Health for Active Ageing in Older People with Intellectual Disabilities
Healthy Ageing

Lifestyle choice, planning and support and opportunities for self expression

Maintainance and strengthening of social networks

Community participation

Maintainence of skills

Promotion of health and healthy lifestyle

Active Ageing

Physical and Mental Health
Defining Older Age In Intellectual Disability

General Population
- 60-65 years
- 70 years

Intellectual Disability
- 40-50-55 years in ID studies
- >65 years in recent studies
- >50 years WHO
- >40 years
Some people with mild ID are living as long, if not longer than the general population

Women in the majority from age 60 cf 35 in general population

Oldest woman 97 years

Oldest man 95 years

High adaptive functioning

Few physical problems

Selective Mortality

Factors Associated with Premature Death

- Youngest age
- Severe ID
- Minimal or no mobility
- Limited or no feeding ability
- No toileting skills/incontinence
- Sensory impairment
- Epilepsy
- Serious medical conditions
- Down Syndrome
- Cerebral Palsy
- Prader Willi Syndrome

Healthy Survivors

- Less people with Down Syndrome, Prader Willi Syndrome
- More females
- More mild ID
- Less physical health problems
- Higher adaptive functioning
  - population studies - increase in adaptive functioning with age
- Adaptive functioning declines after age 74
  - toileting, dressing, grooming, eating, language, reading, writing

Less people with Down Syndrome, Prader Willi Syndrome

More females

More mild ID

Less physical health problems

Higher adaptive functioning
  - population studies - increase in adaptive functioning with age

Adaptive functioning declines after age 74
  - toileting, dressing, grooming, eating, language, reading, writing
Ageing in Intellectual Disabilities

General ageing processes
- Natural physiological process of decline in cell repair and renewal
- Results in loss of cellular structure and organ function over time

Individual variation

General age related conditions
- Health in earlier stages of life impacts health at later age

Interaction of lifelong disability and ageing

Syndrome Specific Ageing
- Premature ageing
- Patterns of ageing
- Pathological mechanisms
- Targeted interventions
- Practice guidelines
9 Ds of Ageing

- physical Decline
- secondary Disability
- age related Diseases
- Drugs
- Depression
- Delirium
- Dementia
- Down syndrome and other syndrome specific ageing
- Death
Systematic Lifelong Preventive Healthcare

Health and healthy life style promotion

Interventions for promoting healthy ageing and longevity

Health surveillance / Annual health assessments

Identification and management of risks
Common Age Related Decline and Disorders in People with Intellectual Disabilities
Musculoskeletal Decline
Musculoskeletal Pain

- Arthritis
  - Spine
  - Hips and Knees
  - Shoulders
  - Hands

- Vertebral crush fractures

- Other Fractures

- Contractures
OsteoArthritis

Abnormal joints
Lax ligaments
Hypotonic and weak muscles
Lifeterm misalignment
Obesity
Down syndrome
Cerebral palsy

Impaired mobility
Impaired functioning
Pain
Behaviour change
Slowing
Falls Risk

- Epilepsy
- Hemiplegia
- Other neurological disorders
  - Parkinson’s disease
  - Peripheral neuropathy
- Advancing Age
- Dementia
- Impaired vision
- Postural hypotension

- Vitamin D deficiency
- Low muscle strength and poor balance
- Agitation, restlessness

Medications
- Sedating
- Benzodiazepines
- Antipsychotics
  - EPSE
- Drop blood pressure
- Anticholinergics cause confusion

Falls are a major cause of injury, disability and death
Osteoporosis increases risk for fractures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Risk Factors</th>
</tr>
</thead>
</table>
| Vitamin D deficiency             | • Anticonvulsant medications  
• Lack of sunshine               |
| Hormonal insufficiencies         | • Hypogonadism  
• Amenorrhoea  
• Can be secondary to psychotropic medications  
• Early menopause  
• Thyroid disease               |
| Smoking                          |                                                                             |
| Down syndrome                    |                                                                             |
| Lack of weight bearing exercises |                                                                             |
Falls and Balance Clinic

**Exercise**
- Muscle strength
- Balance

**Footwear**

**Physiotherapy Assessment**

**Walking/balance aids**

**Vision Assessment and Correction**

**Visual perception**

**Environment**
- Steps
- Rugs
- Uneven ground
- Lighting

**Vitamin D replacement**

**Medication review**

**Reporting/Monitoring**
Hearing and Vision Assessments Every 1-2 years

Hearing and vision impairments very common

Especially common in people with severe ID

Especially common in older people with Down syndrome 2/3

Increase with age

Hearing impairment
- social isolation
- depression
- mistake for dementia

Vision impairment
- anxiety
- falls, fractures, death
- problems with steps, curbs, transitions

Hearing aids
Glasses
Cataract surgery


Cancer in Older People with Intellectual Disabilities

Different risk profiles

Smoking rates less/more than general population

Alcohol consumption less/more than general population

Higher rates of Oesophageal cancer
  • GORD/Reflux
  • High rates in pop. ID
  • Preventable

Higher rates of Stomach cancer
  • Helicobacter pylori infection
  • Gastritis and ulcers
  • Infectious disease
  • High rates in pop. ID
  • Preventable
Syndrome Specific Ageing

- Increasing longevity of people with intellectual and developmental disabilities
- Illuminating the natural history of ageing for
- Specific syndromes such as cerebral palsy
- And
- Genetic disorders such as Down syndrome
- Need to consider specific early life preventative and later life care
Ageing and Cerebral Palsy

**Decreased**
- Mobility
- Balance

**Increased**
- Pain
- Fatigue
- Deconditioning
- Spasticity, contractures
- Falls
- Fractures

**Osteoporosis**
- Activity levels,
- Weight bearing activities,
- Nutrition
- Long term use of anticonvulsants and other psychotropics
Causes of Death in Cerebral Palsy

- Aspiration
- Pneumonia
  - Impaired ability to cough
  - Aspiration
  - Reflux and Oesophagitis
    - Impaired ability to cough
    - Aspiration
      - Pneumonia
    - Reflux and Oesophagitis
      - Cancer

- Oral motor dysfunction with impaired chewing, swallowing, and gag reflex
- Kyphotic Posture
- Poor gastro oesophageal sphincter control
- Oesophageal Cancer
Ageing in Down syndrome
### Non AD Morbidity of Older People with DS

**Earlier Onset of Age Related Disorders**

<table>
<thead>
<tr>
<th>Older DS shorter and more obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impaired functional and sensorimotor performance</td>
</tr>
<tr>
<td>• Muscle weakness</td>
</tr>
<tr>
<td>• Slower walking speed</td>
</tr>
<tr>
<td>• Balance</td>
</tr>
<tr>
<td>• Range of studies by Carmeli and colleagues</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Musculoskeletal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Osteoporosis  (Centre et al 1998, Angelopolou et al 1999)</td>
</tr>
<tr>
<td>• Osteoarthritis (Hresko et al. 1993).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Earlier onset menopause (Carr et al 1995, Schupf et al 1999)</th>
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<table>
<thead>
<tr>
<th>Sensory impairments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High risk of hearing impairment, increases with age</td>
</tr>
<tr>
<td>• &lt;50 yrs 38%</td>
</tr>
<tr>
<td>• &gt;50 62% (Meuwese-Jongejeugd et al. 2006)</td>
</tr>
<tr>
<td>• Increasing vision impairment and <strong>blindness</strong> with age</td>
</tr>
<tr>
<td>• ~1/3 % vision impairment &gt; 50 years</td>
</tr>
<tr>
<td>• ~2/3 vision impairment &gt; 50 years and severe ID</td>
</tr>
<tr>
<td>• Blindness ~2.6% &lt;50 cf 7% &gt;50 years (van Splunder et al 2006)</td>
</tr>
</tbody>
</table>
Delirium
Delirium: Acute and Subacute Brain Syndrome

Acute Brain Syndrome
- Onset over a few days but can continue for months
- Fluctuating level of confusion
- Hallucinations and Delusions
- Due to medical illness or medications

Subacute Brain Syndrome

Common Causes
- Chest Infections
- Urinary Tract Infections
- Medications
  - Polypharmacy
  - Anticholinergic medications

Seek Urgent Medical Review
High Death Rates
Drug Induced Delirium

10–40% of all delirium

Associated with polypharmacy

Benztropine

Anticholinergic medications for incontinence or incompetence

Incontinence or Incompetence
Ageing and Pharmacokinetics

Loss of lean body mass, and liver and renal impairments (Alagiakrishnan & Wiens, 2004).

Consideration needs to be given to gradual change in capacity to metabolise and excrete medications associated with ageing as being responsible for gradual decline in functioning and cognition.

kidneydiseaseweb.com

Depression
and Other Mental Ill Health in Elders with Intellectual Disabilities

Image from Feeling Blue. Books Beyond Words. Gaskell
Psychopathology
Adults vs Elders

Data from Cooper 1998 JIDR
Psychotropic Drug Use
Adults vs Elders

Pary 1993 AJMR
Pary 1995
Archeological Psycho-Pharmacology

Why is this person on these medications?

Does this person have a documented psychiatric diagnosis? Is there documented evidence for this diagnosis? Is the diagnosis correct?

Has a psychiatric diagnosis been missed? Is this person on chemical restraint for aggressive behavior rather than specific treatment for bipolar disorder?

Is the person “old fashioned” Antipsychotics? Antidepressants? Anticonvulsants?


Is this person on depot antipsychotics? Do they take other medications by mouth?
Depression in Older Age

- Older population, higher lifetime rate of depression
- Strong relationship between depression, self-esteem, social engagement, disruptive life events in adults with intellectual disabilities
- No depression or treatment of depression associated with better cognition
- Relationship to brain disorder
  - Vascular changes
  - Association with dementia
- Depression and dementia results in higher levels of disability than dementia alone
Dementia
Prevalence of Dementia in People with Down Syndrome cf People with Intellectual Disability cf General Population

## Risk Factors for Dementia in ID

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Increases with age</td>
</tr>
<tr>
<td>Seizures – poorly controlled</td>
<td>Poor controlled, neurotoxic</td>
</tr>
<tr>
<td>Head injury – cause of ID, falls, SIB</td>
<td>Tauopathy in American Football players</td>
</tr>
<tr>
<td>Congenital malformations</td>
<td>Animal models of prenatal brain insults</td>
</tr>
<tr>
<td>Limited cognitive reserve</td>
<td></td>
</tr>
<tr>
<td>Poor control of vascular risk factors</td>
<td>Vascular Dementia as well as Alzheimer’s disease</td>
</tr>
<tr>
<td>Syndromal specific</td>
<td>HT, DM, hyperhomocysteinaemia, hyperlipidaemia, vascular abnormalities</td>
</tr>
</tbody>
</table>
# Delaying Cognitive Decline and Dementia

## 3 City Studies: Bordeaux, Dijon and Montpellier

<table>
<thead>
<tr>
<th>Life Style</th>
<th>Nutrition</th>
<th>Health Care/Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Crystallised intelligence / What you have learnt</td>
<td>• Fruit and vegetables</td>
<td>• High cholesterol</td>
</tr>
<tr>
<td>• Mentally stimulating activities</td>
<td>• Dietary fibre</td>
<td>• Diabetes</td>
</tr>
<tr>
<td>• *Social engagement</td>
<td>• B vitamins</td>
<td>• Hypertension</td>
</tr>
<tr>
<td>• *Physical exercise</td>
<td>• Olive oil</td>
<td>• Depression</td>
</tr>
<tr>
<td>• *Not Smoking</td>
<td>• Omega-3 fatty acids</td>
<td></td>
</tr>
<tr>
<td>• *Limited Alcohol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Other Studies
Death and Dying
End of Life Care and Decision Making

- Who makes these decisions if there is no next of kin?
- When to make the decisions?
- Not for resuscitation orders
- Emergency care plans in group homes
- Care of support workers
- Care of peers
Questions

What impact does poor health have on the ideal of active ageing? What impact does active ageing have on health?
What is the evidence?

Does the prevalence of disorders in older adults with ID differ from the general population? If so why? How does this impact upon health monitoring, service provision, training of clinicians?

Health in older age reflects health and preventive care at younger age. What preventive health programs need to be put in place in earlier life to minimise impact on ageing on

• Musculoskeletal impairments and pain?
• Sensory impairments
• Vascular disease?
• Cognitive decline and dementia?

Do you have examples of programs in action? For example national health assessment schemes or healthy life style promotion, and choice

In countries where health care of older people with intellectual disabilities is provided through generic health and medical services what are the barriers to providing equitable access to informed clinicians. What role could geriatricians play in assessment and management of complex health care needs in older age?

What training do doctors and other health care clinicians require? Do we need to improve the evidence base, eg the epidemiology of health in older adults, factors impacting upon health? How do we address mandatory requirements of training through colleges, and medical accreditation agencies.