their pain. Their pain intensity during last episode of pain was 5 on a 10-point Numeric Rating Scale (NRS). 39% of the respondents had moderate pain (NRS = 5–7), 43% had severe pain (NRS = 7), 67% had headaches, 22% had back pain. 96% of the acute pain sufferers were using drugs for last three months. 96% of them were taking Aspirin® (acetyl salicylic acid), 91% Vermidon® (paracetamol), 90% Novalgin® (Dipyrone), and 80% Apranax® (naproxen sodium). CONCLUSION: Six percent of Turkish adults had acute pain. Sixty-seven percent of the respondents who had acute pain had accompanying disease causing the pain. Pain is a major health care problem in Turkey that needs to be evaluated and researched in depth.

PAIN—Cost Studies

A COST MINIMIZATION ANALYSIS OF IV BOLUS VERSUS IV INFUSION DICLOFENAC IN POST-OPERATIVE PAIN
Wallerstein KRB
Pharma Focus, Belle Mead, NJ, USA

OBJECTIVES: There are two forms of injectable IV diclofenac available (Dyloject bolus and Voltarol infusion). We conducted a cost minimization analysis to determine the total cost of each treatment strategy. METHODS: A decision-analytic model was developed to estimate total treatment costs of IV bolus versus IV infusion diclofenac. The modeled population was patients who post-operatively would require injectable NSAIDs to control their pain. The model timeframe was for the duration that a patient required post-operative pain management with injectable medications. The model inputs included the actual/estimated cost of medicines, the cost of the IV administration process (staff time and consumables), and the cost of treating adverse events (staff time, medicines and consumables). The unit costs and resources are based on UK data. The results are expressed as Pounds Sterling (GBP) and as average cost per patient. One-way sensitivity analyses were also conducted on key parameters. RESULTS: The total cost of treating post-operative pain was less with IV bolus diclofenac (Dyloject) than with IV infusion diclofenac (Voltarol). Diclofenac IV bolus cost a mean of 27.84 per patient versus diclofenac IV infusion mean cost of 78.61 per patient. The difference in overall cost is attributable to the cost of NSAIDs (IV bolus vs 12.19 versus =1.69 IV Infusion), the cost of administering the NSAID (IV bolus vs 9.72 versus =49.73 IV Infusion) and the cost of consumables (IV bolus vs 1.40 versus =16.72 IV infusion). The difference in the costs of rescure medication (IV bolus vs 2.48 versus =6.14 IV infusion) and of treating adverse events (IV bolus vs 2.061 versus =4.33 IV infusion) was less. One-way sensitivity analyses show the results are sensitive to the cost of staff time and consumables. CONCLUSION: Diclofenac IV bolus (Dyloject) is cost saving relative to diclofenac IV infusion (Voltarol) in the treatment of post-operative pain.

EXPECTED COST AND COST CONSIDERATIONS ASSOCIATED WITH OPIOID ROTATION FOR CHRONIC NON-CANCER PAIN: A SIMULATION MODEL
Magar RS1, Fine PG2, White RE3
1PPD, Morrisville, NC, USA, 2University of Utah—Pain Research Center, Salt Lake City, UT, USA, 3Endo Pharmaceuticals, Chadds Ford, PA, USA

OBJECTIVES: To develop an expected-cost model to examine the impact of opioid rotation among patients with chronic non-cancer pain from the payor perspective. METHODS: A decision tree was developed depicting pathways a patient may follow over the course of 1 year while taking long acting opioids. Up to 2 switches and 5 dose adjustments were possible for each of the three treatment arms: 1) MS Contin ER switch to OPA EA ER; 2) MS Contin ER switch to OxyContin ER; and 3) OPA EA ER switch to OxyContin ER for patients where morphine is not an appropriate first line treatment option. Cost data included drug acquisition costs for extended release (ER) and immediate release (IR) opioids, physician contact reimbursement for pain specialists and primary care physicians. Estimated rates for side effects were assumed similar for the most frequently reported side effects (constipation, nausea, somnolence and sedation) and were applied to all treatment arms. RESULTS: A total of 149 possible pathways of care were evaluated among the 3 treatment arms. Assuming a BID regimen, expected-cost range for treatments 1, 2, and 3 were: $3426–$4299, $3829–$5073, and $4536–$5098, respectively. IR cost contribution of the total expected-cost for treatment arms 1, 2, and 3 amounted to 17%, 21% and 24%, respectively, and was dependent on the total daily ER dose. CONCLUSION: Opioid rotation is thought to be the result of the need to switch opioids when a therapy is not well tolerated by the patient. Having an effective alternative for rotation/switching if first line treatment fails has the potential to reduce incremental down stream costs by decreasing physician contacts due to dose adjustment or the need for further switching. Furthermore, the lack of effective pain management combined with non-tolerated side effects may also require the need for additional medications for pain (IR) and side effects.

HEALTH, NON-HEALTH RESOURCES UTILIZATION AND COSTS OF TREATING REFRACTORY PAINFUL RADICULOPATHY IN PRIMARY CARE SETTING (PCS) UNDER ROUTINE MEDICAL PRACTICE IN SPAIN
Saldaña MT1, Navarro A2, Pérez C3, Torrades S4, Rejas J5
1Primary Care Centre “Raíces”, Castrillón, Asturias, Spain, 2Primary Care Centre “Puerta del Ángel”, Madrid, Spain, 3Hospital University La Princesa, Madrid, Spain, 4European Biometric Institute, Barcelona, Spain, 5Pfizer Spain, Madrid, Spain

OBJECTIVES: To analyze health and non-health resources utilization and derived costs of treating treating refractory painful Radiculopathy followed in PCS under routine medical practice. METHODS: A 12-weeks cross-sectional and retrospective analysis was carried out in year 2006 in a whole-nation representative sample of PC centres. Men and women above 18 years, with chronic pain (6-month or more) due to cervical (17%) or lumbar (83%) radiculopathy, refractory to, at least, one previous analgesic were included in the analysis. Health resources included all-type medical visits, hospitalizations, complementary test and pharmacological and non-pharmacological therapies. Non-health included wages losses due to loss-work-days equivalents (LWDE = absenteeism days + days working with reduced productivity due to pain). Pain severity was measured by McGill–Pain scale. RESULTS: One-thousand-four-hundred-fifty-two subjects [55.8% women, 56.7 (12.5) years] with cervical or lumbar radiculopathy were analyzed. Last-week mean pain severity was 71.4 (15.1) mm with 61.4% declaring the pain as severe or worst the day of collecting data. Previous mean (SD) number of drugs was 2.6 (1.4), with a 24.0% on one-drug only; 81% on NSAIDs, 47% on paracetamol, 32% on opioids, 17% on muscle-relaxants, 9% on antiepileptics, and 7% on antidepressants. Quarterly mean LWDE was 41.1 (28.6) days. Medical visits average per trimester was 9.1 (6.2), with 3.9% declaring one-hospitalization. Quarterly total mean cost was €2970 (2114); €1032 (1207) direct health cost and €1938 (1490) indirect cost. CONCLUSION: In the primary care setting, health and
LONGITUDINAL HEALTH AND NON-HEALTH RESOURCES UTILIZATION AND DERIVED COSTS OF TREATING REFRACTORY PAINFUL RADICULOPATHY IN PRIMARY CARE SETTING (PCS): A 12-WEEKS POST-HOC ANALYSIS OF THE PREGABALIN EFFECT UNDER ROUTINE MEDICAL PRACTICE

Pérez C1, Navarro A2, Saldaña MT2, Masramon X2, Rejas J1
1Hospital University La Princesa, Madrid, Spain, 2Primary Care Centre “Puerta del Ángel”, Madrid, Spain, 3Primary Care Centre “Raíces”, Castriñón, Asturias, Spain, 4European Biometrics Institute, Barcelona, Spain, 5Pfizer Spain, Madrid, Spain

OBJECTIVES: To analyze the Pregabalin (PGB) effect under routine medical practice on longitudinal health and non-health resources utilization (HRU) and derived costs of treating refractory painful Radiculopathy in Primary Care Setting (PCS) during 12-weeks.

METHODS: A representative sample of PC centres included men and women above 18 years, with chronic pain (6-month or more) due to cervical (17%) or lumbar (83%) radiculopathy refractory to, at least, one previous analgesic [mean (SD) number of drugs: 2.6 (1.4)], in a prospective, naturalistic, 12-weeks two-visit study. Health resources included all-type medical visits, hospitalizations, complementary test and pharmacological and non-pharmacological therapies. Non-health included wages loses due to loss-work-days equivalents (LWDE = absenteeism days + days working with reduced productivity due to pain). Pain severity was measured by McGill-pain scale. Descriptive statistics and ANCOVA models were applied to compare 12-weeks periods of treatment. RESULTS: One-thousand-three-hundred-fifty-one PGB-naive patients [55.8% women, 56.7 (12.5) years] were analyzed: 490 (36%) switched to PGB as monotherapy (PGBm), 702 (52%) patients received PGB as add-on therapy (PGBadd-on), and in 159 (12%) previous treatment was replaced by a regimen not including PGB (Non-PGB). As compared to non-PGB, both PGBm and PGBadd-on showed significantly higher HRU reduction. The extra costs of drugs, particularly in PGB subgroups [€15.4 (39.1), €148.6 (109.1) and €145.3 (119.6), respectively (p < 0.0001 within and between groups)] was off-set by higher significant reductions in all other components of health costs (except non-pharmacological therapies in non-PGB group) yielding to a greater total cost reductions: €1203.2 (1805.6), €1423.2 (1650.0) and €1429.2 (1966.2), respectively (p < 0.0001 and p = 0.0004 between groups).

CONCLUSION: In the primary care setting either as add-on or monotherapy with pregabalin under routine medical practice was associated with a significant longitudinal reduction in HRU and total costs when compared with non-PGB therapy in subjects with painful radiculopathy of cervical or lumbar origin.

RESOURCES UTILIZATION DUE TO BREAKTHROUGH PAIN: RESULTS FROM A PROSPECTIVE STUDY ON PATIENTS WITH CHRONIC PAINFUL CONDITIONS

Pizzi LT1, Lee SP2, Richardson D1, Cobb N2, Leas B3, Toner R2, Pracilio V2, Ballas S2, Ashkenazi A2, Derk CT2, Wang D2, DeSousa E2
1Jefferson Medical College, Philadelphia, PA, USA, 2The Breakthrough Pain Study Group, Philadelphia, PA, USA

OBJECTIVES: In this prospective study, we captured resource utilization and work productivity due to breakthrough pain (BTP). METHODS: The sample consisted of outpatients at a large U.S. academic medical center who had chronic pain due to headache, musculoskeletal problems, arthritis/rheumatism, and sickle cell anemia. Patients were administered a 1-week diary which captured demographics, disability, pain (10-point VAS), resource utilization due to BTP (hospitalizations, emergency room visits, outpatient visits, and calls to physician offices), and work productivity (Health-Related Productivity Questionnaire-Diary). RESULTS: Among the 161 patients enrolled, 142 reported at least 1 BTP flare during the diary week (90.5%). Of these, 36 suffered from chronic headache (25.3%), 16 from arthritis/rheumatism (11.3%), 16 from sickle cell anemia (11.3%), 9 from musculoskeletal problems (6.3%), and 1 from neuropathy (0.7%). The remainder reported 2 or more painful conditions (45.1%; n = 64). The cohort experienced 2361 BTP flares (mean per patient per week = 18). Mean pain levels were 5.3 for headache, 5.2 for arthritis/rheumatism, 6.2 for sickle cell anemia, 6.8 for musculoskeletal problems, and 6 for those with 2 or more painful conditions. BTP flares resulted in 8 hospitalizations, 9 emergency room visits, 30 outpatient medical visits, and 24 calls to physicians offices during the diary week and