PCV106
RE-HOSPITALIZATION RATES OF ACUTE CORONARY SYNDROME PATIENTS IN REAL WORLD CLINICAL PRACTICE: OBSERVATIONS FROM A NATIONAL ADMINISTRATIVE CLAIMS DATA Tuncel O1, Gandhi RK2, Bhandroider IP1, Stephenson J1, Gold A1, Fu AC1, Kern DM1, Singer J1
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OBJECTIVES: The national rehospitalization rates of mortality rates are increasingly being used as quality of care measures that have significant reimbursement implications. We examine the rates of re-hospitalization and mortality of acute coronary syndrome (ACS) patients in real-world clinical practice. METHODS: Commercially-insured patients (age >18 years) with an index hospitalization for ACS (ICD-9-CM codes for acute myocardial infarction or unstable angina (UAI) between 1/1/2007-7/31/ 2010 were identified from medical claims in the HealthCore Integrated Research Database (HIRD). Patients with ACS events within one year prior to index hospitalization were excluded. RESULTS: Identification of ACS causes and ACS-related rehospitalization and rehospitalization rates within 30 days and 12 months after index event were evaluated. RESULTS: Of 66,772 ACS patients (60% male; mean age 66.6 years), 21% had diagnostic coding for ST elevation myocardial infarction (STEMI), 31% had coding for non-ST-elevation myocardial infarction (NSTEMI), 37% had UA, and 11% had none. A novel approach to analysing the risk-adjusted cost-effectiveness (RAC-E) of acute services for patients presenting with chest pain at the four main public hospitals in South Australia is presented. METHODS: Routinely collected data on hospital separations (including costs) and mortality were used to validate deterministically derived relevant intermediate endpoints over a two-year follow-up period in a cohort of patients presenting with chest pain in the year to July 2006 were identified. Lifetime costs and survival were extrapolated from these endpoints using data from chest pain patients presenting between July 2006 to July 2008. RESULTS: The study resulting estimating lifetime costs and survival were standardized using separate regression models that estimated expected cost and survival values for each patient. RESULTS: In the base case, two of the four hospitals were dominated by hospital 1. Hospital 2 had lower standardized lifetime costs than hospital 1, and the incremental cost per life year gained between these two hospitals was AUS$2,909. A bootstrapped probabilistic sensitivity analysis showed hospital 1 to have very high probabilities of cost-effectiveness at relevant dollar values for a life year gained. Analysis of differences in cost components between the hospitals showed that hospital 1 spent relatively less on pathology and imaging, whilst spending more on nursing time and pharmaceuticals. CONCLUSIONS: RAC-E provides a useful framework for identifying important differences in the costs and benefits associated with variations in clinical practice. Potential determinants can be partially investigated with the data, but further primary analysis of clinical pathways at key hospitals is required to fully inform the dissemination of best practice.

PCV108
CARDIOVERSION TREATMENT PATTERNS AND OUTCOMES AMONG ACUTE ATRIAL FIBRILLATION PATIENTS IN 5 EUROPEAN COUNTRIES Tuncel O1, Gandhi RK2, Bhandroider IP1, Stephenson J1, Gold A1, Fu AC1, Kern DM1, Singer J1
1Healthcore, Inc., Wilmington, DE, USA, 2AstraZeneca Pharmaceuticals LP, Wilmington, DE, USA
OBJECTIVES: The national rehospitalization rates of mortality rates are increasingly being used as quality of care measures that have significant reimbursement implications. We examine the rates of re-hospitalization and mortality of acute coronary syndrome (ACS) patients in real-world clinical practice. METHODS: Commercially-insured patients (age >18 years) with an index hospitalization for ACS (ICD-9-CM codes for acute myocardial infarction or unstable angina (UAI) between 1/1/2007-7/31/ 2010 were identified from medical claims in the HealthCore Integrated Research Database (HIRD). Patients with ACS events within one year prior to index hospitalization were excluded. RESULTS: Identification of ACS causes and ACS-related rehospitalization and rehospitalization rates within 30 days and 12 months after index event were evaluated. RESULTS: Of 66,772 ACS patients (60% male; mean age 66.6 years), 21% had diagnostic coding for ST elevation myocardial infarction (STEMI), 31% had coding for non-ST-elevation myocardial infarction (NSTEMI), 37% had UA, and 11% had none. A novel approach to analysing the risk-adjusted cost-effectiveness (RAC-E) of acute services for patients presenting with chest pain at the four main public hospitals in South Australia is presented. METHODS: Routinely collected data on hospital separations (including costs) and mortality were used to validate deterministically derived relevant intermediate endpoints over a two-year follow-up period in a cohort of patients presenting with chest pain in the year to July 2006 were identified. Lifetime costs and survival were extrapolated from these endpoints using data from chest pain patients presenting between July 2006 to July 2008. RESULTS: The study resulting estimating lifetime costs and survival were standardized using separate regression models that estimated expected cost and survival values for each patient. RESULTS: In the base case, two of the four hospitals were dominated by hospital 1. Hospital 2 had lower standardized lifetime costs than hospital 1, and the incremental cost per life year gained between these two hospitals was AUS$2,909. A bootstrapped probabilistic sensitivity analysis showed hospital 1 to have very high probabilities of cost-effectiveness at relevant dollar values for a life year gained. Analysis of differences in cost components between the hospitals showed that hospital 1 spent relatively less on pathology and imaging, whilst spending more on nursing time and pharmaceuticals. CONCLUSIONS: RAC-E provides a useful framework for identifying important differences in the costs and benefits associated with variations in clinical practice. Potential determinants can be partially investigated with the data, but further primary analysis of clinical pathways at key hospitals is required to fully inform the dissemination of best practice.

CONCLUSIONS: While amiodarone had a longer median time to cardioversion, faster acting agents, such as flecainide and propafenone, had conversion times at a median time of 12 and 48 hours compared to an average of 7 and 24 hours, respectively, in other countries. In Germany, little difference was observed with median conversion times of 9 and 10 hours for amiodarone IV and oral, respectively. Median conversion times were also similar between amiodarone IV and flecainide IV and oral in Spain and Italy (a difference of 1 and 2 hours, respectively) compared to an average difference in median conversion time of 4 hours between these treatments overall.

Cardiovascular Disorders - Research on Methods

PCV109
BEYOND CASE FATALITY: A NEW METHOD TO ESTIMATE THE EFFECT OF INCREASING TREATMENT UPTAKE ON MORTALITY Mitsakakis N1, Wijeyasurya HC2, Krahn M3
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OBJECTIVES: Epidemiological models have been widely used to estimate how increased uptake of medical and surgical treatments affect mortality and related outcomes. Standard methods rely on the estimate of the case fatality, defined as the risk of death in the absence of the treatment. Because most patients receive some treatment, mortality rates where some treatment is present are often used instead of case fatality rates, leading to biased results. A method that does not rely on case fatality estimates is needed. METHODS: We hypothesized that increasing treatment to benchmark levels uptake results in a reduction of cardiovascular mortality of 22.5%. The standard method gives a reduction of 17%, probably due to underestimation of the case fatality. CONCLUSIONS: Here we present an alternative method for the estimation of the effect of treatment uptake increase to the reduction of mortality. Our example suggests that the magnitude of bias associated with the standard method may be substantial. This approach may be a useful tool for epidemiological and health care research.

PCV110
DEVELOPMENT AND VALIDATION OF A SHORT PROB MEASURE OF HEALTH STATUS FOR INDIVIDUALS WITH ACUTE MYOCARDIAL INFARCTION: THE MYOCARDIAL INFARCTION DIMENSIONAL ASSESSMENT SCALE (MIDAS) Jenkinson C1, Thompson D2, Roebuck A3, Churchman D4
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OBJECTIVES: To develop and validate a disease-specific health status measure for individuals with myocardial infarction (MI). METHODS: The development of the Myocardial Infarction Dimensional Assessment Scale (MIDAS) followed three main stages. Stage 1 consisted of in-depth, semi-structured, exploratory interviews conducted on a sample of 31 patients to identify areas of salience and concern to patients with MI. These interviews generated 48 candidate questions. In stage 2 the 48-item questionnaire was used in a postal survey to identify appropriate rephrasing/shortening, to determine acceptability and to help identify sub-scales of the instrument. A total of 311 patients addressed 3 different versions of MI. In stage 3 the construct validity of MIDAS subscales was examined in relation to clinical and other health outcomes. Setting - A single centre (district general hospital) in England was used for stages 1 and 3 and a national postal survey was conducted for stage 2. Patients - A total of 410 patients were recruited for the national survey (stage 2). Full data was available on 348 (85%) patients. 155 patients were recruited to test construct validity (stage 3). RESULTS: The MIDAS contains 35 questions measuring seven areas of health status: physical activity, insecurity, emotional reaction, dependency, diet, concerns over medication and side effects. The measure has high face, internal and construct validity and is likely to be useful in treatment interventions for MI. CONCLUSIONS: The MIDAS has acceptable validity and reliability. It is suitable for use in a variety of settings for patients with myocardial infarction.

PCV111
IDENTIFICATION OF RESPONSE SHIFT AMONG HYPERTENSIVE PATIENTS WITH CORONARY ARTERY DISEASE USING TWO STRUCTURAL EQUATION MODELING (SEM) APPROACHES Gandhi PK1, Ried LD2, Huang IC1, Kimberlin C1, Kauf T4, Sub DC3
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OBJECTIVES: The Myocardial Infarction Dimensional Assessment Scale (MIDAS) followed three main stages. Stage 1 consisted of in-depth, semi-structured, exploratory interviews conducted on a sample of 31 patients to identify areas of salience and concern to patients with MI. These interviews generated 48 candidate questions. In stage 2 the 48-item questionnaire was used in a postal survey to identify appropriate rephrasing/shortening, to determine acceptability and to help identify sub-scales of the instrument. A total of 311 patients addressed 3 different versions of MI. In stage 3 the construct validity of MIDAS subscales was examined in relation to clinical and other health outcomes. Setting - A single centre (district general hospital) in England was used for stages 1 and 3 and a national postal survey was conducted for stage 2. Patients - A total of 410 patients were recruited for the national survey (stage 2). Full data was available on 348 (85%) patients. 155 patients were recruited to test construct validity (stage 3). RESULTS: The MIDAS contains 35 questions measuring seven areas of health status: physical activity, insecurity, emotional reaction, dependency, diet, concerns over medication and side effects. The measure has high face, internal and construct validity and is likely to be useful in treatment interventions for MI. CONCLUSIONS: The MIDAS has acceptable validity and reliability. It is suitable for use in a variety of settings for patients with myocardial infarction.