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- (sex, age, payer) and hospital-related (private, teaching, region) characteristics were included in the study. RESULTS: 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 an alpha level of 0.05. RESULTS: The hospital discharges for bronchial and lung cancer in 2007 NIS were 153,017 (52.38% male, 57.59% in age group 65–84). Mean LOS was 7.3 ± 1.0 days, mean charges were $45,473 ± 1079, and inpatient mortality was 11.42%. Major (89.6%) of the hospitalizations were located in metropolitan areas. Most hospitalizations (76.4%) were in private, non-profit hospitals. Medicare was the most common payer for the hospitalizations. Total charges were highest for hospitalizations identified in the Western region ($46,655) and in private, for-profit hospitals ($59,233). Inpatient mortality was highest 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 and the other for 2009. Veterans were classified into three risk groups: those who had a CRC screening test, 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 9 previous years. Using a difference-in-differences approach, we applied multivariable linear 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 that OncWatch slightly increases screening adherence among average-risk, age 50–64 veterans. However, OncWatch may have unintentionally reduced use of screening colonoscopy, 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 from/on initial care” on utility values. METHODS: In a systematic review 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 from/to initial care, instrument, administration and study design as independent variables. RESULTS: In the base model, the estimated utility of the reference case (scenario of a CRC patient on stage I and in continues care and more than 1 year post-operation, rated by using EQ5D/ HUI3) was 0.72. Cancer type, condition, stages, time from/to initial care, administration and study design were associated with utility differences of 0.08 to 0.30 (P < 0.05). Utilities derived by using EQ5D/HUI3 instrument were 0.09 lower than SG/TTO, 0.08 lower than EQ5D/Drax and 0.09 lower than SF-36 (P < 0.01) in the base model of QLS analysis. Those utilities differences were significantly larger in the supplemental 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 colorectal and terminal care case that might cause high level uncertainty in the cost-effectiveness analysis results. Pre- and post-operative health states and time from/off health intervention are important factors that influence QoL. Utilities appear sensitive to factors such as cancer type, stage from/to 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: We estimated utility weights for 87 pneumococcal and 4 HPV health states in Argentina, Chile and the UK. We then compared the Argentina-Chile, Argentina-UK, and Chile-UK differences in country-specific values for each health state. 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 sequelae, Argentina). Regarding HPV-related conditions, their mean ranged from 0.152 (cervical cancer, UK) to 0.848 (CD1, 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 though the screening, one was valued for each. These results stress the importance of using local and not international weights in context-specific decision making processes.
Results were similar in the ITT population (HER2+ or HER2- patients). CONCLUSIONS: Utility values for patients with HER2+ MBC are generally similar for patients receiving letrozole plus lapatinib or letrozole plus placebo. Post-progression utility values were based largely on a single assessment for each patient and may not be representative of patient utility during all post-progression survival.

**PCN106**

**IMPACT OF AN INDIVIDUAL’S LOCUS OF CONTROL ON UTILITY FOR HEAD AND NECK CANCER HEALTH STATES**

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OBJECTIVES: The determinants of utilities for health are largely unknown. The psychosocial construct Locus of Control (LOC) describes the extent to which individuals feel their health is determined by their actions, by a powerful external figure, or by chance. LOC is associated with health-related quality of life among cancer patients but its impact on utilities has not been examined. The objective was to estimate the effect of LOC on utilities for head and neck cancer (HNC) health states among Canadians without cancer. METHODS: A convenience sample of respondents without cancer was recruited according to the age- and sex-distribution of Canada in Vancouver and Toronto. Standard gamble utilities were elicited for health states describing HNC stage and type. Standardized health state descriptions were based on literature review, trial data, and feedback from clinicians experienced in HNC treatment and quality-of-life researchers. Respondents completed the validated Multidimensional Health LOC scale. Mixed regression models were used to determine associations between interval locus of control scores and utilities, adjusting for demographic variables, HNC stage and type. RESULTS: Utility values were elicited from 101 respondents with a mean age of 47 years (48% male). Mean utilities were: 0.62 for locorocional laryngeal, 0.61 for locorocional non-laryngeal, 0.57 for recurrent non-locorocional, 0.56 for recurrent laryngeal, 0.52 for metastatic non-laryngeal, and 0.50 for metastatic laryngeal, and 0.34 for post-progression, HNC. There was suggestive evidence that LOC was associated with utilities (P = 0.079). Respondents who had a dominant Chance LOC-rated health states significant lower (P = 0.012): for every one unit increase on the Chance subscale, there was a decrement of 0.011 in mean utility value. CONCLUSIONS: This evidence indicates that LOC is a determinant of utilities for head and neck cancer health states. Replicating these findings in other populations and diseases would shed insight into the psychosocial determinants of preferences.

**PCN107**

**EVALUATION OF QUALITY OF LIFE FOR ANTI-CANCER TREATMENT AMONGST KOREAN METASTATIC BREAST CANCER PATIENTS: A MULTICENTER CROSS-SECTIONAL STUDY**

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OBJECTIVES: This research is designed to reveal Quality of life of Korean patients with metastatic breast cancer for cancer treatments. METHODS: This is a multicenter cross-sectional study in breast cancer patients receiving palliative chemotherapy. Total 199 patients with metastatic breast cancer were interviewed from 4 centers. Clinical, socio-demographic, and quality of life data were collected. Subjects completed a face-to-face interview with trained interviewer to assess their health status for breast cancer treatment. Patients recalled the before diagnosis status under current situation, we used the three methods to evaluate the health status: EORTC QLQ-C30, BR-23, EQ-5D. For each time overall utility weighs for EORTC, QLQ-C30 and EQ-5D was 0.81 and 0.78 respectively(before diagnosis). It is higher than those of current (EORTC: QLQ-C30: 0.34, EQ-5D: 0.60), the patients who are before diagnosis estimated higher functioning score compared to current. (physical functioning scale; before cancer: 92.8, current 65.3). The higher the score is, the better patients’ function is. Symptom scale scores are the similar with functioning scale scores. The higher the score is, the worse the symptom is. before cancer status has lower symptom scale scores than current. (fatigue symptom scale; Before cancer: 25, current: 48.5) BR 23 scale, there were determinations in patients for all domains compared to scores of before breast cancer patients. Especially, patients’ current body image score is significantly lower than that of before diagnosis patients, (before diagnosis: 91.4, current: 46.4) CONCLUSIONS: There are few study of Quality of life in breast cancer patients. It is meaningful that this study provided the utility weights for breast cancer patients in Korea.

**PCN108**

**PSYCHOMETRIC VALIDATION OF A PATIENT QUESTIONNAIRE EVALUATING SATISFACTION WITH A DARBEPOETIN ALPHA PRE-FILLED DEVICE FOR SELF-INJECTION (ARANESP®SURECLICK™DEVICE), AND A HOME-SERVICE (2CARE@SERVICE) IN CHEMOTHERAPY-INDUCED ANAEMIA (MBC) AND RENAL CELL CARCINOMA (RCC)**

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OBJECTIVES: To validate a questionnaire evaluating patient satisfaction with the darbepoetin alpha pre-filled device for self-injection (Aranesp®SureClick™device) and the 2care®service for product delivery and helping patients with injection at home. METHODS: Patients with non-myeloid malignancies to be treated with 500mcg darbepoetin alfa three-weekly for chemotherapy-induced anaemia using the Aranesp®SureClick™device and 2care®service were enrolled in a prospective, observational study in The Netherlands. Following each of the first three darbepoetin alpha-injections, patients completed a questionnaire specifically developed for this study. This questionnaire included items (answer ranges, 0-10) related to satisfaction with the device (5 items: ease-of-use/pain /anxiety/expectations/overall-satisfaction) and the 2care®service (9 items: quickness/delivery/punctuality/friendliness/competency/flexibility/information/usefulness/overall-satisfaction). Questionnaire structure was defined using factor analyses and confirmed by multi-trait analysis. Internal consistency was evaluated by Cronbach’s alphas. Range of minimal important differences (MIDs) were calculated using anchor-based and distribution-based methods. Determinants of overall satisfaction with the Aranesp®SureClick™device were analyzed using multiple regression analyses. RESULTS: A total of 242 new patients (mean age 64 years) were included in the study. At first injection, median item-scores ranged from 8.0-9.4. Two composite scores were defined (1 item not correlated with any scores: quickness 2care@-contact making appointment) with the Aranesp®SureClick™device and satisfaction with the 2care®service. Item-score composite represent a MID of 0.5 for each respectively. Cronbach’s alphas were 0.85 and 0.84. All items met convergent and discriminant validity criteria. Plausible MIDs were 0.5-0.7 and 0.3 for satisfaction with the Aranesp®SureClick™device and 2care®service, respectively. At first injection, satisfaction with the Aranesp®SureClick™device was mainly determined by expectations, pain, and ease-of-use. After 3 injections, the main driver was ease-of-use.

**PCN109**

**DEVELOPMENT OF THE PATIENT-REPORTED VERSION OF THE COMMON TERMINOLOGY CRITERIA FOR ADVERSE EVENTS (PRO-CTCAE)**

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OBJECTIVES: The standard lexicon for reporting adverse events in NCI-sponsored trials is the Common Terminology Criteria for Adverse Events (CTCAE). This 2018 version consists of over 800 individual items. Currently, all items are reported by clinicians. However, multiple studies have found that clinicians tend to underreport symptom severity and onset compared to patient self-reports. In October 2018, the NCI contracted a multi-institutional consortium to develop patient versions of CTCAE items, and an administration electronic platform. METHODS: A multidisciplinary committee systematically identified CTCAE items with sufficient subjective component to be amenable to patient reporting. Systematic reviews of publications and existing questionnaires of quality of life data were conducted to determine optimal formats for questions and response options, and plain-language terms for each new PRO-CTCAE item. Cognitive interviews were conducted in 100 patients to refine items. RESULTS: Seventy-seven “symptoms” were identified in the CTCAE which were amenable to patient reporting. The committee determined that measured attributes for each symptom should include frequency, severity, and activity interference, assessed via discrete questions for each symptom. A standardized format for questions and response options, and plain language terms for each symptom were formulated. A web-based platform was developed for creating and administering the new PRO-CTCAE items. CONCLUSIONS: A patient version of the CTCAE system, known as the PRO-CTCAE, has been developed. This prototype is undergoing further testing to assess its validity, reliability, usability, and feasibility for use in a variety of cancer care settings. The PRO-CTCAE system will both enhance adverse event reporting by directly integrating patient-of-use and will foster consistency of data collection methods across studies.

**PCN110**

**HOW MUCH DO PATIENTS WITH RENAL CELL CARCINOMA (RCC) VALUE PROGRESSION FREE SURVIVAL IN MEDICAL DECISION MAKING—RESULTS FROM A BENEFIT-RISK CONJOINT STUDY**

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BACKGROUND: Overall survival (OS) has been traditionally used as the primary endpoint in oncology trials, however cross-over to 2nd line agents may result in biases for OS. Recent trials have used progression free survival (PFS) as the primary endpoint. Understanding patient preferences regarding expected PFS vs. avoidance of risk for toxicities in medical decision-making is needed.

OBJECTIVES: To estimate RCC patients’ willingness to accept toxicities and medication-related risks to increase PFS. METHODS: A US residents aged 18 years and over with RCC completed a web-enabled, format-conjoint survey that presented a series of 12 trade-off questions, each including a pair of hypothetical RCC medication profiles. Each profile was defined by efficacy (PFS), tolerability effects (fatigue, diarrhea, hand-foot syndrome, mouth