clinicians, patients and caregivers, health care managers, and decision-makers from local and provincial levels. Due to involvement in development of the study objectives, design and methodology, stakeholders will receive additional benefits from the results. For example, results will serve as a baseline for quality improvement initiatives. **Results:** The resulting research program is comprised of three convergent streams. The first stream is an observational cross-sectional study using chart reviews together with clinician and organizational survey data to assess quality of care, clinicians' attitudes, knowledge and practices, as well as organizational characteristics. The second stream uses multiple case-study design involving interviews and document analysis to assess the implementation process. The third stream relies on linked, provincial-level health administrative data to describe and compare population-based trends over time. During the integration phase, a data dossier will be developed for each site using the quantitative and qualitative data to build a matrix across which conclusions can be drawn on key clinical and organizational factors impacting successful initiatives. An integrated knowledge translation plan includes regular feedback to research sites and a series of events at national and international levels. **Conclusions:** This project requires the integration of data from multiple sources and sites across different provinces in a way that maintains their rich context. The innovative methods developed by our stakeholders and research team allow for results that create and empower transformative change in NCD care.

P1-521 NUTRITIONAL STATUS OF ELDERLY WOMEN WITH DEMENTIA IN GERIATRIC HOSPITAL IN KOREA

Kyung Ja Chang, Mi-ae Bae, Duck hwa Kim, *Inha University, Incheon, Republic of South Korea. Contact e-mail: kjchang@inha.ac.kr*

Background: Korea is rapidly becoming an aged society, and prevalence of dementia is increasing in the elderly, which is 2 to 3 times higher in women. It is a growing interest in health and nutrition of the elderly with dementia. The purpose of this study was to investigate nutritional status of the elderly women with dementia in geriatric hospital in Korea. **Methods:** The subjects of this cross-sectional study were 36 elderly women with dementia in one geriatric hospital in Incheon, Korea. They were divided into two groups by MMSE-DS reference score, 14 subjects (mild dementia group, MiDG) who had more than reference score and 22 subjects (moderate dementia group, MoDG) who had less than reference score. Data were collected with questionnaires in 2016. Dietary intake was surveyed for 3 days with photographing and analyzed using CAN program 4.0. The nutritional status was evaluated by the Korean Dietary Reference Intakes (KDRI) and ratio of each food group's contribution to nutrient intakes. Statistical analyses were conducted using SPSS 20.0. **Results:** The average BMI of subjects was 20.9 kg/m^2, nevertheless, underweight (27.8%) and overweight (25.0%) accounted for over half of them. There were no significant differences in average dietary intakes between MiDG and MoDG. Intakes of total energy, fiber, vitamin D, E, C, B$_6$, thiamin, riboflavin, calcium, potassium, and magnesium were lower compared to KDRI, and intake ratios of vitamin D and magnesium were less than 20% in both groups. The energy and protein intake of subjects were mainly from cereals (63.2%) and meats and fish & shellfish (71.9%). Vitamin A, D, C intake was from vegetables (80.6%), eggs and fish & shellfish (90.0%), and potatoes & starch and vegetables (89.6%), respectively. However, calcium intake from milk and dairy products and iron

intake from meats, eggs, fish & shellfish was low at 7.8% and 36.3%, respectively. **Conclusions:** These results showed that the elderly women with dementia in geriatric hospital have unbalanced nutritional status, and MoDG has inadequate intake of nutrients compared to MiDG. Therefore, it is necessary to plan and manage the meals for improve nutritional status of the elderly with dementia.

P1-522 APPLYING INTERACTIVE WEB-BASED EDUCATION OF DEMENTIA CAREGIVING FOR NURSING STUDENTS

Myonghwa Park, Mi-Hyun Lee, Hyun Jeong, Younghye Go, Miri Jeong, *College of Nursing Chungnam National University, Daejeon, Republic of South Korea. Contact e-mail: mhpark@cnu.ac.kr*

Background: The growing number of dementia patients indicates that the demands of patients and their family will also increase. The care environment of dementia may cause stress for nursing students who doubt their capability to achieve the required nursing tasks, especially when they must interact with patients and family caregivers. Web-based program to provide education or support to nursing students and healthcare professionals have been developed and shown to be effective. The aim of the present study was to investigate the effect of interactive web based education of dementia caregiving for nursing students on their self-efficacy, competence and attitude toward dementia. **Methods:** The participants of the study consisted of second year undergraduate nursing students who agreed to participate web based education of dementia caregiving as an extended class activity. The content was developed to cover issues that frequently occur in dementia caregiving such as treating dementia, dealing with behavior problem, assisting daily living, and planning pleasant life. The data were collected by self-administered questionnaires. Self-efficacy, competence, and attitudes toward dementia were measured as outcome variables. Differences between pre-test and post-test scores were analyzed by paired t-test. **Results:** This study showed significant changes for self-efficacy, competency, and attitude toward dementia score after web-based education. The average score for self-efficacy (t = -14.435, $p < 0.01$) and competency (t = -10.723, $p < 0.001$) increased significantly between pre-test and post-test. The mean score for attitude toward dementia increased significantly between pre-test and post-test (t = -13.374, $p < 0.001$). **Conclusions:** This study identified that interactive web based education of dementia caregiving is an effective method for users to facilitate more positive attitudes toward dementia and enhance self-efficacy and confidence in dementia care. The use of web-based education program offers users the opportunity to study at their own time and pace. This program can be applied to training of other professionals in dementia care.

P1-523 THE ADHERENCE/RETENTION PLAN OF THE ALZHEIMER'S PREVENTION INITIATIVE (API) COLOMBIA TRIAL

Silvia Rios Romenets[1], Natalia Acosta-Baena[1], Liliana Lopez[1], Lucia Madrigal[1], Helen Street[2], Laura Jakimovich[2], Annabel Vaghar[3], Rajesh Menon[3], William Cho[3], Jessica B. Langbaum[2], Pierre Tariot[2], Eric M. Reiman[2,4], Francisco Lopera[5], *[1]Neurosciences Group of Antioquia,*

University of Antioquia, Medellin, Colombia; [2]Banner Alzheimer's Institute, Phoenix, AZ, USA; [3]Genentech, Inc., South San Francisco, CA, USA; [4]University of Arizona, Tucson, AZ, USA; [5]Grupo de Neurociencias, Universidad de Antioquia, Medellin, Colombia. Contact e-mail: silvia.riosrom@hotmail.com

Background: The Alzheimer's Prevention Initiative (API) Colombia Trial is a collaborative project involving the Neurosciences Group of Antioquia (GNA), Genentech/Roche, and the Banner Alzheimer's Institute studying whether crenezumab can delay or prevent the clinical onset of Alzheimer's disease in asymptomatic individuals who carry the *PSEN1 E280A* mutation. In an effort to optimize participant compliance and adherence, and maintain interest in the trial for its duration, the GNA developed an "Adherence/Retention Plan." This Plan identifies potential barriers related to characteristic of participants and study partners, protocol design, sponsors, investigators, contextual and environment factors, and characteristics of this population in general. **Methods:** GNA designed and implemented a number of strategies including: a carefully designed schedule of visits and assessments, appointment reminders, reimbursement for transportation and missed work, meals during study procedures, birthday cards, quarterly newsletters, annual in-person feedback meetings, provision of a health plan to participants and a social plan to family members. In the context of health care in Colombia, we determined that a study-related health plan was needed to ensure timely evaluation, treatment and follow up of adverse events, conduct additional testing if needed, offer contraception, and provide gynecological and other specialist evaluations for participants in instances where their standard medical care could not address health concerns in a timely way or at all. The social plan consists of programs/workshops to assist affected individuals and their families, provide coping strategies, support their participation in relevant research, and improve the quality of their lives. The social plan does not benefit trial participants directly and all services are provided whether or not family members participate in GNA research. All strategies are approved by a local Ethics Committee, reevaluated using an annual survey and adjusted according to the needs of participants, investigators and to the experience gained during the study. **Results:** By the end of third year, the trial, retention of participants is 96.6% and 80.3% of participants report feeling "very satisfied" with their experience. **Conclusions:** The Adherence/Retention Plan plays a crucial role in maintaining adherence and compliance needed to achieve the ambitious goals of the Colombian API Autosomal Dominant Alzheimer's Disease Trial.

P1-524 **IMAGING CARE REQUIREMENTS: USE OF FUNCTIONAL HMPAO-SPECT SCANNING TO PREDICT CAREGIVER BURDEN**

Angus Prosser[1,2,3], Christopher Kipps[1,2,3], [1]University of Southampton, Southampton, United Kingdom; [2]National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (NIHR CLAHRC), Wessex, United Kingdom; [3]University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom. Contact e-mail: angus.prosser@nhs.net

Background: Dementia caregivers frequently report high levels of stress, with increased caregiver burden associated with worse outcomes for both patients and caregivers. Although many studies show how clinical phenotypes relate to caregiver burden, there is little information as to how pathological deficits seen on imaging may relate to caregiver burden, regardless of diagnosis. This study aimed to investigate the relationship between caregiver burden and regional functional deficits on perfusion imaging. **Methods:** 77 consecutive individuals recruited to the BraIID study with cognitive impairment undergoing HMPAO-SPECT imaging as part of their normal clinical care, and their close companions, were recruited to the study. Caregiver burden was measured using the Zarit Burden Interview Questionnaire, completed by the companion at the time of imaging. Total burden score was ranked as little or no burden, mild to moderate burden, or moderate to severe burden. Patient perfusion SPECT images were obtained and pre-processed using SPM8. Imaging perfusion values were extracted for pre-defined regions of interest for each individual, and individual images were also rated as normal or abnormal when compared to 31 controls. Associations between global and regional imaging scores and caregiver burden groups were tested. **Results:** Caregiver burden group ranking was significantly associated with abnormal / normal frontal perfusion rating ($p < 0.05$) in chi-square analysis, but not with global, parietal or temporal lobe function. Total Zarit burden score significantly correlated with right sided temporal ($p < 0.05$), right sided parietal ($p < 0.05$), and both right and left sided frontal ($p < 0.01$) perfusion values. A significant difference in mean frontal and temporal perfusion was also found between Zarit caregiver burden groups ($p < 0.01$). **Conclusions:** Caregiver burden is strongly related to the extent of frontal lobe dysfunction, and with right hemisphere parietal and temporal regions. Cross-sectional imaging can be used to facilitate identification at diagnosis of individuals who are likely to create high burden on caregivers, and offers an opportunity to predict and prioritise a need for additional caregiver support in this group.

P1-525 **STUDY OF COMORBIDITIES IN ALZHEIMER'S DISEASE PATIENTS REQUIRING INPATIENT CARE**

Atri Chatterjee[1], Arunabha Chakrabarti[2], Mohor Biplab Sengupta[3], Partha Chattopadhyay[4], Debashis Mukhopadhyay[5], [1]AMRI Institute of Neurosciences, Kolkata, India; [2]Tata Medical Centre, Kolkata, India; [3]Uniformed Services University of the Health Sciences, Rockville, MD, USA; [4]Sagar Dutta Medical College and Hospital, Kolkata, India; [5]Saha Institute of Nuclear Physics, Kolkata, India. Contact e-mail: chatterjee.atri@gmail.com

Background: Patients of Alzheimer's disease (AD) who required hospital admission and inpatient care were studied for comorbidities, reason for hospital admission and clinical outcome. **Methods:** Patients diagnosed with AD were prospectively followed up and those who required hospital admission were included in the study (n = 30). Clinical records were reviewed to identify comorbidities and reason for admission. Patients were followed up for six months after discharge to study hospital readmission and death. **Results:** Commonest presenting symptoms of the subjects in the emergency room were pain (43.3%), fever (26.7%), breathlessness (23.3%), altered sensorium (10%) and gastrointestinal bleeding (7%). Known comorbidities included hypertension (50%), chronic kidney disease (16.7%), chronic obstructive pulmonary disease (13.3%) and diabetes (13.3%). Following admission, reason for admission included sepsis (26.7%), acute exacerbation of chronic obstructive pulmonary disease (13.3%), heart failure (10%), hyponatremia (10%) and analgesic induced gastrointestinal bleeding (7%). Four