A Snapshot on Aging and Dementia

“Changing our minds about people whose minds have changed.” – G. Allen Power
The Texas Health and Human Services Quality Monitoring Program, dementia curriculum has been reviewed by the Alzheimer’s Association® and meets the Alzheimer’s Association Dementia Care Practice Recommendations in the following topics:

- Alzheimer’s and Dementia Disease Awareness
  - Communications and Behaviors
- Strategies for Caring for the Person with Dementia
  - Social Needs and Activities

Date of review completion: December 1, 2016

Review is applicable until: December 1, 2018

For more information go to www.alz.org
MODULE 1:
Ageism in America

age
is just a
number
History of Ageism

• The term was coined in 1969

• Existed long before the term

• Seen most often in the elderly

• Stereotyping
Activity #1
Ageism in the American Culture

• Aging is viewed as a counter productive

• Place significant value on good health

• Fear of dying

• Acceptable to make jokes
**Myths and Facts**

**Myths**
- ✓ Most older people are pretty much alike
- ✓ Older people are generally alone and lonely.
- ✓ Physical and mental capacity inevitably decline with biological aging.
- ✓ Older people barely cope with the inevitable declines associated with aging.

**Facts**
- ✓ As with any generation of individuals, the older generation is a very diverse age group.
- ✓ The opposite is quite true, as this generation maintains close contact with family.
- ✓ Being old doesn’t necessarily entail being frail. The impact of the physiological changes on the capacity of individuals to function in society is quite modest.
- ✓ Most older people successfully adjust to the challenges of aging.
Ageism and the terminology used to define “Old”

• The final stage of the normal life span

• Three sub-populations in recent years
  – “Young-old”
  – “Old”
  – “Old-old”
Activity #2
Reducing Ageism

• Recognize the stereotypes

• Education

• Display more positive images in the media
Activity #3
Medical Professions in Aging

- Geriatrics is a growing field with the following opportunities:

<table>
<thead>
<tr>
<th>Audiologist</th>
<th>Geriatrician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Lab Technician</td>
<td>Occupational Therapist</td>
</tr>
<tr>
<td>Dietician</td>
<td>Physical Therapist</td>
</tr>
<tr>
<td>Geriatric Nurse Practitioner</td>
<td>Physician Assistant</td>
</tr>
<tr>
<td>Geriatric Pharmacist</td>
<td>Podiatrist</td>
</tr>
<tr>
<td>Geriatric Psychiatrist</td>
<td>Social Worker</td>
</tr>
<tr>
<td>Geriatric Staff Nurse</td>
<td></td>
</tr>
</tbody>
</table>
Activity #4
Quiz Time
Activity #1

Label and color each of the different regions of the Brain:

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________
6. ____________________________
7. ____________________________
Anatomy of the Brain: Cerebrum
Anatomy of the Brain: Hypothalamus
Anatomy of the Brain: Pituitary Gland
Anatomy of the Brain: Brain Stem
Anatomy of the Brain: Spinal Cord
Anatomy of the Brain:
Cerebellum
Anatomy of the Brain: Pineal Gland
Anatomy of the Brain: Hippocampus
Anatomy of the Brain: Prefrontal Cortex
Lobes of the Brain: Frontal
Lobes of the Brain: Parietal
Lobes of the Brain: Temporal
Lobes of the Brain: Occipital
Lobes of the Brain: Limbic
Feeding the Brain

Blood supply to brain

• The blood vessels supplying the brain are **two internal carotid arteries and two vertebral arteries**.
• Carotid artery contributes approximately 80% to the total cerebral blood flow, the remaining 20% coming from the two vertebral arteries.

Pulsations felt when one keeps hand over neck are actually carotid pulsations.
Activity #2

- Alzheimer’s Association Brain Tour: Brain Basics
  
  http://www.alz.org/braintour/3_main_parts.asp
Brain Changes in Healthy Aging

- Brain Shrinkage
- Neurofibrillary tangles
- Reduced Blood Flow
- Amyloid plaques
- Inflammation in the Brain

High School Dementia Curriculum
Risks to Brain Health

High School Dementia Curriculum
Alzheimer’s Disease and Dementia

INFOGRAPHIC
The global impact of dementia

Around the world, there will be 9.9 million new cases of dementia in 2015, one every 3 seconds.

46.8 million people worldwide are living with dementia in 2015. This number will almost double every 20 years.

Much of the increase will take place in low and middle income countries (LMICs): in 2015, 58% of all people with dementia live in LMICs, rising to 63% in 2030 and 68% in 2050.

The total estimated worldwide cost of dementia in 2015 is US$ 1 Trillion. By 2030, dementia will become a trillion dollar disease, rising to US$ 2 trillion.

If global dementia care were a country, it would be the 18th largest economy in the world exceeding the market values of companies such as Apple and Google.

This map shows the estimated number of people living with dementia in each world region in 2015.

We must now involve more countries and regions in the global action on dementia.
Most Common Types of Dementia

• Alzheimer’s Disease

• Vascular Dementia

• Dementia with Lewy bodies

“I have dementia. My eyes do see, my ears do hear. I am still me, so let’s be clear. My memory may fade, my walk may slow. I am ME inside, don’t let me go”. – www.keepinmindinc.com
Brain Changes in Alzheimer’s Disease and Dementia

Alzheimer’s Disease

Dementia with Lewy Bodies

Vascular Dementia

High School Dementia Curriculum
Activity #3

• Alzheimer’s Association Brain Tour: Alzheimer’s Disease and the Brain
  http://www.alz.org/braintour/alzheimers_changes.asp
Signs and Symptoms of the most common types of Dementia
Stages of Alzheimer’s Disease

Alzheimer’s Dementia

Mild

Spreads to Lateral Temporal and Parietal Lobes

Symptoms include:
- Reading problems,
- Poor object recognition,
- Poor direction sense

Moderate

Spreads to Frontal Lobe

Symptoms include:
- Poor judgment,
- Impulsivity,
- Short attention

Severe

Widespread Brain Atrophy

Symptoms include:
- Loss of language,
- Basic motor skill function problems

High School Dementia Curriculum
Changes in Behavior

Repetition
Repetition
Repetition
Risks associated with Behavioral Changes

• Physical Abuse
• Isolation
• Verbal Abuse
• Inappropriate use of medications
• Intimidation
• Humiliation
• Malnutrition and dehydration
Quiz Time
MODULE 3: Caring for someone with Alzheimer’s Disease/Dementia

High School Dementia Curriculum
Person-Centered Care

The Whole Person

- Goals
- Career Developmental Cycle
- Abilities
- Values
- Family
- Personal Style
- Interests
- Skills
Aspects of Person-Centered Care

- Respecting one’s values
- Taking into account preferences and expressed needs
  - Coordinating and integrating care
    - Teamwork
    - Comfort and Safety
    - Emotional Support
- Involving family and friends
  - Continuity
  - Access to care
Activity #1

High School Dementia Curriculum
Strategies for Providing Care

• Personal Care
• Nutrition
• Pain Management
• Wandering
• Falls
• Physical Restraint-Free Care
Alternative Therapies versus Medications
Medication Treatments

Namenda
memantine HCl

Aricept
donepezil HCl tablet
5 mg, 10 mg and 23 mg
Alternative Therapies

High School Dementia Curriculum
Music and Memory

• Founded by Dan Cohen
  – He noticed that there was no personalized music available for residents living in nursing facilities that he visited.

• Trained to create personalized playlists using iPods
  – Enable those struggling with Alzheimer’s Disease, Dementia, or other cognitive or physical challenged to reconnect with the world through music-triggered memories.
The Power of Music on the Brain

Music on the mind

When we listen to music, it’s processed in many different areas of our brain. The extent of the brain’s involvement was scarcely imagined until the early nineties, when functional brain imaging became possible. The major computational centres include:

- **CORPUS CALLOSUM**: Connects left and right hemispheres.
- **MOTOR CORTEX**: Movement, foot tapping, dancing, and playing an instrument.
- ** PREFRONTAL CORTEX**: Creation of expectations, violation and satisfaction of expectations.
- **NUCLEUS ACCUMBENS**: Emotional reactions to music.
- **AMYGDALA**: Emotional reactions to music.
- ** SENSORY CORTEX**: Tactile feedback from playing an instrument and dancing.
- **AUDITORY CORTEX**: The first stages of listening to sounds. The perception and analysis of tones.
- **HIPPOCAMPUS**: Memory for music, musical experiences and contexts.
- **VISUAL CORTEX**: Reading music, looking at a performer’s or one’s own movements.
- **CEREBELLUM**: Movement such as foot tapping, dancing, and playing an instrument. Also involved in emotional reactions to music.

MIKE FAILLE/ THE GLOBE AND MAIL  
SOURCE: THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION
Ways to assist with communication

• Be patient and supportive

• Offer comfort and reassurance

• Avoid criticizing, correcting, or arguing

• Focus of the feelings and not the facts
Quiz time
MODULE 4: Intergenerational Programs
Activity #1
Why an Intergenerational Program

• Divided along emotional, physical, and social lines

• Improvement of physical and mental health of elders

• Improvement of academic performance, economic viability, and coping skills
Benefits of Intergenerational Programs: Older Adults

- Enhance Socialization
- Stimulate Learning
- Improve Health
- Improved Dementia Care
Benefits of Intergenerational Programs: Youth

- Improve Academic Performance
- Enhanced Social Skills
- Decreased Negative Behaviors
Benefits of Intergenerational Programs: Community

• Strengthen the Community
• Maximize Human Resources
• Encourage Cultural Exchange
Examples of Intergenerational Programs

- Youth Serving Elders
- Elders Serving Youth
- Joint/Shared Programs
SKIP: Seniors and Kids Intergenerational Programs
Brain Fit: An Intergenerational Program
Advocacy
Social Needs and Activities

• Individuals still require social interaction

• Consider their needs when planning activities

• Activities should done with the individual
  – Not to or for

• Allow the individual to participate at the highest level possible
Test Time