NIHR CLAHRC for Cambridgeshire & Peterborough

Design for Better Mental Health Care

PIRU POLICY INNOVATION RESEARCH UNIT

ePPI CENTRE

The effectiveness of non-pharmacological interventions in managing BPSD: an overview of reviews

L Lafortune, K Dickson, B Erens, J Kavanagh, J Thomas, N Mays

ILPN Conference, 6 Sept 2012, London

Collaborations for Leadership in Applied Health Research and Care

UNIVERSITY OF CAMBRIDGE

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Collaboration

- **Policy Innovation Research Unit (PIRU)** www.piru.ac.uk
- **Institute of Education (IoE)** www.ioe.ac.uk
- **CLAHRC CP** www.clahrc-cp.nihr.ac.uk

Funded by the Policy Research Programme of the Department of Health

Dementia

- Progressive, degenerative condition caused by diseases of the brain
- Risk of dementia increases with age - NOT an inevitable part of ageing
  - 1 in 10 over 65 and 1 in 4 over 85 [Brayne '06]
- There are about 700,000 (predominantly older) adults in the UK with symptoms of dementia
- National cost: around £17 billion per year [Knapp '07]

Dementia

- Constellation of cognitive and non cognitive symptoms
  - typically accompanied by progressive loss of ability to perform normal activities of daily living
- Cognitive symptoms
  - memory loss, orientation, reasoning, semantic memory/language, fluency, visuospacial construction, processing
- Non cognitive symptoms
  - Difficulties concentrating, low mood, anxiety
  - Behavioural and psychological symptoms (BPSD)

BPSD

Behavioural symptoms

- Agitation
  - Wandering, pacing, inappropriate verbal & vocal activity
  - Irritability & behaviours that can seem aggressive
- Inappropriate eating or sexual behaviours
- Sleep disturbances

Psychological symptoms

- Depression & anxiety
- Delusions, hallucinations, misidentifications

BPSD

Frequency & consequences

- Occur most likely in the middle or later stages
- Common (> 90% at some point in the disease)
  - % varies according to type of dementia
  - Mild to severe; can come and go; sometimes persist
- Have profound effects on families
- Associated with more time spent caregiving
- Higher care costs
- Greater risk of residential care placement

BPSD

What causes them?

•Biological & genetic basis…*lots of unknowns*

•Aches and pains and everyday illnesses

•Influenced by personal history, social and physical environment

•Triggers (too little or too much stimulation; activities to do with personal care)

Managing BPSD

Current practice

- Typically involves drug treatments
  - Anti-psychotic drugs, i.e. drugs that have been developed to treat other conditions such as schizophrenia
- Yield little to no benefits for common troublesome behaviors
  - Refusal of care; repetitive vocalisation; argumentation

Managing BPSD

Current practice

- Can pose significant risks
  - Social withdrawal, accelerated cognitive decline
  - Falls, heart problems, increased risk of death, etc.
- Wide concern about anti-psychotic drugs being prescribed far too readily & for too long
- Consensus: use non-drug approaches as the fist-line treatment
  - Quality Outcomes for People with Dementia Report (2010)

What can be offered instead of drugs?

Several options BUT

- What actually works?
- For whom? By whom?
- In what context (e.g. home, residential care)?

Approach

Overview of the scientific literature

- Review of systematic reviews
- Different settings & any type or level of dementia

Interventions

- Psychological
- Sensory
- Behavioural
- Educational
- Environmental

Approach

Effects of interest (outcomes)

- Use of anti-psychotics
- Intensity and/or frequency of behavioural symptoms

Comparator: had to have one!

- Normal care, no treatment, placebo or some noted standard of care

Approach

Design

- Any (except case reports)
- *BUT* we prioritised randomised clinical trials in our analysis and narrative summary

Thorough search of scientific databases (July 2012)

- Looked for systematic reviews

Applied quality criteria to select systematic reviews

- AMSTAR [Shea '09]

Findings

33 systematic reviews met our quality standards

•17 “broad” reviews (looking at several interventions)

•16 “narrow” reviews (looking at one intervention)

Coverage: over 960 primary studies

•Varying quality owing to different criteria used by individual systematic reviews

19 types of non-drug interventions to deal with behavioural symptoms

•6 types of interventions are likely to work

Problems with available research

With few exceptions

- Small number of participants
- Lack of rigor in how primary studies are designed and reported
- Foci on residential care
  - 17 reviews: intervention delivered in residential care setting
  - 6 reviews: intervention delivered in community setting
- Need for replication

Effect on anti-psychotics

Very little information!

- Can't conclude anything
- Priority for research

Likely to affect behavioural symptoms

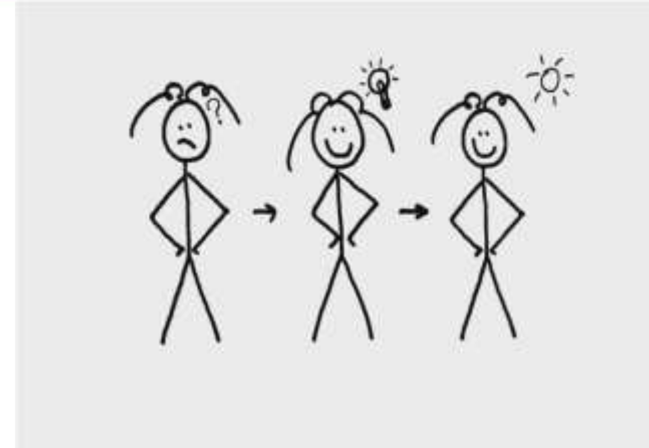
Quality of the evidence	Potential effectiveness			
		Not likely to be effective	Unclear	Likely to be effective
	Good/some evidence	Validation therapy	Simulated interaction Cognitive stimulation Reminiscence therapy Reality orientation Light therapy Special care units	Behaviour management techniques Staff and caregiver training and support Massage/ touch Music therapy Multi-sensory/sensory stimulation Physical activity/exercise
	Poor/little evidence		Relaxation therapy White noise One-on-one stimulation Environmental modifications TENS Pet / animal-assisted therapy	

Likely to affect behavioural symptoms

Carer training & support

- Aim: change interactions between carers and people with dementia
- Psycho-education
- Integrated family support, such as counselling and advocacy
- Training in awareness and problem solving
- Support groups

Likely to affect behavioural symptoms



Behavioural management techniques

- Aim: Identify and modify factors which can lead to specific difficult behaviours or their consequences
- Use of communication skills or distraction techniques
- Individualised interventions

Note: Demonstrated for professional carers. **??** informal carers

Likely to affect behavioural symptoms

Physical activity & exercise

- Structured activities
- Provide people with meaningful and engaging experiences
- E.g. outdoor walks

Likely to affect behavioural symptoms

Sensory enhancement

- Aim: Capitalise on sensorimotor abilities through stimulation of primary senses (sight, hearing, touch, taste and smell)
- Less demand on cognitive abilities

Likely to affect behavioural symptoms

Sensory enhancement therapies

- Massage/Touch therapies
- Music therapy
- Multisensory stimulation (**+/-**)
  - Aromatherapy
  - Snoezelen (use of lighting effects, tactile surfaces, meditative music, relaxing essential oils)

Implications

- Difficult to make practice recommendations
  - Poor quality, lack of evidence, etc…

- More research
  - Robust designs
  - Large enough sample size to draw meaningful conclusions
  - Clearer description of the context in which interventions are delivered
    - Implementation, cost-effectiveness & transferability across care settings

What next...

Look at these interventions in more detail

- Appear to work for whom (types of dementia, severity)?
- Key characteristics, i.e. what makes them work?
- Identify *specifically* where more research is needed

Meanwhile...

If you implement

- Choose among interventions that are likely to be effective
- You MUST evaluate
  - Get the support you need!
  - Clearly define your intervention
  - Clearly define what outcomes you want to improve/impact
  - Develop a robust evaluation plan (implementation issues, efficacy, costs, barriers, acceptability, etc.)
  - Share what you find

Thank you!