1. **Alzheimer Disease**  
   **Health and Behavioral Issues**
   
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   September 7, 2013  
   Los Angeles, CA  
   
   Age of Change  
   DSALA and NDSS

2. **Aging and Decline in Skills**
   - Is it always Alzheimer Disease?
   - What else can it be?
   - How do make the diagnosis?
     - A pattern of decline
     - Rule out other causes

3. **Approach to a person with Decline in skills**
   - History and physical
   - Medication review
   - Mental Health/Psychosocial evaluation
   - Labs: Thyroid, vitamin B12, Chemistry panel, Celiac
   - Xrays: Lateral cervical spine, CT/MRI of brain (?)
   - Sleep study(?)

4. **Decline in Function and Alzheimer Disease**
   - Neuropathologic changes
   - Prevalence of clinical Alzheimer Disease
     - 10% 40 – 60; 20% 50 – 70; 40% 60 – 80
   - Do others have pre-clinical dementia or early non-evident clinical dementia?
   - Why do some people not get symptomatic Alzheimer disease?

5. **Challenges**
   - Not just a cognitive disease
   - A total body disease
     - Physical
     - Psychological
   - A family disease

6. **Clinical course**
   - The average age on onset of Alzheimer disease in people with DS is about 20 years earlier than in people without DS.
   - The average time from onset of symptoms to death was shorter for people with DS by
2.2 years (3.7 years vs 5.9 years).
- Avg age of death 55.9 years
- Seizures are much more common in AD in people with DS (77% vs 2%)
- Hallucinations were described less frequently in AD in people with DS (13% vs 23%)

8 Additional physical issues
- Gait change 97%
- Incontinence 87%
- Dysphagia/swallowing dysfunction 58%

9 Psychological issues
- Anxiety
  - Including gait changes
- Depression
- Psychoses
- Aggressive behavior and agitation

10 Treatment
- Cholinesterase inhibitors
  - Donepezil (Aricept), tacrine (Cognex), rivastigmine (Exelon), galantamine (Razadyne)
- Memantine (Namenda)
- Memantine for dementia in adults older than 40 years with Down's syndrome (MEADOWS): a randomised, double-blind, placebo-controlled trial.

11 Symptom treatment
- Consider pain, discomfort, or environmental issues as cause of behavioral or mood change
- Anxiety
  - Benzodiazepines (lorazepam, alprazolam, clonazepam)
  - Antidepressants (sertraline, citalopram)
- Depression
  - Antidepressants (sertraline, citalopram, duloxetine, mirtazapine)

12 Other psychological changes
- Agitated or aggressive behavior
  - May respond to same medications as for Anxiety
  - Anti-psychotics (risperidone, olanzapine)
- Psychoses
  - Anti-psychotics
    -

13 Insomnia
- Melatonin
- Trazodone
- Use side effects of other medications
Age of Change

DSALA and NDSS

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The environment

- Noise
- Commotion
- Outings, work, activities
- The Bingo Pace

Family Struggles

- Family outings
- Intermittent skills
- Grieving

Advance Directives

- “Start to address when you don’t have to address”
- Goals of care
- A fluid document
- Feeding tubes

What can we do?

- Improve cognition
- Limit further insults to cognition
  - Anesthesia
  - Any illness
- Limit psychological symptoms
  - Environment
  - Medications
- Screening testing (?)
- Comfort