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three groups were identified: High-SES (n=398), Medium-SES (n=889), Low-SES (n=567). Key patterns were: High-SES: mean 35 years-old, 90% of working age, most married, technical or university level, only 2.7% with ethnic background. Medium-SES: mean 33 years-old, >60% technical education, mixed cluster. Low-SES: mean 25 years-old, >60% women, >80% ethnic background, up to high-school only, 2 poorest income quintiles. CONCLUSIONS: Immigrants in Chile are a very heterogeneous group. Hierarchical cluster techniques offer an appropriate method to group immigrants according to their socio-economic characteristics and, consequently, to provide clear patterns of SES vulnerability within the total immigrant population. Immigrants living in the Low-SES cluster are a vulnerable group that needs further attention in Chile.

PRI95

MULTIPLE PROPENSITY SCORE ADJUSTMENT AND TRADITIONAL REGRESSION ANALYSIS TO ASSESS THE EXPOSURE-OUTCOME ASSOCIATION USING RETROSPECTIVE CLAIMS DATA

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OBJECTIVES: Researchers have suggested that, propensity score (PS) adjustment provides similar results as traditional regression analysis in observational studies. This has been attributed to the inappropriate implementation of PS, like inclusion of both PS and baseline covariates, and absence of covariate balance verification after PS adjustment. The present study employed a multiple PS adjustment model to evaluate the risk of falls/fractures in older adults using typical antipsychotics, performed a balance check of covariates after PS adjustment and compared the results to traditional regression models.

METHODS: The study used IMS LifeLink Health Plans Database and included older adults (aged ≥ 50 years) who initiated risperidone, olanzapine or quetiapine anytime during July 1, 2000 to June 30, 2008. Patients were followed until hospitalization/emergency room (ER) visit for falls/fractures, or end of the study period, whichever occurred earlier. Cox proportional hazard regression model was used to evaluate the relative risk of falls/fractures. The traditional model included over 80 baseline covariates which were also used to calculate the PS. The PS model included the two PS interaction terms. The covariate balance after PS adjustment was checked using logistic regression. RESULTS: After PS adjustment, there was no difference in any of the baseline covariates among the treatment groups. Both traditional regression and PS analyses had similar findings. There was no statistically significant difference with use of risperidone (Traditional: Hazard Ratio, HR, 1.10, 95% CI, 0.86-1.39; PS: HR, 1.09, 0.86-1.38) or quetiapine (Traditional: HR, 1.10, 0.84-1.44; PS: HR, 1.12, 0.86-1.46) compared to olanzapine in the risk of falls/fractures. CONCLUSIONS: The study findings suggest that, a PS adjustment model results in better balanced covariates across treatment groups gives similar results as traditional regression model.

PRI94

MODEL AND COVARIATE VISUALIZATION AIDS FOR ENHANCING THE INTERPRETATION OF STEPS IN THE HIGH DIMENSIONAL PROPENSITY SCORING ADJUSTMENT PROCEDURE

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OBJECTIVES: Currently, the work of Schneeweiss, et al. (2009) for propensity score adjustment is considered the standard approach for accounting for confounding in large claims data sets and is endorsed by such bodies as the Observational Medical Outcomes Partnership (OMOP) in the United States. The procedure appears to perform well and has many attractive features for the practitioner; however, examination of the selection of a set of potential effects for adjustment typically involves the perusal of large tables of summary statistics. For large data sets with potentially hundreds of covariates, this display does not afford the practitioner an easy, intuitive view of the relationships amongst the confounders and with the desired outcome under study. METHODS: Modification of simple regression data visualization suggested by Cleveland (1993), Keller and Keller (1993), Harris (1999), Friendly (2001) and others were developed in common statistical software packages (e.g. SAS). RESULTS: The individual and joint behavior of the contribution of various confounders could be identified quickly and enhanced the user’s understanding of their role in the procedure. CONCLUSIONS: In a setting with a large number of confounders, the procedure suggested by Schneeweiss, et al. reduces the number of confounders to a more manageable and practical level. Graphical techniques help the practitioner achieve a better understanding of the role of these confounders and the rationale for their inclusion in the adjustment procedure.

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PRI93

A NEW APPROACH TO MODELING CANCER RECURRENCE AND FOLLOW-UP

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OBJECTIVES: The ability to model cancer recurrence could assist in the optimization of surveillance strategies. However, capturing the dynamics of cancer recurrence in order to simulate follow-up surveillance after initial extirpative surgery presents a significant methodological challenge. The difficulty of modeling recurrence patterns is that relevant experimental and observational data is collected in the context of heterogeneous protocols for follow-up. Using the example of colorectal cancer, we propose a method of controlling for choice of follow-up regimen in order to infer the value of key natural history parameters. Once these values are inferred, any hypothetical follow-up regimen can be superimposed upon the natu-