

# Health problems managed in Malian general practice as compared to French general practice

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# The epidemiological transition in Mali

- High incidence and mortality of infectious diseases<sup>1</sup>
  - Malaria, diarrheas, HIV, tuberculosis, pneumonias
- Mortality of mother and child still high<sup>2</sup>
  - 115 children per 1000 before the age of 5 years
  - 587 women per 100,000 births
- Emerging non-communicable diseases<sup>1</sup>
  1. Cardiovascular disease
  2. COPD
  3. Cancers

<sup>1</sup> Murray, Lancet, 2014

<sup>2</sup> WHO, 2018

# Evolution of the healthcare system in Mali

- Chronic lack of resources<sup>2</sup>
  - 2.7 physicians and 12.4 nurses or midwives per 10,000 inhabitants
  - Versus 32.1 and 80.2 in Europe, respectively
- The Community Health Centers (CSCOMs)
  - 1st level of the healthcare pyramid
  - Private, not-for-profit centers, managed by a local association of elected users
  - Mission to provide a « minimal bundle of activities », including curative, preventive, perinatal, etc.
  - Supported by the French NGO 'Santé Sud'

<sup>2</sup> WHO, 2015

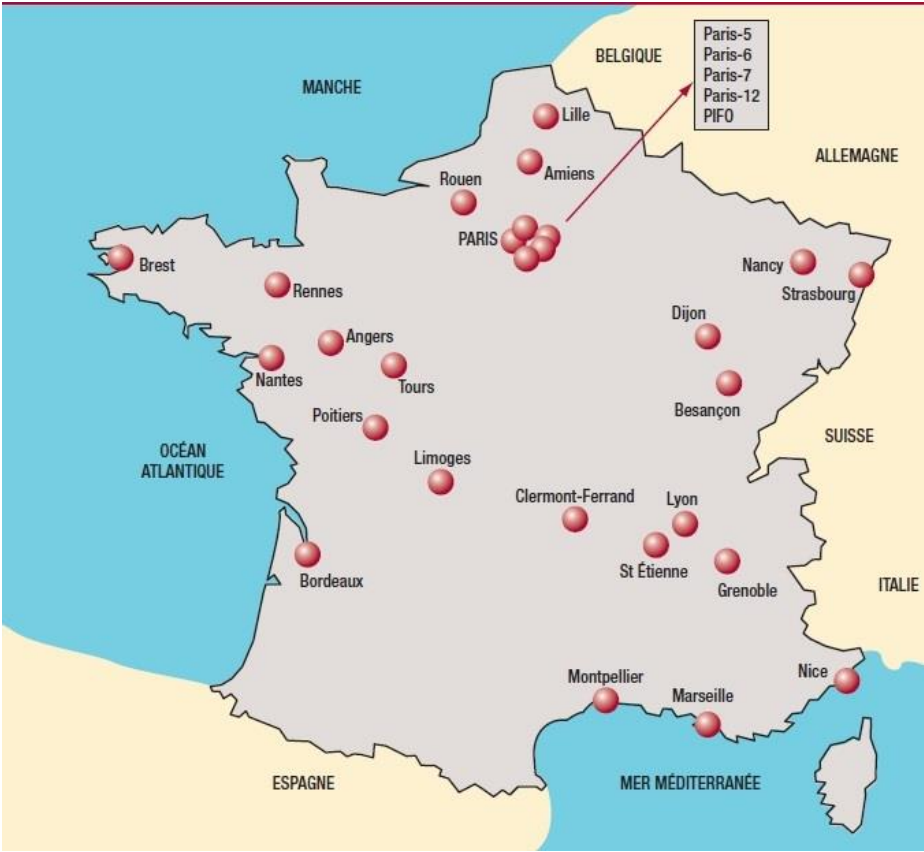
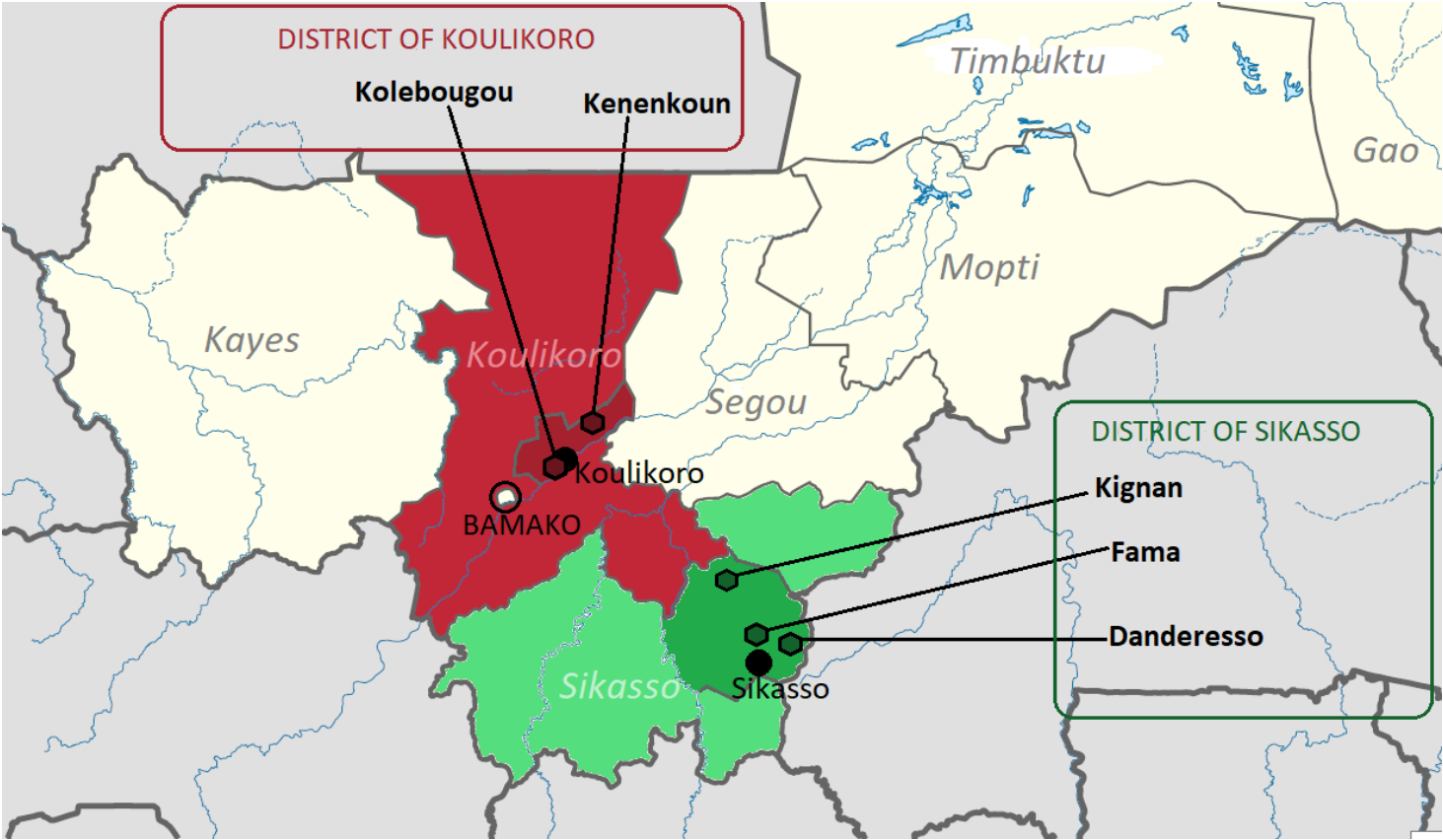
# Objective of the study

To compare the health problems managed by the GPs in Mali and in France



# Data sources

5 CSCOMs and 128 practices of GP trainers



# Data collection

## Mali

By the doctor of each CSCOM  
via the EHR provided by the NGO Santé  
Sud in 2015

June 2016 → May 2017

## France

By the intern in training in 128 practices  
involved in the ECOGEN\* study

December 2011 → March 2012

\* *étude des Eléments de COnsultation en Médecine GENérale*

# Sample sizes

## Mali

- 19,068 encounters
- 22,051 health problems managed
- Primary coding according to a list of 62 health problems derived from the ICD-10
- Secondary coding according to ICPC-2, including the coding of 4,417 « other diagnoses »

## France

- 19,341 encounters
- 45,577 health problems managed
- Coding according to the ICPC-2

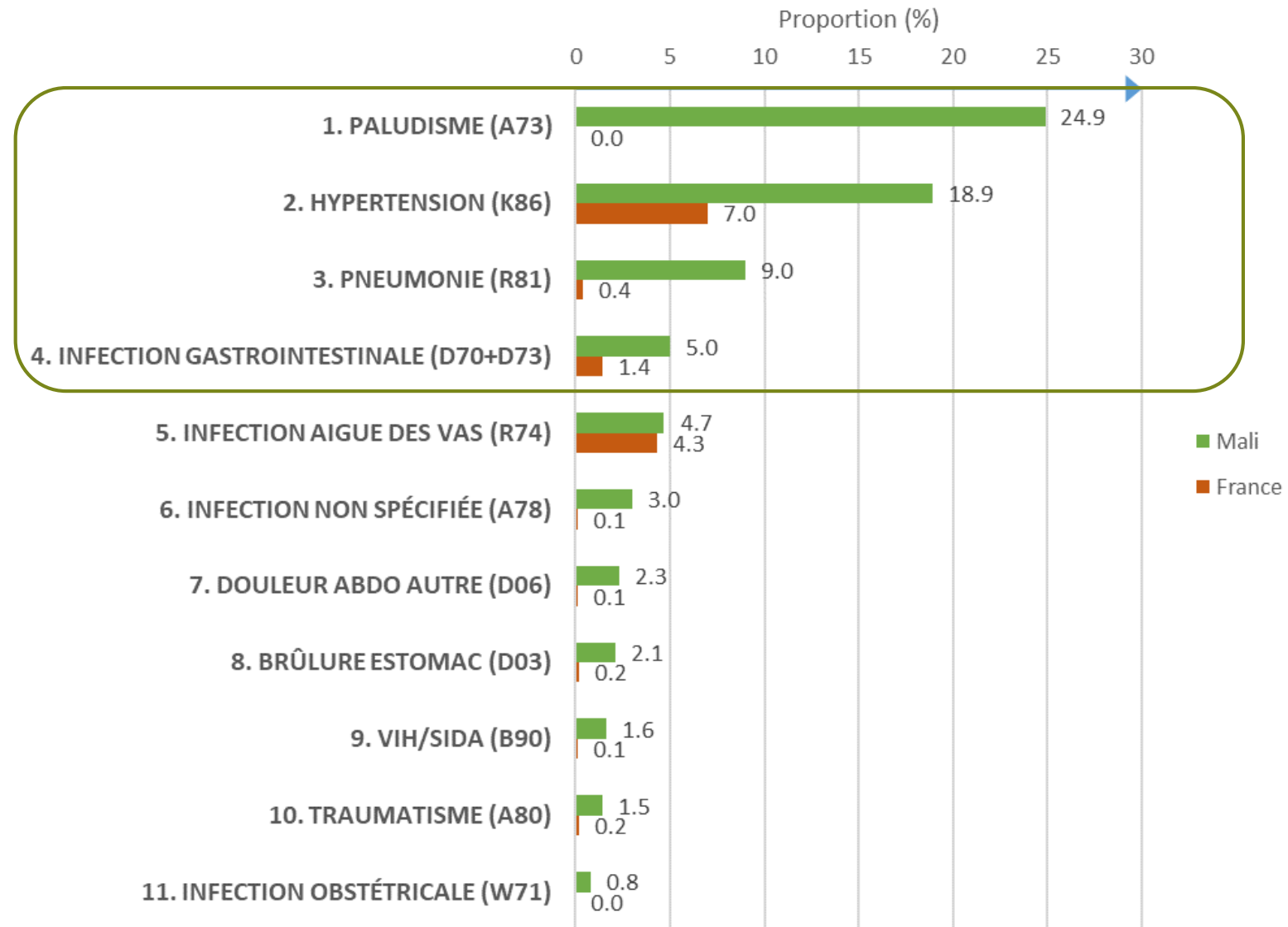
Direct standardisation of data for age and sex

# Frequency of health problems and prescriptions

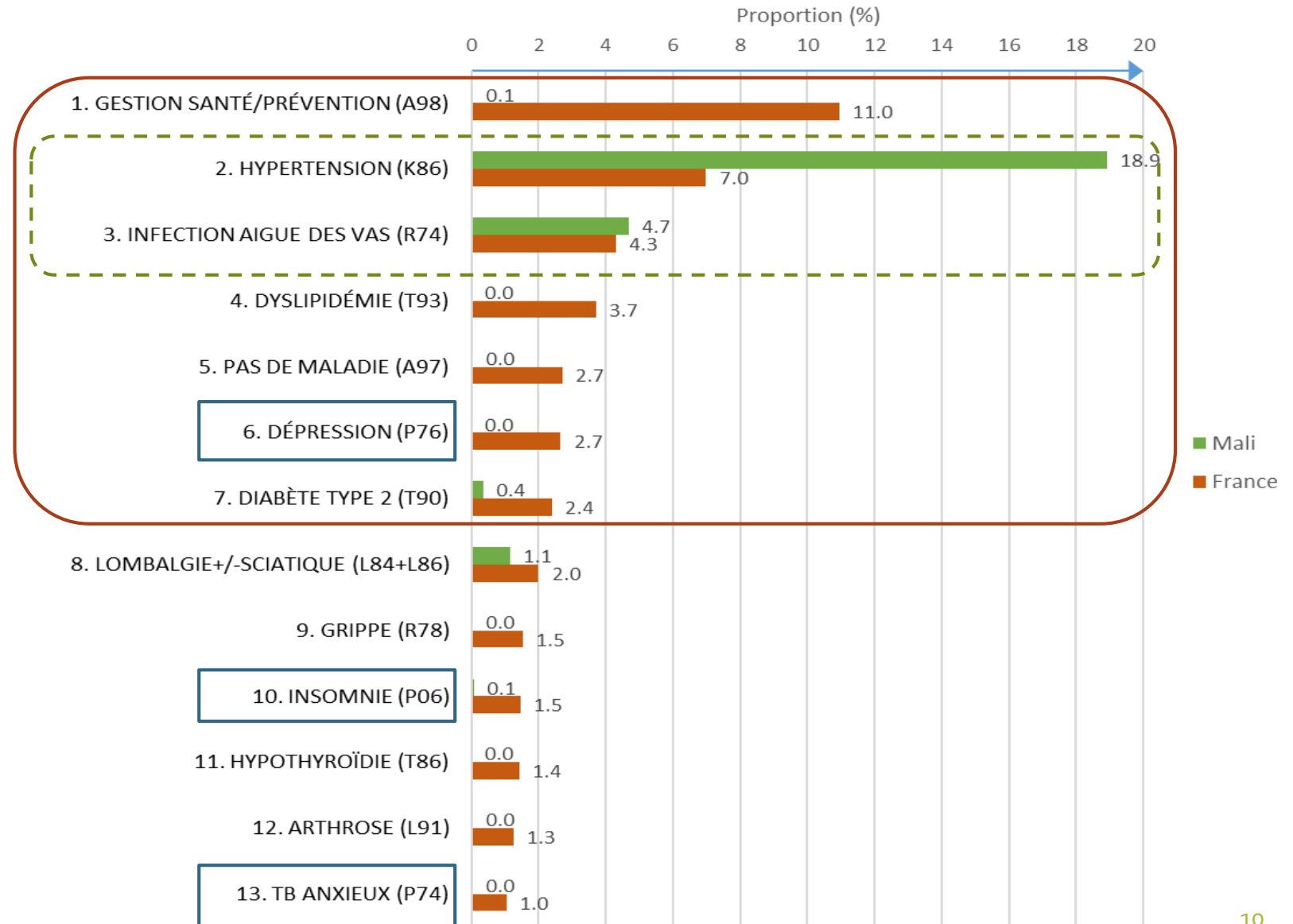
	MALI	FRANCE
Number of health problems managed per consultation	1.16	2.21
Proportion of chronic conditions among health problems	12.3%	39.6%
Proportion of encounters with a drug prescription	99.9%	80.7%



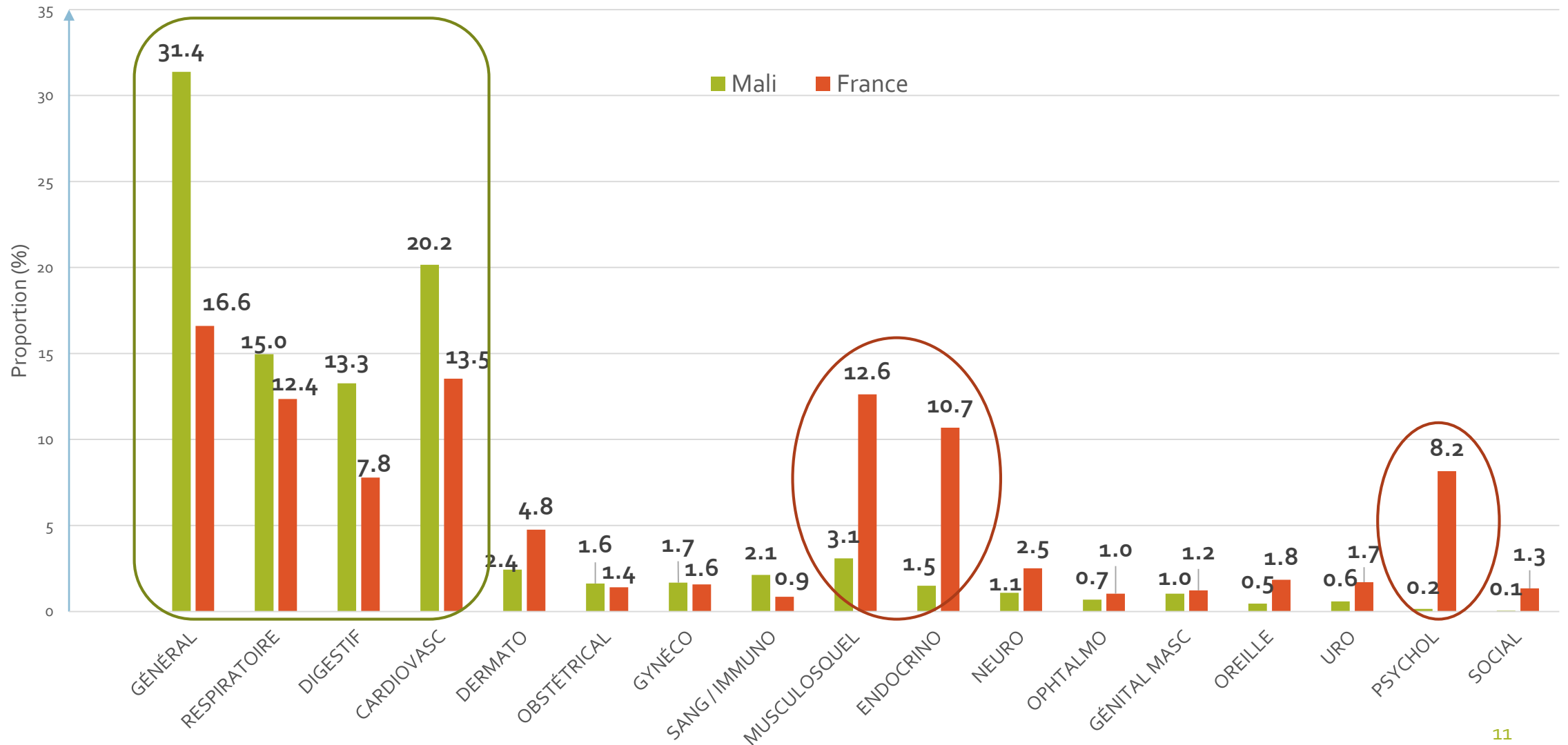
# Health problems most frequently managed in Mali



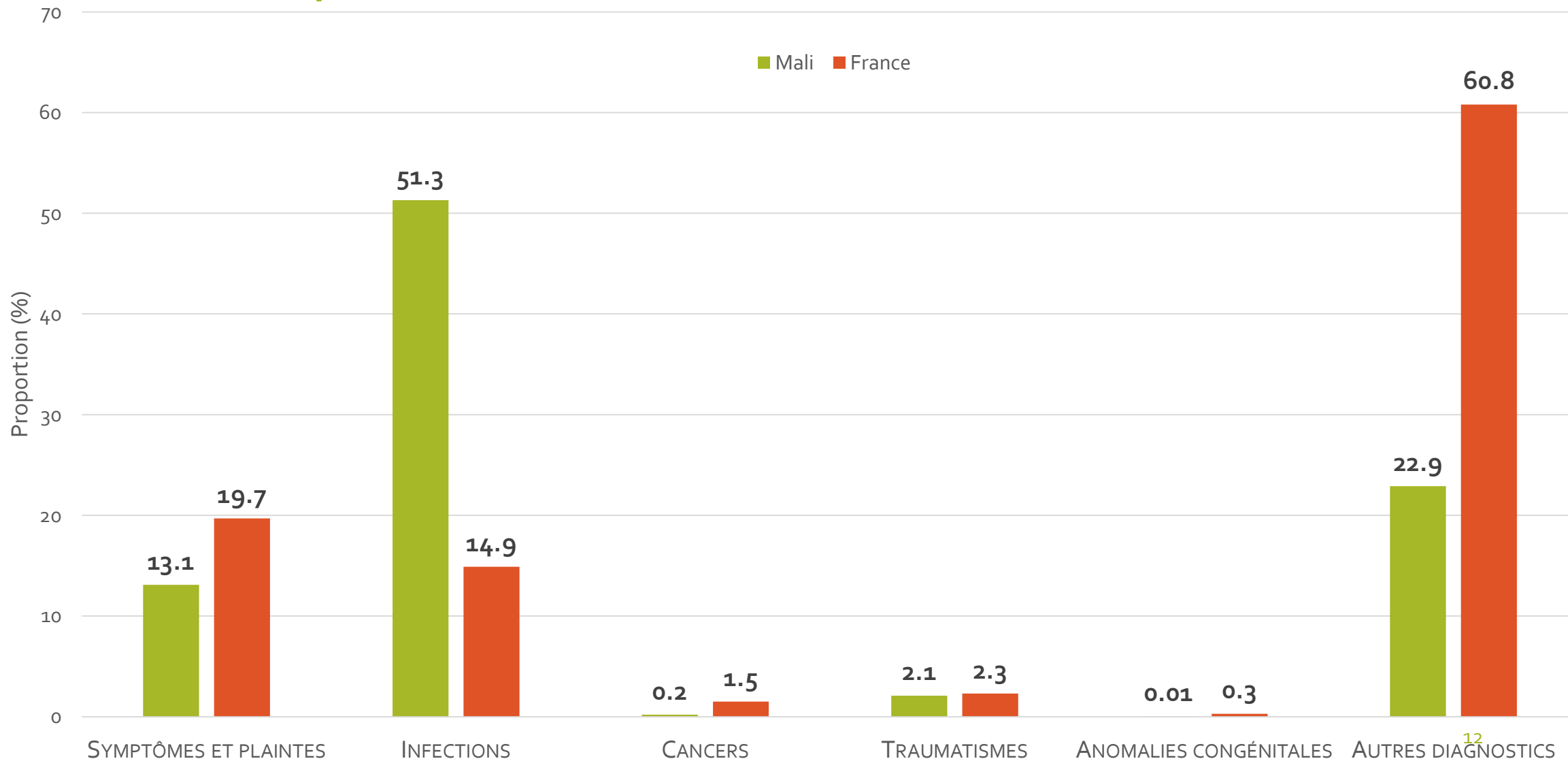
# Health problems most frequently managed in France



# Distribution of health problems according to ICPC-2 chapters



# Distribution of health problems according to ICPC-2 subcomponents



# Predominance of infectious illnesses in Mali and chronic conditions in France

- Persistent burden of infectious illnesses (51% of health problems)
  - Especially malaria (25%), although morbi-mortality is decreasing in Africa<sup>1</sup>
  - Pneumonias overdiagnosed?
    - High use of anti-infective drugs
    - Lack of distinction between viral, bacterial and parasitical diseases?
- Chronic conditions rarely managed in Mali (apart from exacerbations)
  - 12.3% versus 39.6% in France
  - Malian patients maliens consult late
  - Less « symptoms and complaints » than in France
    - Presumptive diagnostics in Mali?

<sup>1</sup> O'Meara, *Lancet Infect Dis*, 2010

# Prévention top-ranking in France and absent in Mali

- Prévention is the main activity of French GPs (11%) but is absent in the practice of Malian GPs
  - Delegated to other stakeholders<sup>1</sup> : nurses, community health workers
  - Practice centered on acute illnesses
- Risk factors insufficiently managed in Mali (apart from hypertension)
  - Prévalence of diabetes: 3.1% → 7.1% from 1980 to 2014 (5.3% → 7.3% in Europe)<sup>2</sup>
  - Increasing mortality related to cardiovascular disease, and relatively young age at onset<sup>3</sup>

<sup>1</sup> Anand, *Lancet*, 2007

<sup>2</sup> WHO, 2016

<sup>3</sup> Roth, *Circulation*, 2015

# Psychological problems frequent in France and underestimated in Mali

- Psychological disorders almost never managed in Mali
  - Despite context of war and insecurity
  - Dépression: 3<sup>rd</sup> cause of years lived with disability in sub-Saharan Africa<sup>1</sup>
- Mental health in the context of sub-Saharan Africa
  - Important role of the traditional healers and local communities<sup>2</sup>
  - Psychiatrists very rare and concentrated in largest cities

<sup>1</sup> Ferrari. *PLoS Med.* 2013

<sup>2</sup> Alem. *World Psychiatr.* 2008.

# Implications and recommendations

- Continue the medicalization of primary care
- Promote pluridisciplinary collaboration and a more horizontal approach
- Develop supporting tools
  1. Electronic health record
  2. Point-of-care biological tests
  3. Clinical practice guidelines

