ~30% (2012) → ↑~70% (2017)
• Improvement in psychosocial papers:
  • ~ 24% (2012) → ↑ 60% (2017)
• Improvement in pharmacological papers:
  • ~ 38% (2012) ↑ 80% (2017)

BPSD Guide Implementation Project
What’s changed in services for BPSD

- Dementia Support Australia: Dementia Behaviour Management Advisory Service (DBMAS) 1-800 699 799


- Flying squads – some hospitals

- Special care units – some areas, U Wollongong review, Commonwealth WP
DCRC – BPSD resources

- Behaviour Management, A Guide to Good Practice
- Clinician’s Field Guide
- Guide for Family Carers
- BPSD Guide App for clinicians
- App for carers & frontline care staff
- Posters for remote Aboriginal communities
- LGBTI resource soon!
- CALD, need funding

www.dementiaresearch.org.au/bpsdguide
Behaviour Management
A Guide to Good Practice

Managing Behavioural and Psychological Symptoms of Dementia

DCRC DBMAS dendemia behaviour management advisory service

Helping Australians with dementia, and their carers
BPSD Guide

Behaviour Management - A Guide to Good Practice, Managing Behavioural and Psychological Symptoms of Dementia (BPSD)

- Restless/agitated behaviours
- Psychological/mood symptoms
- Psychotic symptoms
- Disinhibited behaviours

Aggression

Physically or verbally threatening behaviours directed at people, objects or self

- Presenting symptoms
- Contributing factors
- Differential diagnosis
- Assessment tools
- Conclusions
- Precautions
- Psychosocial/environmental interventions
Agitation

Psychosocial/environmental interventions

Acupressure
Scientific quality of research: Moderate
Outcomes: Positive; 1 large & 1 small pilot study

Animal-assisted therapy
Scientific quality of research: Limited
Outcomes: Positive; 1 small case series

Aromatherapy with lavender oil inhalation
Scientific quality of research: Moderate
Outcomes: Positive; 1 study

Bright light therapy
Scientific quality of research: Moderate
Outcomes: No benefit; 1 study *MAY INCREASE AGITATION

Closing Group intervention, small group, resident driven program
Scientific quality of research: Limited
Outcomes: Positive; 1 small study

Wandering

Clinical scenario

Presentation

Mr E is a 63 year old Aboriginal man who moved to Adelaide from a regional community when he was 16. He lived with his wife until she died several years ago. While raising their family of five children, they maintained strong community links with Aboriginal friends and family in Mr E’s original community. His connection to Country has remained very important to him. Family and community members have been supporting Mr E in the family home with the assistance of an Aboriginal-specific community service and this arrangement has been working well until recently. On three occasions in the past month Mr E has been found after dark some distance from home, underdressed for the weather and distressed. On the most recent occasion, a concerned passer-by alerted police after Mr E was unable to provide his address or contact details for his family. When the police approached Mr E he became uncooperative and verbally aggressive. Police ultimately located Mr E’s daughter who collected him from the local police station to take him home.

Assessment

In order to reduce the presenting behaviour...
**AGGRESSION IN DEMENTIA**

**What is aggression?**
- Hit out at others
- Punch, kick, scratch
- Push others
- Throw things
- Refuse care
- Scream or shout

**Why does it happen?**
- Dementia
- Pain
- Sick or infection
- Frustrated
- Scared or threatened during care
- Toilet problems

**What could help?**
- Keep everyone safe
- Keep respect
- Don’t argue
- Know their story
- Calm them, help them feel safe
- Go to clinic for check up
- Stop noises around them
- Go back to Country
- Keep things to a routine
- Help them do things they like and know well

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**RESISTANCE TO CARE IN DEMENTIA**

**What is resistance to care?**
- Not want to eat or drink
- Not want to wash or change clothes
- Stay in bed too much
- Spit out food or medicine
- Walk away from help
- Shout at you or push you away when you try to help

**Why does it happen?**
- Dementia
- Pain
- Sick or infection
- Toilet problems
- Tired
- Don’t understand what you are doing
- Feel shame when you try to help

**What could help?**
- Keep respect
- Know their story
- Go to clinic for check up
- Keep to their usual routine
- Let them do what they can for themselves
- Tell them what you are going to do to help
- Yarning with family and community
- Go back to Country
Why LGBTIQ considerations?

Need for care as LGBTIQ peoples age → anxiety around disclosure

Dementia → unable to self-censor information they may have previously guarded closely

Disclosure, inadvertent or by choice → potential discrimination where aged care services are not LGBTIQ aware & inclusive
Behaviour Management: LGBTIQ Resources

- Need for greater, targeted support for LGBTIQ people with dementia
- Consultation ++ with LGBTIQ community
- Module will contain information for direct care staff
- e-learning module in preparation
- Each section will also have link to more detailed fact sheet (aimed at clinicians)

https://www.dementiaresearch.org.au
Fully Funded Online Courses

Caring for LGBTI People with Dementia

This course assists health and aged care workers and organisations provide culturally competent and inclusive care and services for lesbian, gay, bisexual, transgender and intersex (LGBTI) people with dementia.

Read More  Register

The View from Here

This program encourages health professionals to understand the acute care experience from the viewpoint of the person living with dementia.

Start Date 02 Oct 2017
End Date 02 Jan 2018
Location Online Course

Assessment and Management of People with Behavioural and Psychological Symptoms of Dementia (BPSD)

A Handbook for NSW Health Clinicians
DICE for BPSD

D: Describe - “who, what, when and where” of situations where problem behaviours occur

I: Investigate – Aspects of patient’s health that might combine with other factors …

C: Create – Develop a plan to prevent and respond to behavioural issues

E: Evaluate – Assessing how well plan is being followed, how it’s working, what needs to change

Training and Education

- Dementia Training Australia:
  - Funded by the Australian Government
  - National delivery of training

- DTSC GP education component of AA project (La Trobe University):
  - Supports GPs & practice nurses in timely diagnosis of dementia

- DBMAS toolkit: training for aged & health workers
Innovations:
Dementia Communities

• The Eden Alternative:
  • International, non-profit organisation
  • Dedicated to creating QoL for elders
  • Systematic introduction of pets, plants, and children into RACFs

• Adopted by RACFs throughout the world, including 36 facilities in Australia and NZ¹

• ↓ Psychotropic use by residents¹

• ↓ Boredom & feelings of helplessness¹

Innovations:
Hogeweyk Dementia Village

- Specially designed village of 23 houses for 152 PWD
- Streets, squares, gardens, park where residents can safely roam
- Residents manage own households with assistance
- Village has selection of facilities (e.g. restaurant, bar, theatre) for residents and others = everyone welcome

https://hogeweyk.dementiavillage.com/en/
Innovations: Korongee Dementia Village

- Modelled on Hogeweyk\(^1\)
- Located in Tasmania\(^1\)
- Completion 2019\(^2\)
- Design:\(^1\)
  - Tasmanian town lifestyle
  - 15 six-bedroom homes
  - Grocery store, café, restaurant, cinema & beauty salon
  - Residents safe to wander
  - No institutional routines

Innovations: Group Homes Australia

- Provides accommodation in traditional homes
- Currently 8 homes in Sydney (Eastern subs, Northern beaches, upper Nth Shore)
- Plans for further homes in lower Nth shore, Sutherland shire and Inner west of Sydney
- Number of residents limited to 6-10 per home
- Integration of technology, staff support, modern medical equipment, garden spaces & familiar home environment

The Triangle is a strategic device to organise planning services NOT a clinical diagnosis.

Tiers are based on populations, not individuals.

Categories are fluid = people transition according to their condition (e.g. UTI resolved) or treatment (psychosocial or Rx).

The Triangle and Mrs Brown

- The person in room 25 is not a “3” or a “5”
- Mrs Brown is a person with a family and a lifetime of experience
Using the Triangle: Mrs Brown in a NH

- Mrs Brown: moderately severe dementia
- Difficult, resists personal care (Level 3)
- Few weeks - aggressive to staff and residents, hitting, kicking, scratching (L5)
- GP called to prescribe something
- GP asks for behavioural chart and MSU
- Behaviours random; MSU → E Coli → antibiotic
- Mrs Brown Level 3
- Family and staff work to institute PCC → L2
Vast improvements but much more needed:
Service provision for more severe BPSD
Allied health staff eg psychologists, OTs, SWs
More 1-1 engagement (note evidence that PCC reduces agitation)
DCRC → translate research findings into practice
Plans for network of special care dementia units
BE THE CHANGE

• Work with family to understand person behind the behaviour
• Implement true person-centred care (PCC) at individual and system levels – ALL OF US
• Implement PCC
• Educate GPs, nurses, families, hospital staff, general public
• Expand services so that…
The triangle is a model *not* a diagnosis

Dementia Collaborative Research Centre
www.dementiaresearch.org.au, &
Centre for Healthy Brain Ageing
www.cheba.unsw.edu.au
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