

IOF International Survey (1999)

Summary

In 1998 and 1999 IOF carried out a survey among its member societies to evaluate international awareness of osteoporosis and availability of diagnostic tools and therapy.

Nineteen countries, mostly from Europe but including Lebanon, China and Argentina, took part. Using a standardized questionnaire, societies were asked to detail their national experience of fracture rate, proportion of osteoporosis patients receiving regular treatment, awareness of osteoporosis in the general population and among physicians, treatments available, and the availability and reimbursement of bone densitometry and X-ray for vertebral fractures.

The results were presented at the meeting of the Committee of National Societies in Brussels on November 19th 1999 – and are a cause for concern. Overall awareness of osteoporosis in the general population is low in most countries. Even more worrying is the low awareness among physicians, reported by 12 out of 16 European countries. Awareness seems to be unrelated to a country's economic condition – a high level of awareness is reported by Portugal and Lebanon, a low level by Belgium and Germany.

- Regular treatment of patients is still the exception throughout Europe. In most countries the proportion of osteoporosis patients receiving pharmaceutical treatment is under 20%. This might be expected of countries with low awareness of osteoporosis, but sadly it seems to be equally true of countries claiming a high awareness among physicians and the general public, such as Norway, the UK and Holland.
- It is a particular scandal that in the overwhelming majority of countries surveyed, patients who have had a hip fracture are not provided with pharmaceutical treatment during follow up – even though this is known to minimize the risk of new fractures. Exceptions here are Lebanon and (in some cases) Germany.
- HRT in osteoporosis prevention is accepted by physicians in 9 out of 16 countries, but in most countries the women themselves are more negative towards it. Substantially more women accept the role of calcium and of exercise in preventing osteoporosis, while the importance of vitamin D remains disputed by physicians in 8 out of 16 countries surveyed.
- Although bone mass measurement is available in all 16 European countries surveyed and is in routine use in 13 of them, 7 of these offer no or only restricted reimbursement for bone densitometry. In addition the number of densitometers varies enormously, from less than 1 per million population (China, Lithuania) to more than 10 (e.g. Belgium, Germany, Portugal); Lebanon is again exceptional with as much as 25 machines per million. Documentation of vertebral fractures by X-ray is performed occasionally in most countries, but Slovenia is the only country where it is done on a regular basis.

The conclusions are clear:

- Awareness of osteoporosis is still unacceptably low, as is the proportion of patients who receive appropriate treatment.
- Although diagnostic tools are widely available, countries still experience problems in their use.
- Programs that will effectively increase osteoporosis awareness, appropriate use of diagnostic tools and availability of therapy, are urgently needed.
- **Our actions so far, although valuable, have been of limited success. Some changes are needed to achieve our goals more effectively.**

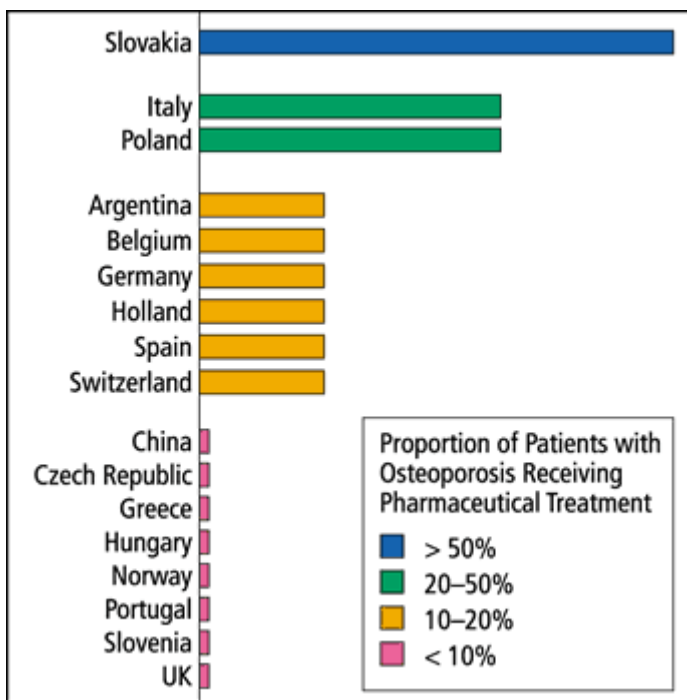


Fig 1: Proportion of patients with osteoporosis receiving pharmaceutical treatment

	Awareness in the General Population	Awareness among Physicians
Neglect	China	China Hungary
Low	Argentina Belgium Czech Republic Germany Greece Hungary Lithuania Slovenia Spain	Argentina Belgium Czech Republic Germany Greece Italy Lithuania Norway Slovenia Spain
High	Holland Italy Lebanon Norway Poland Portugal UK	Holland Lebanon Norway Poland Portugal UK

Fig 2: Awareness among public and physicians

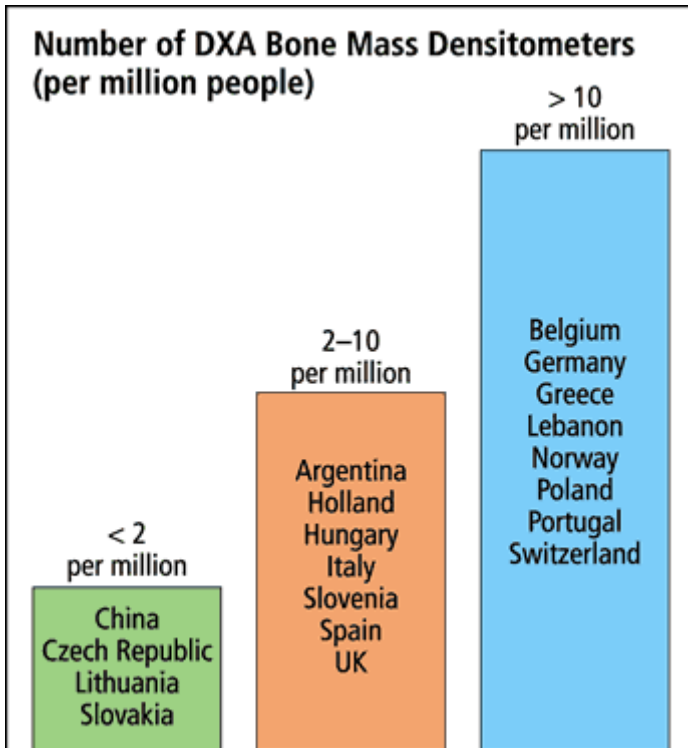


Fig 3: Number of DXA bone mass densitometers per million.

Survey

Evaluation of

- osteoporosis awareness
 - availability of diagnostic tools
 - availability of therapy of osteoporosis and related fractures
-

Scope of Study:

survey was conducted among IOF member societies in order to assess the awareness of osteoporosis among the general population and among physicians, and the availability of diagnostic and therapeutic tools for each country.

Approach:

standardized questionnaire was provided and the societies (those which were members of IOF at the time) were asked to communicate their experience in these fields.

Goal:

To complete this survey by collecting completed questionnaires from those societies which did not have the opportunity to respond so far.

Questions asked in the survey:

- country
- number of inhabitants
- number of fractures
 - hip
 - vertebral bodies
 - others

- proportion of osteoporotic patients who get regular treatment
- prevention
 - awareness in the general population, awareness among physicians
 - available remedies

- densitometry
 - for research
 - for routine use
 - reimbursement
 - number of available machines

- documentation of vertebral fractures by X-ray

19 Countries participated in the survey:

Europe

Belgium
Czech Republic
Germany (2)
Greece
Holland (2)
Hungary
Italy (3)
Lithuania
Norway
Poland
Portugal
Slovakia
Slovenia
Spain
Switzerland
United Kingdom

Middle East

Lebanon

Asia

China

South America

Argentina

Note: the number in parenthesis represents the number of societies participating

	Inhabitants Million	Annual Hip fractures per Million (estimated)	Predominant treatment		Pharmaceutical treatment during follow up
			surg.	cons	
Belgium	10	1,400	✓		no
Czech Republic	10	1,700	✓		no
Germany (2)	80	1,375-1,750	✓		no/yes
Greece	10	1.200	✓		no
Holland (2)	16	1.000	✓		no
Hungary	10	1.500	✓		no
Italy (3)	55	1.000-2.400	✓		no
Lithuania	-	-	✓		no
Norway	4,5	3,777	✓		no
Poland	38,5	259	✓		no
Portugal (2)	10	675-900	✓		no
Slovakia (2)	2	1273	✓		no
Slovenia (2)	2	600-1000	✓		no
Spain (2)	40	600	✓		no
Switzerland	7	1042	✓		no
UK	55	1272	✓		no
Lebanon	4	-	✓		yes
China	1.200	-	✓		no
Argentina	36	472	✓		no

	Proportion of patients with osteoporosis getting pharmaceutical treatment				Awareness in the general population			Awareness among physicians		
	< 10	10-20	20-50	>50	high	low	neglect	high	low	neglect
Belgium		✓				✓			✓	
Czech Republic	✓					✓			✓	
Germany (2)		✓				✓			✓	
Greece	✓					✓			✓	
Holland (2)		✓			(✓)	✓		(✓)	✓	
Hungary	✓					✓				✓
Italy (3)		✓	(✓)		(✓)	✓			✓	
Lithuania						✓			✓	
Norway	✓				✓				✓	
Poland			✓		✓			✓		
Portugal (2)	✓				✓	✓		✓	✓	
Slovakia (2)				(✓)*						
Slovenia (2)	✓					✓			✓	
Spain (2)	✓	✓				✓			✓	
Switzerland	✓	✓***								
UK ***	✓				✓			✓		
Lebanon					✓			✓		
China	✓						✓			✓
Argentina		✓				✓			✓	

*) clinically manifested and diagnosed patients

**) uncertain

***) high awareness, but little action

	Available for prevention							
	HRT accepted by		Calcium accepted by		Vitamin D accepted by		Sports and Exercises	
	physic.	women	physic.	popul.	physic.	popul.	yes	no
Belgium	yes	no	yes	yes	no	no	✓	
Czech Republic	yes	no	yes	yes	no	no		✓
Germany (2)	yes	no(yes)	No(yes)	yes	no	no		✓
Greece	no	no	yes	yes	no	no		✓
Holland (2)	<u>yes</u> no	no	yes	<u>yes</u> no	no	no	✓	
Hungary	50%	30%	yes	yes	yes	yes		✓
Italy (3)	<u>yes</u> no	<u>no</u> yes	<u>yes</u> no	<u>yes</u> no	yes	<u>no</u> yes	(✓)	✓
Lithuania	yes	no	yes	yes	yes	yes		✓
Norway	yes	50%	no	yes	yes	yes	✓	
Poland	yes	no	no	yes	no	no		✓
Portugal (2)	yes	no	yes	yes	yes	yes	✓	✓
Slovakia (2)	yes	no	yes	yes	yes	yes		✓
Slovenia (2)	yes	no	no(yes)	yes	No(yes)	yes	✓	
Spain (2)	more no	more no	yes	yes	yes	yes		✓
Switzerland	yes/no	yes/no	yes	yes	yes	yes	✓	
UK	some	some	yes	yes	some	no	✓	
Lebanon	yes	yes	yes	yes	yes	yes	✓	
China	yes	yes	yes	yes	yes	yes	✓	
Argentina	yes	no	yes	yes	no	no	✓	

	population million	DXA Bone mass measurement						Fracture documented by X-ray (vert. fract.)		
		available	at research sites	for routine	reimburse ment	\$ reimbursed	machines per million	rarely	occasion	regularly
Belgium	10	y	y	y	n	30	>10		✓	
Czech Republic	10	y	y	y	y	7	1,6		✓	
Germany (2)	80	y	y	y	y	20	>10		✓	
Greece	10	y	y	y	y		>10		✓	
Holland (2)	16	y	y	y	y	75	1-6		✓	
Hungary	10	y	y	y	y	18	1-10	✓		
Italy (3)	55	y	y	y	y	40	>5		(✓)	
Lithuania		y	y	n	n	-	<1		✓	
Norway	4,5	y	y	y	n	75	2-20	✓	✓	
Poland	38,5	y	y	y	y	20	>10		✓	
Portugal (2)	10	y	y	y	y	40(20)	>10		✓	
Slovakia (2)	5,1	y	y	y	y	20	< 2			✓
Slovenia (2)	2	y	y	y	y/n	20	> 5	✓	✓	
Spain (2)	40	y	y	y/ n	y/n	100	> 2	✓	✓	
Switzerland	7	y	y	y	y/*)	> 60	1,5-14		✓	
UK	55	y	y	n	y/**)	> 40	2,2****)		✓	
Lebanon	4	y	y	y	y	50	2,5-25	✓		
China	1200	y	y	n	y	30	< 1	✓		
Argentina	36	y	y	y	y	35	> 2		✓	

*) with restrictions

**) some

Evaluation of results (I)

Number of estimated annual hip fractures per million inhabitants:

higher in northern countries, ranging

from > 3000 (Norway)

to > 1000 (Switzerland, Czech Republic, Belgium, Germany, UK, Slovakia)

lower in southern countries, ranging

from < 600 (Argentina, Spain)

to < 1100 (Portugal, Slovenia, Greece)

exception:

Italy: 1000 – 2400

Poland: 295

Awareness

- awareness is low
 - in the general population in 11 out of 16 countries in Europe

- awareness seems to be higher in some countries
 - 4-6 out of 16 countries in Europe

- awareness seems to be unrelated to the economic condition of countries

- awareness is low to negligible
 - among physicians in 12 out of 16 countries in Europe

- awareness seems to be higher in some countries
 - 3 – 4 out of 16 countries in Europe

Treatment

Regular treatment of patients is still the exception throughout Europe

Pharmacological treatment of patients after hip fracture

- | | |
|--------|--|
| no | in 14 out of 16
Europe countries |
| no/yes | in 1 out of 16
European countries |
| yes | (?) in 1 out of 16
European countries |

The proportion of patients with osteoporosis that get regular treatment is rather low

- < 10% in 9 out of 16 countries
- < 20% in 5 out of 16 countries
- 20 – 50% in 1 out of 16 countries
- > 50% in non out of 16 countries

Prevention with HRT

- accepted by physicians in 9 out of 16 countries
- questionable or not in 7 out of 16 countries
- not accepted by women in 10 out of 16 countries
- questionable or accepted in 6 out of 16 countries

Role of calcium

- accepted by physicians in 11 out of 16 countries
- questionable or not accepted in 5 out of 16 countries

Role of Vitamin D

- accepted by physicians in 8 out of 16 countries
- questionable or not accepted in 8 out of 16 countries

Bone Mass Measurement

available in:

- 16 out of 16 countries in Europe
- at research sites in 16 out of 16 countries in Europe
- for routine use in 13 out of 16 countries in Europe
- reimbursed in 9 out of 16 countries in Europe
(7 – 100 \$ per measurement)
- restrictions or no reimbursement in 7 out of 16 countries in Europe
- number of machines per million inhabitants < 1 to > 10

Vertebral fracture documentation by X-ray:

- rarely to occasionally in 15 out of 16 countries in Europe
- regularly in 1 out of 16 countries in Europe (Slovakia)

Summary (I):

Awareness is still low among physicians and the general population in the majority of European countries

Virtually none of the patients get any **pharmacological treatment** after a hip fracture

The proportion of patients with osteoporosis, who get **treatment** is < 20% in 14 out of 16 countries (1 country 20-50% (?), no data from another country)

Bone mass measurement is available, but **reimbursement** only 9/16 and restricted in 7/16

Summary (II):

Prevention with HRT is not accepted by women in the majority of European countries

The role of calcium seems to be accepted by more

The role of Vitamin D is still ignored by a majority

Conclusions:

- Hip fracture data are available and should allow to calculate parts of the social and economic burden of the disease
- The awareness of the disease is still unacceptably low among physicians and the general population
- The proportion of patients, who deserve treatment and who get treatment is still unacceptably low
- Diagnostic tools seem to be available, at least in some countries, there are problems with respect to the use of these tools
- It is still a problem to disseminate the knowledge about osteoporosis in a way, that changes habits in Europe
- It is no longer appropriate to close the eyes in the presence of the realities
- The development of successful programs is still required
 - to increase the awareness of osteoporosis
 - to make appropriate use of diagnostic tools
 - to improve the availability of therapy

We have to conclude that our actions were of limited success in the past

We have to conclude that we have to change our actions