Behavioural & Psychological Symptoms of Dementia

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Objectives

- To better understand Behavioural & Psychological Symptoms of Dementia (BPSD) with regard to:
  - Common presentations
  - Prevalence
  - Impact
  - Underlying pathophysiology
  - Assessment
  - Management

Alois Alzheimer - 1906

Dr. Alois Alzheimer

"One of the first disease symptoms of a 51-year-old woman was a strong feeling of jealousy towards her husband. Very soon she showed rapidly increasing memory impairments; she could not find her way about her home, she dragged objects to and fro, hid herself, or sometimes thought that people were out to kill her, then she would start to scream loudly."

Dr. Alois Alzheimer

"From time to time she was completely delirious, dragging her blankets and sheets to and fro, calling for her husband and daughter, and seeming to have auditory hallucinations. Often she would scream for hours and hours in a horrible voice."

What is BPSD?

- Symptoms of disturbed perception, thought content, mood or behaviour that frequently occurs in patients with dementia
  - Concensus Conference of the International Psychogeriatric Association Task Force on Behavioural Disturbances of Dementia

- NICE refers to:
  - behaviour that challenges
  - Non-cognitive symptoms in dementia

What is BPSD?

- Heterogenous range of psychiatric symptoms:
  - psychological
  - behavioural
- occurring in people with dementia of any underlying aetiology.
- resulting in observable
  - verbal
  - vocal or
  - motor manifestations
- which are severe enough to be labelled by others as:
  - “a problem” or
  - “challenging behaviour”
- ……But challenging and problematic to whom ?

What is BPSD?

- People with dementia progressively:
  - lose their ability to cope with day to day situations
  - perceive their environment as more stressful / threatening resulting in anxiety
  - respond inappropriately when they cannot tolerate environmental stresses

Range of behaviour

- Hallucinations
- Delusions
- Agitation/aggression
- Dysphoria/depression
- Anxiety
- Irritability
- Disinhibition
- Euphoria
- Apathy
- Aberrant motor behaviour
- Sleep and night-time behaviour change
- Appetite and eating change

From Neuropsychiatric Inventory (NPI) rating scale – Cummings et al 1994

Classifying BPSD

- Numerous possible classifications:
  - Discrete psychiatric symptoms
    - Behavioural vs Psychological
  - Symptom clusters

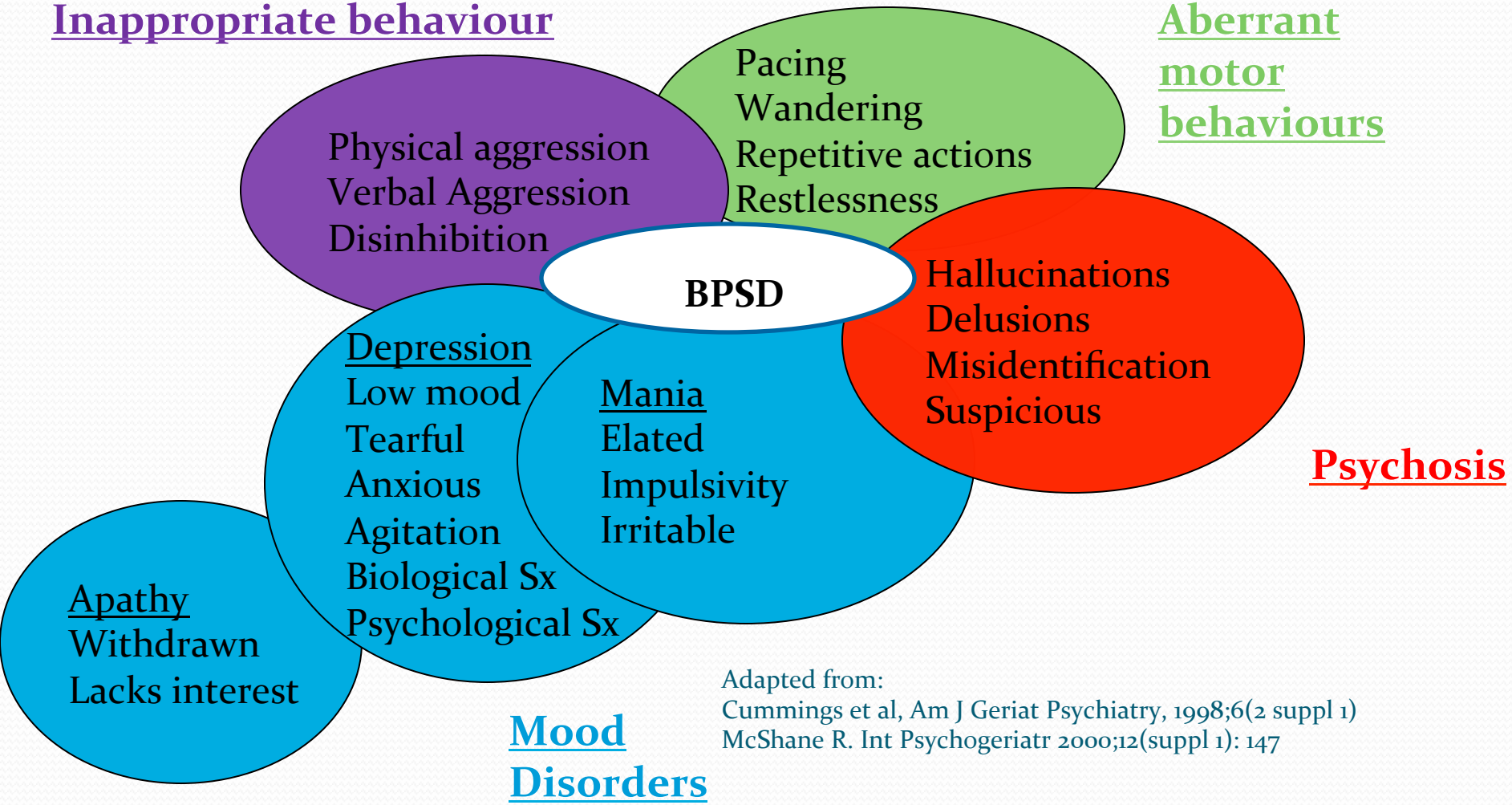
BPSD- behavioural symptoms

Most common	Common	Less Common
Apathy	Disinhibition (Inappropriate touching, stripping)	Crying
Verbal agitation (repetitive phrases, shouting out)	Verbal aggression (cursing, threats, screaming)	Mannerisms
Physical agitation –pacing, restlessness, wandering	Physical aggression (hitting, biting, kicking)	
Eating problems	Sundowning	

BPSD- psychological symptoms

Most common	Common	Less common
Depression	Psychosis – delusions & hallucinations	Misidentification
Anxiety		
Insomnia		

BPSD Symptom Clusters



Adapted from:
Cummings et al, Am J Geriat Psychiatry, 1998;6(2 suppl 1)
McShane R. Int Psychogeriatr 2000;12(suppl 1): 147

Prevalence of BPSD

- Seen in:
  - All types of dementia
  - 20 - 40% of MCI
  - 30 -60% early stage dementia
  - 30 - 60% community dwelling patients with dementia
  - 80% of nursing home residents with dementia
  - Increasing frequency & severity with advancing dementia

Prevalence of BPSD

- 90% of patients with dementia experience BPSD during the course of their illness:
  - Agitation 80 -90%
  - Wandering 60%
  - Depression 50-70% *
  - Apathy 40 -90% *
  - Psychosis 30 – 45% *
  - Screaming & Violence 20 - 80%

- Rivard M.F. – University of Ottawa
- Jost & Grossberg

Impact of BPSD

- Associated with:
- ** Reduced quality of life for the person:
  - Greater functional impairment
  - Greater distress for individual
  - Increased mortality

Impact of BPSD

- Associated with:
  - Greater distress for carers –
    - could manage “pure memory” disorders
    - Carer depression
  - Prolonged hospital admissions
  - Earlier placement in care settings
  - Increased financial costs
  - Increased use of medication

Impact of BPSD

- 50-90% of caregivers identified physical aggression as the most serious problem and the factor which most often related to the decision to institutionalise the person.

  - (Rabins et al 1982)

Pathophysiology of BPSD

- Various factors may be contributing synergistically to cause BPSD:
  - Biological
    - Anatomical brain changes:
    - Neurochemical changes:
      - Serotonergic
      - Noradrenergic
      - Cholinergic
      - Dopaminergic
      - Glutaminergic
  - Psychological – ie premorbid personality, adjustment
  - Social

Assessment

- Obtain clear description of the problem behaviours and its context to establish:
  - What's changed?
  - What are the risks?
- Must be multi-faceted:
  - Physical health
  - Individualised assessment – person centred
  - Psychosocial factors
  - Environmental factors
  - Behavioural and functional analysis

Assessment – Physical Health

- Basic needs (Maslow):
  - Hunger, thirst, temperature, excretion (bowels and bladder)
- Delirium (acute change with fluctuations):
  - Sepsis, dehydration, metabolic changes, pain, constipation, hypoxia, drugs (direct effects, withdrawal and side effects) vascular, trauma, endocrine.
- Recent medication changes - including OTC

Assessment – Physical Health

- **Think ‘PINCH ME’ to identify any treatable causes of symptoms:**
  - **P**ain
  - **In**fection
  - **C**onstipation
  - **H**ydration
  - **M**edication
  - **E**nvironmental

DAA Dementia Action Alliance

NHS Institute for Innovation and Improvement

The Right Prescription:
a call to action on the use of antipsychotic drugs for people with dementia

Assessment – Physical Health

- History and Examination
- Involve carers
- Review medications
- Physical observations
- Baseline bloods – FBC, U&E, LFT, Albumin, Ca^{2+}, Mg^{2+} TSH, B12, folate
- MSU
- ?CXR, ?CT head

Assessment - individualised

- Personal history – life story, social network
- Personality
- Religious and cultural beliefs

Assessment – Psychosocial factors

- Psychiatric assessment – health and social needs assessment including but not limited to:
- MSE:
  - Affective
  - Neurotic
  - Psychotic
  - Cognitive
- Personal history
- Identity and attachments
- Activities / occupation
- Alcohol and substance misuse

Assessment – Environmental factors

- Activities, exercise and inclusion
- Overcrowding
- Dignity and privacy
- Relationships and communication
- Comfortable and calm environment:
  - Noise
  - Lighting

Assessment – behavioural and functional analysis

- An underlying unmet need is causing the inappropriate behaviour
- Caregivers are not recognising or not addressing the unmet need
- Behaviour is a learned connection (reinforcement) between antecedents (A) behaviours (B) and consequences (C)
- Many behaviours are learned through inadvertent reinforcement of problem behaviours

Assessment - Tools

- Standardised assessment scales:
  - Assist in well-rounded assessments covering all core aspects
  - Allows quantification and qualification of behaviours allowing baselines and progress to be measured
  - Carer reported scales allow carers opportunity to convey their observations/concerns without having to discuss these in front of the patient
  - Can be carried out in community and Nursing Home settings and can be completed prior to review meetings

Assessment – Tools

- Neuropsychiatric Inventory – NPI
- Behavioural Pathology in Alzheimer's Disease Rating Scale - BEHAVE-AD
- Kingston Behavioural Assessment
- Geriatric Depression Scale - GDS
- Cornell Scale for Depression in Dementia - CSDD
- Apathy Inventory (Clinician Version)

Assessment – Structured

- Optimising treatment and care for people with behavioural and psychological symptoms of dementia: A best practice guide for health and social care professionals- Alzheimer's Society:
  - Clinical Global Impression of Change (CGIC) Scale
  - Pain rating chart
  - Cornell Depression Scale
  - NPI
  - Confusion Assessment Method
- http://alzheimers.org.uk/site/scripts/download_info.php?fileID=1163

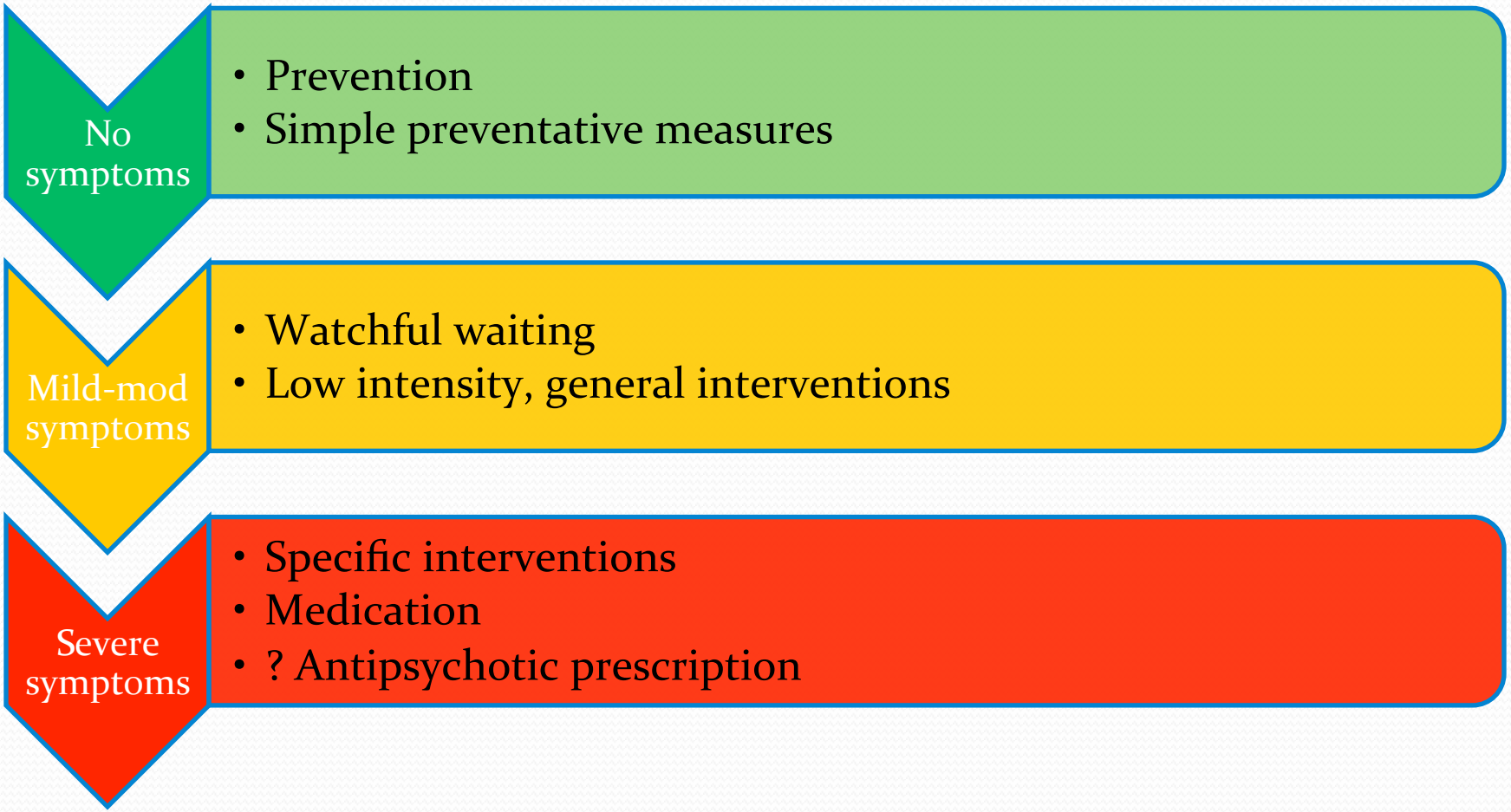
Assessment – Structured

- P.I.E.C.E.S. – Ontario, Canada:
  - Daily Observation Sheet – ABC charting
  - Cohen Mansfield Agitation Inventory
  - Confusion Assessment Method
  - MMSE/MOCA & Clock drawing
  - Cornell Depression Scale
- www.piecescanada.com

Management

- Ensure focus on the broader picture of bio-psycho-social well-being
- Capitalise on the person's preferences, strengths and skills
- Work with the person and carers in a non-judgemental manner seeking to motivate others
- Be realistic in goals and plans
- Seek consistency and continually review

Management



Adapted from: Optimising treatment and care for people with behavioural and psychological symptoms of dementia: A best practice guide for health and social care professionals- Alzheimer's Society

Management

- **Treat underlying medical causes**
- **Prophylaxis**
- **Environmental modification**
- **Watchful waiting**
- **Education and sharing**
- **Therapies**
- **Behavioural approaches**
- **Medication**

Management – underlying medical causes

- **P**ain
- **In**fection
- **C**onstipation
- **H**ydration
- **M**edication
- **E**nvironmental

Management - Prophylaxis

- Basic needs:
  - Correct sensory deficits
  - Diet
  - Stimulation
  - Exercise
  - Sleep hygiene
  - Exposure to daylight
  - Toileting

Management –Environmental and Psychosocial Modification

- Address contributory factors:
  - Overcrowding
  - Lack of privacy
  - Lack of activities
  - Inadequate staff attention
  - Poor communication between person and staff
  - Conflicts between staff and carers
  - Weak clinical leadership
- Keep the environment comfortable and calm
  - Stimulation/noise
  - Exercise
  - food & hydration,
  - Lighting
  - Relate behaviour to life story

Management - Watchful waiting

- May be self-limiting
- Many people with BPSD experience improvement or resolution in 4 – 6 weeks

Management – Education & Sharing

- Vital in supporting carers to:
  - Understand
  - Tolerate
  - Share previous experience to develop creative, individualised strategies

Management - Therapies

- NICE recommends:
  - Aromatherapy
  - Multisensory stimulation
  - Music & dance therapy
  - Animal assisted therapy
  - Massage
  - CBT – possibly involving carers

Management - Behavioural Approaches

- Cohen-Mansfield
  - Individualised approach
  - Driven by behavioural and functional analysis by trained staff
  - Define precisely the "problem" behaviour (B)
  - Gather serial info re the antecedents (A) and consequences (C)
- Set realistic goals and plans for achieving:
  - Distraction & diversion techniques
  - Tailor to individuals and carers
  - Rewards for individuals and carers – positive reinforcement
  - Regular review and modification

Management - Medication

- NICE Clinical Guideline 42:
  - Non-cognitive symptoms and behaviour that challenges
    - First line interventions:
      - Consider medication in the first instance only if there is severe distress or an immediate risk of harm to the person or others.
      - For less severe distress/agitation initially use a non drug option
- Targeting specific symptoms
- Need to weigh up risks and benefits of both treating and not treating
- Requiring regular review

Medication – not usually helpful for

- Wandering
- Perseverative motor activities
- Vocal repetition
- Inappropriate urination / defecation
- Inappropriate stripping

Medication –usually helpful for

- Aggression – physical and verbal
- Restlessness- anxiety
- Tearfulness, poor appetite, withdrawn - low mood
- Sleep
- Delusions and hallucinations – psychosis

Management - Medication

- Depression / anxiety –
  - Antidepressants / Anticholinesterases
- Agitation / aggression –
  - Antidepressants, Anticholinesterases, Benzodiazepines, Mood stabilisers, Antipsychotics ???
- Psychosis –
  - Antipsychotics

Medication - antidepressants

- NICE CG42:
  - Specialist staff should start treatment after risk-benefit analysis
  - Treatment should follow generic NICE guidance on depression
  - Avoid drugs with anticholinergic effects due to adverse effects on cognition
  - Explain issues around adherence, SE's, withdrawal effects

Medication - antidepressants

- But the effectiveness of antidepressant treatment in people with dementia is contentious.
- BPSD may relate to serotonergic dysfunction
  - Trazodone for agitation in dementia -2004 Cochrane Review:
    - insufficient evidence to recommend this practice
- For clinical depression in the context of dementia:
  - Mirtazepine and sertraline – Banerjee et al, Lancet July 2011:
    - No benefit over placebo
    - Increased adverse events over placebo
    - Need to review the practice of using antidepressants first line

Medication – cholinesterase inhibitors

- NICE CG 42 - consider for:
  - People with DLB or mild/mod/severe Alzheimer's dementia who have:
    - non-cognitive symptoms causing significant distress / behaviour that challenges and potential harm to the individual if:
    - A non-pharmacological approach is inappropriate/ineffective and
    - Antipsychotics are inappropriate/ineffective
  - Not for vascular dementia – unless part of a properly constructed clinical study.

Medication – cholinesterase inhibitors

- Evidence of possible behavioural benefits:
  - Statistically significant but ??clinically significant benefits in:
    - Psychosis
    - Agitation
    - Mood
    - Apathy

- Meta-analysis – Trinh et al 2005

Medication - Memantine

- Benefits for aggression and agitation
- Delay in emergence of agitation and reduced carer distress

- Cummings et al 2006

Medication - Benzodiazepines

- Guidelines advise only short term use
- Evidence of mild efficacy
- But high rate of adverse events:
  - Especially in frail elderly
  - Sedation
  - Falls
  - Cognitive impairment
  - Paradoxical agitation

Medication – mood stabilisers

- For mood swings & impulsivity
  - Poor evidence base for Valproate:
    - Low doses ineffective
    - Higher doses associated with high rate of side effects:
      - Sedation
  - Good evidence for effectiveness of Carbamazepine:
    - But poor tolerability and high rates of side effects

Medication - Others

- Sleep disturbance:
  - Zopiclone or Zolpidem when sleep hygiene advice fails
  - For 4-6 weeks
  - Consider trazodone if significant agitation

- Pain:
  - Based on pain assessments consider Paracetamol 1g QDS

Medication – Antipsychotics:
NICE Guidance

- Consider antipsychotics for severe distress only if:
  - Risks and benefits have been fully discussed including CVA/ TIA risks and adverse effect on cognition
  - Regular assessment of cognition
  - **Target symptoms** identified, quantified and documented (esp changes)
  - Comorbid conditions, eg depression, have been considered
  - Individual risk : benefit analysis leading to choice of a particular drug
  - Start low and titrate slowly
  - Treatment is time limited and reviewed every 3 months or according to clinical need

Medication – Antipsychotics:

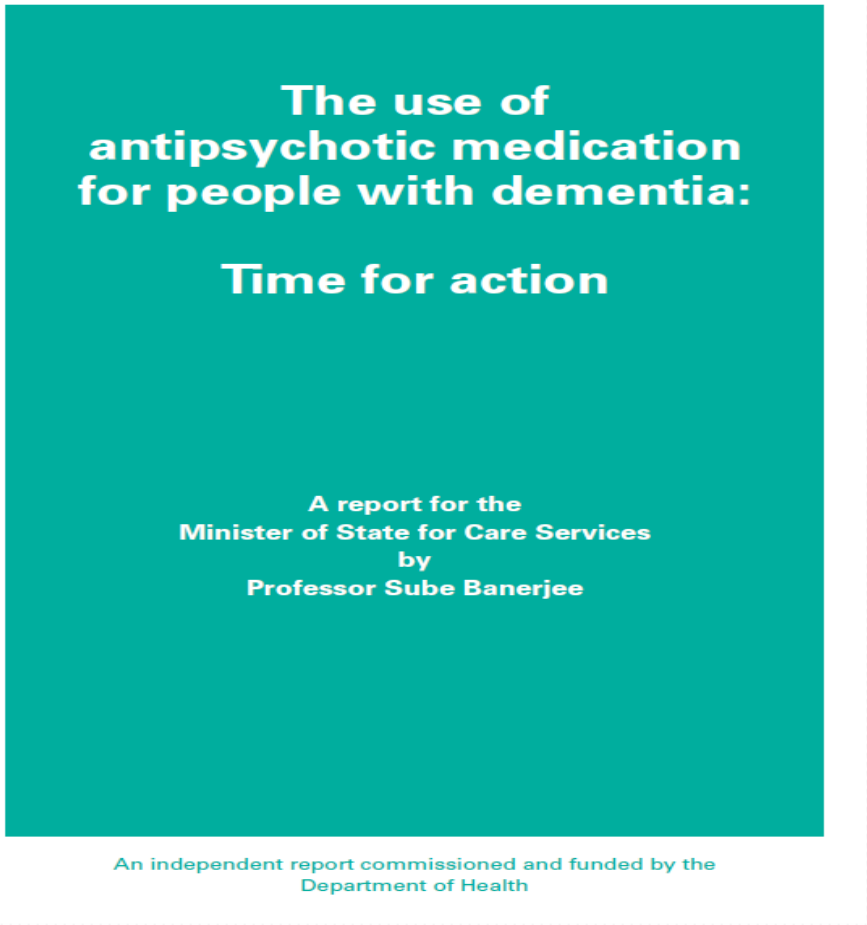
BNF guidance

- **Prescribing for the elderly**
  - It is recommended that:
  - Antipsychotic drugs should not be used in elderly patients to treat mild to moderate psychotic symptoms.
  - Initial doses of antipsychotic drugs in elderly patients should be reduced (to half the adult dose or less), taking into account factors such as the patient's weight, co-morbidity, and concomitant medication.
  - Treatment should be reviewed regularly.
- Risperidone - short-term treatment (up to 6 weeks) of persistent aggression in patients with moderate to severe Alzheimer's dementia unresponsive to non-pharmacological interventions and when there is a risk of harm to self or others

What are the concerns re antipsychotics in dementia ?

- 2003 – FDA warning re risperidone
- 2004 UK MHRA – advice not use risperidone and olanzapine for BPSD due to CVA risk
- 2005 – FDA advice against aripiprazole
- 2005 – pooled analysis of 17 RCT's – 1.7times increased of all-cause mortality with atypicals vs placebo
- 2008 - Exposure to antipsychotics and risk of stroke: self controlled case series study. Douglas & Smeeth BMJ 2008;337:a1227
  - In patients with dementia the rate ratios for stroke were:
    - 3.26 (2.73 to 3.89) for typical antipsychotics only.
    - 5.86 (3.01 to 11.38) for atypical antipsychotics only

Banerjee Report



November 2009

Banerjee Report

- Prompt for report:
  - Increasing concern over preceeding years re antipsychotics in dementia
  - Need to review the evidence base (gaps, contradictions and complexity)

Banerjee Report

- Acknowledgements:
  - BPSD is a core part of dementia syndrome and legitimate to seek to relieve distress
  - But assessment and management is complicated and systems of care have developed locally, unplanned and many patients receive an inadequate strategy of antipsychotic management
  - Some patients (esp severe and complex risk) do benefit from antipsychotics
  - 180 000 patients with dementia on antipsychotics per year
    - 36 000 will derive some benefit
    - 1620 CVA's per year
    - 1800 deaths

Banerjee Report

- People with dementia often at high risk of SE's:
  - Age
  - Frailty
  - Physical comorbidity
  - Normal changes in renal and hepatic functioning
  - Drug-drug interactions

  - NNH = 100 (100 people treated to result in one additional death over 6-12 week period)

Banerjee Report

3.4 Summary of risks and benefits at a population level of the use of atypical antipsychotics for BPSD in people with dementia

Summarising the risks and benefits using NNT and NNH, the data here suggest that treating 1,000 people with BPSD with an atypical antipsychotic drug for around 12 weeks would result in:

- an additional 91–200 patients with behaviour disturbance (or an additional 72 patients of 1,000 with psychosis) showing clinically significant improvement in these symptoms;
- an additional 10 deaths;
- an additional 18 CVAEs, around half of which may be severe;
- no additional falls or fractures; and
- an additional 58–94 patients with gait disturbance.

Banerjee Report

- Conclusions:
  - Significant issues in quality of care and patient safety
  - Drugs used too often
  - Potential benefits are most probably outweighed by risks overall
  - Reduction in use needs to be a clinical governance priority for all
  - Estimate that can reduce the rate of prescribing by two thirds over 3 years
  - Some simple actions which need to be AVOIDED:
    - "Namely wholesale prohibition or cessation of these medications. Such actions may themselves compromise patient safety, causing considerable harm and leading to a paradoxical increase in distress for patients with dementia and their carers. A measured, planned approach is needed."

Management - Antipsychotics

The Telegraph

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Dementia doctors may face jail for using chemical cosh

Doctors will face up to five years in jail under a plan to stop antipsychotic drugs being used as a potentially fatal "chemical cosh" to sedate dementia patients.

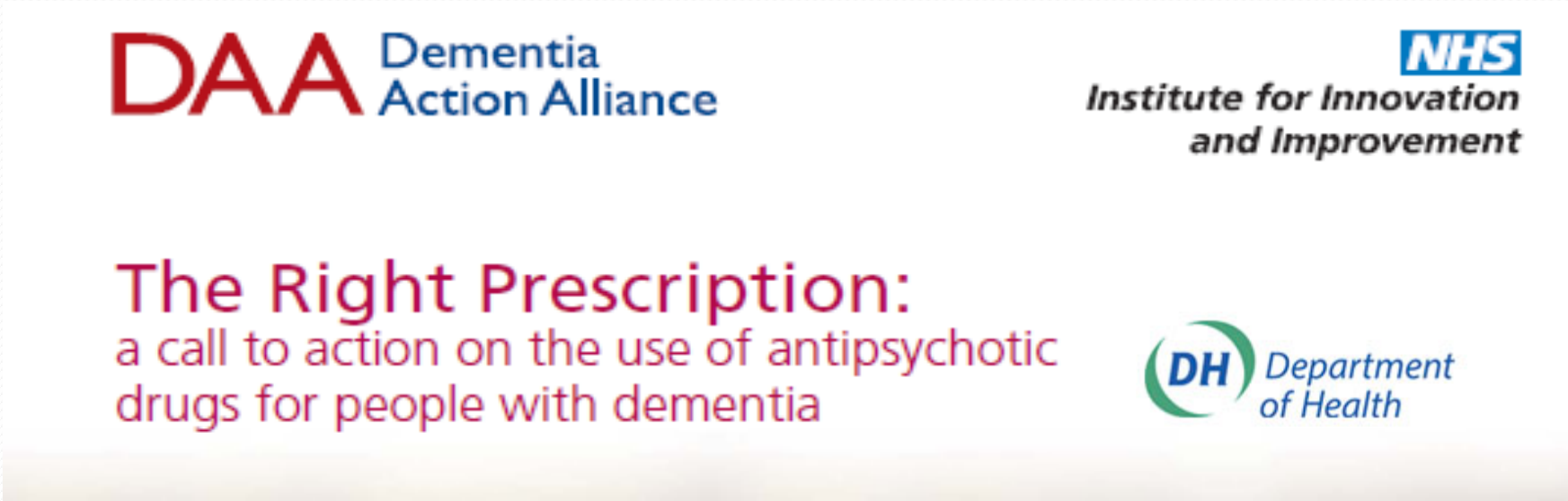
PULSE

At the heart of general practice since 1960

Minister warns GPs could require PCT permission to prescribe antipsychotics - or face jail

03 Nov 2011

Junior Doctors



- We commit to carefully considering whether or not a prescription for antipsychotic medication is appropriate for someone with dementia who is in hospital and to reviewing the prescription on transfer or discharge from hospital

My Recommendations

- For all situations involving BPSD (but especially if you get to the stage of considering medication) document very carefully re Mental Capacity Act:
  - 2 step Capacity assessment
  - Guiding Principles of MCA
  - Best Interest decision checklist

Recommendations – Guiding Principles

- Assume capacity unless it is proved otherwise
- Give all appropriate help before concluding someone cannot make their own decisions
- Accept the right to make what might be seen as eccentric or unwise decisions
- Always act in the best interests of people without capacity
- Decisions made should be the least restrictive of their basic rights and freedoms.

Recommendations – Best Interests

- Best Interests Checklist:
  - Consider all the relevant circumstances - and
  - Consider a delay until the person regains capacity? - and
  - Involve the person – and
  - Not be motivated to bring about death - and
  - Consider the individual's own past and present wishes and feelings - and
  - Consider any advance statements made - and
  - Consider the beliefs and values of the individual- and
  - Take into account views of family and informal carers - and
  - Take into account views of Independent Mental Capacity Advocate (IMCA) or other key people - and
  - Show it is the least restrictive alternative or intervention

Summary

- BPSD:
  - are common, core symptoms of dementia
  - Increases distress, mortality and carer burnout
  - Requires multi-faceted assessment and firstly non-pharmacological management
  - Needs shared decision making
  - Choose specific target symptoms
  - Medication management is the final consideration, with caution, in this fragile and vulnerable patient group
  - Continual review of effectiveness, and attempt to wean off medication
  - Utilise best practice guides (and MCA) to frame the assessment, management and review – Alzheimer's Society, PIECES etc

Further Reading:

- NICE Clinical Guideline 42 – Dementia: Quick reference guide, pages 16-19

- Optimising treatment and care for people with behavioural and psychological symptoms of dementia: A best practice guide for health and social care professionals- Alzheimer's Society http://alzheimers.org.uk/site/scripts/download_info.php?fileID=1163

- www.piecescanada.com

- The use of antipsychotic medication for people with dementia: Time for Action. Professor Sube Banerjee, DoH http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_108303

Further Reading

- Factsheet 408 - Drugs used to relieve behavioural and psychological symptoms in dementia - www.alzheimers.org.uk/factsheets

- Reducing the use of antipsychotic drugs: A guide to the treatment and care of behavioural and psychological symptoms of dementia – www.alzheimers.org.uk/antipsychotics

- The Right Prescription: A call to Action for junior doctors on the use of antipsychotic drugs for people with dementia http://www.institute.nhs.uk/qipp/calls_to_action/Dementia_and_antipsychotic_drugs.html

Further Reading:

- Behavioural and Psychological Symptoms of Dementia: Part 1 – Epidemiology, Neurobiology, Heritability and Evaluation – Tampi, R et al. Clinical Geriatrics. 2011;19(5):41-46.
- Behavioural and Psychological Symptoms of Dementia: Part 2 - Treatment – Tampi, R et al. Clinical Geriatrics. 2011;19(6):31-32, 34-40.
- Behavioural and psychological symptoms of dementia- Purandare, N, Allen, NHP, & Burns, A. Reviews in Clinical Gerontology, 2000; 10; 245-260