Osteoporosis (porous bone) is a disease characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures, especially of the hip, spine, and wrist. Although both men and women are affected, women represent 90% of hospitalized patients being treated for osteoporosis, according to MediMedia’s Hospital Diagnosis and Therapy Audit. The number of patients with osteoporosis has increased since 2000 (Figure 1).

Three main classes of drugs are used to treat osteoporosis: bisphosphonates, calcitonins, and bone-density regulators. The bisphosphonate class is the one most often prescribed and includes products such as alendronate (Fosamax®, Merck), risedronate sodium (Actonel®, Procter & Gamble), pamidronate disodium (Aredia®, Novartis), and zoledronic acid (Zometa™, Novartis). Bisphosphonates are used to help improve bone strength in many diseases associated with bone resorption, including cancer. Table 1 shows the percentage of hospitalized patients who received each agent in the first and second quarters of 2003.

The oral agents alendronate and risedronate are much less expensive than the injectable products. Figure 2 shows the average drug cost per patient for each type of medication.

The goals of treatment are to increase bone mass and to reduce the risk of fractures as the population ages. The mortality rate in the first year following a broken hip is approximately 25%. Death following a hip fracture is often a result of blood clots, pneumonia, or infection. Furthermore, only 25% of patients who sustain a broken hip return to their pre-injury level of activity. Most patients require prolonged specialized care, such as a long-term nursing or rehabilitation facility. It is hoped that the ongoing treatment of osteoporosis will lead to decreased patient mortality by reducing the number of hip fractures in older people.

REFERENCES