(Mini-Mental State Examination [MMSE]) is equivocal in literature. To examine the association between DSM-IV and MMSE data, we used longitudinal data on MMSE and depression scores to evaluate the relationship between two health outcomes. METHODS: Data were obtained from the Hispanic Established Populations for Epidemiologic Studies of the Elderly. Participants included 3050 noninstitutionalized Mexican Americans aged 65 and older followed from 1993-2001. Cognitive function and depressive symptoms were assessed using the MMSE and CESD at baseline and at 2.5, and 7 years of follow-up. Independent variables were sociodemographics, CESD, medical conditions, and medical treatment effect adjusted model. RESULTS: Using IPW estimator to evaluate the extent to which cognitive function depend not only on depressive symptoms measured at a single point in time but also on an individual’s entire depressive symptoms history. RESULTS: Our results indicate that if intervention to reduce 1 point of depressive symptoms were made at two years prior to assessing cognitive function, they would result in average improvement in cognitive function of 0.11 points. CONCLUSIONS: The results support that health intervention of depressive symptoms would be useful in prevention of cognitive impair.

PRM17 METHODS FOR EVALUATING THE EFFECT MODIFICATION IN THE OBSERVATIONAL STUDIES: A RETROSPECTIVE ANALYSIS ON THE IMPACT OF SIMVASTATINA AND EZEZTIMIN AND STATINS ON ACUTE MYOCARDIAL INFACTION

Voci C. Agenzia Sanitaria e Sociale Emiliana-Romagna, Bologna, Italy

OBJECTIVES: Fundamental potential weaknesses of observational studies are bias and effect modification. In this situation, computing an overall estimate of association is necessarily biased. The goal was to compare a traditional multivariable-adjusted model with a propensity score (PS) model and a cluster analysis (CA) model, in estimating the association between type of lipid modifying agent and hospitalization for Acute Myocardial Infarction (AMI). METHODS: Multivariable-adjusted model was used for Cluster 1; HR = 1.49 (95% CI [0.95, 2.34]). HR = 1.00 (95% CI [0.65, 1.54]). A PS model was constructed by adjusting assignment from age, gender, use of diabetic agents, different pharmacologic agents, comorbidity level and utilization of outpatient services. For analysis’ purpose, the effect of the treatment on the risk of IMA was measured by estimates of hazard ratios (HRs) in the PS model in the PS model and the cluster analysis model. RESULTS: Compared with Statins, the risk of IMA for SE resulted similar in the adjusted CRM and in the propensity CRM (HR = 1.47 and HR = 1.49 respectively). The CRM performed within each cluster yielded different treatment effect estimates (HR = 1.29 for Cluster 1; HR = 1.36 for Cluster 2, 1.37 for Cluster 3); CONCLUSIONS: The CRM model was constructed to identify specific subgroups of patients, with homogeneous risk features. The CRM within each cluster yielded different treatment effect estimates that might suggest the presence of unmeasured confounding. In that case, traditional regression model and PS developed using administrative data do not necessarily balance patient characteristics contained in clinical data. Choice among different approaches for investigating effect modification should be sensitive to the circumstances of the data analysis in applying observational studies.

PRM18 MULTI-CRITERIA DECISION ANALYSIS IN ONCOLOGY: AN OVERVIEW

Adalpin G1, Dahlby V1, Montero A2, Xiao H3

1Florida A&M University, Tallahassee, FL, USA, 2Cleveland Clinic, Cleveland, OH, USA

OBJECTIVES: Diagnosis, treatment, and management decisions in oncology can be particularly complex due to a combination of diagnostic and therapeutic uncertainties, patients’ preferences and values, as well as costs. These decisions involve trade-offs between possible benefits and harms. There is growing interest in the development and application of alternative decision-making frameworks within oncology, including multi-criteria decision analysis (MCDA). Even though the literature includes several reviews on MCDA methods, applications of MCDA in oncology are lacking. This study sought to discuss the rationale for using MCDA in oncology. In this context, the following research question emerged: How can MCDA be used to develop a clinical decision support tool in oncology? METHODS: This study surveyed several applications of MCDA in the field of oncology. In particular, the study reviewed key contributions addressing screening and treatment decision-making in this area. It proposed research opportunities in the context of oncology, and presented a hypothetical scenario to show how MCDA could be applied in oncology. RESULTS: The literature review identified eight studies. Five studies examined decision making for cancer screening. Four studies demonstrated applicability and acceptability of the Analytic Hierarchy Process (AHP) as a means to involve patients in oncology decisions and translate evidence into clinical practice. The study showed that a wide range of MCDA methods exist; each has its strengths and weaknesses. Choosing the appropriate method vary depending on the source and nature of information used to inform decision-making. CONCLUSIONS: Based on these simulation results, we recommend implementing multi-criteria analysis methods in oncology decision-making to help address trade-offs regarding preferences. Nonetheless, field-testing is desirable before MCDA becomes an established decision-making tool in oncology.

PRM19 A COMPARISON OF PROPENSITY SCORES FOR ASSESSING PATIENT REPORTED OUTCOMES: A MONTE CARLO STUDY

Sloanian M1, Kwon D1, Volpi S2, Koh NY1, Tu C2

1University of New England, Portland, ME, USA, 2University of New England, Biddeford, ME, USA

OBJECTIVES: Many medical and epidemiological research studies are based on observational data. In this study, we compare three different propensity scores: unadjusted propensity score (UPS), prognostic propensity score 1(PPS1), and prognostic propensity score 2(PPS2) using the inverse probability weighted (IPW) estimator for assessing patient reported outcomes (PROs) in terms of average treatment effect (ATT). METHODS: We conducted a Monte Carlo simulation study to evaluate these three propensity scores for estimating ATT and ATT in terms of bias, mean squared error and standard error at 40% treatment effect. RESULTS: The simulation results show that PPS1 has the poorest performance compared to UPS and PPS2 in terms of bias, MSE and CP. CONCLUSIONS: Based on these simulation results, we recommend using UPS and PPS2 for estimating ATT and ATT for patient reported outcomes in practice.

PRM20 BARRIERS IN CONDUCTING RESEARCH IN THE FIELD OF RADIOLOGY

PERCEPTIONS OF HEALTH CARE PROFESSIONALS FROM A DEVELOPING NATION

Voci C. The Aga Khan University Hospital, Karachi, Pakistan

OBJECTIVES: To identify proportion of radiology Health care professionals’ opinions regarding level of difficulty in conducting research in radiology and to ascertain barriers associated in conducting research activities in field of radiology. METHODS: Cross-sectional analytical study was conducted during International Conference organized by Radiological Society of Pakistan in November 2009 at Sheraton Hotel, Karachi. Data were collected using a structured, self-administered questionnaire from participants willing to participate in research registered for Annual Radiology Research Workshop at the conference. RESULTS: Data were analyzed using SPSS version 19.0. Means±SD were calculated for quantitative variables. Chi square and Fisher’s exact tests were applied for categorical variables. A p-value of < 0.001 was considered significant. RESULTS: Response rate was 76% (n=78/103). 65.4% agreed that conducting research in the field of radiology is difficult. Most of the participants (60.9%) agreed that statistic knowledge is required. 4.2% believed that research in radiology is difficult as compared to those who had published a paper (80.8%) (p =0.026). However, age, sex, attending conferences and presenting papers did not significantly influence response of participants. The top three barriers in conducting research in field of radiology were time required providing clinical services (92.3%), lack of dedicated time for research, diminished income in research activities were identified as most important barriers in conducting research. Similar responses were observed among residents and consultants regarding barriers in conducting research.

PRM21 VIEWS OF HEALTH CARE PROVIDERS ON MEDICAL ERRORS IN KARACHI, PAKISTAN

Karachi, Pakistan

OBJECTIVES: Incidence of medical errors is as an area of concern for health care providers and policy makers. The large number of preventable errors, risk of litigations, patients’ insecurity and lack of confidence in health care provision is a concern globally in an underdeveloped country like Pakistan, patient safety is as yet a nascent area. The aim of this study is to identify specific subgroups of patients, with homogeneous risk features. The CRM within each cluster yielded different treatment effect estimates that might suggest the presence of unmeasured confounding. In that case, traditional regression model and PS developed using administrative data do not necessarily balance patient characteristics contained in clinical data. Choice among different approaches for investigating effect modification should be sensitive to the circumstances of the data analysis in applying observational studies.

RESEARCH ON METHODS – Cost Methods

PRM22 EVALUATING THE RELATIONSHIP BETWEEN BODY MASS INDEX (BMI) OF DIABETIC PATIENTS AND HEALTH CARE COSTS

Adanpur A1, Raisal KC1, Lawson C2, Wilson J3, Novak S2

1The University of Texas at Austin, Austin, TX, USA, 2Austin Outcomes Research Inc., Austin, TX, USA

OBJECTIVES: Although a number of studies have been conducted to estimate the economic implications of comorbid obesity in diabetic patients, mixed conclu-