

# VALUE OF INSURANCE CLAIM DATA FOR “RISK-MANAGEMENT” THE EXAMPLE OF MENTAL HEALTH

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# Key facts and figures about French Health Care system (2015)

**66 M** population

**82,3** LE at birth

**\$US 4.6k** per capita PPP

**11%** Share of GDP

**2-2.5%** App. annual growth

## Social insurance system:

Public « universal »  
mandatory health insurance

+

Voluntary private « top-up »  
health insurance

**77%**

**13%**

# A mandatory public « universal » health insurance system managed by 3 main funds

CNAM

**General regime  
(salaried workers)**

**86 %**

**Independent  
workers**

**5 %**

**Agriculture  
workers**

**5 %**

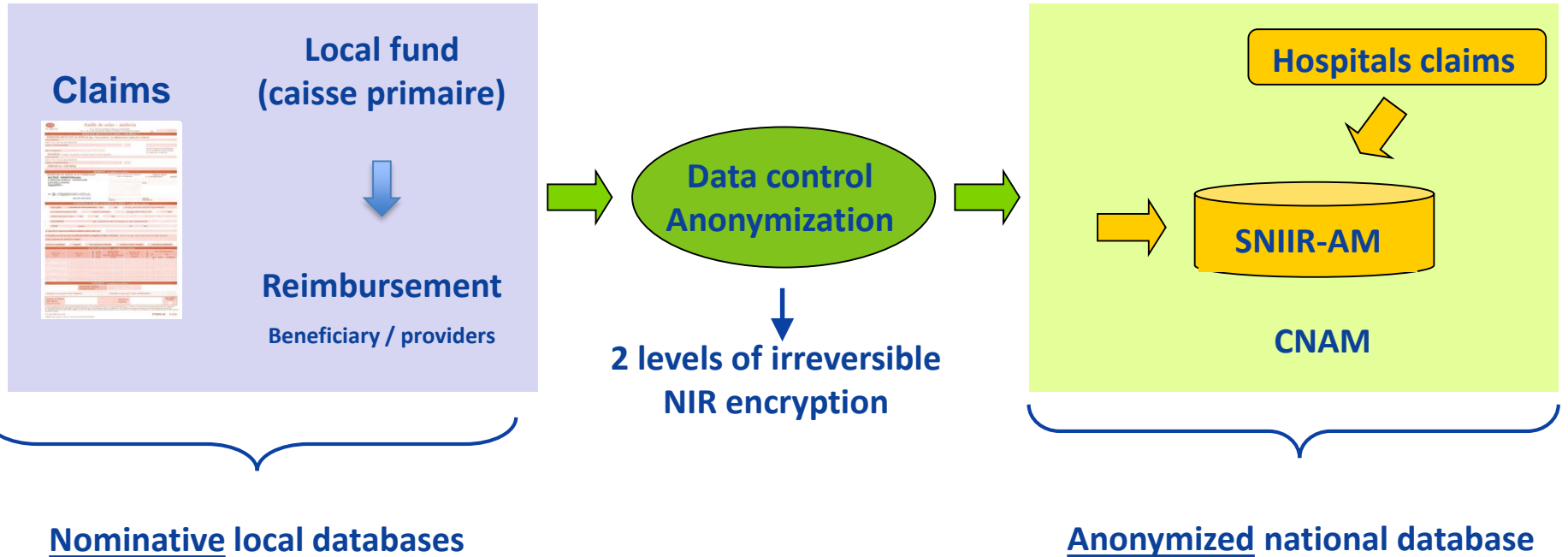
**Other « small » funds**

**4 %**

# History of national claims database in France

- **1998**
  - Law creates SNIIRAM
- 2003
  - First national datawarehouse
- 2007
  - SNIIRAM complete and fully active
- **2016**
  - Law creates SNDS
- 2017
  - SNDS active
- **2019**
  - Law creates health data hub

# What data do we have in France? (SNDS) Coverage of the whole French population



+ causes of death (death certificates)

# What type of data do we have ?

- **Information on beneficiaries**

- Demographics (age, gender, living status) ;
- Address ;
- Type of coverage (eg chronic disease schemes, safety-net coverage) ;

- **Outpatient care (fee for service)**

- All « prestations » (consultations, lab tests, imaging, procedures, drugs, medical devices)
- Expenditures
- Date of care date of reimbursement
- No diagnosis or motive of care

- **Inpatient care (activity based payment – DRG)**

- Infos on stays (dates, diagnosis, procedures, DRG)
- Emergency visits (no motive of care)

- **Death certificates**

- Causes of death, date of death, place of death

# « Mapping » diseases and costs : methodology

- Identification of people who received care for **58 groups of diseases or medical events or treatments**, which are frequent, serious and/or costly
- Using algorithms and the Sniiram database:
  - International Classification of Diseases 10th edition (ICD-10) diagnoses for **long term chronic diseases** with 100% fee coverage for chronic disease
  - ICD-10 diagnoses **for hospital stays using the primary or associated diagnoses**, that occurred during the past 5 years
  - Reimbursements for **specific drugs**
  - Medical **procedures**
- Definitions based on:
  - Sensitivity analyses (sample sizes, characteristics, costs)
  - External comparisons
  - External review to consult experts

# Methods

## Category 1 – psychiatric diseases

- **4 types of disorders:**
  - **Psychotic** disorders
  - **Mood and neurotic** disorders
  - **Mental deficiency**
  - **Addictive** disorders
- **Algorithm identifies**
  - ICD-10 diagnosis for **long term chronic diseases** with 100% coverage
  - ICD-10 **diagnosis for hospital stay** (primary or associated diagnoses), in the past 2 years
  - ICD-10 **diagnosis for hospital stay** (primary or associated diagnoses), in the past 5 years AND **3+ reimbursements for relevant drugs** in the current year

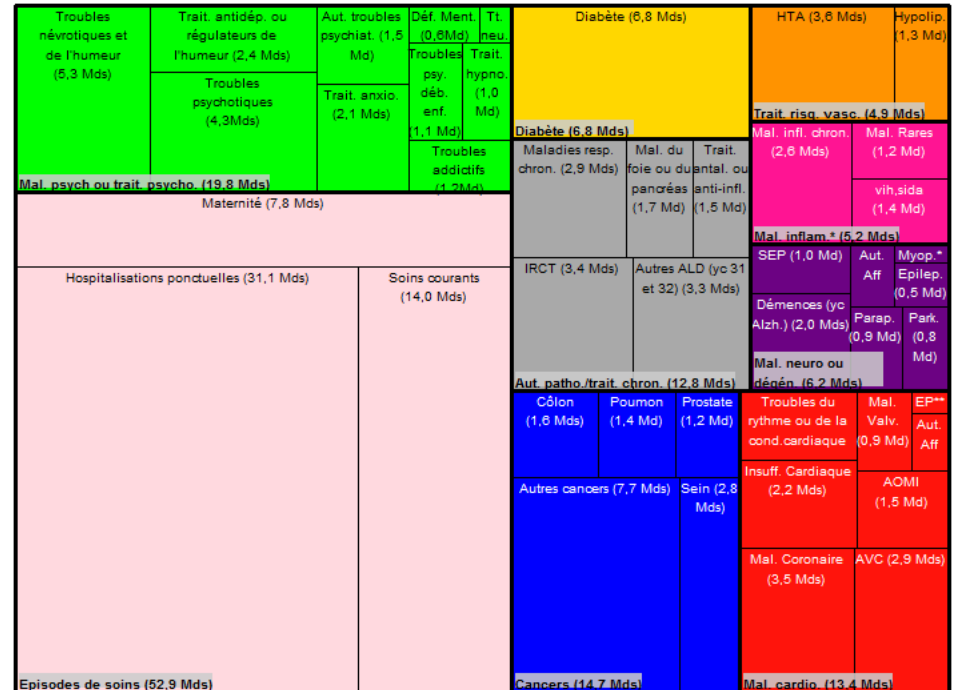
## Category 2 – psychiatric treatment

- **4 types of treatments**
  - **Antidepressant**
  - **Neuroleptic**
  - **Anxiolytic**
  - **Hypnotic**
- **Algorithm identifies**
  - Current year : **3+ reimbursements** for antidepressant drugs
  - Past 5 years: **no ICD-10 code** for mental illnesses during



# Mental health burden [general regime beneficiaries - 2016]

- **7,2 million people (12.5 %)**
  - 2,1 million « pathology »
  - 5,1 millions « traitement »
- **19,8 bn euros, soit (14 %)**
  - 70 % for « pathology »



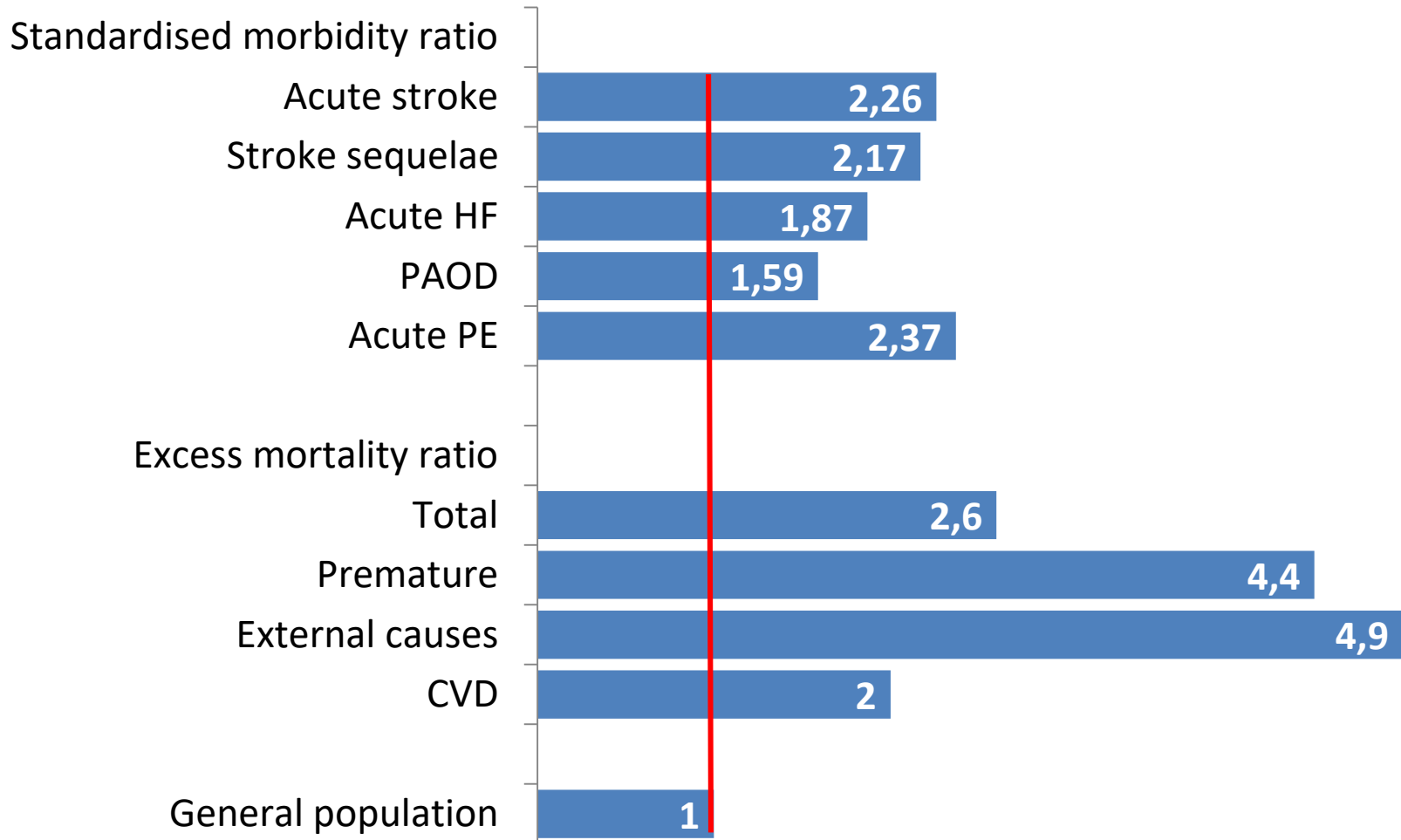
# Psychiatric diseases AND cardiovascular diseases

- **Odds-ratio of a cardiovascular event between 2013 et 2016**

- No CV history at baseline (2013)
- Comparing : people WITH vs WITHOUT psychiatric disease in 2012

	Addictive disorders	Psychotic disorders	Mood and neurotic disorders	Bipolar disorders	Depression and other mood disorders
Acute coronary event	1,3	1,0	1,2	1,1	1,3
Acute stroke	2,6	1,3	1,4	1,4	1,4
Acute cardiac failure	2,2	1,6	1,5	1,4	1,5
Acute pulmonary embolism	2,4	2,2	2,0	2,2	2,2

# Excess risk and excess mortality in 2016 (all patients with psychiatric « pathology »)



# Appropriateness of psychiatric drugs prescription in « real-life »

## The case of bipolar disorders

- **In ~30 000 patients :**
  - Patients with bipolar disorder (ICD-10)
  - AND initiating mood stabilising drugs in 2011-2012
- **First-line prescribed treatment**
  - Second generation antipsychotic drugs - SGAD (48 % cases)
  - Conventional mood stabilizer (42 % cases)
  - Both in association (10 % of cases)
  
  - ✓ Lithium = 4.7 % cases – recommended first-line (!)
- **SGAPD are known to have excess CV risk**
  - However 4.8 % of SGAPD patients had a history of CHD
  - Vs 4.2 % of total study population

**THANK YOU FOR YOUR ATTENTION**