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

Kim Burns

An Australian Government Initiative

DCRC
Dementia Collaborative Research Centres

Translating dementia research into practice
Prevalence of BPSD

- Reported prevalence rates between 56% & 90%
- Most frequent BPSD: apathy, depression & anxiety
- Individual BPSD fluctuate over time
- Limited information available on dementia prevalence in Aboriginal & Torres Strait Islander communities & specific CALD groups
- Even more limited information on rates of BPSD in these populations
DBMAS – all States & Territories

Dementia Behaviour Management Advisory Service
Original DBMAS Best Practice Guidelines

- Principles & Strategies in Managing BPSD, 2006
- Appendix 1, DBMAS Operational Guidelines
- Separate Guidelines for Aboriginal & Torres Strait Islander + Culturally & Linguistically Diverse communities
Aims of the Guide

• Provide guidance to support DBMAS clinicians in assisting those caring for persons with BPSD
• Provide practical strategies, to be combined with clinical expertise, for managing BPSD
• Build on broad principles of care for people with dementia
• Residential care staff, family carers, community care staff
Australian Government
Department of Health & Ageing

- Provided funding for original Guidelines to be reviewed & updated
- Later expanded project to update & incorporate separate Guidelines for Aboriginal & Torres Strait Islander + CALD communities
Rationale for update

- Review & update is timely 5 years on
- Aged care services across Aust are changing
- Developments in drug treatments:
  - limited efficacy & potential adverse effects of antipsychotics
  - disappointing results with antidepressants
- Developments in psychosocial management lend themselves to wider use
- Benefits of person centred care established in RCT
Core project team

- Scientia Professor Henry Brodaty
- Kim Burns
- Ranmalie Jayasinha
- Ruby Tsang joined team later as an additional author
Approach to project

• Literature review – research studies rated for quality of evidence

• Expert Working Group of 23 provided suggestions, comments & feedback throughout

• Extensive consultation with 53 additional clinical experts, PGU staff & others experienced in dealing with BPSD throughout Australia
Kim & Ranmalie’s whirlwind tour of Oz
Expert Working Group

- Department of Health & Ageing
- DBMAS providers all states & territories
- Aged & Community Services Assoc NSW & ACT
- NSW Specialist Mental Health Services for Older People
- Consumers: Alzheimer’s Australia
- Faculty of Psychiatry of Old Age
- Dementia Training Study Centres
- Residential Aged Care sector
- Researchers in the field
- DCRCs ABC & CC

Translating dementia research into practice ©UNSW as represented by the DCRC-ABC (2012)
Expert Working Group
Expanded expert working group

Those with experience working with:

- Aboriginal & Torres Strait Islander communities
- Culturally & Linguistically Diverse groups
Literature review

• Search terms relevant to BPSD
• Databases searched – Medline, Psycinfo, Embase
• 2006 – 2011
• Relevant publications by other bodies internationally & in Australia
• Dementia Research Map – summary report of key dementia research
• Published reviews e.g. IPA
• Grey literature
Aboriginal & Torres Strait Islander component

- Importance of culturally safe services
- Awareness of historical aspects
- Perceptions of dementia & BPSD within communities
- Barriers to accessing services
- Flexibility of services necessary
- Developing partnerships with communities
- Culturally appropriate assessment

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Culturally & Linguistically Diverse component

• Importance of culturally competent service provision
• Those from similar cultural &/or religious backgrounds not homogenous
• Understanding of dementia & BPSD within different cultural groups
• Culturally appropriate assessment
• Bilingual/bicultural clinicians always first preference
Tab dividers indicate individual modules
Colour coded text boxes
Contents of Guide

- DBMAS behaviour management process
- General BPSD
- Aggression
- Agitation
- Anxiety
- Apathy

- Depression
- Disinhibited behaviours
- Nocturnal disruption
- Psychotic symptoms
- Vocally disruptive behaviours
- Wandering
Module format

• Each BPSD specific module begins with key messages and a 2 page summary
• Body of modules include:
  – Description & presentation in dementia
  – Potential causes
  – Differential diagnosis
  – Measuring the BPSD
  – Prevalence
Module format cont.

– Effects on the person with dementia & others
– Results from literature search
– Management strategies & quality of supporting evidence for specific interventions:
  • Psychosocial & environmental interventions
  • Biological interventions
– Limitations of evidence presented
– Conclusions
USB: Guide + appendices
8 pdf appendices – electronic

1: Questions to facilitate assessment
2: DBMAS resources
3: Psychosocial & environmental interventions table
4: Biological interventions table
5: Aboriginal & Torres Strait Islander resources
6: Culturally & Linguistically Diverse resources
7: Methodology
8: Combined reference list
### Intervention tables

| Orsulic-Jeras et al, 2000, (Orsulic-Jeras, Judge, & Camp, 2000) | Montessori-based activities (individual and small group) vs regular activities (large and small group) programming in 15-30 min sessions twice weekly, over 9 months | Apathy | Interrupted time series without parallel control group. No f/u | 16 residents in an advanced dementia unit (14 females) | Participants served as their own controls | No | 4 levels of engagement: constructive (CE), passive (PE), non (NE) and self (SE) engagement observed in 10 min windows as measured by a scale developed by the authors (Judge, Camp, & Orsulic-Jeras, 2000) | Significant main effect for CE ($F(1,15) = 102, p < .001$) and PE ($F(1,15) = 5.5, p < .03$). Instances of NE and SE not often observed during either activity periods | 8 |
| Politis et al, 2004 (Politis et al., 2004) | Kit-based activity intervention vs one to one time and attention intervention for 30 mins, 3 x per week over 4 weeks | Apathy | RCT. No f/u | 36 residents of a specialist long term dementia care facility (18 females); intervention group n = 18, control group n = 18 | Table of random numbers in blocks of 4. | Raters masked to treatment assignment | Apathy as measured by the NPI (J. L. Cummings, et al., 1994) and activity participation as measured by the CRAI developed by Copper Ridge Institute (Politis, et al., 2004) | Significant within group improvements on NPI apathy in both kit-based intervention group ($z = -1.92$, $p = .05$) and one to one intervention group ($z = -2.68$, $p = .01$). No significant difference between groups in activity participation on the CRAI. | 12 |
| Putman & Wang, (Putman & Wang, 2007) | Therapeutic recreation: the “closing group” | Anxiety | Repeated measures | 16 long-term care residents | nil | nil | Reduced anxiety as measured on the Cohen-Mansfield Agitation Inventory (CMAI), the Cornell Depression Scale | Non parametric testing showed a significant overall score decrease ($p = .013$) on the CMAI between pre and post scores. Two residents | 8 |
How to use the Guide

1. Review key messages and/or summaries to determine which behaviour module(s) are relevant.

2. Within the relevant module(s), refer to the management intervention sections (psychosocial/environmental or biological) for information on a specific intervention and/or study.

3. To locate details of a specific intervention study:
   - Numbered referencing in the modules refers to combined reference list, Appendix 8. Go to the reference list for the first author of a specific intervention study.

4. To browse an intervention category:

5. Refer to relevant intervention table according to the intervention type:
   - Psychosocial and environmental interventions (Appendix 3)
   - Biological interventions (Appendix 4)

6. Refer to the appropriate category in the intervention tables (for example animals in psychosocial/environmental). Studies are listed in the intervention tables by first author’s surname.
Mx BPSD - generic rules

- Comprehensive Ax – include co-morbidities, concomitant meds
- Address potential underlying causes eg UTI, pain, Rx AEs, depression
- Unless PWD very distressed or risk of harm to self or others, 1st trial psychosocial methods
- Attend to environmental contributors
Mx BPSD - generic rules cont

• Educate carers, involve them in Mx plan
• Individually tailor interventions to PWD
• Identify person behind BPSD to design most appropriate psychosocial strategy for individual
• Monitor Sx for a suitable period before Rx as
  – Sx may resolve spontaneously or ...
  – ... in response to psychosocial Rx
• Before starting Rx weigh AEs against benefits
Aggression – psychosocial & environmental interventions

- Individualised care based on psychosocial management recommended
- Touch therapies & music Rx - most studies
- Touch therapies – low quality research
  - massage
  - acupressure
  - craniosacral still point technique
  - therapeutic touch
- Music Rx: evidence questionable
Aggression – psychosocial & environmental interventions

• Some support for light massage, individual behaviour Rx, bright light Rx, *Montessori* activities

• Lack of evidence should not prevent considering interventions on a case-by-case basis
Aggression – biological interventions

- Rx → AEs but if urgent response required Rx may be necessary
- Expert consensus recommend S/T use of atypical antipsychotics; evidence limited
- Majority of biological studies examined atypical antipsychotics, ChEIs & memantine
- No good evidence for anticonvulsants
- V limited evidence for cyproterone, prazosin & yokukansan, traditional Asian herbal
Agitation – psychosocial & environmental interventions

• Majority of studies within music Rx category
• These provide best evidence for psychosocial Mx
• Mostly +ve results; quality of evidence varies
• Individualised care which is based on psychosocial Mx recommended
• Lack of evidence should not prevent clinicians considering interventions on a case-by-case basis
Agitation – biological interventions

• Pharma = 2nd-line approach usually
• Most studies - atypical antipsychotics, ChEIs & memantine
• Atypical antipsychotics - best evidence but recommended against due to safety concerns
• Some +ve results for ChEIs, memantine & antidepressants - ?viable alternatives to APs
• Ltd evidence – anticonvulsants, α- and β-blockers, melatonin, cannabinoids & omega-3
Anxiety – psychosocial & environmental interventions

- Music Rx greatest number of studies, then behavioural/cognitive-behavioural interventions
- Multicomponent interventions - best evidence e.g. interventions which target contributing environmental, biological & psychosocial factors
- Need for multidisciplinary, individualised & multifaceted approach to Mx emphasised
Anxiety – biological interventions

- ChEIs - beneficial effects, may ↓ neuroleptic/benzo
- Benzos may be of benefit, but ....
- Evidence for antipsychotics mixed
- Expert GLs recommend against long-term use of benzos or traditional antipsychotics
- Limited evidence for antidepressants
- SSRIs suggested for long-term Mx of prominent anxiety in mild-mod dementia
- Limited evidence - traditional herbal medicine, Ginkgo & sodium valproate
Pharmacotherapy

Where possible, symptomatic pharmacotherapy should be time-ltd, monitored, reviewed, reduced &/or discontinued when indicated & prescribed with (and after) appropriate psychosocial interventions
Update on management of BPSD

Henry Brodaty
Dementia Collaborative Research Centre, UNSW
www.dementiaresearch.org.au
When to stop treatment?
Psychotropic medication for patients with dementia in NHs

- 633 NH residents with dementia followed 1 yr
- Overall persistence of BPSD (NPI): 79%
- Individual Sx (depression, delusion, agitation/aggression) resolved at high rate (47% - 58%)
- Persistent psychotropic drug use very common
- No difference in users vs non-users regarding course of BPSD

Continuing vs stopping neuroleptics in dementia patients?

- 12 months RCT
- Continuous use of neuroleptics vs placebo
- For most AD pts withdrawal had no overall detrimental effect
- Continuers – worse verbal fluency (p<.002)
- Subgroup of pts with more severe symptoms (NPI ≥ 15) might benefit from continuous Rx

Ballard et al 2008 PLOS Medicine, 5:587-599
DART-AD – mortality associated with continuous Rx

![Graph showing modified intention-to-treat (mITT) population survival rates for Placebo and Continue treatment groups.]

- Placebo
- Continue treatment

HR 0.58 (95% CI 0.35 to 0.95); Log-rank p=0.03

Number at risk (deaths)
- Continue treatment: 64 (19) 45 (13) 20 (6) 9 (1) 4 (0)
- Placebo: 64 (15) 49 (3) 29 (6) 19 (2) 8 (1)

1 Ballard et al, 2009 Lancet Neurology, 8, 151–157
Relapse risk after discontinuing risperidone in AD

- Patients with AD and psychosis or agitation-aggression Rx open-label risperidone for 16 wks
- Responders → DB RCT ...
  - 32 weeks continued risperidone (group 1)
  - 16 wks risperidone + 16 weeks placebo (gp 2)
  - 32 wks placebo (group 3)
- 1⁰ outcome = time to relapse psychosis/ agitation

Devenand DP et al, NEJM 2012 367; 1497-1507
Relapse risk after discontinuing risperidone in AD

- 180 pts received open-label risperidone (mean dose, 0.97 mg daily)
- Severity of psychosis and agitation ↓
- Mild increase in extrapyramidal signs
- 112 pts met criteria for response → 110 in RCT
- In 1st 16 wks, rate of relapse higher in PBO than in risperidone groups (60% [24/40 pts in gp 3] vs. 33% [23/70 in gps 1 and 2]; P = 0.004; hazard ratio with placebo, 1.94; 95% CI, 1.09 to 3.45; P = 0.02).

Devenand DP et al, NEJM 2012 367; 1497-1507
Relapse risk after discontinuing risperidone in AD

• During next 16 wks, rate of relapse was higher in group switched from risperidone to pbo than in gp that continued to receive risperidone (48% [13/27 pts in gp 2] vs. 15% [2/13 in gp 1]; P = 0.02; hazard ratio, 4.88; 95% CI, 1.08 to 21.98; P = 0.02)

• Rates of AEs and death did not differ significantly among the groups, (small Ns)

• Conclusions: In pts with AD + psychosis or agitation that responded to risperidone therapy for 4 to 8 months, discontinuation of risperidone was associated with an increased risk of relapse

Devenand DP et al, NEJM 2012 367; 1497-1507
Analgesics

- Cluster RCT, 60 NHs, 352 residents, 8 + 4wks
- Mod-severe dementia, CMAI ≥ 39
- Stepped analgesia vs usual care
- CMAI ↓17% (9.6 vs 3.4, p<.001)
- CMAI score ↑ in four weeks after stop analgesia
- NPI, Pain scores significantly ↓

Husebo BS et al, BMJ, 2011;343:d4065 doi: 10.1136bmj.d0465
Analgesics

• No analgesic or low dose paracetamol → 3g/day paracetamol (n = 120, 69%)
• Full dose paracetamol or low dose morphine → 5mg bd morphine (4, 2%)
• Low dose buprenorphine or unable to swallow → buprenorphine patch 5-10μg/h (39, 22%)
• Neuropathic pain → pregabalin 25-300mg/day (12, 7%)

Husebo BS et al, BMJ, 2011;343:d4065 doi: 10.1136bmj.d0465
Apathy – psychosocial & environmental interventions

- Benefit of therapeutic recreation for apathy in dementia is apparent although this is a heterogeneous group
- These include small group, individual/tailored, Montessori based & kit-based activities
- Some +ve results reported for music, exercise, multi-sensory stimulation, pet Rx & SCUs
- Limited evidence of sustainability of effect once interventions cease
Apathy – biological interventions

- ChEIs - beneficial effects but no clear indication that any one is superior
- Limited evidence for memantine
- No sound evidence for traditional antipsychotics
- Atypical antipsychotics may be beneficial but improvement $\leq 2^0$ to effect on psychosis
- Good evidence that antidepressants have *no* significant benefit
- Modest efficacy for psychostimulants but side effects a concern
Depression – psychosocial & environmental interventions

- Exercise category was most popular
- Exercise & behavioural approaches provide best evidence for psychosocial Mx
**Depression – biological interventions**

- Pharma studies limited in number & quality
- Expert consensus GLs recommend antidepressants as 1st-line Rx for non-psychotic depression in dementia & combination therapy with ChEIs as 2nd-line approach
- Evidence for antidepressants mixed
- Moderate evidence for ChEIs
- Combination Rx antidepressant + antipsychotic recommended for psychotic depression
- Evidence for brain stimulation limited
Disinhibition – psychosocial & environmental interventions

Limited evidence → suggested strategies:

- Psychotherapy/education for family carers, RACF staff
- Identify triggers, social cues, early indicators
- Modify environmental aspects, clothing, staff roles
Disinhibition – psychosocial & environmental interventions

Suggested strategies (continued):

• Provide distraction, redirection, modified learning techniques
• Activities to occupy PWD’s hands
• Increased, +ve contact with family
• Avoid overreaction
Disinhibition – biological interventions

- Case studies/series only, no RCTs
- Anticonvulsants, hormones, atypical antipsychotics, anti-depressants, ChEIs, H₂-receptor antagonist
- Antipsychotics benefit but expert GLs recommend against long-term use
- ChEIs or SSRIs may be safer
- Potential benefits to PWD & safety of others must be weighed against potential side effects
- Hormonal therapy controversial, informed consent crucial - Guardianship Tribunal
Nocturnal disruption – psychosocial & environmental interventions

- Most studies - sensory or multicomponent categories
- Bright light therapy: evidence inconsistent
- Residential respite → carer stress↓ but sleep disturbance↑ (1 study)
Nocturnal disruption – psychosocial & environmental interventions

- NITE-AD intervention --> nocturnal disruptions ↓
  - carer sleep hygiene education, daily walking and increased daylight exposure
- Traditional interventions – may contribute to Mx, evidence lacking but should not be overlooked
  - warm milk, reassuring human contact, gentle massage, soothing music, adequate day time light exposure, physical activity
Nocturnal disruption – biological interventions

- Limited high quality evidence available for Rx
- Most studies - ChEIs or atypical antipsychotics
- Some evidence for atypical antipsychotics but recommend against use unless 20 to psychosis
- Some evidence - melatonin, dronabinol (synthetic marijuana), Ginkgo, EGB 761, Yi-Gan San
- Electrical stimulation (2 studies) - mixed results
Psychotic Sx – psychosocial & environmental interventions

- All studies - moderate quality
- Individualised care based on psychosocial Mx recommended
- Music Rx - largest group, mixed results
- Therapeutic activities, aromatherapy - no benefits
- Lack of evidence should not prevent considering psychosocial interventions on case-by-case basis
Psychotic Sx – biological interventions

- Where psychotic Sx significant concern or safety risk, Rx may be 1st-line approach
- Majority of studies - atypical antipsychotics, ChEIs, memantine, citalopram
- Best evidence - ChEIs & memantine
- Mixed findings: atypical antipsychotics, antidepressants
- Limited evidence for Ω-3 & traditional Asian herbal formulation Yokukansan
- No evidence for - tandospirone, dronabinol, Ginkgo
- Small case series - some +ve results for ECT
Vocally disruptive behaviours – psychosocial & environmental interventions

- Music Rx – most studies, followed by behavioural/cognitive-behavioural interventions & models of care
- Potential causes of VDB may provide clues to appropriate intervention
- Therapeutic recreation: best evidence for psychosocial Mx
- Need for multidisciplinary, individualised & multifaceted approach emphasised
Vocally disruptive behaviours – biological interventions

- Evidence for Rx overall is limited
- Best evidence for risperidone but expert GLs recommend against use of atypical APs
- Limited evidence for antidepressants & ChEIs
Wandering – psychosocial & environmental interventions

- Majority of studies - environmental interventions
- Subjective barriers – visual manipulation of environment eg grid patterns & mirrors
- Modest support for camouflage & concealment
Wandering – psychosocial & environmental interventions

- Most studies report positive results or trend but quality of evidence varies & sustainability reports very limited
- ↓ wandering associated with
  - improved lighting
  - variations in sound levels
  - proximity to others
  - +ve social interaction
  - addressing emotional needs & distress
- but research lacking
Wandering – biological interventions

• One RCT - strong evidence for reduced wandering with antipsychotics but ....
• Pharmacotherapy for underlying depression or pain may help where there is motor restlessness
Mr E, 63 yo Aboriginal man

- Moved to Adelaide from regional community as young man
- Wife died several years ago
- 5 children, strong community links with Aboriginal friends & family
- Connection to Country very important
- Informal & formal supports
- 3 x past month found distance from home, underdressed & distressed
Mr E – presentation cont.

• Most recently, passer-by alerted police
• Unable to provide his address or contact details for family
• When approached by police Mr E became uncooperative & verbally aggressive
• Police located Mr E’s daughter who collected him from the police station
Identify potentially contributing factors

- Investigate any possible pain, discomfort, illness, infection &/or constipation
- Medication review: interactions, dosage, recent changes, adverse effects
- Potential triggers or changes to the physical environment
- Exclude underlying depression
- Lack of stimulation/boredom
- Searching for family members or childhood home
Assessing the situation

• Encourage Mr E to express his concerns as far as he is able
• Medical & Rx review, exclude reversible factors
• Observe & document Mr E’s behaviour before occasions when he does & does not wander
• Consult Mr E’s life Hx, family & community workers re situations which provoke, & possible strategies to discourage, wandering
Potential strategies/outcomes

• Family report Mr E’s dog died recently but he doesn’t remember → distressed when can’t find it

• Mr E’s multiple comorbid medical conditions contributing to mobility limitations + forgets to use walking stick → falls risk

• ↑difficulty with communication as Mr E reverts to traditional language
Potential strategies/outcomes cont.

• Community workers & family - little understanding of Mr E’s dementia & wandering → education
• Police contact exacerbated traumatic memories & fear of authority figures
• Family/commu meeting incl younger brother
• Mr E to stay with brother - responded well to returning to Country + company of older family & community members
• Additional support from multiple community members → greater supervision
Next steps

• Implementation/knowledge transfer project
• ?other platforms/formats: – iPhone app
www.dementiaresearch.org.au

Thank you

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• Aboriginal & Torres Strait Islander experts
• CALD experts
• DTSC

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