PHYSICAL ACTIVITY AND THE DEVELOPMENT OF DEPRESSIVE SYMPTOMS IN THE ELDERLY TO ASSESS THE IMPACT OF MENTAL HEALTH INTERVENTIONS. 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 functional and social limitations. Marginal structural causal models were employed 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 of depressive symptoms were made at two years prior to assessing cognitive function.

PMR17 METHODS FOR EVALUATING THE EFFECT MODIFICATION IN THE OBSERVATIONAL STUDIES: A RETROSPECTIVE ANALYSIS ON THE IMPACT OF SIMVASTATINA AND EDETIMINE AND STATINS ON ACUTE MYOCARDIAL INFARCTION

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OBJECTIVES: Fundamental potential weaknesses of observational studies are bias and effect modification. In this situation, computing an overall estimate of association without taking into account effect modification is a common practice. This approach can lead to misleading results. Identifying and evaluating effect modification is crucial for the demonstration of the benefits of treatments. In this study, we employed marginal structural causal models 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 of depressive symptoms were made at two years prior to assessing cognitive function.

PMR18 MULTI-CRITERIA DECISION ANALYSIS IN ONCOLOGY: AN OVERVIEW

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OBJECTIVES: Diagnosis, treatment, and management decisions in oncology can be pathologically 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 of a generation 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. RESULTS: A multi-criteria decision analysis (MCDA) model was developed in oncology. This model incorporates specific subgroups of patients, who are homogeneous risk features. The model demonstrates that treatment decisions in oncology need 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.

PMR19 A COMPARISON OF PROSPECTIVITY SCORES FOR ASSESSING PATIENT REPORTED OUTCOMES: A MONTE CARLO STUDY

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OBJECTIVES: 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 reviewed 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 varies depending on the source and nature of information used to inform decision-making. CONCLUSIONS: Given recent advances in understanding and translating evidence-based data, multidisciplinary teams, and shared decision-making, the field of oncology will continuously seek ways to make comprehensive and transparent decisions. MCDA appears to be a promising tool to aid in the clinical decision-making in oncology and help assess trade-offs regarding preferences. Nonetheless, field-testing is desirable before MCDA becomes an established decision-making tool in oncology.

PMR20 BAROGRAPHS IN CONDUCTING RESEARCH IN THE FIELD OF RADIOLoGY

Perceptions of Health Care Professionals From a Developing Nation

The Asia Pacific University Hospital, Karachi, Pakistan

OBJECTIVES: To identity 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 Conference. RESULTS: The majority of respondents thought that research in field of radiology is difficult. Most of the participants (69.2%) who had not published papers believed that research in radiology is difficult as compared to those who had published a paper (39.8%) (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 to provide clinical services (92.3%), lack of dedicated time for research activities (89.8%) and diminished income in research activities (88.5%). Although similar responses were observed among residents and consultants regarding barriers in conducting research, more residents than consultants believed that lack of support from dean (p = 0.037) and diminished income in research activities (p = 0.003) were significant barriers. CONCLUSIONS: Most of the participants’ opinions was that conducting research in field of radiology is difficult. Time required providing clinical services, 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.

PMR21 VIEWS OF HEALTH CARE PROVIDERS ON MEDICAL ERRORS IN KARACHI, PAKISTAN

The Asia Pacific University Hospital, Karachi, Pakistan

OBJECTIVES: Incidence of medical errors is an area of concern for health care providers and policy makers. The large number of preventable errors, risk of litigation, patients’ insecurity and lack of confidence in health care provision is a concern globally in an underdeveloped country like Pakistan, patient safety is a major priority. The objective of this review was to identify specific subgroups of patients, who are homogeneous risk features. The study demonstrated that treatment decisions in oncology need 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.

PMR22 EVALUATING THE RELATIONSHIP BETWEEN BODY MASS INDEX (BMI) OF DIABETIC PATIENTS AND HEALTH CARE COSTS

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

PMR22 EVALUATING THE RELATIONSHIP BETWEEN BODY MASS INDEX (BMI) OF DIABETIC PATIENTS AND HEALTH CARE COSTS

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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 (ATE) and average treatment effect on the treated (ATT). METHODS: We conducted a Monte Carlo simulation study to evaluate these three propensity scores for estimating ATE and ATT in terms of bias, mean squared error (MSE), and coverage probability (CP). 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 PPS for estimating ATE and ATT for patient reported outcomes in practice.

RESEARCH ON METHODS – Cost Methods

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