neck fracture) and the Hungarian Diagnosis Related Groups. Patients with polytrauma or severe comorbidities were excluded. Our retrospective analysis includes patients under 60 with femoral neck fracture identified with Social Security Identification number (TAJ) and discharged in 2000. RESULTS: A total of 518 patients met the selection criteria and 23.7% of them (N = 123) had impaired ability to work. The proportion of patients with impaired ability to work was 41.3% in patients with further treatment, 50% in patients with secondary prosthesis and 20% in patients with one definitive treatment. The proportion of patients with impaired ability to work according to the method of primary surgery was 27.1% in arthroplasty, 23.7 in screw fixation and 20.6% in DHS. A total of 16.3% of disabled patients received rehabilitation treatment. The proportion of disabled patients increased in higher age groups. We found higher than national average disability ratio in regions with higher unemployment rate and lower employment rate. CONCLUSIONS: We found higher impaired ability to work ratio in patients with one definitive treatment. The proportion of patients with impaired ability to work, the sick-pay period should be used more efficiently. The frequency of impaired ability to work is not only a health related problem but it is an effect of social and economic processes.

OSTEOPOROSIS—Health Care Use & Policy Studies

POS8

PRICE AND UTILIZATION OF OSTEOPOROSIS MEDICATIONS IN U.S. MEDICAID PROGRAMS

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OBJECTIVES: Approximately eight million women and two million men in the U.S. suffer from osteoporosis, a disease that causes over 1.5 million fractures each year. The cost to Medicaid for anti-osteoporosis medications topped $85 million in the first quarter of 2004. The objective of this study is to analyze price, cost, utilization, and market shares of oral anti-osteoporosis medications in U.S. Medicaid programs, with the specific purpose of assessing interbrand competition in a tightly oligopolistic market. METHODS: There are five oral medications for osteoporosis, including Didronel® (etidronate), Skelid® (tiludronate), Actonel® (risedronate), Fosamax® (alendronate), and Evista® (raloxifene). Data from the First DataBank® were used to calculate the monthly Average Wholesale Price (AWP) per daily dose for each drug over the period 1990–2004. Data from the National Medicaid Pharmacy claims were used to calculate quarterly drug prescriptions, market shares, and reimbursements over essentially the same time period. RESULTS: The three most frequently prescribed drugs are alendronate (utilization reached 600,000 scripts in the 1st quarter 2004); risedronate whose use increased from 90 scripts in the 2nd quarter 1999 to 400,000 in the 1st quarter 2004; and raloxifene with utilization of 190,000 scripts in the 1st quarter 2004. Each of these drugs has an AWP per daily dose in the $2.00 to $4.00 range. Interestingly, the Medicaid cost per prescription for risedronate decreased from $300 in 1999 to $80 in 2004. Though not widely prescribed, the AWP for tiludronate is much higher than for its competitors at $15.00 per daily dose. CONCLUSIONS: There is no indication that market shares or prices of branded medications are responding to new entry in the anti-osteoporosis drug market. Movement in prices and utilization are driven much more by dosage and compliance issues.

POS9

TRENDS IN THE CLINICAL MANAGEMENT OF FRAGILE FRACTURE BEFORE AND AFTER THE NEW HEDIS OSTEOPOROSIS MANAGEMENT MEASURE IN A MEDICARE POPULATION

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OBJECTIVE: To examine the trend in clinical management of patients with fragile fractures before and after the implementation of the Health Plan Employer Data and Information Set (HEDIS) osteoporosis measure. METHODS: Two cohorts of Medicare Beneficiaries with continuous enrollment for at least 18 months and a fracture during the measurement year and no use of osteoporosis medication or BMD screening in the preceding 12 months were identified in the MarketScan Medicare Supplemental and COB database for the measurement years 2000–2005. Per HEDIS, each measurement year began on July 1st of the preceding year and continues through June 30th of the measurement year. The first cohort consisted of women aged 67 and older, while the second cohort consisted of men and women aged 65 and older. Fractures were identified according to HEDIS definitions. Clinical management was assessed by the presence of a claim for BMD screening and/or a prescription for a bisphosphonate or other osteoporosis-specific medication in the year following the fracture. Adjusted rates of change in screening and treatment were estimated using multivariate logistic regression. RESULTS: In the measurement year 2000, 8.4% of Cohort 1 underwent BMD screening and 11.2% received pharmacological treatment. For Cohort 2, the rates were 6.5% and 8.3%, respectively. By 2005, BMD screening had increased by 21% and treatment increased by 15% for Cohort 1. For Cohort 2, the rates increased by 42% and 22%, respectively. After adjusting for patient age, sex, fracture location, provider specialty, geographic region and capitated versus non-capitated health plan, the rates for screening and treatment had increased by 21% and 15% for Cohort 1, and by 41% and 15% for Cohort 2. CONCLUSION: While slow progress has been made in the clinical management of fracture since the implementation of the HEDIS osteoporosis measure, there is still an opportunity for significant improvement.

OSTEOPOROSIS—Methods and Concepts

POS10

TREATMENT PATTERNS AND RESOURCE UTILIZATION IN PATIENTS WITH PAGET’S DISEASE TREATED WITH RISENDRONATE

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OBJECTIVES: After the recommended two-month treatment course of risedronate for the treatment of Paget's disease, patients should be followed to assess the need for re-treatment. We examined real-world treatment patterns and resource utilization in patients treated with risedronate for Paget's disease. METHODS: Patients enrolled in a nationally representative, multi-managed care plan claims database (1998–2004; PharMetrics) with a diagnosis of Paget’s disease (ICD-9 code), were identified. Patients were followed up after initial risedronate therapy. For this cohort, we evaluated: 1) Proportion of patients with risedronate use >1 month after the recommended treatment regimen in the approved label (i.e., additional use); 2) Proportion of patients without risedronate prescription (i.e., gap) from days 61 to 180, followed by use after
that (i.e., retreatment); 3) Annualized resource use stratified by
retreatment status. RESULTS: Of the 45 patients who met study
inclusion criteria, mean age was 61.8 and 62.2% were male.
46.7% of patients (n = 21) had medication use >1 month after
the recommended treatment regimen. 73.3% (n = 33) had a gap
in treatment, and of these, 24.2% (n = 8) were retreated after
the gap. Annualized resource utilization (mean (SD)) for not
retreated vs. retreated patients respectively was: Physician visits: 2.0 (2.0) vs. 4.2 (3.9), p = 0.16; Specialist visits: 1.0 (2.1) vs. 2.7
(2.9), p = 0.16; SAP tests: 0.3 (0.8) vs. 0.8 (2.8), p = 0.32; and
Bisphosphonate prescriptions: 1.7 (2.3) vs. 4.2 (3.9), p = 0.12.
CONCLUSIONS: This analysis of real-world treatment patterns and
resource use in risedronate-treated patients suggests a large
extent of risedronate use beyond approved label recommenda-
tions and high retreatment rates, as well as higher resource use
in those retreated. Larger studies are warranted to further under-
stand treatment patterns and associated resource utilization in
Paget’s disease patients.

POS11
THE USE OF INDIVIDUAL RISKS RATHER THAN POPULATION
AVERAGES IN COST-EFFECTIVENESS MODELING
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OBJECTIVES: Cost-effectiveness analyses are routinely based on
data from group averages, restricting its generalizability to those
with below- or above-average risk. A pharmaco-economic model
was developed that used individualised risks, taking as example
bisphosphonates and prevention of fractures. METHODS: Data
were obtained from a research database of general practitioners,
comprising a sample of the UK general population of women
>50 years (N = 330,000). Individual mortality and hip, verte-
bral, and other osteoporotic fracture risks were estimated by age,
sex, body mass index, smoking and other clinical risk factors.
Estimates on costs, EQ5D utilities and treatment efficacy were
obtained from a UK national report (NICE) and outcomes were
simulated over a ten-year period. RESULTS: There was a large
variability in the cost-effectiveness with clinical risk factors. At
age 60–69, the cost per QALY gained was ≤36k in women with
low fracture risk but ≤36k with high fracture risk (data for
women without fracture history). Patients with low body mass
index (<20) had considerably better cost-effectiveness than
patients with high BMI (≥26) (≤23k versus ≤71k at age 60–79
in women without fracture history). The same was found for dif-
ferent diseases such as rheumatoid arthritis or inflammatory
bowel disease. Using a cost-acceptability ratio of ≤30k per
QALY gained, bisphosphonates became cost-effective for patients
with a five-year risk of 9.3% (95% CI 8.0–10.5%) for osteoporotic
fractures and of 2.1% (95% CI 1.5–2.7%) for hip
fractures. Including bone mineral density in the risk assessment,
the cost per QALY gained was ≤35k in women at age 60 with a
fracture history and a T-score of –2.5 (at age 80, this was ≤3k).
CONCLUSIONS: A pharmaco-economic model based on
individual long-term risks (as derived from a health care data-
base) can improve the targeting in a cost-effective manner of
therapy to patients.

OSTEOPOROSIS—Patient Reported Outcomes

POS12
PATIENT ADHERENCE WITH BISPHOSPHONATES AT 6
MONTHS: A RETROSPECTIVE COHORT STUDY
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OBJECTIVES: To assess patient adherence with bisphospho-

dates at 6 months of therapy utilizing an integrated administra-
tive, medical and pharmacy claims database. METHODS: A
retrospective cohort study was conducted among 128,362
women, 45 years of age and older, with a new (index) prescrip-
tion for risedronate (35mg/week) or alendronate (35mg/week or
70mg/week) between May 1, 2002, and December 31, 2003. All
eligible patients were required to be continuously enrolled for
the six months preceding and the 12 months following the index
date and to have filled at least 2 continuous bisphosphonate pre-
scriptions, as defined below. The six-month history was used to
assess baseline clinical characteristics, including fracture history,
gastrointestinal conditions, hospitalizations, and glucocorticoid
use. Adherence with therapy was then assessed for the first 6
months of bisphosphonate treatment. Patient adherence was
defined as continuous refilling of the weekly bisphosphonate
treatment with no gaps exceeding 90 days during the follow-up
period. RESULTS: The average bisphosphonate user in this study
was aged 64 years; 78% initiated with alendronate and 22% with
risedronate. Almost 4% had a history of fragility fractures (verte-
bral and/or non-vertebral) and 18% used oral glucocorticoids
during the study period. At 6 months, 71% of bisphos-
phonate patients were adherent with therapy. An additional 22%
continued, and subsequently resumed treatment after a mean
treatment gap of 164 days. The following patient characteristics
were correlated with a higher likelihood of therapy discontinu-
ation: younger age, GI event after the index date, oral glucocor-
ticoid use, and history of GI events, hospitalization, or fracture.
CONCLUSIONS: This study demonstrates that seven in ten new
bisphosphonate users remained on therapy at six months after
treatment initiation. An additional two in ten patients resumed
therapy after a mean treatment gap of five months. Overall, the
majority of patients who initiated bisphosphonates were adher-
ent after the first six months of treatment.

POS13
COMPLIANCE, DISCONTINUATION, AND SWITCHING OF
OSTEOPOROSIS TREATMENT IN LOUISIANA MEDICAID
POST-MENOPAUSAL WOMEN
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OBJECTIVES: To determine the rates of compliance; discontinu-
ation; and switching of treatment with bisphosphonates, calci-
ton, estrogens, parathyroid hormones, and raloxifene in
Louisiana Medicaid post-menopausal women with diagnosis of
osteoporosis and/or fracture. METHODS: Medical and phar-
macy administrative claims data obtained from the Louisiana
Department of Health and Hospitals were used for the study.
The data contain paid claims for all Louisiana Medicaid recipi-
ents. Women age 50 and older diagnosed with osteoporosis
and/or a fracture between July 1, 2002 and June 30, 2003 and
continuously eligible 12 months prior through 24 months after
their initial diagnosis were included in the study. Women with
Medicare eligibility and those who received a prescription for
osteoporosis and/or fracture 12 months prior were excluded.
There were 1772 women who met the inclusion criteria. Claims
data on these women were studied for two years from the date
of their initial diagnosis. Women were considered compliant if
the difference between their fill dates did not exceed 45 days.
Women were considered discontinuers if they filled prescriptions
only once in the two-year study period. Recipients were consid-
ered switchers if they switched from one drug to another, single
to combination therapy, or combination to single therapy.
RESULTS: Of the 1772 in the study group, 28% (500) received
treatment, and of those, 57% were on a single drug, 22% on
multiple drugs, and 21% discontinued treatment. The compli-