

through a third party (64.9%) and a perception by SHHC personnel that “Physicians [are] not interested in communicating with SHHC Personnel” (45.1%). Failed communication resulted in delayed orders (70.8%) and sending a patient to the emergency room (37.1%). IMPLICATIONS: SHHC agency personnel experience significant barriers in communicating with physicians. Modes of communication remain rudimentary, and there are serious consequences of failed communication.

SESSION 2912 (PAPER)

BIOLOGY OF AGING I

A VIRTUAL HEALTH LIBRARY FOR DEMENTIA PATIENTS AND CAREGIVERS TO IMPROVE QUALITY OF INFORMATION AND COMMUNICATION

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Access to accurate health information is critical for patient decision making and health communication. Unfortunately, there is limited quality health information for dementia patients and their caregivers. A Virtual Health Library (VHL) provided access to credible health information through the electronic medical record (EMR) to reach the dementia patients and their caregivers. A VHL was created and brought together clinicians, caregivers, technology support personnel, public health professionals, and the health sciences library. The team identified areas of interest and met monthly to create VHL materials. Materials included voice-over slides and 1-page educational content that was uploaded to the EMR for patient and caregiver access. A baseline and final questionnaire assessed demographics, empowerment, and shared decision making for both the patient and the caregivers and a pre/post was created for each module to assess knowledge and stratification. Initially, 1331 patients with dementia were recruited for the project from a university geriatrics department. The population had a 28.3% enrollment in the EMR and only 3.8% used the EMR in the past six months. Of this pool, during the initial launch 32 patients and/or caregivers completed the baseline within the first week. 98% of respondents were caregivers with an average age of 58.7. With the youngest caregiver 42 and the oldest 88. Of the caregiver's relationships to the patients is 43.3% their child, 40% their spouse, 10% other family, and 6.7% friends. During the project, participants improved access to health information and became empowered to engage with their healthcare provider.

APOLIPOPROTEIN E GENOTYPE AND THE RELATIONSHIP BETWEEN CHITINASE 3-LIKE PROTEIN 1 AND POSTOPERATIVE DELIRIUM

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Apolipoprotein E (APOE) $\epsilon 4$ does not confer increased risk of delirium in older surgical patients; however, $\epsilon 4$ status modifies the relationship of C-reactive protein (CRP) with delirium: increased risk for delirium in $\epsilon 4$ carriers with high CRP. We examine whether APOE genotype modifies the established association between inflammatory marker chitinase-3-like protein-1 (CHI3LI/YKL-40) and delirium in patients without dementia age ≥ 70 undergoing major non-cardiac surgery. We performed APOE genotyping using PCR, considering APOE $\epsilon 4$ vs. non- $\epsilon 4$ carriers. Plasma YKL-40, measured on postoperative day 2 by ELISA, was examined using sample-based quartiles (Q1-Q4). Delirium status was determined with daily interviews rating the Confusion Assessment Method, augmented by a validated chart review. We used generalized linear models adjusted for age, sex, surgery type, and stratified by APOE $\epsilon 4$ status. Among the 557 patients, 19% were APOE $\epsilon 4$ carriers, and 24% developed postoperative delirium. The YKL-40-delirium relationship differed by APOE status. Among APOE non- $\epsilon 4$ carriers, we found a significant relationship between YKL-40 and delirium (relative risk [RR](95% confidence interval [CI] for YKL-40 Q4 vs. Q1: 2.6(1.4-4.9) and Q3 vs. Q1: 2.3(1.2-4.5); p-trend $<.01$). Among APOE $\epsilon 4$ carriers, YKL-40 was not significantly associated with delirium (RR(95% CI) for YKL-40 Q4 vs. Q1: 2.0(0.6-6.6) and Q3 vs. Q1: 1.1(0.3-3.5); p-trend=0.37). APOE non- $\epsilon 4$ carriers may have increased risk of delirium conferred by post-surgical inflammation specific to the type 2 immune response (high YKL-40). These results differ from prior results with CRP, and raise the possibility that APOE genotype may interact at different points in the inflammatory pathway leading to delirium.

CIRCULATING PROCOLLAGEN TYPE III N-TERMINAL PEPTIDE AND PHYSICAL FUNCTION IN THE LONG LIFE FAMILY STUDY

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Circulating levels of procollagen type III N-terminal peptide (P3NP) may reflect increased fibrosis of skeletal muscle and other tissues with aging. In the current study, we tested if P3NP levels were associated with baseline and 7-year change in physical function among adults aged 39-104. Participants (n=400) were from the Long Life Family Study, a study of exceptional familial longevity. Plasma P3NP concentration was measured using a sandwich enzyme-linked immunosorbent assay (inter-assay