

Viet Nam

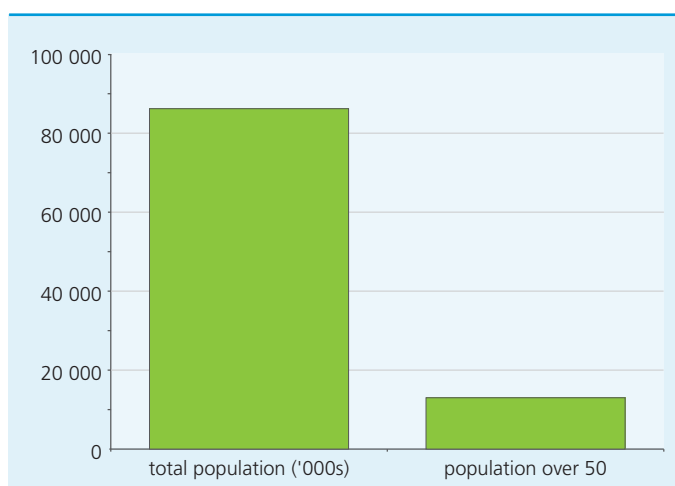
Overview

With a population of 86 million, Viet Nam is a rapidly growing and developing country. The population is expected to increase by more than 30% in the next 40 years to reach more than 111 million. Today, osteoporosis is estimated to concern 2.8 million people in Viet Nam and hip fracture due to this disease is projected to reach 47 652 cases in 2050.

These estimations are probably below reality due to the fact that most of the diagnostic tools like DXA and osteoporosis concerned health care professionals are located in the urban area whereas 73% of the Vietnamese population is rural.

Osteoporosis has been recognized as a major health problem in Viet Nam. Different measures have already been taken like prevention programs, but guidelines, health care professional training and a national strategy regarding health insurance and reimbursement policy need to be implemented.

Figure 1 Population distribution in Viet Nam



Key findings

The population of Viet Nam in 2009 is approximately 86 million, of this 6.3 % (5.45 million) are women over 50 and 8.5% (7.34 million) are men over 50 (figure 1). Population is expected to increase to 98 million by 2020 and 111.7 million by 2050.

Currently, osteoporosis is estimated to affect 2.8 million people in Viet Nam (about 3.3% of the popula-

Figure 2 Population projection (in millions) in Viet Nam until 2050

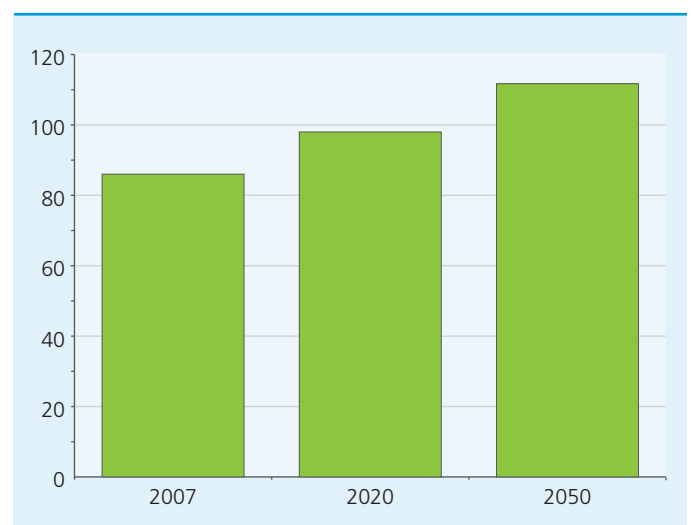
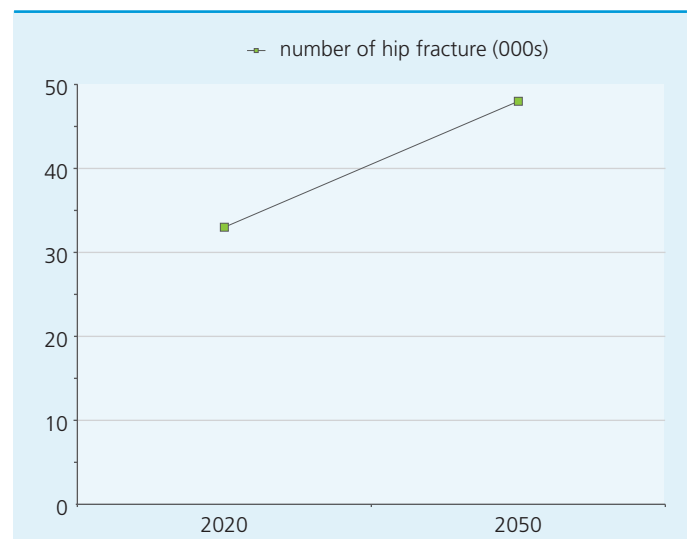


Figure 3 Predictions of hip fracture



tion) and hip fracture due to osteoporosis is projected to reach 32 818 cases in 2020 and 47 652 in 2050. Regarding vertebral fracture, a recent study suggested that the prevalence of radiographic vertebral fracture was 23% in women aged over 50¹.

All of hip fractures are treated surgically and direct hospital cost is 2200 USD for a hip replacement with an average stay at hospital of 7 nights.

Table 1 Hip fracture treatment

% surgically treated	average hospital stay (nights)	direct hospital cost (USD)
100	7	2200

In total, 25 DXA machines are available for the whole population (0.003 per 10 000). They are located mostly in urban centers and large hospitals in major cities such as Ho Chi Minh City, Hanoi, Can Tho, Da Nang, and some provinces. Ultrasound machines are widely available in Viet Nam. The cost for a DXA is 12 USD (average income per capita per month is 193 USD) and for an ultrasound scan is 3 USD. Both tests are partially reimbursed by government if patients have health insurance (45% of the population have health plan).

Figure 4 Repartition of the population in Viet Nam

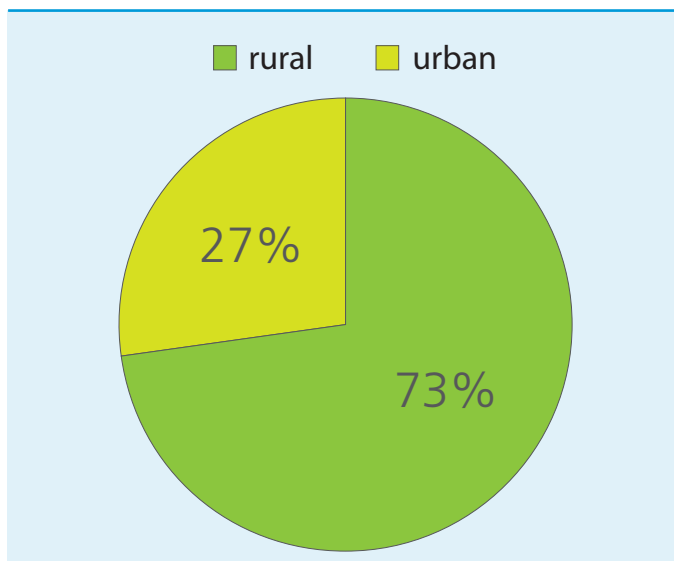


Table 2 Diagnostic tools and cost

total DXA machines	25
DXA machine / 10 000	0.003
total US machine	40
cost of DXA scan (USD)	12
cost of US (USD)	3
income per capita per month (USD)	193

Bisphosphonates, hormone replacement therapy (HRT) and selective oestrogen receptor modulators (SERMs) are available drugs as well as calcium, vita-

min D supplements and fortified food; some medications are reimbursed for inpatients.

Osteoporosis is recognized as a major health problem in Viet Nam, major achievements have been the marked increase in awareness of osteoporosis and prevention measures, awareness of impact of tobacco and alcohol on bone, benefits of regular physical exercises and appropriate nutrition. Numerous problems need to be recognized such as:

- Increase of elderly population (longevity = 71 years) but limited resources (funds, equipments)
- Lack of appropriate training for health care professionals.
- Lack of awareness among many health care professionals and in the general public
- Cost of medication for prevention and treatment is too high for a vast majority of patients, esp. those without health plan and poor.

Recommendations for prevention of osteoporotic fractures:

- *Individuals*: adequate osteoporosis information, actively participate in osteoporosis programs, seek early and regular care from health professionals, follow prevention guidelines (healthy and safe lifestyles)
- *Health care professionals*: appropriate training, raise awareness of osteoporosis in the public and patients, and pay attention to those with high risks
- *The government*: priorities should include development of guidelines, national strategy development, appropriate changes in health insurance and reimbursement policy, raising of funds from various resources

Reference

1. Ho-Pham L, et al. Prevalence and risk factors of radiographic vertebral fracture in postmenopausal Vietnamese Women. *Bone*, 2009; 45(2):213-217