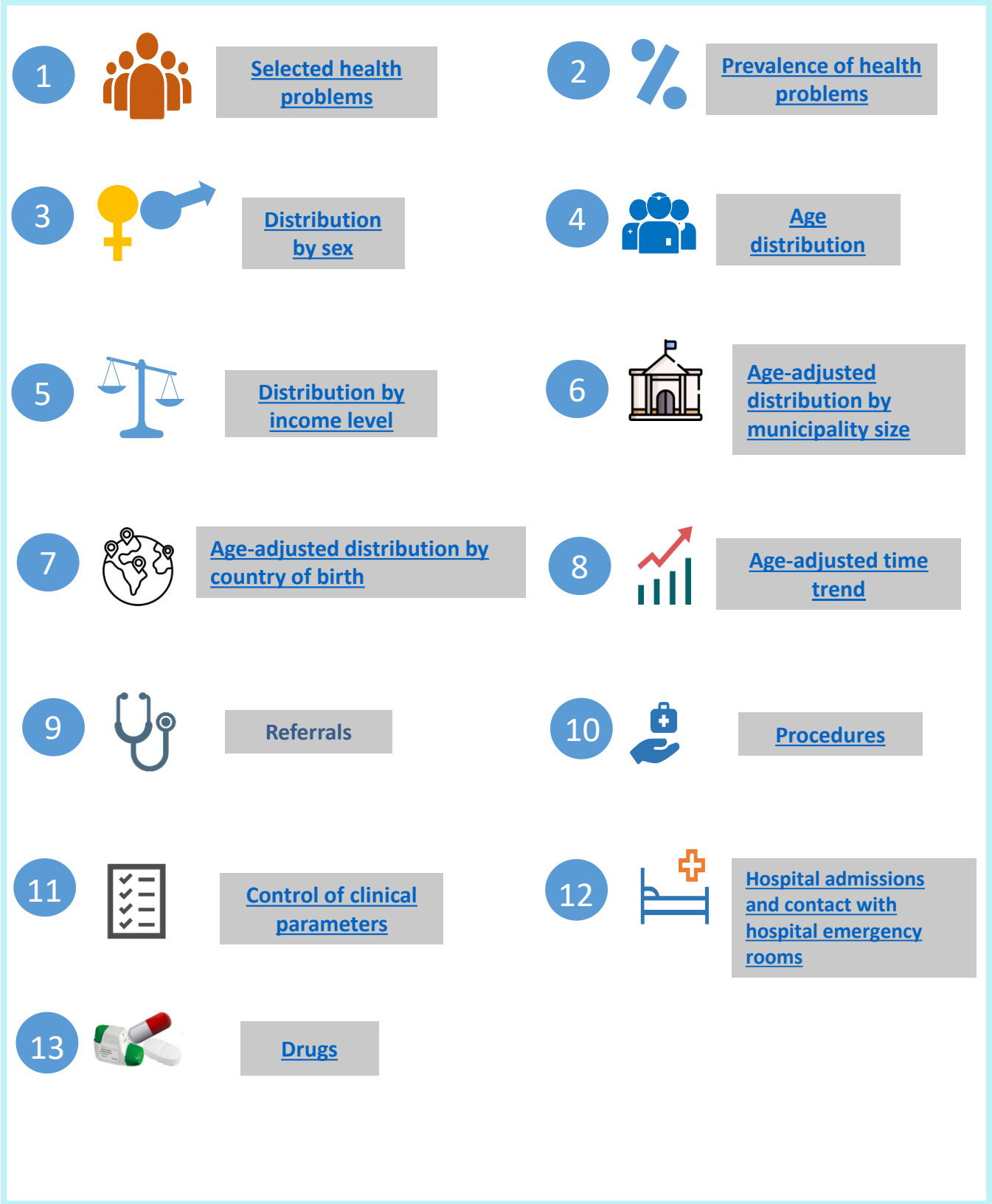






# Characterization of non-communicable health problems from primary care clinical records (BDCAP)

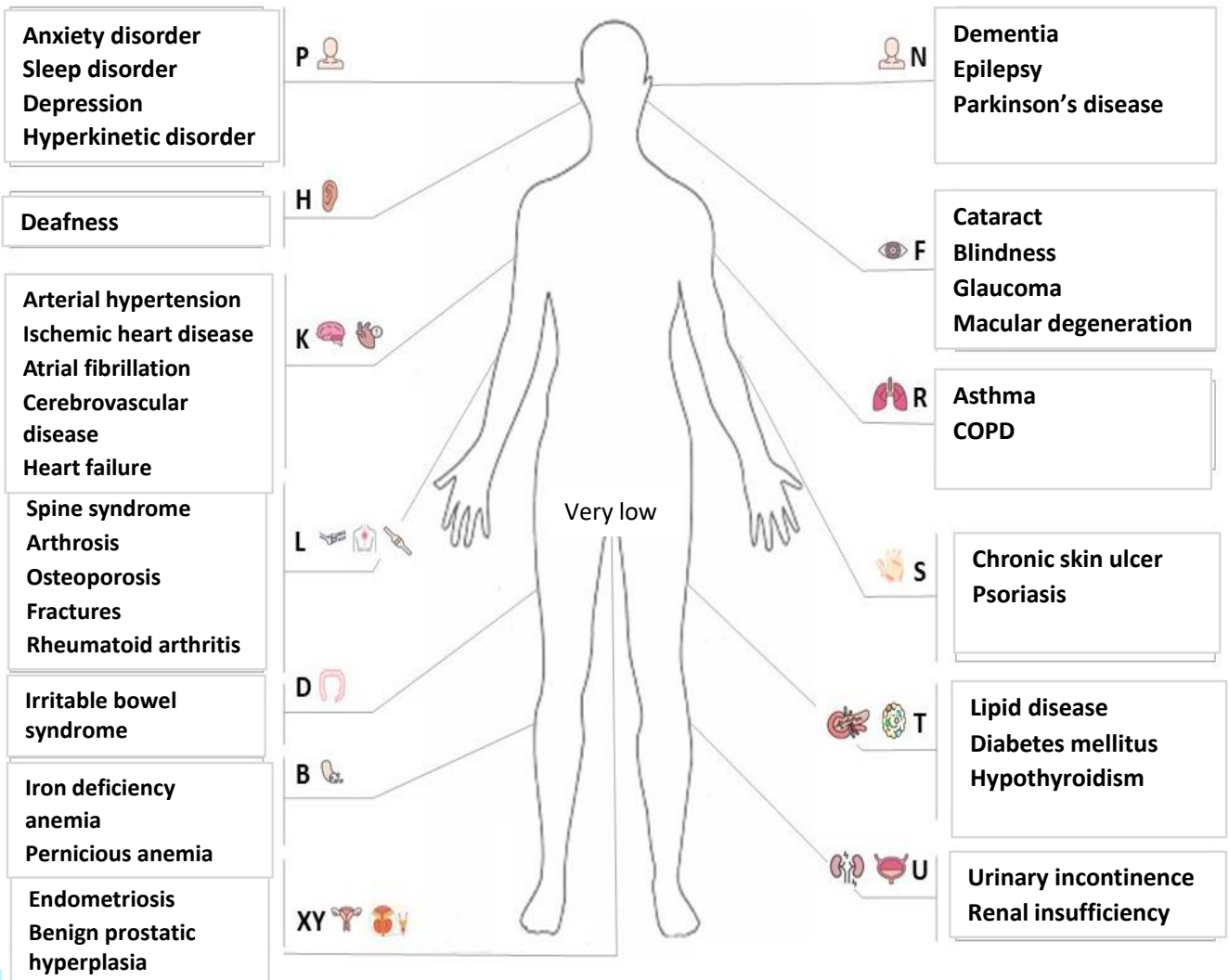
## GRAPHICAL OVERVIEW





## SELECTED HEALTH PROBLEMS

**36 health problems** have been selected which include all the chapters and systems of the CIAP-2 classification. In addition to the problems classically contemplated among the "non-communicable" problems, the following health problems are relevant to be monitored for reasons of prevalence and vulnerability



D1 = disease; Sd = syndrome; D2 = disorder; H = hypertrophy

Dementia and chronic skin ulcer refers to persons 65 years of age and older. And in epilepsy and hyperkinetic disorder, to the population under 20 years of age

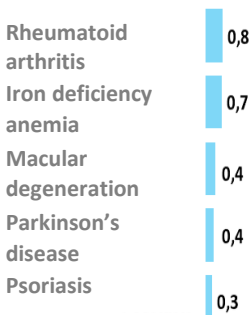
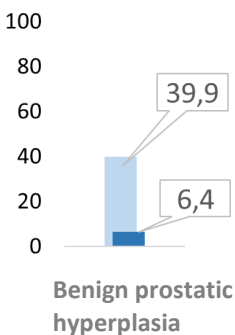
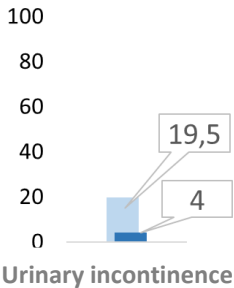
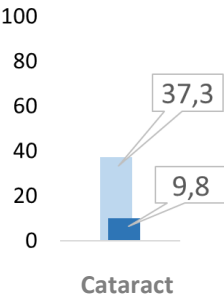
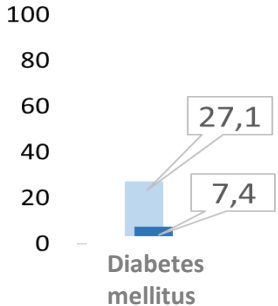
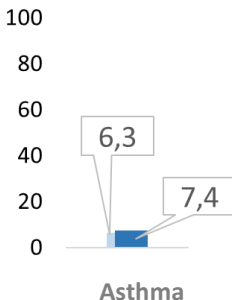
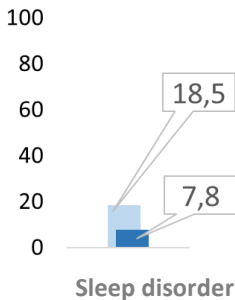
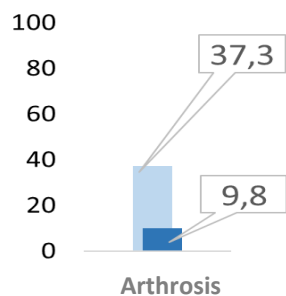
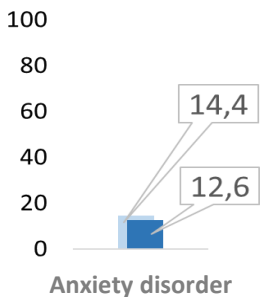
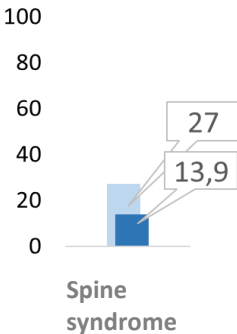
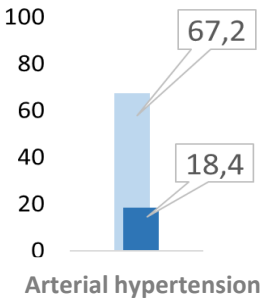
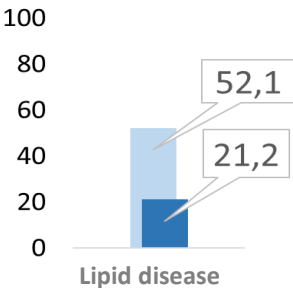
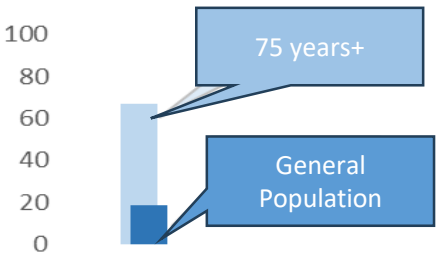


# PREVALENCE OF HEALTH PROBLEMS

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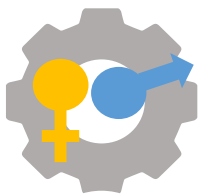
Percentage of most frequent health problems in:

- general population
- population aged 75 and over



Less frequent problems

\* In the case of asthma, the value of +75 years (6.3%) < general population (7.4%)

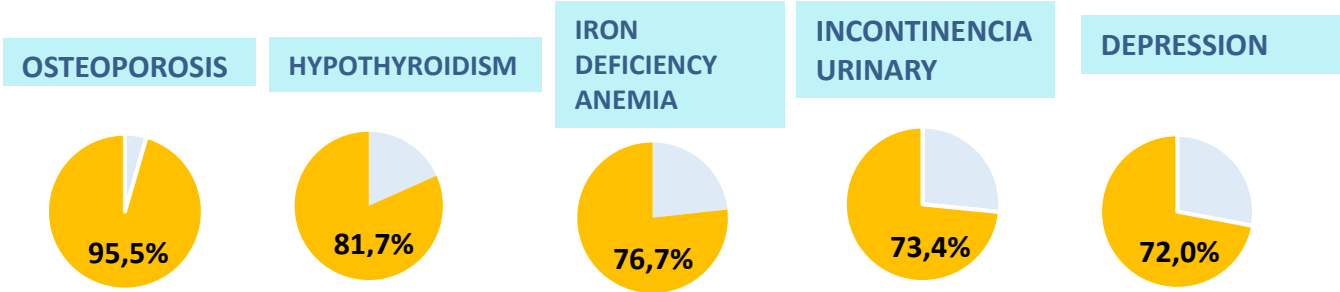


# GENDER DISTRIBUTION

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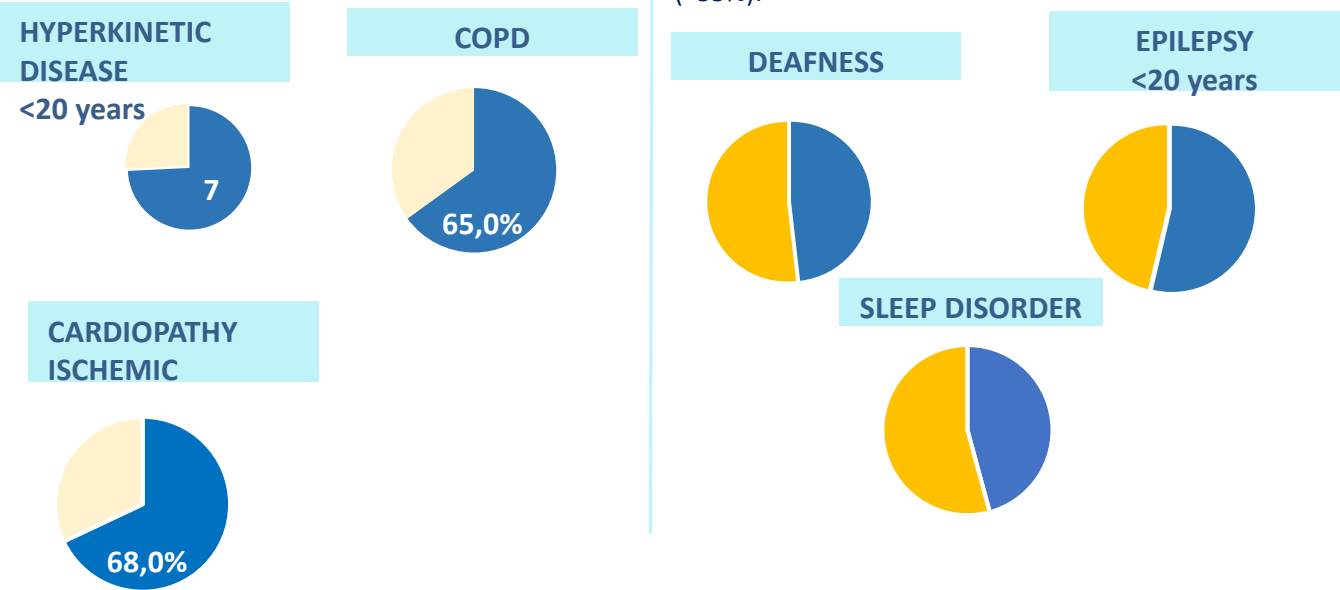
● Man      ▲ Woman

Most of the health problems studied are more prevalent in women. Over **70%** of the people affected are women in:

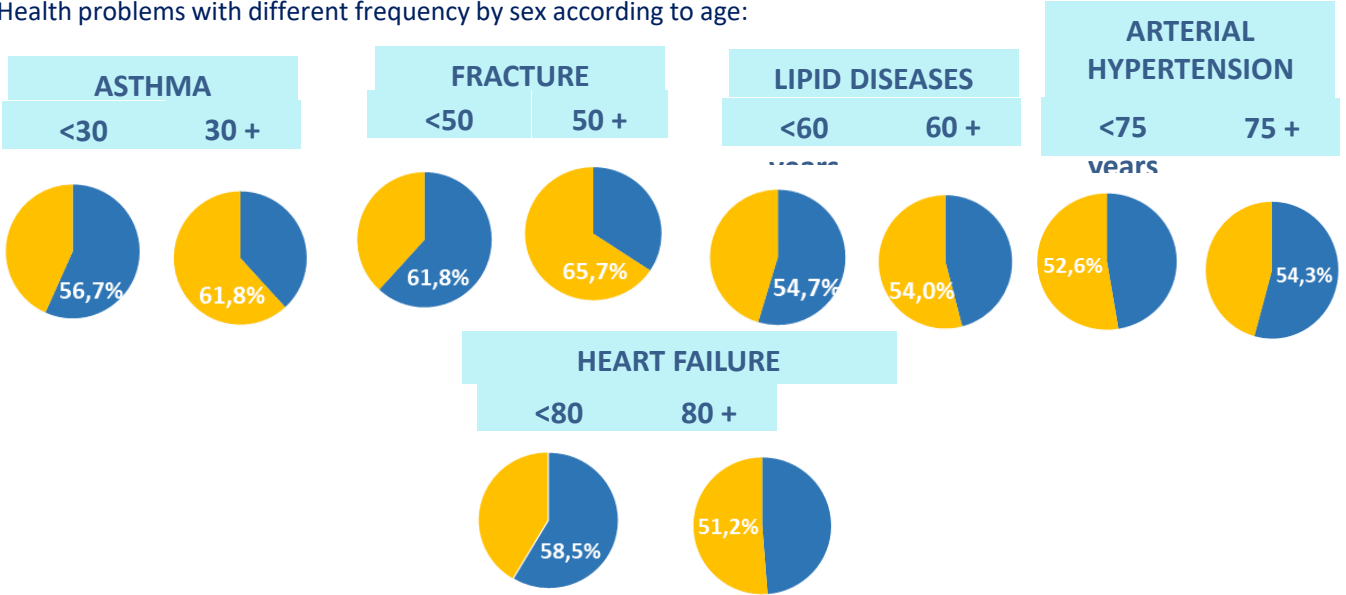


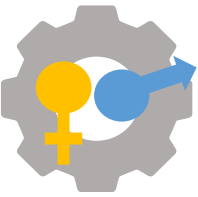
Health problems in which more than **60%** of the people affected are men:

Health problems with similar distribution by sex (<55%):



Health problems with different frequency by sex according to age:





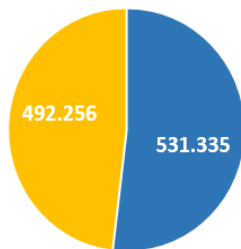
## GENDER DISTRIBUTION

● Man      ▲ Woman

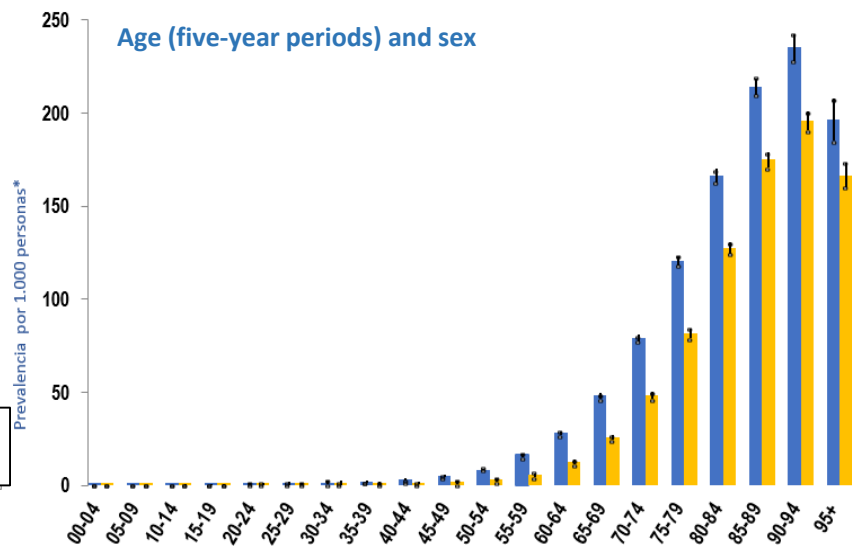
### Other situations

Finally, there are other health problems with similar absolute numbers of both sexes (cerebrovascular disease, atrial fibrillation, psoriasis, diabetes mellitus) or with a predominance of women (Parkinson's disease, renal failure) but in which the age-specific rates are higher in men. Example: atrial fibrillation

1,023,591 people



Rate: 22.36 per 1,000  
[CI95%: 21.48 – 23.25]

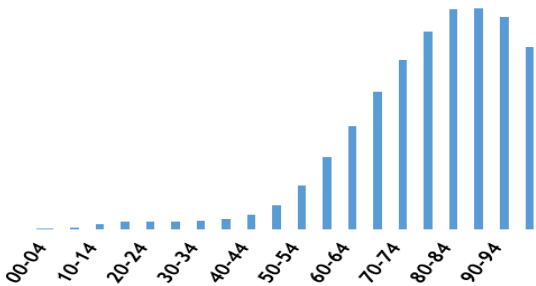




# AGE DISTRIBUTION

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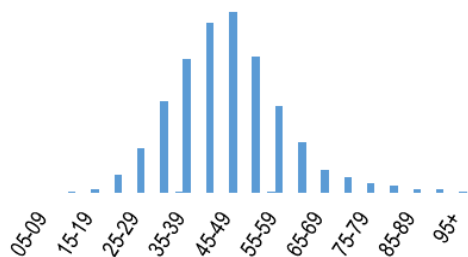
## Pattern 1: increasing frequency with age



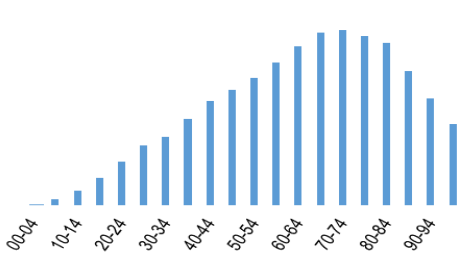
The vast majority of problems **increase with age** until 85/95 years of age and then decrease slightly. The differences lie in the time at which they begin to increase, the slope and the time at which the decline begins

In two health problems, the rise of the curve occurs at earlier ages

### Endometriosis

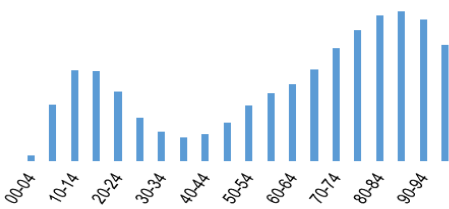


### Psoriasis

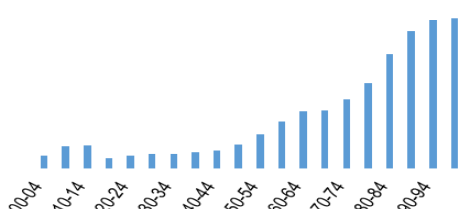


## Pattern 2: bimodal, with two curves, one in infancy and the other in adulthood

### Blindness

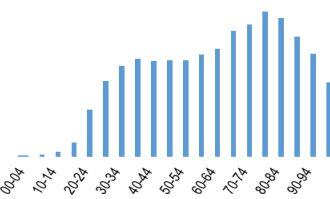


### Fracture

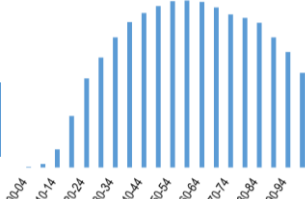


## Pattern 3: there is no typical growth curve with age, but rather a certain stability in the frequencies or specific age predominance

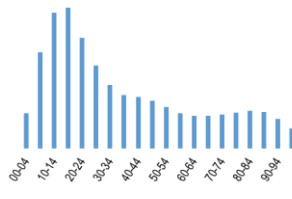
### Irritable bowel syndrome



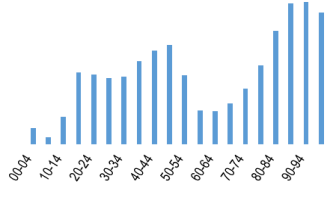
### Anxiety disorder



### Asthma



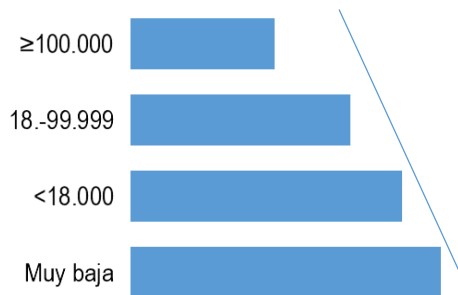
### Iron deficiency anemia





## DISTRIBUTION BY INCOME LEVEL

A more or less marked **social gradient** (higher frequency at lower income levels) is observed for most health problems in both sexes



Iron deficiency anemia	Anxiety disorder
Blindness	Depression
Cerebrovascular disease	Chronic skin ulcer (65+ years)
Ischemic heart disease	Diabetes mellitus
Heart failure	Hypothyroidism
Arthrosis	Urinary incontinence
Dementia (65+ years)	Chronic renal insufficiency

The gradient appears in **WOMEN** and, more diluted, in men in:

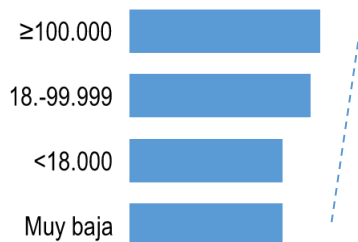
- Pernicious anemia
- Cataract
- Deafness
- Arterial hypertension
- Atrial fibrillation
- Spine syndrome
- Asthma
- Sleep disorder
- Lipid diseases

The gradient appears in MEN in:

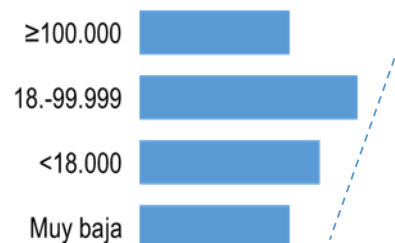
- Hyperkinetic disorder (<20 years)
- COPD

An inverse **social gradient** (higher frequency with higher income level) is observed in:

### Osteoporosis in women



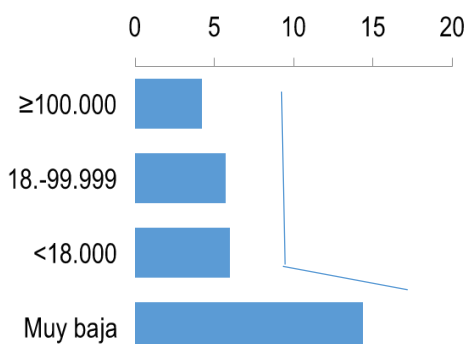
### Endometriosis Benign prostatic hyperplasia



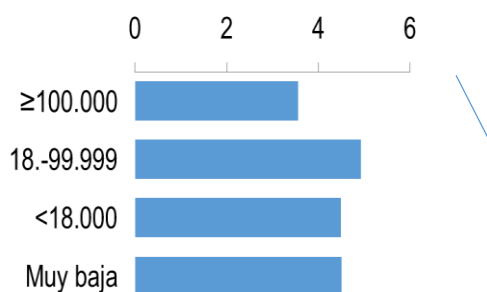




## DISTRIBUTION BY INCOME LEVEL

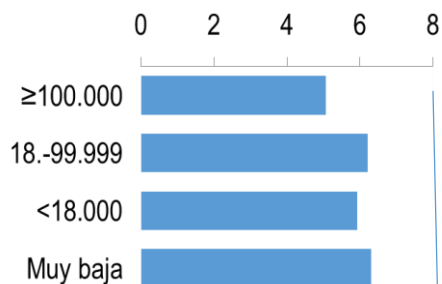


In **epilepsy** (under 20 years of age) there is an accumulation of cases in the lower income level



This pattern (lower rates in the highest income level and similar in the rest) can be observed in:

- Irritable bowel syndrome
- Fractures
- Glaucoma
- Macular degeneration (woman)
- Psoriasis



No difference in:

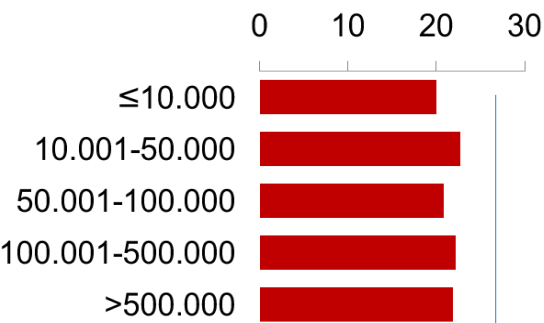
- Rheumatoid arthritis
- Parkinson's disease



## AGE-ADJUSTED DISTRIBUTION BY SIZE OF MUNICIPALITY

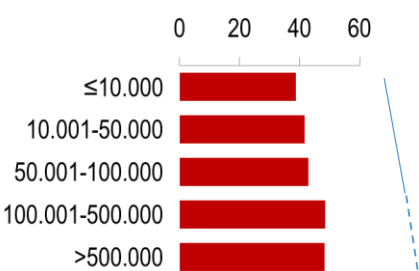
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With a few exceptions, **there are no differences** in the frequency of disease according to the size of the municipality



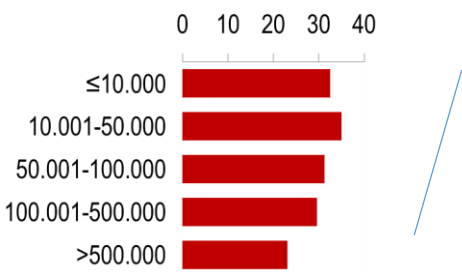
Prevalence tends to be **higher** the larger the size of the municipality in:

- Irritable bowel syndrome
- Sleep disorder
- Depression



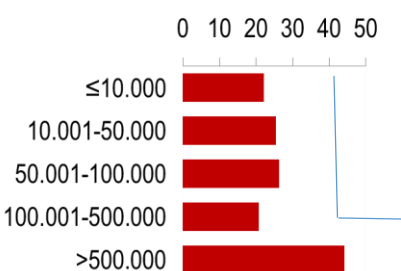
The prevalence tends to be **lower** the larger the size of the municipality in:

- Chronic skin ulcer
- Anxiety disorder

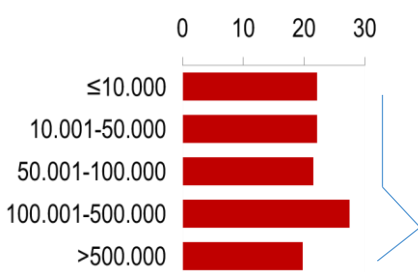


Higher prevalence **in cities** with more than 500,000 inhabitants (and similar in the rest):

- Blindness
- Glaucoma
- Macular degeneration
- Rheumatoid arthritis
- Pernicious anemia



Higher prevalence **in cities** with more than 100 to 500,000 inhabitants (and similar in the rest).  
Hyperkinetic disorder





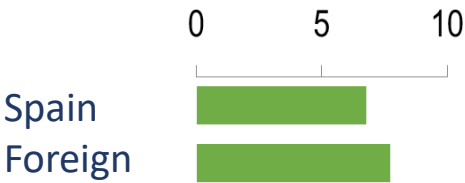
## AGE-ADJUSTED DISTRIBUTION BY COUNTRY OF BIRTH

For **most health problems**, the **prevalence** (age-adjusted) is **higher** in people **born in Spain**



**Similar prevalence** was observed between those born in Spain and those born abroad:

- Anemias
- Ischemic heart disease
- Rheumatoid arthritis
- Hypothyroidism



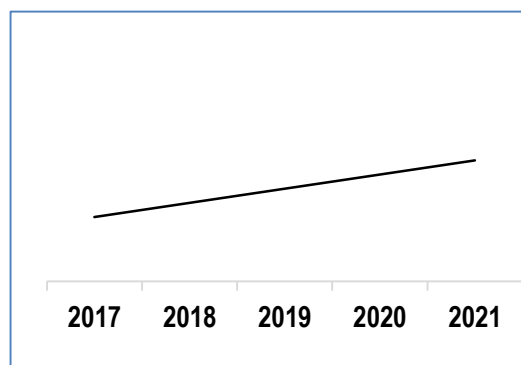


## AGE-ADJUSTED TIME TREND

The **prevalence of most** health **problems increases** over time

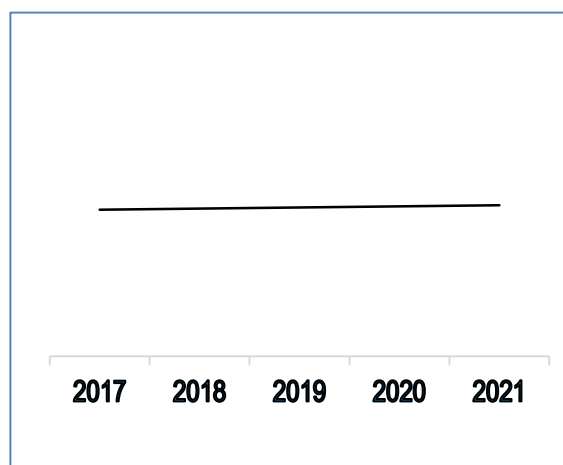
It stands out a **greater slope** of:

- Anxiety disorder
- Urinary incontinence
- Deafness
- Hyperkinetic disorder (< 20 years)
- Endometriosis



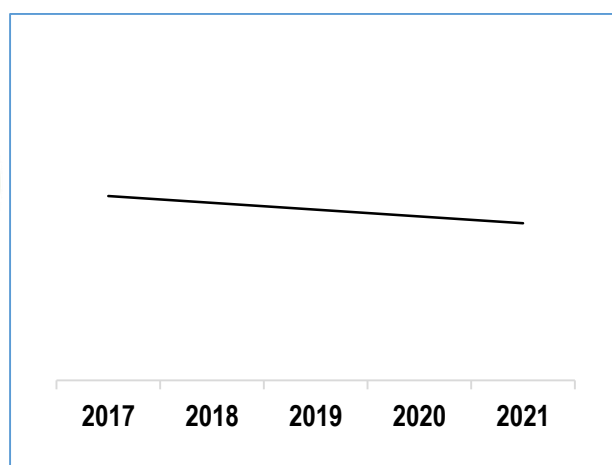
**Stable** prevalence over time is observed in:

- Ischemic heart disease
- Cerebrovascular disease
- Arterial hypertension
- Osteoporosis
- Parkinson's disease
- Diabetes mellitus
- COPD



There is a tendency for prevalence to **decrease** over time in:

- Iron deficiency anemia
- Fractures





## REFERRALS

In the card for each health problem, the five interconsultations to which people with that problem are most frequently referred are presented, and the values for the general population are represented

The following graph shows the **ratio of referrals** for each health problem to the most common referral specialty in the general population. It is expressed as number of times more

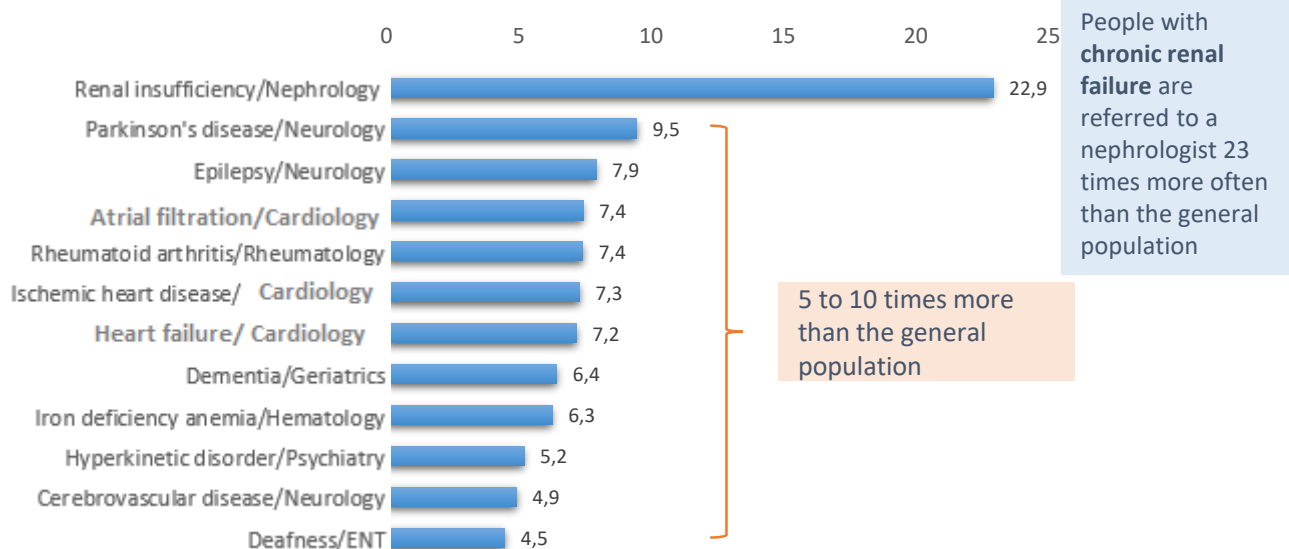
Ratio of percentage of people with referral.

Example:

Percentage of people with Parkinson's disease and referral to neurology 11.72%

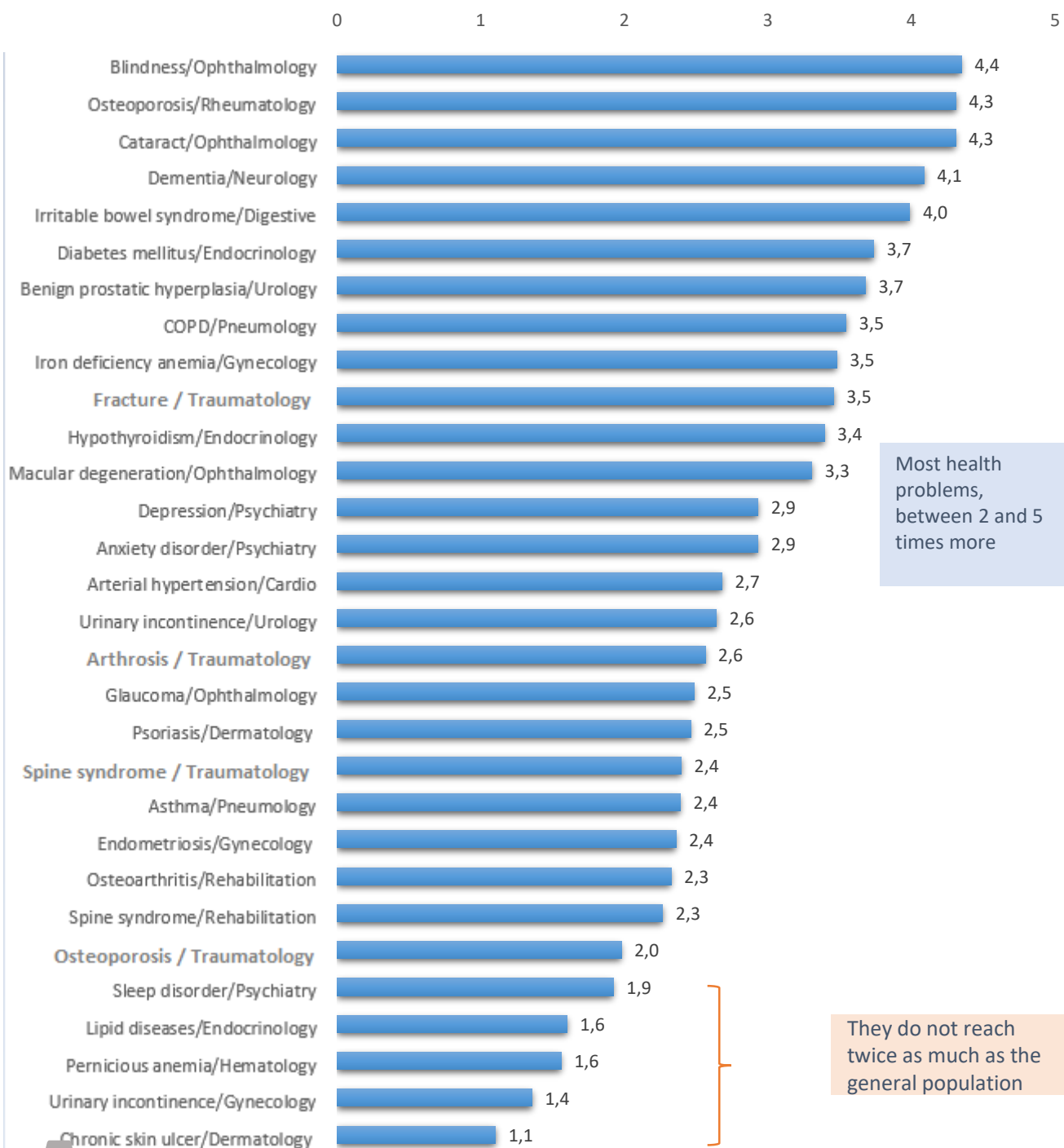
Percentage of persons with referrals to neurology in the general population: 1.23 %

Ratio:  $11.72/1.23 = 9.53$





## REFERRALS



## PROCEDURES

The tab for each health problem indicates the % of persons with the problem who, in the year analyzed, have undergone a given procedure. In general terms, the selected procedures are recommended to be performed in periods longer than one year. These annual results are shown as an approximation which should be interpreted cautiously



## CONTROL OF CLINICAL PARAMETERS



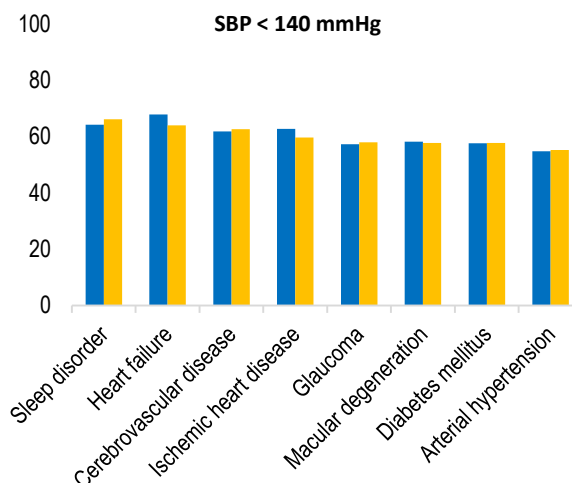
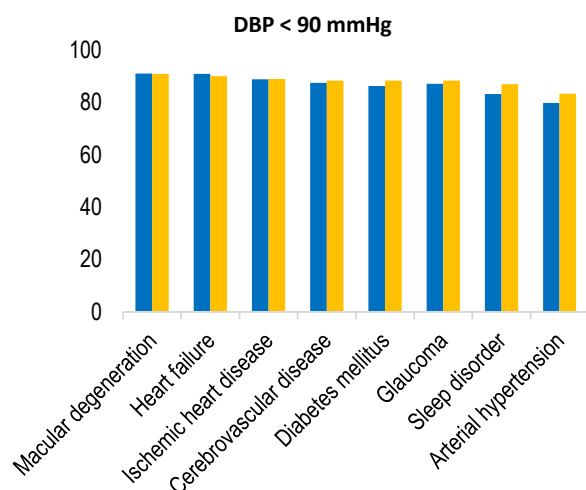
Man



Woman

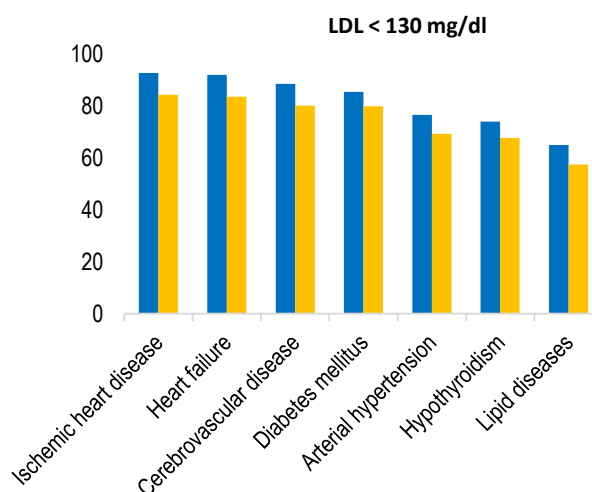
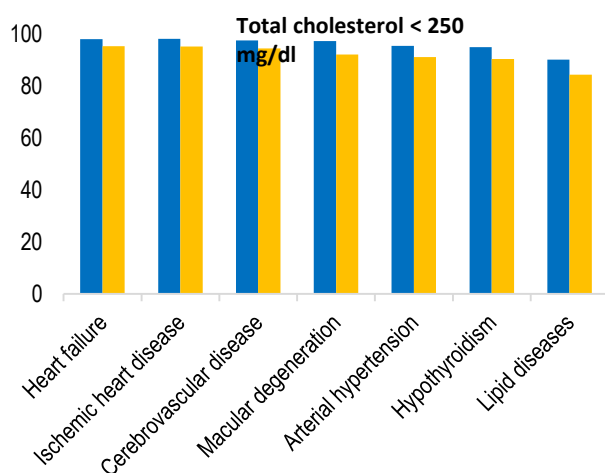
### Blood pressure

In cardiovascular processes there is better control of diastolic blood pressure (85-90% of people with good control) than systolic blood pressure (around 60%)



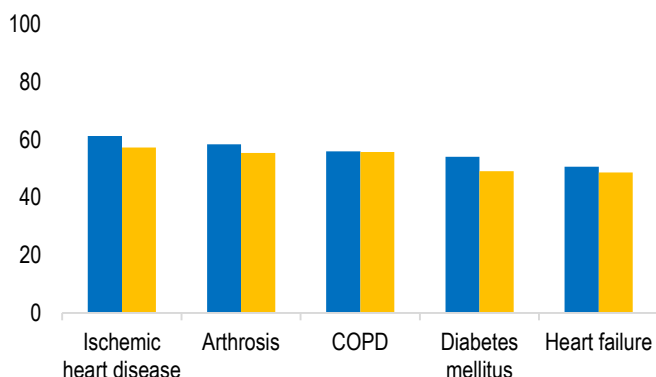
### Lipids

Better control of total cholesterol and LDL cholesterol is observed in men. LDL well-control reaches **80-90%** of people



### Body mass index (BMI)

**BMI < 30 kg/m<sup>2</sup>**



In health problems for which weight control is specifically indicated, between **50 and 60%** of people have BMI values below 30 kg/m<sup>2</sup> (without obesity)

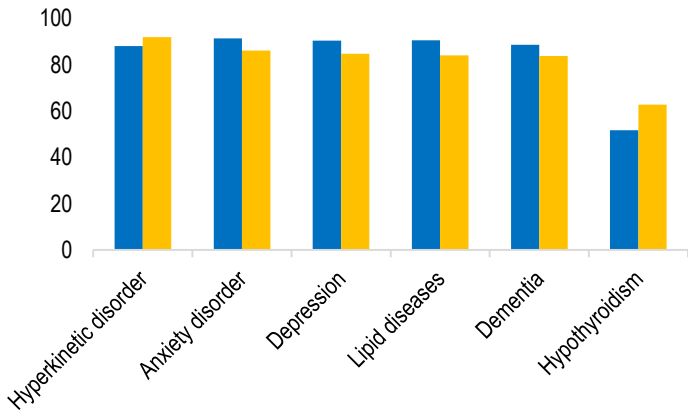


# CONTROL OF CLINICAL PARAMETERS

Men Women

## Thyroid stimulating hormone (TSH)

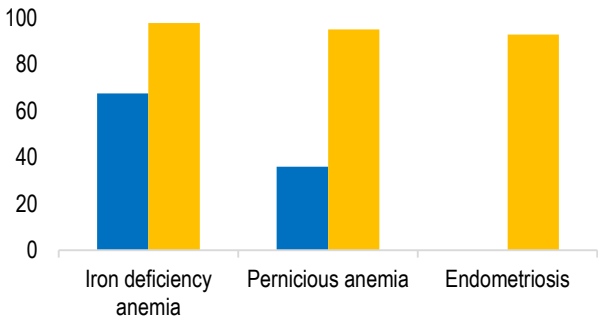
TSH 0.4-4.0 mIU/l



Between 10 and 15% of people with processes whose etiology may be related to thyroid alterations have a TSH outside the normal range (Note: Hypothyroidism includes subclinical hypothyroidism)

## Hemoglobin

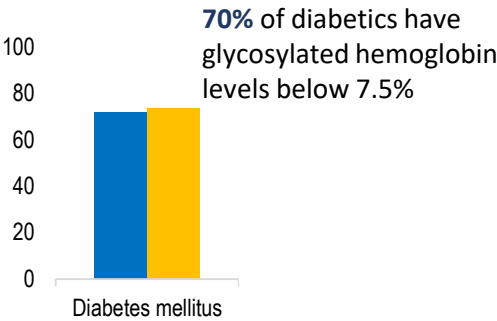
**Hemoglobin**  
(Female between 12.1 and 15.1;  
Man between 12.7 and 13.8 mg/dl)



95% of **women** diagnosed with iron deficiency anemia, pernicious anemia or endometriosis have a last hemoglobin value within normal limits. This is not the case in man

## Glycosylated hemoglobin

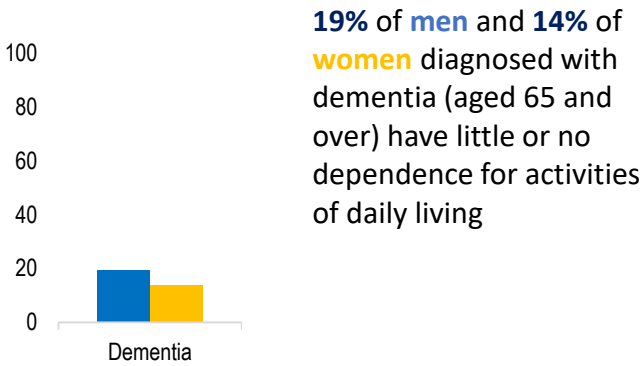
HbA1c < 7.5%



70% of diabetics have glycosylated hemoglobin levels below 7.5%

## Dependency for activities of daily living

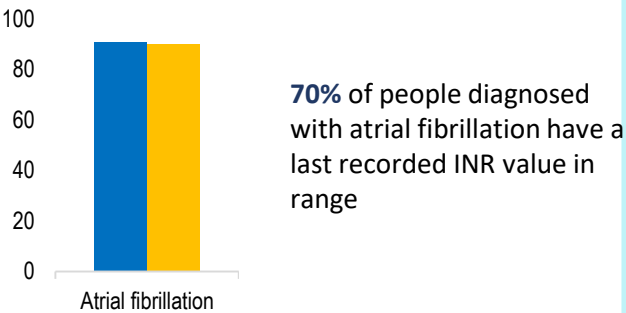
Barthel Index > 90



19% of **men** and 14% of **women** diagnosed with dementia (aged 65 and over) have little or no dependence for activities of daily living

## International Normalized Ratio

INR (1.8-3.5)



70% of people diagnosed with atrial fibrillation have a last recorded INR value in range

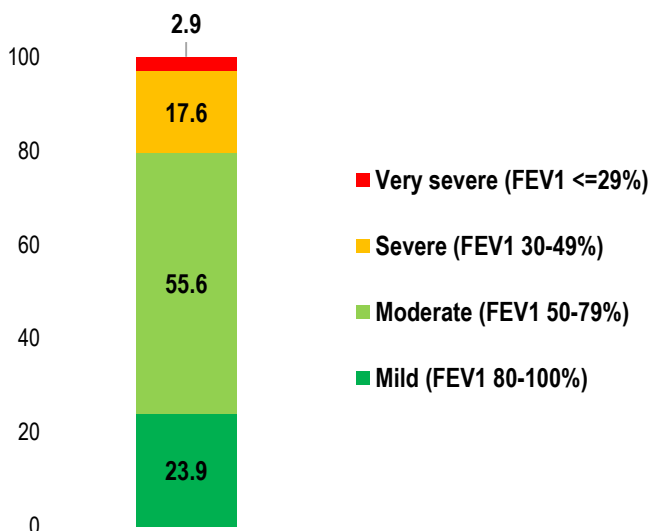




## CONTROL OF CLINICAL PARAMETERS

### Forced exhaled volume (FEV1)

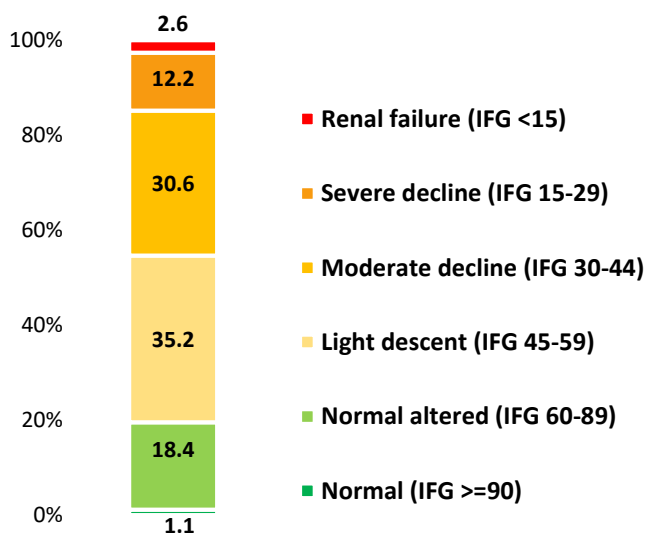
**79%** of people diagnosed with COPD have mild or moderate COPD



### GFR, glomerular filtration rate

**45%** of people diagnosed with chronic renal failure have moderate, severe or very severe chronic renal function decline

(ml/min/m<sup>2</sup>)



# HOSPITAL ADMISSIONS AND HOSPITAL EMERGENCY ROOM VISITS

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Men

Women

## Interpretation:

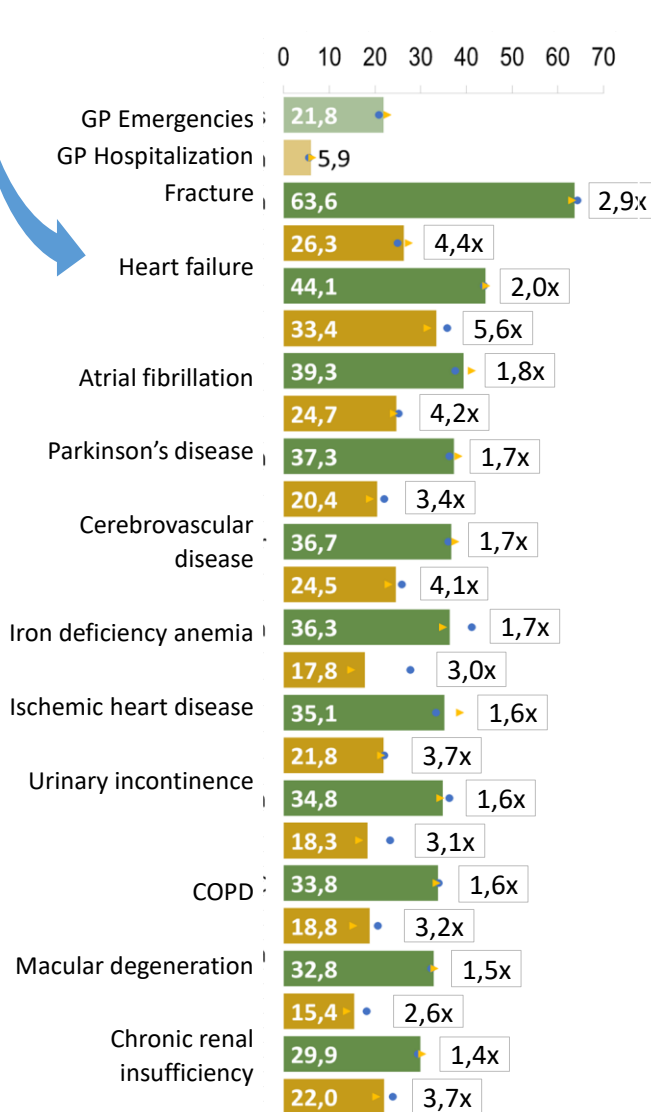
44.1% of people with heart failure have made at least one visit to a hospital emergency room for any reason during the year (2 times more than the general population). And 33.4% have had at least one hospital admission (5.6 times more than the general population)

## Interpretation:

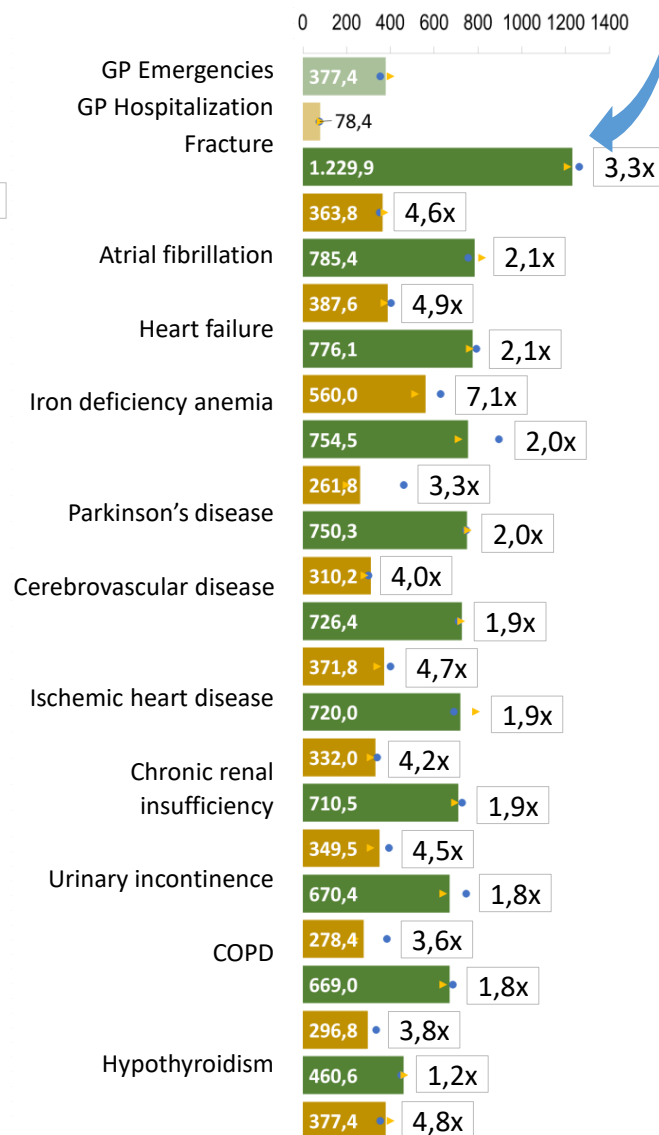
People with fractures have made an average of 1.2 visits per person per year to the hospital emergency department for any reason during the year (3.3 times more than the general population). And they have 4.6 times more hospital admissions than the general population (363.8% vs. 78.4%)

## Persons with at least one hospital emergency visit (green) or hospital admission (gold) (%)

## Visits per thousand people per year in hospital emergency rooms (green) or with hospital admission (gold) (%)



GP: general population





## DRUGS



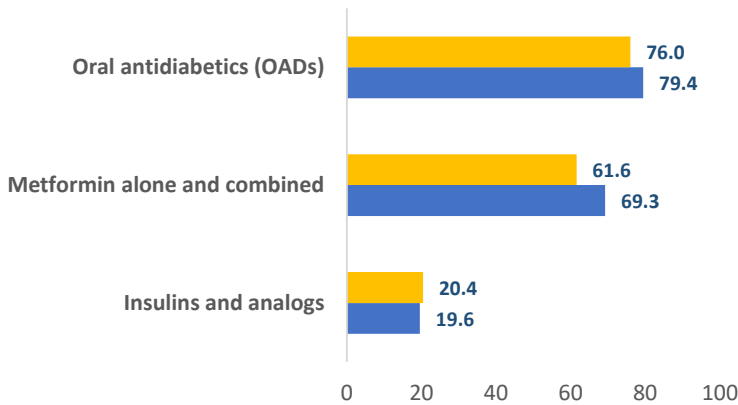
Man



Woman

Clinically relevant drugs for each health problem have been selected for study. **Two types of graphs** are included in each problem card

### Percentage of individuals who have used each selected drug at least once in the year

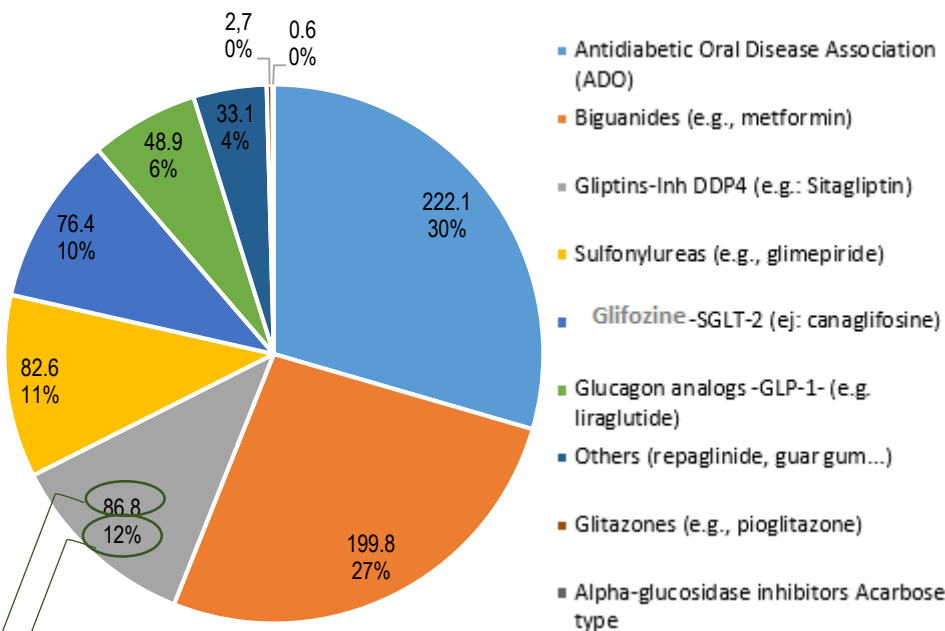


Example of interpretation:

**20.4% of women** and **19.6% of men** with diabetes mellitus have received at least one package of insulin

\*Metformin is the most widely used ADO

### Distribution of the total consumption of a pharmacological group significant for that health problem in its subgroups



**Oral antidiabetic consumption (A10B).**  
DDD(s)/1000  
Inhabitants/day and %  
over total DHD

It is expressed in two measures:  
**DDD(s)/1000 Inhabitants/day** for each pharmacological subgroup  
**% of DHD** of each subgroup with respect to total DHD of the group

Example of interpretation:

The most commonly used type of oral antidiabetic (OAD) is OAD associations\*, which account for **30%** of OAD doses. A total of **222.1** DHD of these associations are consumed \*(in general, metformin with "glitazone", "gliptin" or "gliflozine")