situation 3; CIs cannot defined), the combination of the two proposed methods was significantly better than the conventional methods. METHODS: We compared the incremental predictive value of the probability-classification versus a deterministic grouping of previous healthcare utilization for predictive model accuracy. METHODS: Administrative databases from two cities in Canada (Montreal, Quebec and Ottawa, Ontario) were used to estimate the incremental predictive value of a model for predicting the risk of serious complications (model 1) and model 1 + initiating-service groups (model 3). Optimism-corrected C-statistics and root mean square error (RMSE) were used to compare model prediction accuracy. RESULTS: The cohort consisted of 3,105 individuals; of which 38.3% had a recurrent episode, with an average cost of $3,803/AD (SD = $11,959). LCA identified two groups: high user (15.2%) and low user (84.8%), while about 51.6% of the cohort was classified as moderate user. Model 2 predicted episode time better (C-statistic = 0.94) than model 3 (C-statistic = 0.91), and model 1 (C-statistic = 0.87). Model 3 predicted cost of the subsequent episode better (RMSIE = 11934.5) than model 2 (RMSIE = 11599.8) and model 1 (RMSIE = 12075.9). CONCLUSIONS: The findings suggest that both LCA-defined groups and initiating-service groups could be used to summarize past utilization for risk prediction modeling, the choice may depend on the outcome of interest.

PM36 NON-DISCRIMINATORY OUTCOMES ARE IMPORTANT FACTORS IN HOSPITAL EFFICIENCY STUDIES AND POLICY EVALUATION

Passaphoty, Sir M

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OBJECTIVES: Hospital efficiency is the focus of several studies and increasingly, data envelopment analysis (DEA) is used to compute and compare efficiencies of hospitals for quality improvement and policy analysis. DEA is a non-parametric approach to compute efficiency considering multiple inputs and outputs and benchmark hospitals, with the presumption that the inefficient hospitals can reduce inputs and/or increase outputs to improve their efficiency. Hospitals are complex systems and have multiple non-discretionary inputs, such as type of hospital or region of location that are not under the control of administration, and hence cannot be assessed. This study employed DEA methods to consider all inputs and outputs in DEA models. METHODS: One year’s worth of data for both the Core Measures and Quality of Care Measures (QCMs) were used. The data were divided into two groups: high user (15.2%) and low user (84.8%), while about 51.6% of the cohort was classified as moderate user. The cycle outcomes were seen between FSH and FSH for: live birth per ET (38.1% vs 38.3%, OR 1.02 [95%CI: 0.82–1.26], p = 0.87), and live birth per pregnancy (54.4% vs 54.9%, OR 1.00 [95%CI: 0.78–1.28], p = 0.98), respectively. CONCLUSIONS: Most published analyses of fertility treatment outcomes are derived from single fertility center datasets. This methodology successfully identified two distinct IVF treatment protocols and allowed comparison of outcomes using real-world healthcare claims data sourced from a variety of fertility centers.

PM34 AN ANALYSIS OF KIDNEY THERAPY OPTIONS

Youinou M1, Forgone D1, Akhatou A1, Jahi S1, Hartmann M1, Kiss A1

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OBJECTIVES: Kidney disease is a common condition in which kidneys fail to function properly. In this study, the highest incidence and prevalence rates of end-stage renal disease (ESRD) (i.e. both renal transplant and dialysis) were reported from the USA, Taiwan, and Japan. In the Arab countries of the Middle East, Saudi Arabia recorded the highest prevalence of patients with renal failure of 600 cases per million of population, while Kuwait recorded the lowest prevalence rate of 10 mg/dl). An intermediate risk type-2 diabetes cohort (age 52 years, HbA1c 8%, SBP 119/85 mmHg for: live birth per ET (38.1% vs 38.3%, OR 1.02 [95%CI: 0.82–1.26], p = 0.87), and live birth per pregnancy (54.4% vs 54.9%, OR 1.00 [95%CI: 0.78–1.28], p = 0.98), respectively. CONCLUSIONS: Most published analyses of fertility treatment outcomes are derived from single fertility center datasets. This methodology successfully identified two distinct IVF treatment protocols and allowed comparison of outcomes using real-world healthcare claims data sourced from a variety of fertility centers.

PM35 ASSESSING THE INCREMENTAL PREDICTIVE VALUE OF HEALTHCARE UTILIZATION PATHWAYS IN RISK PREDICTION MODELING

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1University of Manitoba, Winnipeg, MB, Canada; 2Saskatchewan Health Quality Council, Saskatoon, Canada

OBJECTIVES: The objective was to compare the incremental predictive value of a probability-based classification versus a deterministic grouping of previous healthcare use for subsequent healthcare outcomes. METHODS: Administrative databases from two Canadian hospitals (Montreal, Quebec and Ottawa, Ontario) were used to estimate the incremental predictive value of a model for predicting the risk of serious complications (model 1) and model 1 + initiating-service groups (model 3). Optimism-corrected C-statistics and root mean square error (RMSE) were used to compare model prediction accuracy. RESULTS: The cohort consisted of 3,105 individuals; of which 38.3% had a recurrent episode, with an average cost of $3,803/AD (SD = $11,959). LCA identified two groups: high user (15.2%) and low user (84.8%), while about 51.6% of the cohort was classified as moderate user. Model 2 predicted episode time better (C-statistic = 0.94) than model 3 (C-statistic = 0.91), and model 1 (C-statistic = 0.87). Model 3 predicted cost of the subsequent episode better (RMSIE = 11934.5) than model 2 (RMSIE = 11599.8) and model 1 (RMSIE = 12075.9). CONCLUSIONS: The findings suggest that both LCA-defined groups and initiating-service groups could be used to summarize past utilization for risk prediction modeling, the choice may depend on the outcome of interest.

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