



Gerontechnology I

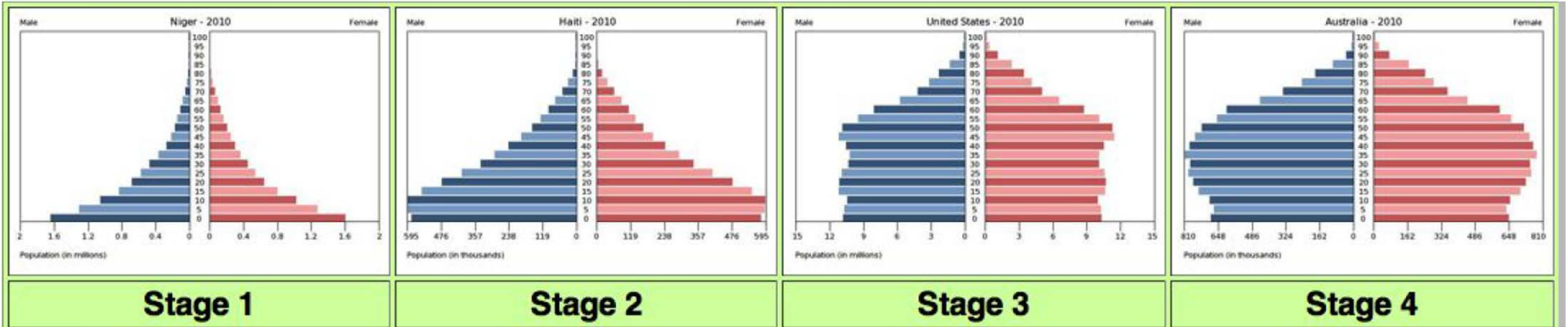
Psych 485 / CptS 485

Fall 2017

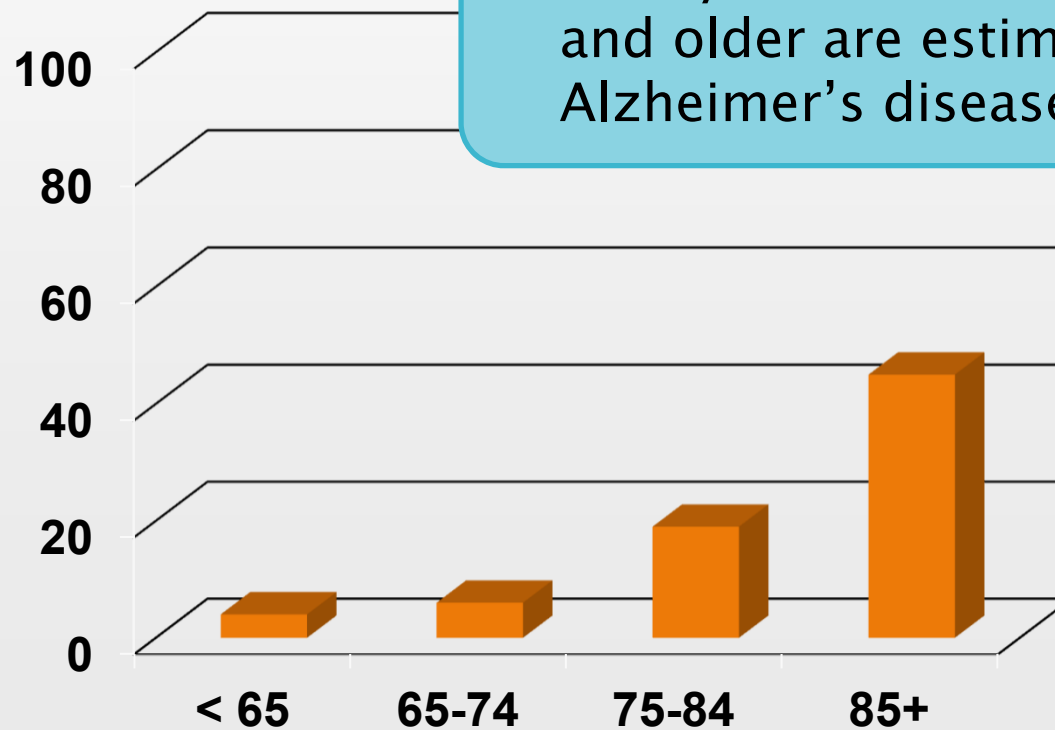
Dr. Diane J. Cook

Dr. Maureen Schmitter-Edgecombe

The Need



% persons with AD



Nearly 45% of individuals age 85 and older are estimated to have Alzheimer's disease

The Field

- Interdisciplinary academic and professional field
 - Gerontology
 - Technology
- Use technology to study aging
- Design technology to provide solutions to deal with the challenges of aging



1. Understand challenges of aging



- Aging, senses, and health care
- Aging, mobility, and falls
- Aging, cognition and everyday function
- Simulation devices
- Service learning

2. Understand opportunities of technology



- Smart homes / sensors
- Smart watches / phones
- Activity recognition
- Estimote beacons
- Robot navigation / mapping
- Object detection
- Machine learning
- Augmented reality



3. Understand external research

- **Guest speakers**

- Lorraine Evangelista, UCI Irvine, intervention compliance
- Shelly Fritz, WSU Vancouver, clinician in the loop
- Kathleen Insel, University of Arizona, medication monitoring
- Keith Diaz Moore, University of Utah, design for older adults
- Ka’imi Sinclair, WSU Spokane, interventions in rural communities / tribes
- Matt Taylor, WSU, assistive robotics
- Doug Weeks, STRL, rehabilitation technologies
- Don McMahon, WSU, training adults with disabilities

- **Youtube channel: [wsu serc](#)**

- **Playlist: [NIH Distinguished Speaker Series](#)**

4. Put it into practice

- **Multidisciplinary research projects**

- Grad / undergrad
- Multidisciplinary team
- Steps
 - IRB
 - Define hypothesis
 - Define methods
 - Recruit participants
 - Collect data
 - Analyze data
 - Poster presentation
 - Posters due 12/11 9am
 - Poster session 12/12 10am



Gerontechnology II

Psych 486 / CptS 486

Spring 2018

Dr. Diane J. Cook

Dr. Maureen Schmitter-Edgecombe

**Wednesdays (8:00-) 9:00-11:00 (-12:00)
EME 130**

1-2. Understand challenges of aging & opportunities of technology

- Lectures
 - Mild cognitive impairment
 - Ethics
 - Aging in place
 - Compensatory strategies
 - Socialization and caregiver issues

- App design
- Mobile health
- Behavioral change detection
- Audience-adapted visualization
- Medication adherence

1-2. Understand challenges of aging & opportunities of technology

- Experience
 - Homework assignment
 - Paper presentation
 - Caregiver panel

3. Understand external research

- **Guest speakers**

- **David Kutzik**, Drexel University
 - Transitioning assistive technologies to the marketplace
- **Adri Seelye**, University of Minnesota
 - Mobile health assessment and intervention
- **David Sprott**, WSU
 - Marketing
- **Tanzeem Choudhury**, Cornell University
 - Mobile health technologies
- **Momotaz Begum**, University of New Hampshire
 - Assistive robotics
- **Steve Woods**, University of Houston
 - Bringing technologies into health testing
- **Troy McDaniel**, Arizona State University
 - Ubiquitous computing for rehabilitation
- **Naomi Chaytor**, WSU Spokane
 - Mobile technologies for nutrition monitoring

4. Put it into practice

- **Finish off those research projects!**
- **Research paper**

Weekly Team Meetings

- Mondays (Johnson Tower)
 - 9:00 Estimotes (Taite, Lisa, Cat, Chance)
- Wednesdays (EME 130)
 - 8:00 AL (Nathan, Mark)
 - 8:20 Clinician (Beiyu, Ali, Katie, Kylie)
 - 8:40 Assess (Mahdi, Katelyn)
 - 9:00 – 11:00 Class
 - 11:10 RAS (Nisha, Garrett, Chris)