

## Regular Reads\*

### THE PURSUING PERFECTION INITIATIVE: LESSONS ON TRANSFORMING HEALTH CARE (cont'd)

#### Innovation: Finding a Steady Stream of Innovative Solutions to Persistent Challenges

After commencing their projects using existing or enhanced versions of current methods, participants discovered that attaining *Pursuing Perfection* aims was only possible through innovation. (See "10 Simple Rules" from *Crossing the Quality Chasm*<sup>3</sup>).

#### Some of the innovations implemented include:

##### Importing/adapting methods for reliability from other industries into health care

###### Result:

*This enabled Hackensack University Medical Centre and McLeod Regional Medical Centre, both in the US, to reach beyond 90 per cent reliable delivery of evidence-based care. Such approaches are now widespread in IHI initiatives, such as the 100,000 Lives Campaign/5 Million Lives Campaign.*

##### Including patients and families on improvement teams

###### Result:

*Cincinnati Children's Hospital, US shared data transparently with patients and their families to glean improvement ideas, working with them as full partners to improve care. This shifted the motivation to improve not just for patients and families, but with them. This practice is now integrated into many IHI programmes and used across the US and the United Kingdom.*

#### Conclusion

This initiative showed that while dramatic improvements were achievable, fundamental changes in leadership and a steady stream of innovative solutions to address tough problems were needed. It also noted that despite successes, these were not enough to transform the overall healthcare system. Leveraging on regulation or financial incentives will be needed to propel leaders to seek beyond "just average" performance. It is also not certain that perfect care will necessarily reduce waste in healthcare processes and care costs. For system-wide improvements, high quality performance in healthcare organisations must be accompanied by innovations in the organisation of services and care delivery across the continuum of patient care.

#### Useful links:

<sup>1</sup>Reinertsen JL, Bisognano M, Pugh MD. *Seven Leadership Leverage Points for Organization-Level Improvement in Health Care (Second Edition)*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2008. [ihi.org/knowledge/Pages/IHIWhitePapers/SevenLeadershipLeveragePointsWhitePaper.aspx](http://ihi.org/knowledge/Pages/IHIWhitePapers/SevenLeadershipLeveragePointsWhitePaper.aspx)

<sup>2</sup>Nolan TW. *Execution of Strategic Improvement Initiatives to Produce System-Level Results*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2007. [ihi.org/knowledge/Pages/IHIWhitePapers/ExecutionofStrategicImprovementInitiativesWhitePaper.aspx](http://ihi.org/knowledge/Pages/IHIWhitePapers/ExecutionofStrategicImprovementInitiativesWhitePaper.aspx)

<sup>3</sup>Committee on Quality of Health Care in America, Institute of Medicine. "Front Matter." *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: The National Academies Press, 2001. [nap.edu/openbook.php?isbn=0309072808](http://nap.edu/openbook.php?isbn=0309072808)

(All links accessed on 1 December 2012)

## SLEEP IN RESIDENTIAL AGED CARE: A Review of the Literature

**This literature** review of 34 international research papers (selected from Pubmed databases), published in English between April 2003 and May 2010, aims to identify evidence-based strategies to improve sleep in residential care and offer recommendations for further research.

Sleep is necessary for good health. Although changes in sleep patterns are part of ageing, sleep disturbance is perceived to negatively affect quality of life, cause safety concerns, increase fall and injury risks and harm bedroom partners and

**Australian Journal of Advanced Nursing**, Volume 29, Issue 4 (June-August 2012) by **Leslie Dowson, BSc (Hons); Kirsten Moore, BA (Hons); Dr Jean Tinney, BA, Dip Ed, Dip TEFLA, MAppl Ling, PhD; Kay Ledgerwood, BSc (Hons), PGCE** and **Dr Briony Dow, BSW, MA, PhD** (Accessed: 1 December 2012)

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carers. A common reason for residential care placement, it is also associated with disruptive behaviours and psychological distress.

#### Types of Sleep Disturbances

- **Primary sleep disorders:** Sleep apnoea, periodic limb movement disorder, circadian rhythm disorders and primary insomnia.
- **Secondary sleep disorders:** Pain, depression, polypharmacy, environmental disturbances, chronic diseases and nocturia.

## SLEEP IN RESIDENTIAL AGED CARE: A REVIEW OF THE LITERATURE (cont'd)

In residential care facilities, factors such as noise, inappropriate lighting and temperature, night-time nursing care, excessive daytime napping, very early bedtimes, low levels of physical activity and daytime light exposure, as well as pain and medications, also contribute to sleep disturbance.

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### Review of Interventions

#### Used with Caution

##### Pharmacological Therapy

- There is no systematic evidence which supports the effectiveness of antihistamines, antidepressants, antipsychotics or anticonvulsants in treating insomnia.
- Other research found such treatments have limited benefits, worrying side effects and advised caution in their use.
- Studies suggest avoiding pharmacological therapies where possible and attempting slow withdrawal in long-term users.
- Pharmacological treatments are advised to be short-term, intermittent and closely monitored and documented for effects.

#### Promising but Further Research/Testing Required

##### Light Therapy

- It is well-established that circadian rhythms are influenced by light exposure and that bright light contributes to better sleep. Although studies suggest potential benefits, with varying study designs, result comparisons are difficult and there is presently no agreement on the optimum treatment protocol.

##### Exercise and Activity

- The studies on the effects of yoga and *tai chi* on sleep have reaped promising results. However, in isolation, these are unlikely to lead to significant sleep improvements.

**Melatonin:** A naturally occurring hormone involved in regulating circadian rhythms and promoting/improving sleep.

- Although it has been found to have minimal side effects on persons who have diminished production of endogenous melatonin that causes early evening agitation and cognitive impairment (such as in persons living with Alzheimer's Disease [AD]), carers reported subjective improvements.
- Combined with bright light therapy, melatonin may improve sleep and reduce negative mood effects.

##### Multifactorial interventions

- A combination of interventions is likelier to improve sleep in

residential care than any one single therapy.

- Some experts have suggested simultaneous multifactorial interventions. Examples include: Reducing time spent in bed in the day, 30 minutes or more of daily sunlight exposure, increased physical activity, structured bedtime routine and decreasing night-time light and noise.
- Although there were no significant improvements in the multifactorial interventions studied, reasons proposed for this include: Failure to treat other factors that can influence sleep, such as depression; longer/more intensive periods of interventions required; and insufficient strategies to reduce night-time noise and disruption.

#### Limited Research Available

**Cognitive Behavioural Therapy (CBT):** CBT refers to non-pharmacological strategies that challenge/change dysfunctional thoughts, emotions and behaviours.

- There is an absence of studies on the use of CBT in residential care settings, perhaps due to its limited use on residents with deteriorating cognition. Guided CBT may be beneficial for residents with the ability to understand/follow strategies.
- Studies in other settings indicate the effectiveness of CBT in improving several sleep parameters in the short- and long-term.

**Ramelteon:** A melatonin receptor agonist that may be more effective than melatonin due to its longer half-life.

**Valerian:** A herbal remedy that, in its aqueous form, has a sedative effect.

**Other Alternative Therapies:** Herbal *yi-gan san*, music therapy, aromatherapy and acupuncture.

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#### Conclusion

- Sleep medications should not be used as a substitute for addressing underlying causes of sleep disturbance and should be used with extreme caution. Studies also found long-acting benzodiazepines should be avoided because of their potential harm and that more research on tapered withdrawals and the efficacy/risks of using non-benzodiazepine hypnotics in residential care are required.
- Multifactorial interventions are most likely to improve sleep than any single intervention in isolation although the durations, mixes and intensities are undetermined. It is advised that interventions should be based on individual assessments and treatment of underlying causes.

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