INPATIENT RESOURCE UTILIZATION IN BRONCHIAL AND LUNG CANCER: ANALYSIS OF 2007 HEALTH CARE UTILIZATION AND PROJECT (HCUP) DATA

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OBJECTIVES: To assess overall inpatient resource utilization; and to identify patient-, and hospital-related predictors of inpatient length of stay (LOS), total charges, and inpatient mortality in bronchial and lung cancer. METHODS: A retrospective database analysis was conducted using the 2007 Nationwide Inpatient Sample (NIS) database of the Health Care Cost and Utilization Project (HCUP). Patient- (age, sex, payer) and hospital-related (private, teaching, region) characteristics were included in the analysis. The outcome variables were LOS, total mortality. Descriptive analysis examined the differences in bronchial and lung cancer-related outcome variables. Regression analyses were conducted to investigate the predictors of LOS, charges, and inpatient mortality in bronchial and lung cancer. All statistical analyses were conducted using Stata 17.0 version. RESULTS: The hospital discharges for bronchial and lung cancer in 2007 NIS were 153,017 (52.38% male; 7.59% in age group 65–84). Mean LOS was 7.3 ± 0.1 days, mean charges were $45,473 ± 1,079, and inpatient mortality was 11.42%. Majority (89.0%) of the hospitalizations were located in metropolitan areas. Most hospitalizations (76.4%) were in private, not-for-profit hospitals. Medicare was the most common payer for the hospitalizations. Total charges were highest for hospitalizations identified in the Western region ($68,655) and in private, for-profit hospitals ($59,233). Inpatient mortality was higher among hospitalizations in non-metropolitan areas (16.06%). CONCLUSIONS: Bronchial and lung cancer is the second leading cause of death in United States and thus, it is important to characterize resource utilization and important predictors for the disease. Patient- and hospital-related characteristics identified from this study will be useful in stratifying high-risk individuals and those with high inpatient resource utilization. Disease management programs such as smoking cessation programs can be implemented in high-risk population which can improve patient well-being, reduce hospitalizations, and promote cost savings.

CANCER – Patient-Reported Outcomes Studies

EFFECTS OF VA ONCWATCH INTERVENTION ON COLORECTAL CANCER SCREENING ADHERENCE

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OBJECTIVES: In 2008, the Veterans Integrated Service Network (VISN) 7 implemented the colorectal cancer (CRC) Oncology Watch intervention (OncWatch), an IT system aimed at improving screening adherence and expanding use of colonoscopy for diagnostic and surveillance follow-ups. This study is to evaluate the effects of the OncWatch on CRC screening adherence. METHODS: We used 1998–2009 Veterans Affairs (VA) administrative data to construct two cohorts of average-risk, age 50–64 veterans eligible for CRC screening, one for 2007–2008 and the other for 2007–2010. Average-risk veterans were those who did not report a history of colorectal cancer or another risk factor, age 50–64 veterans across the VA in 2007 or 2009 were included in this study. Veterans in a cohort for a year were considered adherent if they completed fecal occult blood test during that year, flexible sigmoidoscopy or double-contrast barium enema during the year or the 4 previous years, or colonoscopy during that year or the 5 previous years. Using a difference-in-differences approach, we applied multivariable linear probability models with hospitals fixed-effects for estimation. RESULTS: The proportions of veterans adherent to screening in VISN 7 (including 9 hospitals) were 31.62% in 2007 and 34.37% in 2009 and the proportions in the control VISNs (including 120 hospitals) 30.27% and 32.33%, respectively. Among the screening adherent, the proportions adherent to colonoscopy in VISN 7 were 16.44% in 2007 and 24.40% in 2009; the proportions in the control VISNs 26.16% and 38.39%, respectively. The multivariable analyses showed that OncWatch was associated with a one percentage-point increase in the likelihood of adherence among the veterans eligible for screening and a 3-percentage-point decrease in the likelihood of screening colonoscopy among the adherent (P < 0.001). CONCLUSIONS: This preliminary study suggests OncWatch slightly increased the colonoscopy screening adherence among average-risk, age 50–64 veterans. However, OncWatch may have unintentionally reduced use of screening colonoscopy, possibly because limited colonoscopy capacity was diverted from screening indications to diagnostic and surveillance indications.

A REVIEW AND META-ANALYSIS OF COLORECTAL CANCER UTILITIES

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OBJECTIVES: To perform a systematic review of the literature on the utility weights for colorectal cancer (CRC) health states; to determine the effects of study characteristics and role of “time to/from initial care” on utility values. METHOD: We identified 26 articles in English, providing 161 unique utilities for CRC health states elicited from 3574 respondents. Some utilities were estimated from SF-36 scores. Data were analyzed using Ordinary Least Squares and Linear Mixed-Effects with CRC cancer type, condition, stage, time to/from initial care, instrument, administration and study design as independent variables. RESULTS: In the base model, the estimated utility of the reference case (a scenario of a CRC patient on stage III in continuous care and more than 1 year post-operation, rated by using EQ/SD and HUI3) was 0.72. Cancer type, condition, stage, time to/from initial care, and study design were associated with utility differences of 0.08 to 0.30 (P < 0.05). Utilities derived by using EQ/SD/HUI3 instrument were 0.09 lower than SQ/TO, 0.08 lower than EQ/Drax and 0.09 lower than SF-36 (P < 0.01) in the base model of OLS analysis. Those utilities differences were significantly larger in the supplementary model. Utilities elicited at “post-operation more than 1 year” were 0.15 higher than “preoperative”, 0.30 higher than “post-operation 1 year” in supplemental model. CONCLUSIONS: The CRC utilities review shows a lack of quality of life (QoL) studies for surveillance and terminal care which might cause high level uncertainty in the cost-effectiveness analysis results. Pre- and post-operative health states and time to/from health intervention are important factors that influence QoL. Utilities appear sensitive to factors such as cancer type, time to/from initial care and utility instruments.

ESTIMATION AND COMPARISON OF EQ-5D HEALTH STATES’ UTILITY WEIGHTS FOR PNEUMOCOCCAL AND HUMAN PAPILLOMAVIRUS DISEASES IN ARGENTINA, CHILE AND THE UNITED KINGDOM

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OBJECTIVES: EQ-5D is a widely used generic health measure. One concern is the comparability of EQ5D derived weights of selected health states among different countries. Our objective was to estimate and compare EQ-5D health states’ weights for pneumococcal and human papillomavirus (HPV) diseases in three different countries (Argentina, Chile and United Kingdom (UK)). METHODS: Twelve health state vignettes (8 pneumococcal, 4 HPV) were designed and administered to a convenience sample in order to obtain descriptive data regarding the different disease-related EQ-5D health states. Subsequently, country-specific EQ-5D time-trade-off based weights were used in order to map descriptive health states into local preferred weights. Finally, inter-country differences for each condition were compared using repeated measures ANOVA. RESULTS: Between July and August 2009, 73 subjects (mean age = 31 years, range 22 to 58) successfully responded the questionnaire. Fifty-three percent of the respondents were female and 96% worked or studied in the health sector. For pneumococcal disease-related health states, utility coefficients’ means ranged from 0.331 (sepsis, Chile) to 0.727 (auditive sequela, Argentina). Regarding HPV-related conditions, their mean ranged from 0.152 (cervical cancer, UK) to 0.848 (CDI1, Argentina). Chile consistently showed the lowest values in pneumococcal states and in one HPV state, while those of UK were the lowest in most HPV states. Argentina showed the highest values in both disease groups. Mean differences between countries in pneumococcal health states were 0.236 (Argentina-Chile), 0.207 (Argentina-UK), and 0.048 (Chile-UK), and those for HPV were 0.117 (Argentina-Chile), 0.133 (Argentina-UK), and 0.017 (Chile-UK). Differences in country-specific values for each health state were statistically significant (p < 0.001). CONCLUSIONS: Preference weights for each condition differed significantly between analyzed countries even through the screening, one was fixed for each. These results stress the importance of using local and not international weights in context-specific decision making processes.