What falls prevention service do older adults deserve?

Dr J Lawson
Falls and Syncope
Newcastle upon Tyne
Dizziness

- Syncope
- Falls
You need a Framework
Making the diagnosis

HISTORY TAKING

Clinical examination

Specialist testing
History

- Presyncope
- Unsteadiness /Gait Disorder – What Type
- Vertigo
- Non-specific

Can be sorted at bedside by generalist with skills
Which System is causing symptoms?

• Cardiovascular system
• Gait abnormality: Lower level, Middle level, High level
• Peripheral vestibular system
• Central vestibular system

Basis of what a Falls and Syncope service should provide
Examination

• What do you know and do anyway?
• Pulse, lying and standing BP
• Neurological examination cranial nerves, motor system, sensation, reflexes, cerebellar tests, proprioception
• ADD – Eye movements
• Dynamic tests- move their head/positional
• Rombergs/Watch them walk
• Fire up the otoscope
Why is BPPV in a Falls/Syncope Service?

Research

• Older persons with BPPV more likely to fall than with any other type of dizziness

• Falls more in older age groups with BPPV
Falls

The assessment and prevention of falls in older people

NICE guidance

Primary and community care

Case/risk identified at health screen

Case/risk identified opportunistically at presentation with fall/other problem

Secondary care

Case/risk identified opportunistically at presentation with fall/other problem

Presentation at A&E with fall injury

MULTIFACTORIAL FALLS RISK ASSESSMENT
Offer multifactorial falls assessment. This may include:
- falls history
- gait, balance, mobility, muscle weakness
- osteoporosis risk
- perceived functional ability
- fear of falling
- visual impairment
- cognitive impairment
- neurological examination
- continence
- home hazard
- cardiovascular examination
- medication review.

*Refer as necessary
“Well organised services, based on national standards and evidence-based guidelines can prevent future falls, and reduce death and disability from fractures”

Falling Standards, Broken Promises: The National Audit of Falls and Bone Health in Older People
What do you ask them? – Essential History

- Where?
- Past Medical History?
- Precipitants?
- Prodrome?
- Posture?
- Red Flags?
- Medications?
- Frequency?
- Associated symptoms?
- Dizziness?
- Witness?
- Vision?
- Family History?
- What do they mean?
- Prodrome?
Examination - Assess their gait...

Observe walking

Walking aid?

Feet & footwear

Timed Up & Go Test
Putting it all together

Physical Assessment
- Cardiovascular
- Neurological
- Vestibular
- Vision
- Cognition

Medication Review
- Medication Cessation
- Bone Health
- Education

Cardiovascular
- Postural BP assessment
- Carotid Sinus Studies
- Ambulatory Monitoring

Other Professionals
- Physiotherapy
- OT
- Others?
The North Tyneside Falls Prevention Service

- Multi-organisational, multi-professional
- PCT, Age UK, Norprime, NuTH, Social Services, Newcastle University,
- Commissioned by Primary care trust
- Recognised in DH national Integrated Care Pilot Scheme
- National drive towards Integrated Care
The North Tyneside context…..

• 192,000 patients
  – 44,160 >60 years
  – 15,900 >75 years
• Lower prevalence estimate of 35%
  – 15,500 fallers
    • Approx 1500 seen by existing services
    • Seen late in falls and blackouts “career”
      – (14,000 not being seen at all)
• >60 years to rise from 23% to 32% in next decade
Method – Phase 1

- Specific audit questions both to identify those at risk and exclude those already being seen by other services
  - Eg 4 or more prescribed meds, fragility fractures, hospital attendance with falls, blackouts

- Postal triage tool
  - Assess severity of risk
  - See most in need first
Phase II: Targeted specialist falls and blackouts assessment in community setting

- Nurse – Vision, ECG, lying and standing BP
- Physiotherapy assessment and treatment
- Medical assessment includes assessment of all types of dizziness
  - History, examination, Hallpikes
  - Bone health risk assessment
- *Individualised care plan*
- Recommendations to GP/community teams
- Referrals to Age Concern/strength and balance training classes
Portugal Place Results

- 1915 identified at risk from audit
- 1225 (63.9%) replied to triage letter
- 681 – no problems – answered no to all questions re falls, balance, dizziness, LOC
- 544 (28%) – answered yes to 1 or more questions
- 206 – declined appointment or DNA
- 338 (17%) - attended
Who are they?

338
Mean age 75 range 60 to 93
116 male (40%)
Mean Number of falls -2 (up to 50)
70% falls
44% Dizziness
17% Vertigo
10.6% Syncope
Key modifiable risk factors

- 59 (18%) no action required
- 82% direct action
- 92 sent to Age UK strength and balance class - of these 67 (73%) had additional risk modification
- 60 (18%) sent for DEXA
- 6 required treatment for Osteoporosis – high risk or had stopped treatment
Modifiable Risk factors

- BPPV in 15 (4.5%)
- Orthostatic Hypotension in 29
- New cognitive impairment in 28 MMSE<23
- New depression 19
- New murmur in 13
- Vasovagal syncope in 11
- Low Resting BP requiring Medication review - 5
- Bradycardic in 5, 2 heart rate 42, on culprit meds
- 2 new AF
Modifiable Risk Factors

- Significant Leg length discrepancy requiring action – 5
- Foot drop requiring splint - 3
- Orthotist 2
- Orthopaedic type problem - severe back pain, spinal stenosis, failing hip joint, severe OA, unstable knees – 27
- Syncope - requiring Ix -6
- Reduced Visual Acuity - to see optician 22
- Others-26- ischaemic ECGs, ECG abnormalities
Key Diagnoses in 1000

Mean age 75.4 40% males

- Sent for DEXA 14%
- BPPV 4.3%
- VVS 4.5%
- OH 5.1%
- New murmur 5.3%
- New cognitive impairment 5.6%
- New depression 4.5%
- Orthopaedic referral 3.9%
- Orthotist 1.4%
Do you know who falls?

- Practice A 24%  58 out of 242
- Practice B  0   0 out of 136
- Overall GP  15%

SYNCOPE

- Practice A  17%  4 out of 23
- Practice B  16%  2 out of 12
- Overall GP  17%
Northern Region Syncope Experience

20 years, 6 centres

- Syncope – injurious unexplained falls/carotid sinus massage, Reveal devices
- Dissociative attacks on the increase
- POTS and Orthostatic Intolerance
- New bedside skills in vertigo/balance/BPPV
- Understanding of balance in the elderly – visual dominance
- Lower limb movements – foot, orthotist
- Balance physiotherapist
Falls, Balance & Gait Rehabilitation

- Strength
- Range of Mvt
- Central control
- Visual input
- Prop input
- Vestibular input

Balance coordination
Case study ~ Connie 82

- Referred with visual dominance & multifactorial balance issues.
- **O/E:**
  - Resigned to getting old & busy environments made her unsteady
  - LL & core weakness
  - Visually dominant
  - Decreased use of prop. cues
  - Reporting disequilibrium & altered perception of motion

- **Intervention:**
  - Gaze stabilization X1
    - Progressed to busy background
  - Somatosensory exercises
    - Progressed to EC
  - Dynamic balance work
  - Functional training – up off floor!
Connie after intervention…

Huge boost in confidence

Requesting techniques to get of floor

Happy to remain in house a living
Case study ~ Roy 84

- Referred for: ‘anything you can suggest re: balance’
- Catching toes on stairs, gradual decline in balance

O/E:
- Atypical gait (short &shuffling, heavy wear on shoes), avoiding any challenges to postural orientation, using ULs to support balance, visual dominance
- Lost confidence 2/10
- Unable 1 leg stand
- TUAG 17 seconds

Rx:
1. Tinetti home ex L1
2. Gait re-ed with Nordic poles & Somatosensory work
3. Dynamic balance
   - Sit to stand, 1 leg stand
   - Tinetti level 3, decreasing UL support
Roy after…

**Outcome:**
- TUA
- G: 12 sec
- 1 leg stand 2 sec
- Increase stride length
- Confidence 8/10
- Re-engaged in hobbies
- Decrease height of soles
Conclusion

• Older patients need an efficient service to identify and treat modifiable risk factors for falls
• Treat dizziness to prevent falls
• Skill yourself up – learn from physiotherapists/neurologists/ENT
• Raise the standard and provide a better service