PRIORITY BRIEFING
The purpose of this briefing paper is to aid Stakeholders in prioritising topics to be taken further by PenCLAHRC as the basis for a specific evaluation or implementation research project. They were complied in 2-3 days.

Should case finding and management of overactive bladder symptoms be added to multi-factorial interventions to prevent falls in elderly women?

Question ID: 2
Question type: Intervention
Question: Should case finding and management of overactive bladder symptoms be added to multi-factorial interventions to prevent falls in elderly women?

Population: Elderly patients (i.e. over 75 years at home and in residential care) considered to be at risk of falling and being subject to multi-factorial risk assessment and appropriate management.

Intervention: The assessment of falls risk using an accepted tool with additional assessment of overactive bladder symptoms followed by the consequent management (where identified) with behavioural modification and anticholinergic drug therapy (as one combined intervention).

Control: Assessment of falls risk using accepted instruments without the addition of assessment of bladder symptoms.

Outcome: (a) number of falls and proportion of people who fall (and have fractures) (b) improvement in quality of life consequent on improved bladder function.

Case finding: This is the identification of cases who may benefit from intervention but may not be actively seeking help.

Overactive Bladder:
Overactive bladder (OAB) is a condition that involves the involuntary contraction of the muscle in the wall of the bladder causing a sudden and unstoppable need to urinate (urgency). Symptoms include: frequent urination, urgency and urge incontinence.

Behavioural intervention:
Behavioural modification techniques to treat overactive bladder include fluid management (caffeine reduction), bladder retraining, pelvic floor exercises and psychological support.

Anti-cholinergic drug therapy: Anti-cholinergic drugs (also known as anti-muscarinic and anti-nicotinic) block the neurotransmitter acetylcholine in the

central and peripheral nervous system. Anti-cholinergics are used in this instance to promote urinary retention and so reverse some of the symptoms of overactive bladder.

The Health Problem

Some studies suggest that urinary incontinence problems could lead to a 35-45% increased risk of falls and fractures. NICE Guidelines on Urinary Incontinence (2006) predict that the cost of urinary incontinence in the UK is approximately £1.8 billion. The National Service Framework for Older People (Department of Health, 2001) stated that older people should have access to an integrated continence service as described in Good Practice in Continence Services (DH, 2000). However, the Royal College of Physicians (2006), in its audit of continence care provision for older people, reported that there still remains inadequate access to integrated services.

The European Association of Urology *Guidelines of Urinary Incontinence* (2009) report that prevalence of OAB in males is 10-26% and in females is 8-42%. Prevalence increases with age and often occurs with other lower urinary tract symptoms. Overactive bladder affects 15-20% of the population and occurs more frequently in the elderly population.

The South West Strategic Health Authority have highlighted that the life expectancy in the southwest is the highest in England with males at 77.8 years and females at 82.0 years. One ambition of the Authority is to increase life expectancy to that of the best in Europe this means there will be increased numbers people over the age of 75 years and therefore increased potential for falls and urinary incontinence. In the Public Health Report 2007/08 for Devon PCT it is reported that in 2006 approximately 8.6% of Devon's population is 75 years plus in comparison to 7.8% in England and Wales. This is expected to increase to 10.9% by 2011 in Devon. Standardised average years of life lost by accidental falls in Devon is higher than the rest of the southwest and of England and Wales.

Guidelines:

NICE guidelines on *Falls* (2004) suggest that behaviour modification/cognitive interventions alone have not been proven to reduce the incidence of falls and therefore cannot recommend them. However, they do recommend multi-factorial interventions that include strength and balance training, home hazard assessment and intervention, vision assessment and referral, and medication review with modification/withdrawal.

NICE guidelines on *Urinary Incontinence* (2006) recommend multi-factorial methods of treatment including use of drugs, behavioural modification and home safety packages as well as others.

The American Geriatrics Society clinical practice guideline (2010) *Preventing falls in older persons* do not mention any form of incontinence as an indicator for risk of falls. It does not use incontinence questions in the initial screening for risk of falls or later in the treatment/prevention.

The National Service Framework for Older People (2001) also identifies the prevention of falls in the elderly as a key priority, although OAB is not recognized as a risk factor.

NHS Priority

Regional

SW SHA Priorities framework 2008-11

- Maximise independent living for people with long-term ill health or disabling conditions
- Helping people age well
- Match the highest life expectancy in Europe by 2013
- To reduce emergency admissions as a result of falls by 30% through effective falls prevention by march 2010

Local

Local perspective

- Cornwall PCT want to reduce the incidence of slips, trips and falls by 10% per year from 2007/8 through to 2010 (CPCT)
- Specify and develop the role of core services in preventing falls and managing repeat falls
- through complex care teams and general practices (DPCT)
- Increase awareness raising on falls prevention and support through partnership working and social marketing (DPCT)
- assessment is made and help offered to prevent similar falls happening again (NDHT)

Existing Research

Published research

A systematic review, conducted in 2009, based on observational studies found that urge urinary incontinence but not stress urinary incontinence was associated with a modest increase in falls (the odds of falling with urge urinary incontinence were 1.45 and 1.11 for stress incontinence).[1] The authors suggest that falls prevention programs need to include an assessment of incontinence and referral for interventions to relieve the symptoms of urge incontinence. As yet we have been unable to find any interventional studies that assess the preventative effect of OAB treatment on falls. If found to be effective, increased awareness of the effect of bladder dysfunction (particularly urgency at night) could become part of falls prevention programmes in the elderly.

Ongoing Research:

There are several ongoing trials (Israel and Spain) in falls prevention that measure urinary incontinence as part of a multifactorial intervention but do not subsequently measure incontinence as an outcome and focus mainly on falls.

These studies have only just begun (November 2009- Israel and May 2009) and expect to be completed late in 2010.

Feasibility:
The urogynaecology research team in Plymouth have experience in managing patients of all ages with bladder dysfunction and have researched and published in this area. There are also close links with Urology, Colo-proctology and Health Care of the Elderly in Plymouth (and other national locations through the UK Continence Society).

National patients groups would be interested in this question and it may be attractive to drug companies e.g. The Bladder and Bowel Foundation will support this research question as would the British Society of Urogynaecology. The UK Continence Society, a multidiscliplinary group including Health Care of the Elderly physicians, Urologists and Gynaecologists, and who held their annual meeting in Torbay in April 2010, would also give support.

It is possible this research will impact on the current PenCLAHRC falls project.

References

(1) Chiarelli, P. E., L. A. Mackenzie, et al. (2009). "Urinary incontinence is associated with an increase in falls: a systematic review." Australian Journal of Physiotherapy **55**(2): 89-95.
QUESTION: Is urinary incontinence associated with falls in community-dwelling older people? DESIGN: A systematic review and meta-analysis of observational studies investigating falls and urinary incontinence. PARTICIPANTS: Community-dwelling older people. OUTCOME MEASURES: Falls rather than fracture or injury, and any type of urinary incontinence. RESULTS: Odds ratios of nine studies were included in the meta-analysis. The odds of falling were 1.45 (95% CI 1.36 to 1.54) in the presence of any type of urinary incontinence. The odds of falling were 1.54 (95% CI 1.41 to 1.69) in the presence of urge incontinence. The odds of falling were 1.11 (95% CI 1.00 to 1.23) in the presence of stress incontinence. The odds of falling were 1.92 (95% CI 1.69 to 2.18) in the presence of mixed incontinence. CONCLUSION: Urge urinary incontinence, but not stress urinary incontinence, is associated with a modest increase in falls. Falls prevention programs need to include an assessment of incontinence and referral for interventions to ameliorate the symptoms of urge incontinence.