another were selected. Valvular and non-valvular patients were identified using appro-
imate ICD-9 codes. A bivariate comparison of baseline characteristics and outcomes
measures was provided. T-test, Mann Whitney U-test, and chi square test were used
based on the distribution and standardized differences were calculated. Risk adjust-
ment was done using the propensity score method with the Probit algo-
rithm. RESULTS: Out of 19,268 identified patients, 392 were diagnosed with valvular
atrial fibrillation, and 18, 575 with non-valvular atrial fibrillation. Patients were
similar in terms of age and gender, but significantly different in terms of comorbid
conditions and baseline CHADS score. Patients with valvular atrial fibrillation were
more likely to have a Charlson comorbidity score, congestive heart failure, peripheral
arterial disease, acute coronary syndrome, obesity, etc. Risk-adjusted outpatient visits
(97% vs 95%), transient ischemic attack (3.57 vs 1.76), major bleeding (5.61 vs
2.85) and minor bleeding (4.59 vs 1.56) were all higher for patients with valvular
atrial fibrillation. However, risk-adjusted inpatient hospitalization (39.8% vs
44.77%) and osteoporotic fracture (0% vs. 1.66%) were lower. Overall risk-adjusted
costs did not differ ($15, 426 vs $16,039). CONCLUSIONS: Most of the adverse
events analyzed were higher for valvular atrial fibrillation patients relative to non-
valvular atrial fibrillation patients. However, the economic burden of both groups
of patients on the health care system was similar.

PCV56
INCREMENTAL COSTS OF BLEEDING IN PATIENTS WITH ATRIAL
FIBRILLATION WITHIN A LARGE, NATIONAL HEALTH PLAN
Burke JP1, Sander S2, Henk Hj3
13 FVHI, Eden Prairie, MN, USA, 2Boehringer-Ingelheim Pharmaceuticals, Inc, Ridgefield,
CT, USA
OBJECTIVES: Patients with atrial fibrillation (AF) are often chronically treated with
antiagulant or antiplatelet drugs for stroke prevention and are especially vulnerable
to bleeding. The objective of this retrospective database analysis was to use administra-
tional claims data from a large, national US health care organization to estimate the
incremental costs of bleeding events in patients with AF. METHODS: Administrative
claims data were used to identify patients with AF and bleeding events from January
1, 2002—December 31, 2005 with continuous enrollment for 1 year prior to AF
diagnosis. Patients were stratified into 3 sub-discordant intracranial hemorrhaging
(ICH), major bleeds and minor bleeds. To assess incremental costs, patients with
bleeding were matched on age, gender, region, and month of identification to a
cohort of patients with AF and no evidence of bleeding. Multivariate analyses were used
to estimate the independent incremental costs attributed to bleeding. RESULTS: A total
of 127,135 subjects were identified with AF, 39.1% of whom had bleeding events.
After applying criteria for continuous enrollment and age (≥18 years), a total of 11,266
patients that had evidence of bleeding were identified (1.8% ICH, 10.8% major bleeds
and 87.4% minor bleeds). Compared to matched controls, patients with ICH or major
bleed incurred significantly more costs over the 1-year follow-up period. Mean
adjusted incremental total costs over the 1-year follow-up period were $258,968 in
subjects with ICH and $88,775 in subjects with major bleeds. Patients with minor
bleeds did not incur additional costs compared to controls. CONCLUSIONS: Major
bleeding associated with AF is associated with significant costs over and above that
of AF alone. New strategies that further reduce the risk of bleeding among patients
with AF could reduce the cost of their care.

PCV57
THE DIRECT MEDICAL COSTS OF STROKE IN KOREA
Kim JG1, Rha JH2, Koo JG3, Cho KH4, Kim GE5, Oh GS6, Lee SJ7, Cha JG8, Oh JI9, Lee YS10,
Han BM11
1Asan Medical Center, Seoul, Korea, 2Inha University Hospital, Incheon, South Korea,
3Eulji General Hospital, Seoul, Korea, 4Chonnam National University Hospital, Gwangju,
South Korea, 5Inje University Pusan Paik Hospital, Busan, South Korea, 6Eulji University
Hospital, Daejeon, South Korea, 7Yeungnam University Hospital, Daejeon, South Korea,
8Dong-A University Medical Center, Busan, South Korea, 9Pfizer Pharmaceuticals
Korea Ltd, Seoul, South Korea, 10Princemore Consulting co Ltd, Seoul, South Korea
OBJECTIVES: This study sought to examine the direct medical costs of stroke based
on the actual hospital charge data while previous studies depended on the
insurance claim data in Korea. METHODS: This study is significant in that it examined stroke costs
including non-reimbursed

PCV58
ECONOMIC BURDEN OF VENOUS THROMBOEMBOLISM IN
US HOSPITALS
Bharmal M1, Doye J2, White C2, Gemmen E2
1Quintiles, Falls Church, VA, USA, 2Quintiles Global Consulting, Hawthorne, NY, USA
OBJECTIVES: There is a limited nationally representative data on the economic
burden of venous thromboembolism (VTE), which manifests as deep vein thrombosis
(DVT) or pulmonary embolism (PE). The objectives of this study were to assess
costs associated with DVT and PE and to estimate the independent incremental costs
of VTE. METHODS: Data were analyzed from the 2007 Nationwide Inpatient
Sample (NIS), which is the largest all-payer inpatient care database in the U.S.
containing all discharge data from 1044 hospitals in 40 US states, approximating a 20%
stratified sample of US community hospitals. Using a combination of several ICD-
9-CM codes, hospital discharges were classified as those with a primary diagnosis of
DVT, primary diagnosis of PE, secondary diagnosis of DVT, secondary diagnosis of
PE and secondary diagnosis of DVT and PE. Hospital charges and length of stay were
estimated for each of these VTE hospitalizations. RESULTS: Among all patients, 39,541 (0.93%)
hospital discharges in the US in 2007, 172,731 (0.44%) were primary DVT, 155,281
(0.39%) were primary PE, 402,449 (1.02%) were secondary DVT, 118,537 (0.30%)
were secondary PE and 30,473 (0.08%) were secondary DVT and PE. The average
length of stay for discharges with secondary DVT (11.3 days), secondary PE (12.0
days), and secondary DVT and PE (14.5 days) was substantially more than for stays with
primary DVT (4.9 days) and primary PE (5.8 days). Similarly, the mean (95% CI)
total hospital charges for stays with secondary DVT ($73,152, $68,368–$77,935),
secondary PE ($80,341, $74,782–$85,900), secondary DVT and PE ($98,205, $89,906–
$106,503) was substantially more than for stays with primary VTE ($23,771, $22,572–
$24,970) and primary PE ($30,478, $28,912–$32,044). CONCLUSIONS: In 2007, the economic
burden of VTE in US hospitals was estimated in aggregate at $4.07 billion for primary
DVT and $4.65 billion for primary PE hospitalizations. Compared to primary VTE, the
inpatient costs were substantially larger for secondary VTE.

PCV59
EXPLORING THE RELATIONSHIP OF COST SHARING AND FIXED-DOSE
COMBINATION VERSUS MONO ANTIHYPERTENSIVE MEDICATION
THERAPY AMONG HYPERTENSION PATIENTS
Tsai J1, University of Tennessee Health Science Center, Memphis, TN, USA
OBJECTIVES: To describe the relationship between the cost-sharing and antihyper-
tensive medication therapy of fixed-dose combination (FDC) versus mono therapy.
METHODS: Cross-sectional study of all individuals surveyed in the U.S. Medical
Expenditure Panel Survey 2006 with at least one hypertension diagnosis, only 30 pills
antihypertensive drugs per prescription, and either FDC or mono therapy were
included. Bivariate and multivariate generalized linear regression models that con-
trolled for demographic, socioeconomic and drug characteristics assessed the associa-
tion between the costs and therapy type. Crude and adjusted mean out-of-pocket cost
and total payers paid amount were also computed and compared. The 2006 full-year
person level sample weight was applied in the statistical analysis. RESULTS: The
cohort consist of 2,190 hypertension patients with a mean age of 60.3 years, 53.9%
female, with average Charlson index of 0.36(range 0–8) and 35% population were
on FDC therapy. The multivariate model that adjusted for demographic, socioeconomic
and drug factors, showed FDC therapy had no significant association with out-of-
pocket cost with coefficient(95% confidential interval) of 1.0742(-0.9577 to 3.1061),
but was negatively associated with the total cost with coefficient of -6.6464(-10.1180
to -3.2048). The crude average increase in out-of-pocket and total payer costs per
patient with 30 pills per prescription between FDC versus mono therapy were
$6.22(95% confidence interval, $4.42 to 8.02) and $5.67($2.66 to 8.67), respectively,
CONCLUSIONS: The association results suggested that FDC antihypertensive therapy
does not affect patient out-of-pocket cost, but FDC therapy reduces payer cost. Considering
the number of agents in one pill of the therapy, FDC therapy does not cost significantly more
than patient and payer than mono therapy. Other also provide economic evidence for clinicians to help
ease the financial burden from out-of-pocket cost in patients who need two antihypertensive agents.

PCV60
SYSTEMATIC REVIEW OF THE ECONOMIC BURDEN OF VENOUS
THROMBOEMBOLISM TREATMENT
Woodward TE1, Kachroo S3, Bookhart B1, Chen J5, Reynolds MM1
1United Biosource Corporation, Bethesda, MD, USA, 2United Biosource Corporation,
Lexington, MA, USA, 3Ortho-McNeil Jansen Scientific Affairs, LLC, Rantian, NJ, USA
OBJECTIVES: To summarize economic burden associated with treatment of venous thromboembolism (VTE)
from payer, patient, and caregiver perspectives by assessing characterizations, outcomes, costs, and risk
cruisers of treatment. METHODS: We con-
ducted a systematic search of MEDLINE and EMBASE databases for US economic
studies of VTE published between January 1, 1999 and May 22, 2009. We also
reviewed bibliographies of included studies. Studies were critically appraised using the