TITLE: ENHANCEMENT TO CURRICULUM ON GENETICS IN ALZHEIMER DISEASE: A MEDICAL STUDENT’S INITIATIVE

AUTHORS (FIRST NAME INITIAL LAST NAME): R. Celli¹, J. Lawrence¹, S. McGee¹, C. DuBeau¹, G. Blanchard¹, M. Keough¹, M. Zanetti¹, J. Twomey¹, P. Droney¹, M. Pugnaire¹, J. Gurwitz¹

INSTITUTIONS (ALL): 1. Geriatric Medicine, University of Massachusetts Medical School, Worcester, MA, USA.

ABSTRACT BODY:

Objective: To increase geriatric content in an established undergraduate medical education (UME) genetics course via a new module on familial Alzheimer disease (AD).

Description: Previously, the UMass MS1 genetics course had little geriatric content and no clinical presentation or in-depth formal discussion of familial AD. In collaboration with geriatricians and public health specialists, a MS2 developed a module on AD genetics to incorporate into the UMass Reynolds’ Advancing Geriatric Education program.

The learner goals for the AD genetics module were to: (1) understand through a patient presentation the pathogenesis, diagnosis, and familial and societal issues surrounding AD; (2) understand the epidemiology of sporadic versus familial AD and the genetics of early- versus late-onset familial AD; and (3) describe available genetic testing for early-onset familial AD (EOFAD) and recognize the psychological impact of genetic screening and counseling.

New curricular materials included a brief didactic lecture and in-class discussion with a patient describing personal and family experience with EOFAD and genetic screening. The MS2 conducted a literature search and prepared a lecture on familial AD. Through the local Alzheimer’s Association chapter, he contacted an EOFAD patient comfortable and cognitively able to talk about EOFAD and genetic counseling.

The genetics course director allotted one hour for the MS2’s new clinical correlation module, presented to all 125 MS1. This module was followed by a 2-3 hour self-learning and assessment exercise used previously in the genetics course in which students answer analytical and quantitative questions using a professional genetics website (www.genetests.com) to further their understanding of three different AD forms.

Evaluation and future plans: Course evaluations include unit and end of course measurement of knowledge and attitudes regarding familial AD and EOFAD screening. Participation of affected patients in disease-specific UME has positive short-term effects on learners and patients, but long-term data are lacking. Our module provides a novel opportunity to test both short- and long-term impact. Moreover, this module imparts a model for MS-driven geriatric curriculum development to expand geriatrics education in the foundational years.

Supported by the Donald W. Reynolds Foundation.