

# BoD with RWD



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“ Vaccines and Infectious Diseases in the Ageing Population

To address the current challenges of (P)VPD in ageing adults

To provide evidence-based knowledge on possible specific vaccination strategies to enhance healthy ageing.



**Vaccinating  
Elderly for  
Healthy Ageing**

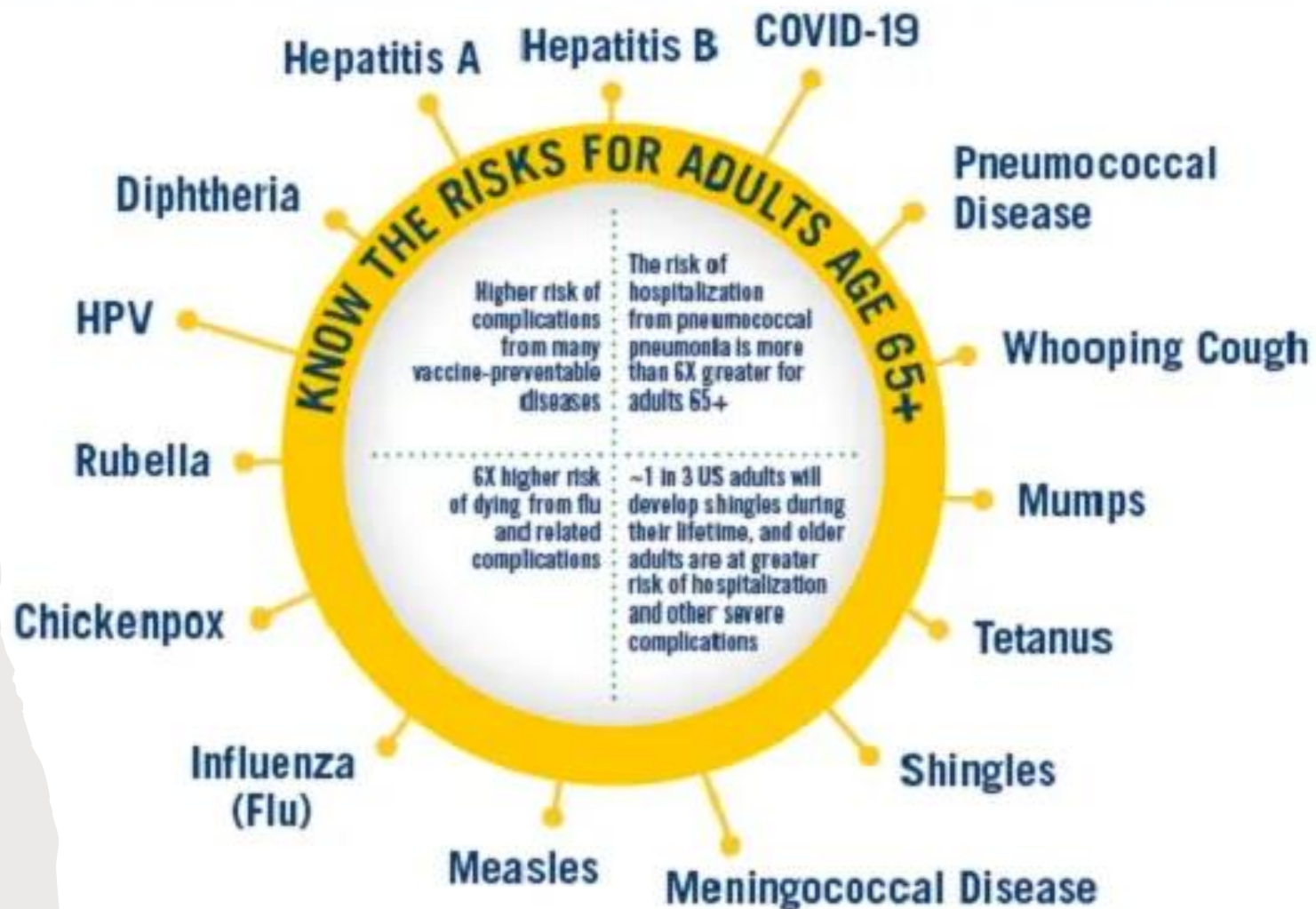




Vaccinating  
Elderly for  
Healthy Ageing

“ WP1. Burden of infectious diseases in aging adults (50+)

# VACCINES ARE NOT JUST FOR CHILDREN ADULTS 65+ CAN BE PROTECTED FROM DEADLY DISEASES



“ 1. We identified (P)VPD based on WHO summary information and input from project members.

#### Available vaccines

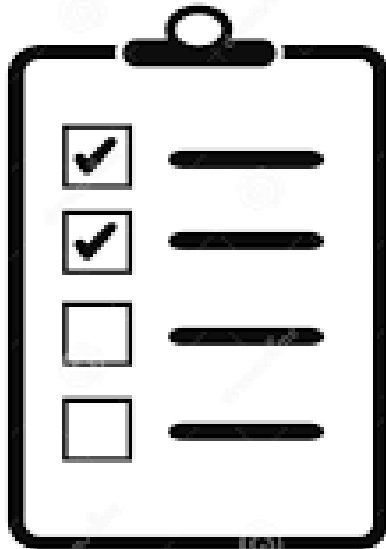
- Cholera
- COVID-19 (corona virus)
- Dengue
- Diphtheria
- Hepatitis
- *Haemophilus influenzae* type b (Hib)
- Human papillomavirus (HPV)
- Influenza
- Japanese encephalitis
- Malaria
- Measles
- Meningococcal meningitis
- Mumps
- Pertussis
- Pneumococcal disease
- Poliomyelitis
- Rabies
- Rotavirus
- Rubella
- Tetanus
- Tick-borne encephalitis
- Tuberculosis
- Typhoid
- Varicella
- Yellow Fever

#### Pipeline vaccines

- Enterotoxigenic *Escherichia coli*
- Group B *Streptococcus* (GBS)
- Herpes Simplex Virus
- HIV-1
- Malaria
- *Neisseria gonorrhoeae*
- Nontyphoidal *Salmonella* Disease
- Norovirus
- Paratyphoid fever
- Respiratory Syncytial Virus (RSV)
- Schistosomiasis Disease
- Shigella
- Group A *Streptococcus* (GAS)
- Tuberculosis
- Improved Influenza Vaccines



## “ 2. Selection: relevance & Phase II



Influenza

Varicella/herpes zoster

Herpes simplex virus

Norovirus

Respiratory syncytial virus (RSV),

Staphylococcus aureus (S. aureus)

Extra-intestinal pathogenic Escherichia coli (ExPEC)

Pneumococcal pneumonia (PnPn)

### “ 3. Identifying data gaps

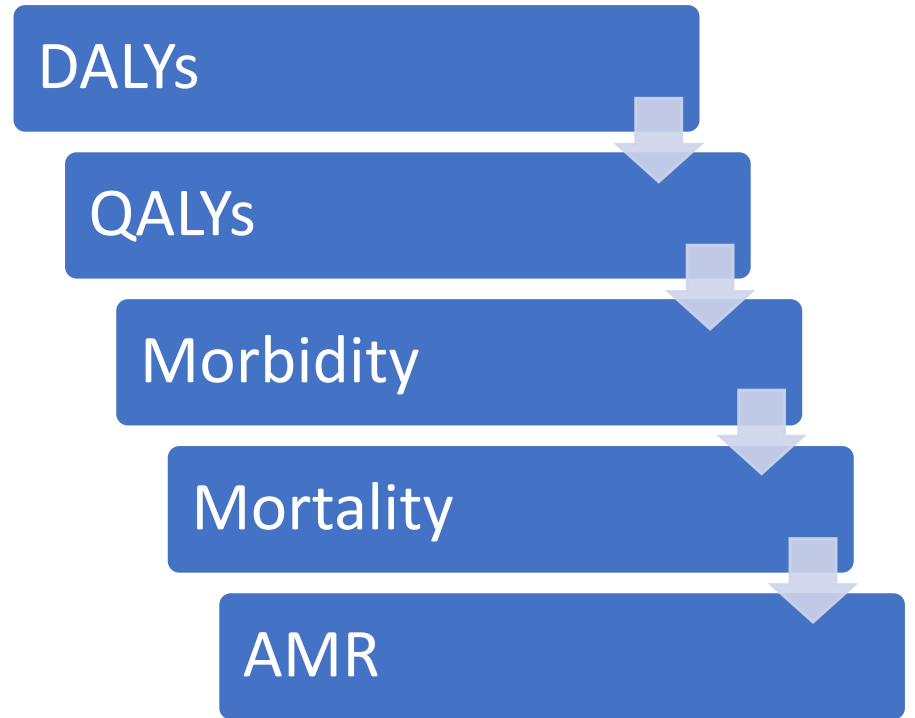


Experts

+



Literature review





Pneumococcal pneumonia



ExPEC



RESEARCH ARTICLE

Open Access

# European data sources for computing burden of (potential) vaccine-preventable diseases in ageing adults



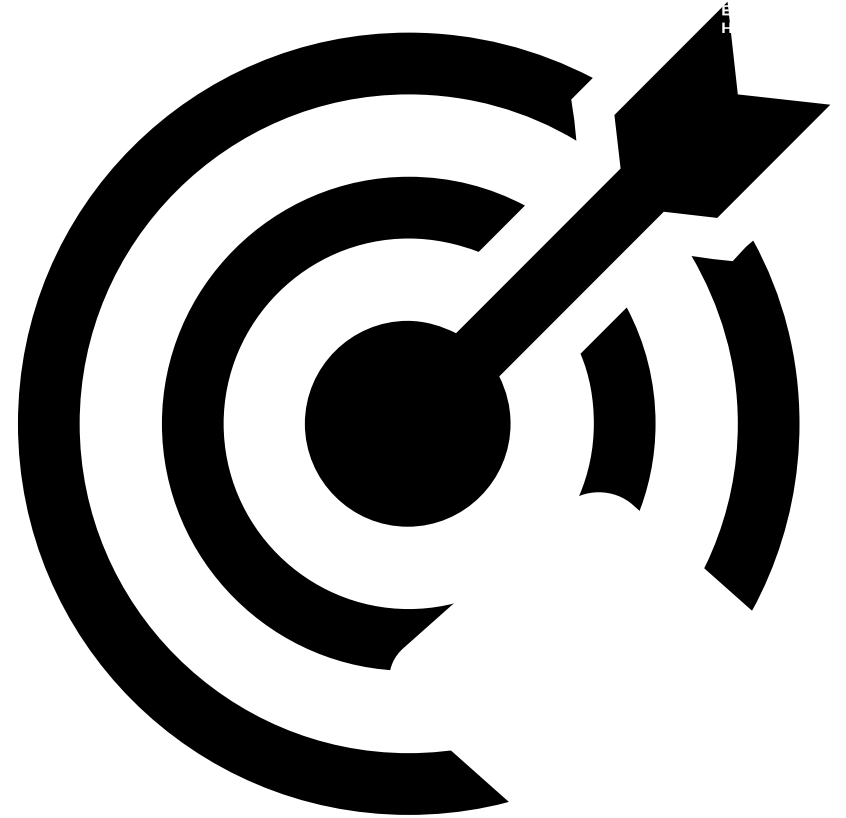
Estelle Méroc<sup>1\*</sup>, Janeri Fröberg<sup>2</sup>, Timea Almasi<sup>3</sup>, Brita Askeland Winje<sup>4</sup>, Alejandro Orrico-Sánchez<sup>5</sup>, Anneke Steens<sup>4</sup>, Scott A. McDonald<sup>6</sup>, Kaatje Bollaerts<sup>1</sup> and Mirjam J. Knol<sup>6</sup>

# “ Objective

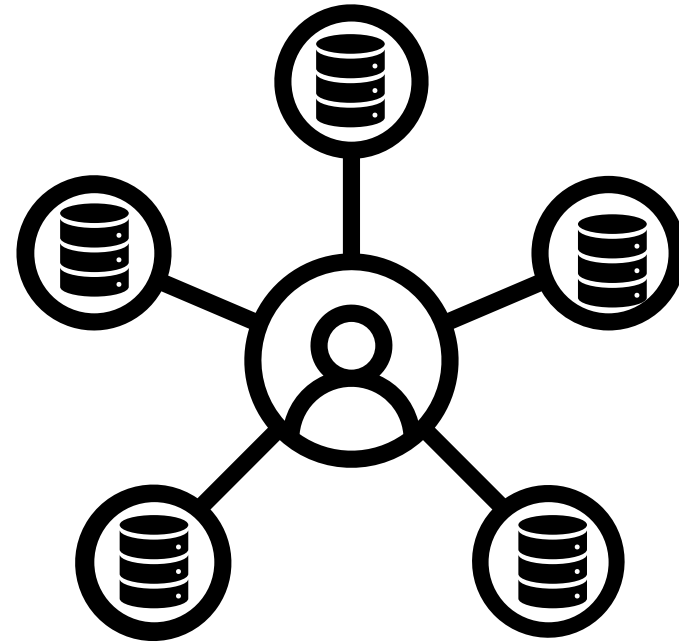
Estimate the **burden of PP/IED** using a composite BoD measure (**DALYs**)

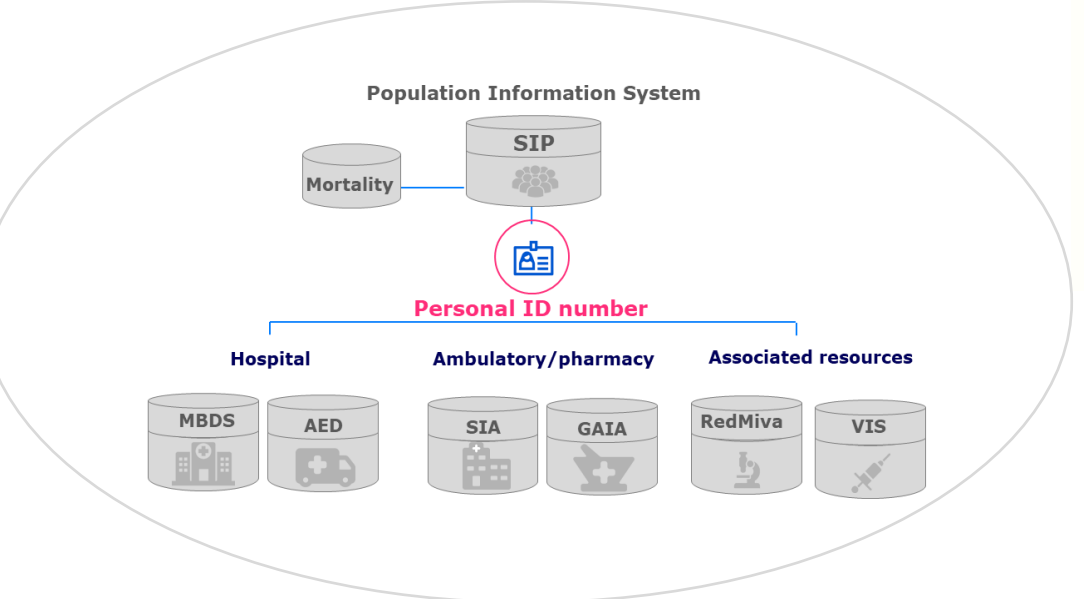
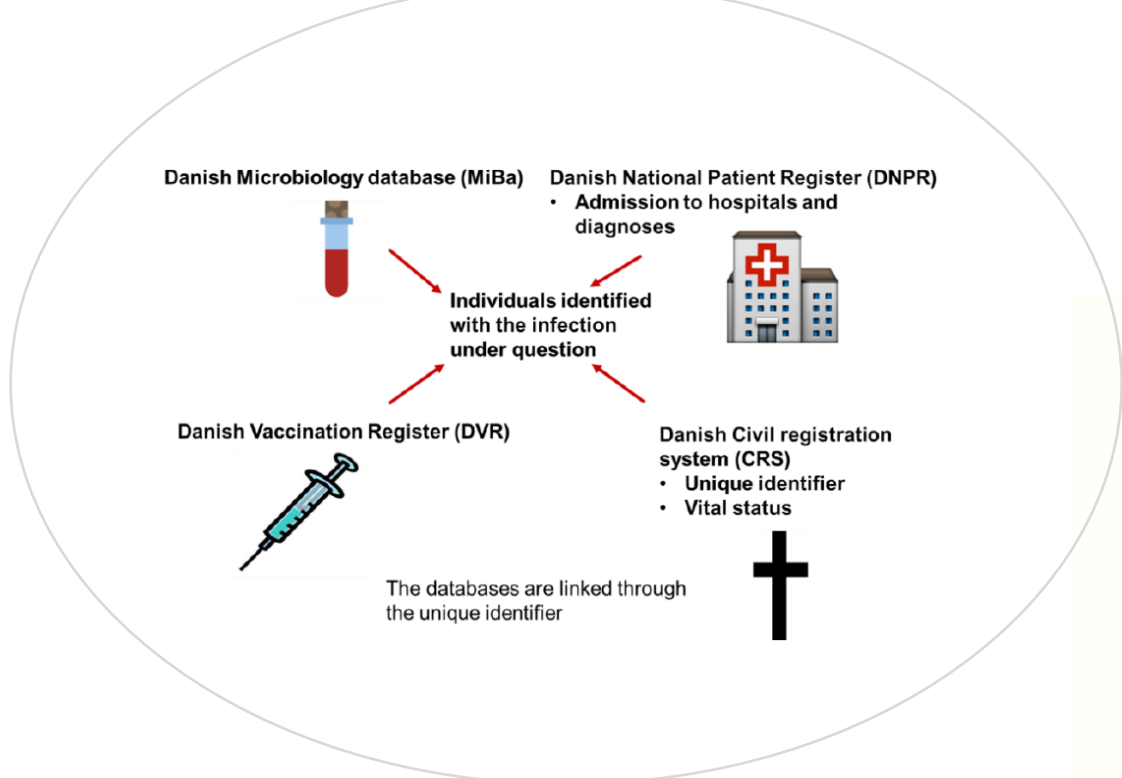
The following components are required:

- Incident and recurrent disease
- Disability duration
- Mortality
- Sequelae

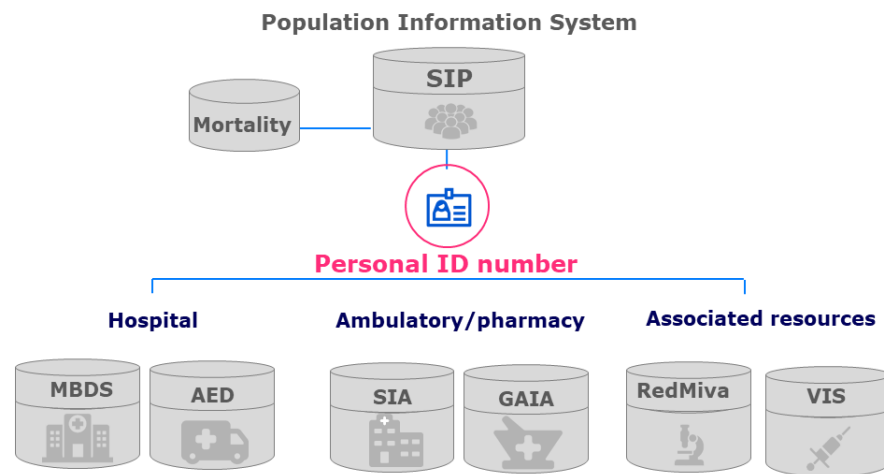


# “ Pilot regions





# “ VID “Valencia Integrated Databases”




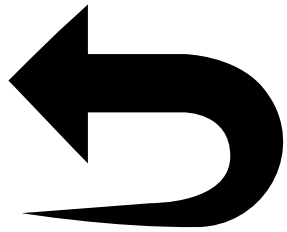
*International Journal of Epidemiology*, 2020, 740–741e  
doi: 10.1093/ije/dy286  
Advance Access Publication Date: 16 January 2020  
Data Resource Profile



Data Resource Profile

## Data Resource Profile: The Valencia Health System Integrated Database (VID)

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Cintia Muñoz-Quiles,<sup>3</sup> Isabel Hurtado,<sup>1,2</sup> Salvador Peiró,<sup>1,2</sup>  
Gabriel Sanfélix-Gimeno<sup>1,2\*</sup> and Javier Díez-Domingo<sup>3</sup>



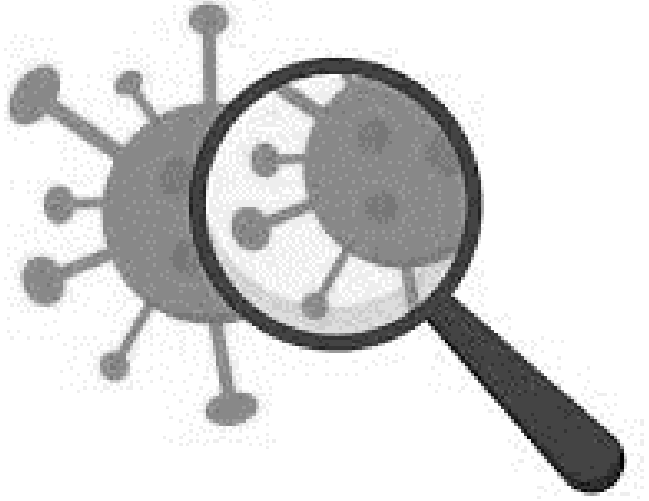
Retrospective cohort



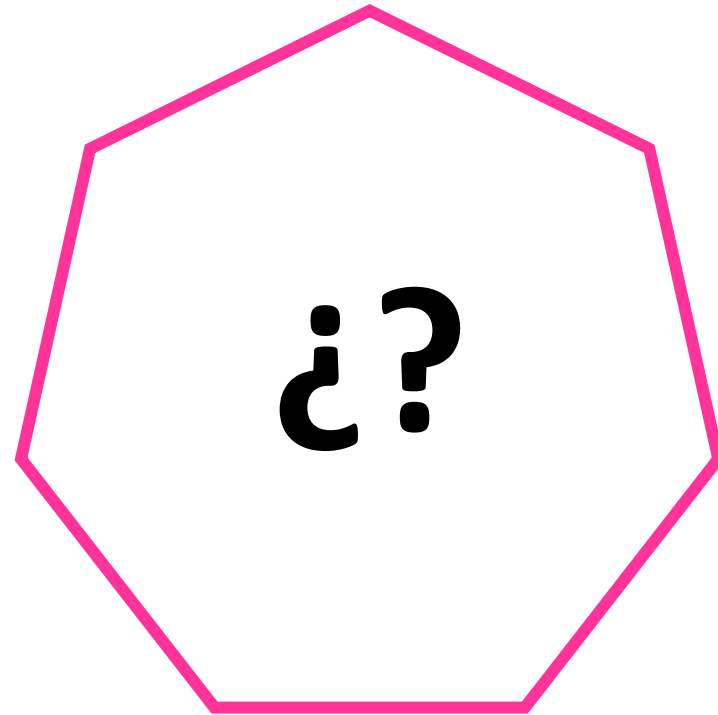
50+



2010-2018



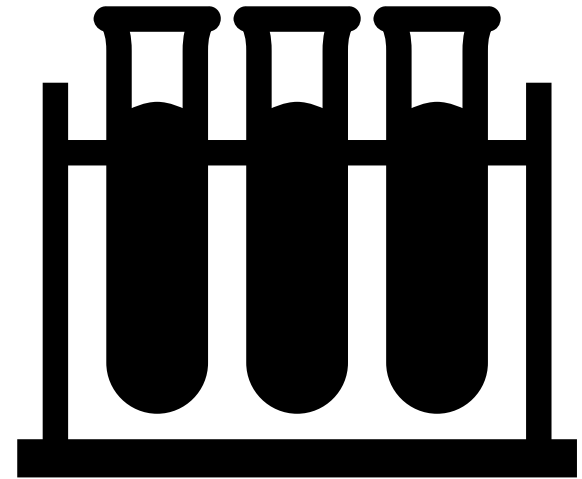
“ Epidemiological challenges



# “ Case definition



+





# “ Case definition

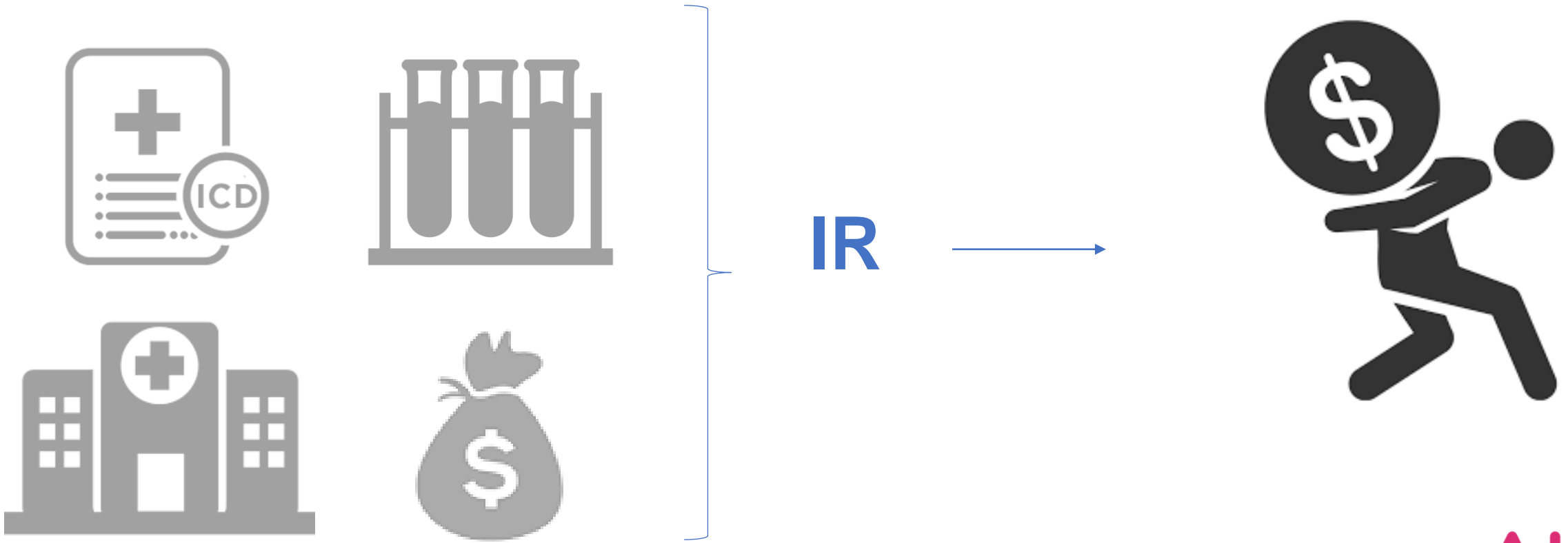


A49.9A

A41.9B

A41.9C

# “ Clinical practice





# “ Preliminary Results

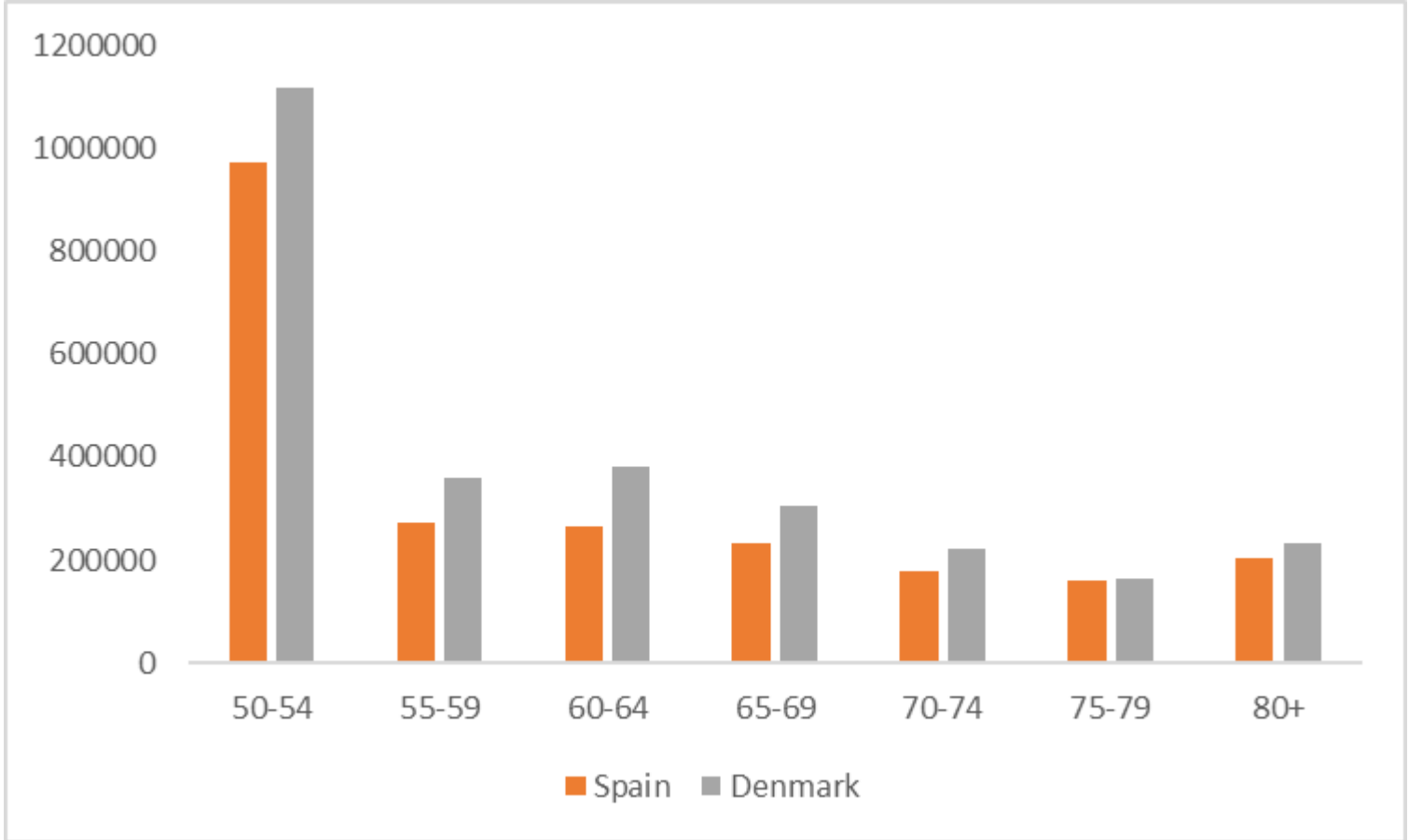


# “ Demographics

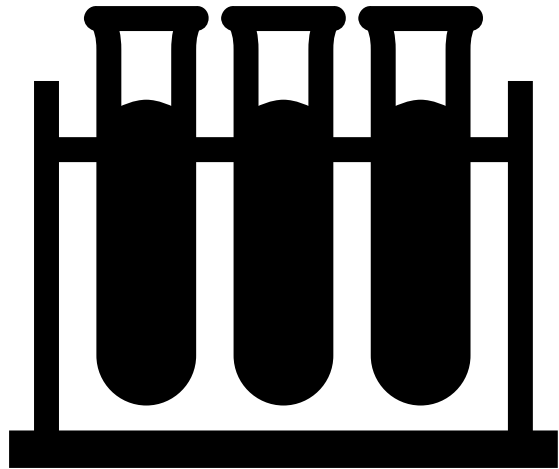


Spain  
2,3M

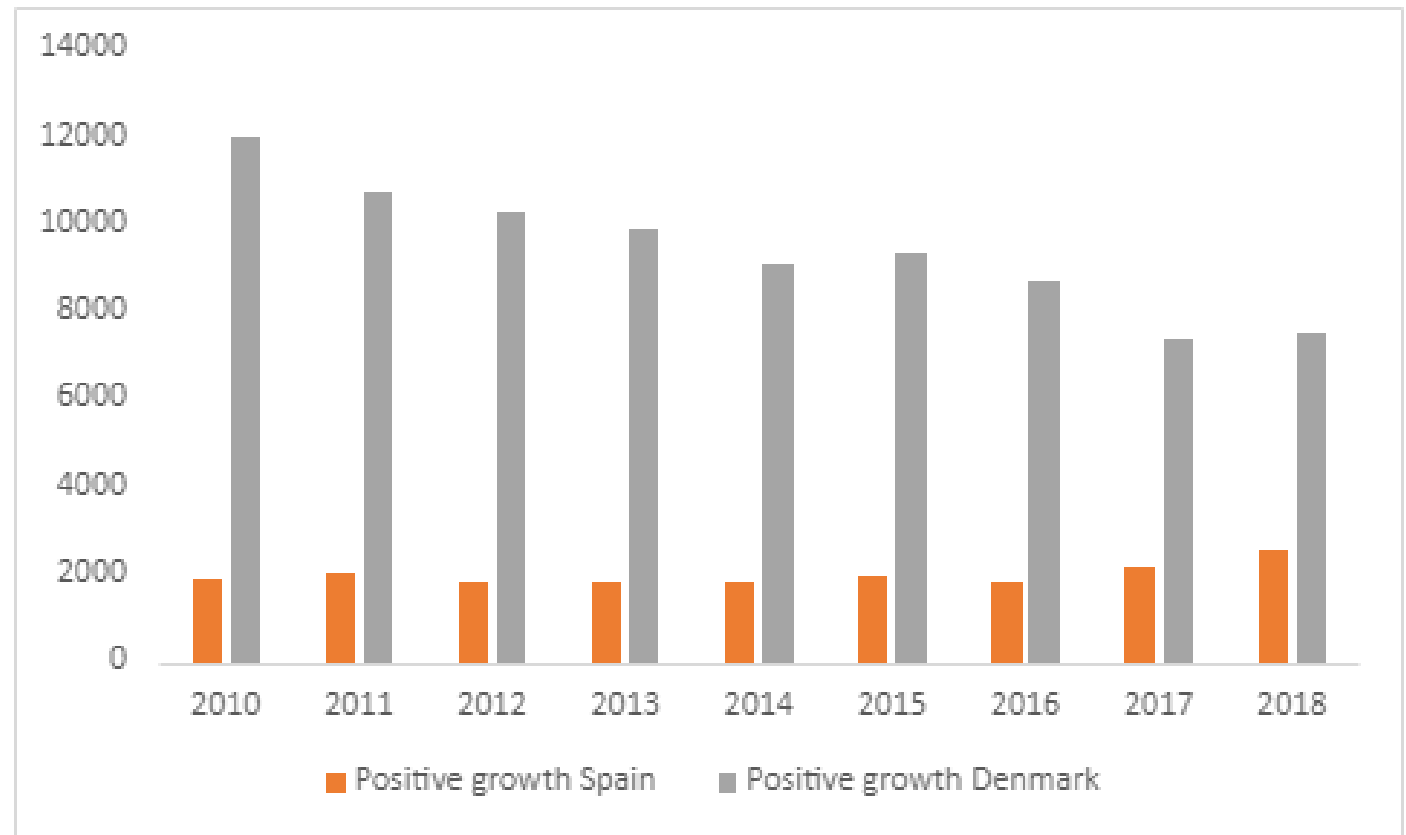
DK  
2,8M



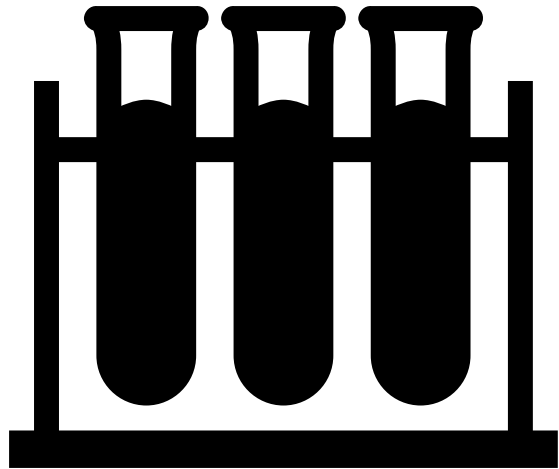
# “ Testing



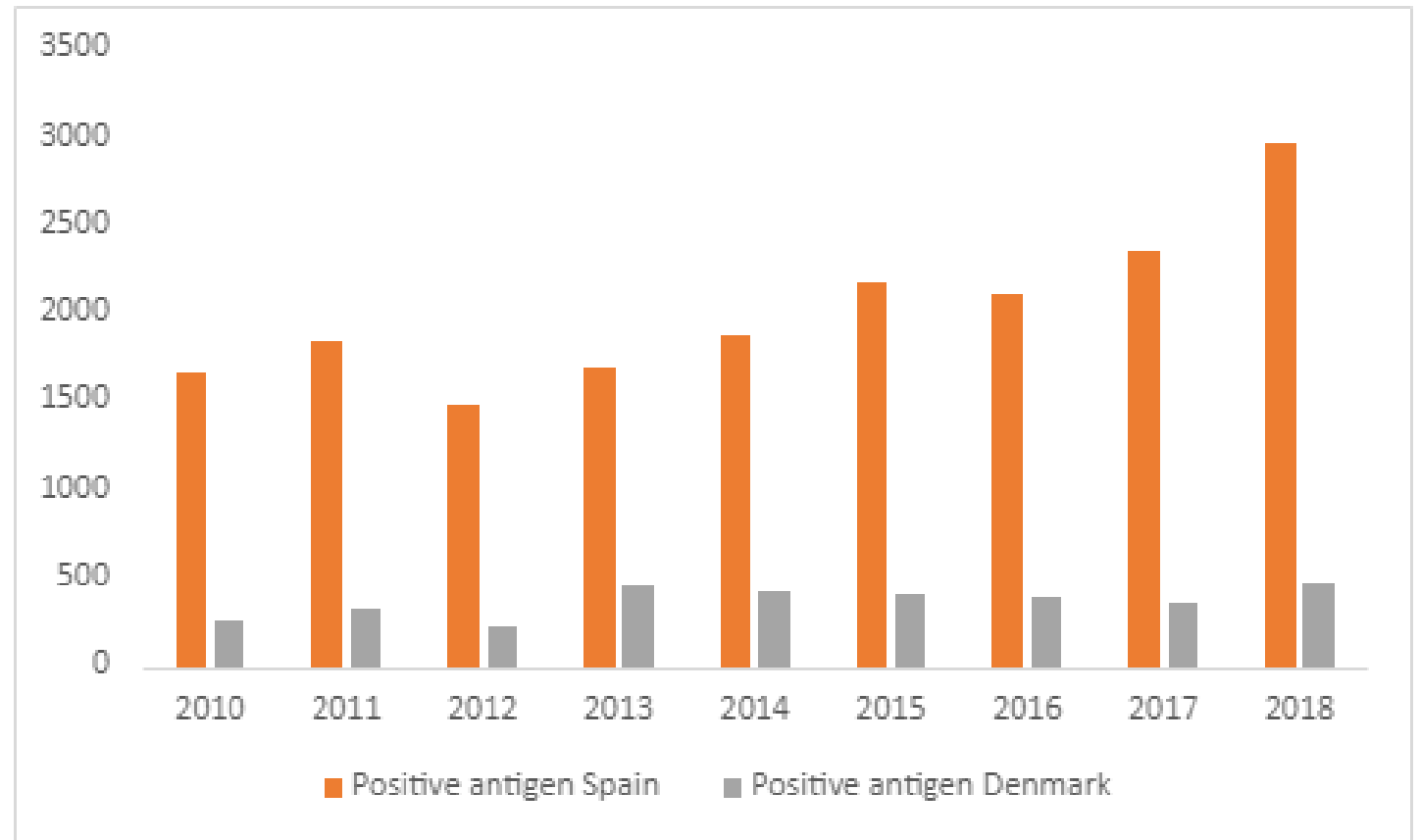
Positives for **growth** by year & site



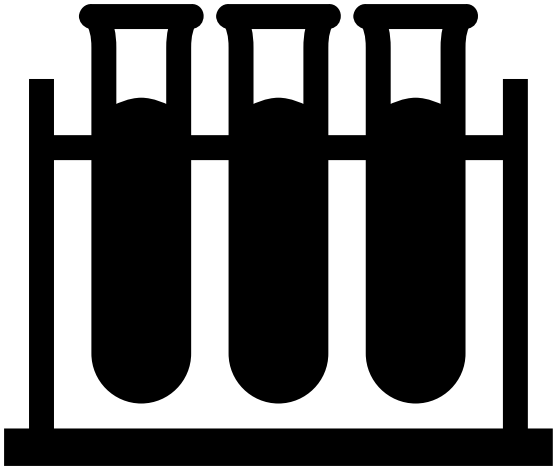
# “ Testing



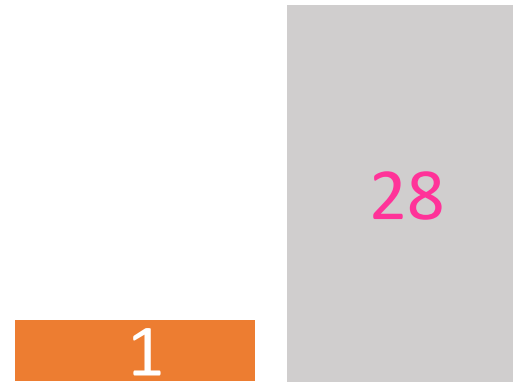
Positives for **Ag** by year & site



# “ Testing



Average **ratio growth/Ag** by site



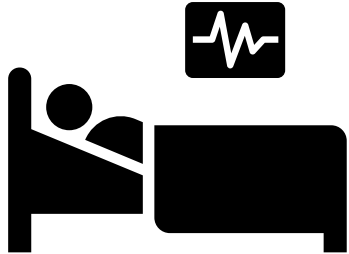
“ Healthcare organization (by Health Department)



Primary Care



Specialty



Hospital



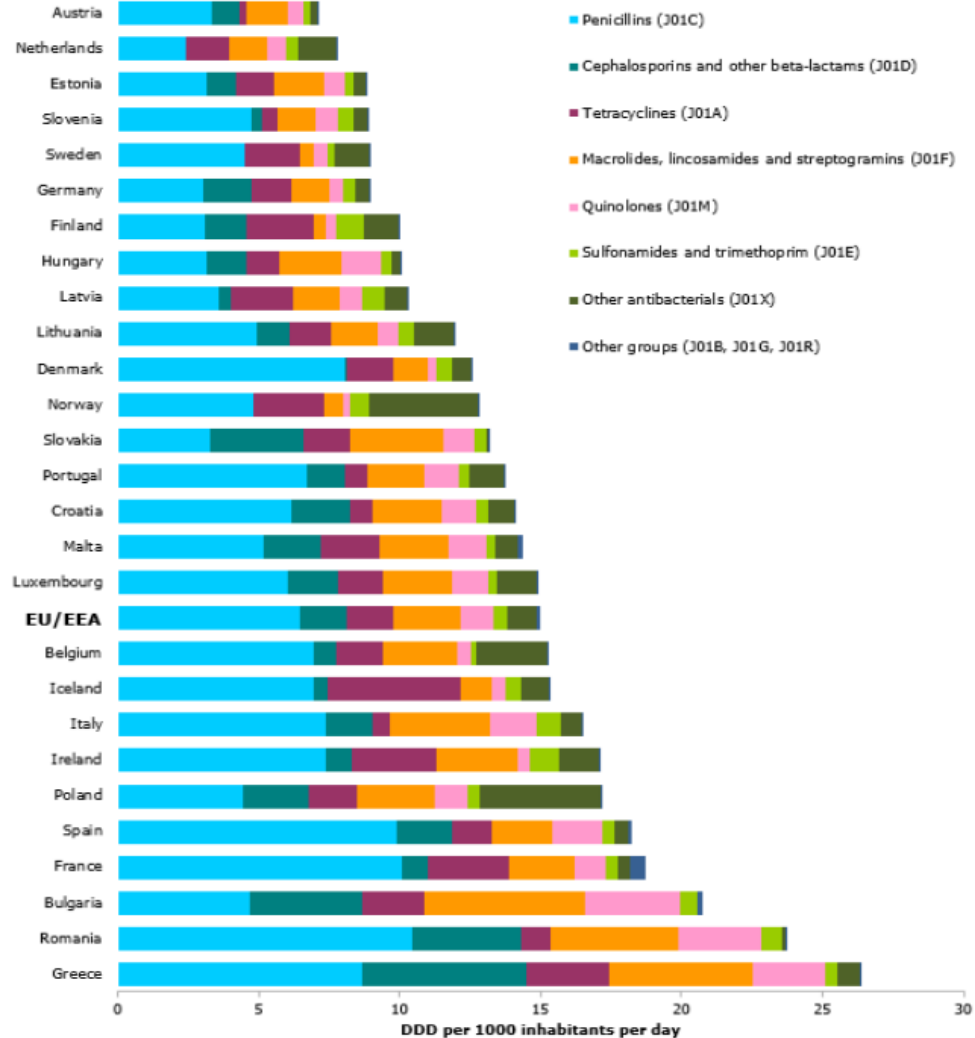


# “ Antibiotics use

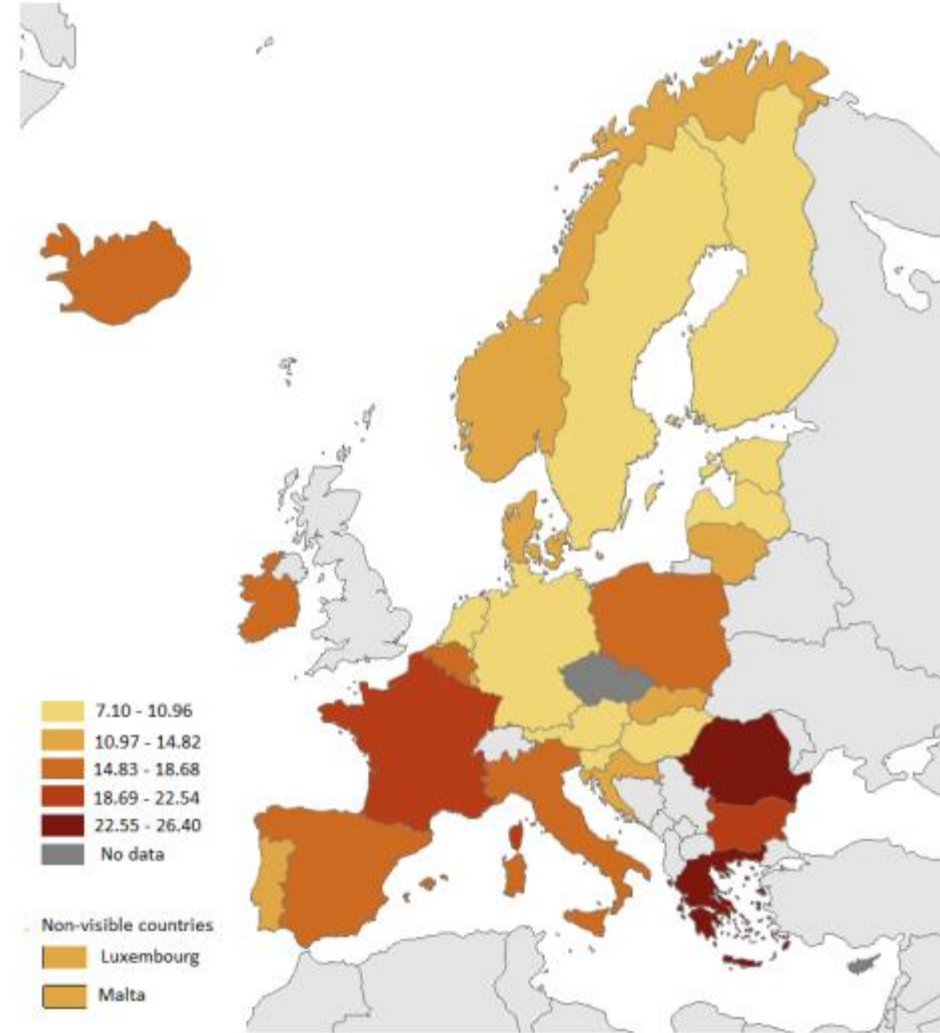
Antimicrobial consumption in the EU/EEA – AER 2020

SURVEILLANCE REPORT

**Figure 2. Community consumption of antibacterials for systemic use (ATC group J01) at ATC group level 3, by country, EU/EEA, 2020 (expressed as DDD per 1 000 inhabitants per day)**



**Figure 1. Community consumption of antibacterials for systemic use (ATC group J01), by country, EU/EEA countries, 2020 (expressed as DDD per 1 000 inhabitants per day)**



# “ Antibiotics use



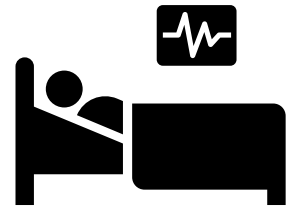
DDD/1.000

40%

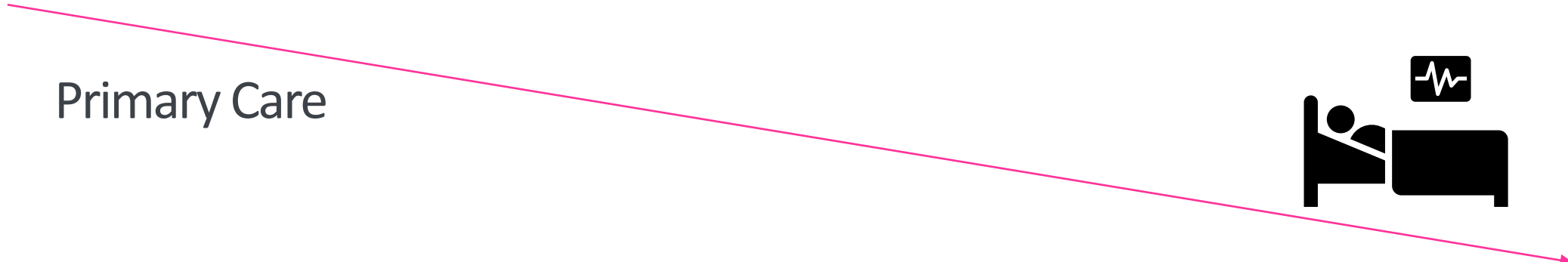
# “ Antibiotics use



Primary Care



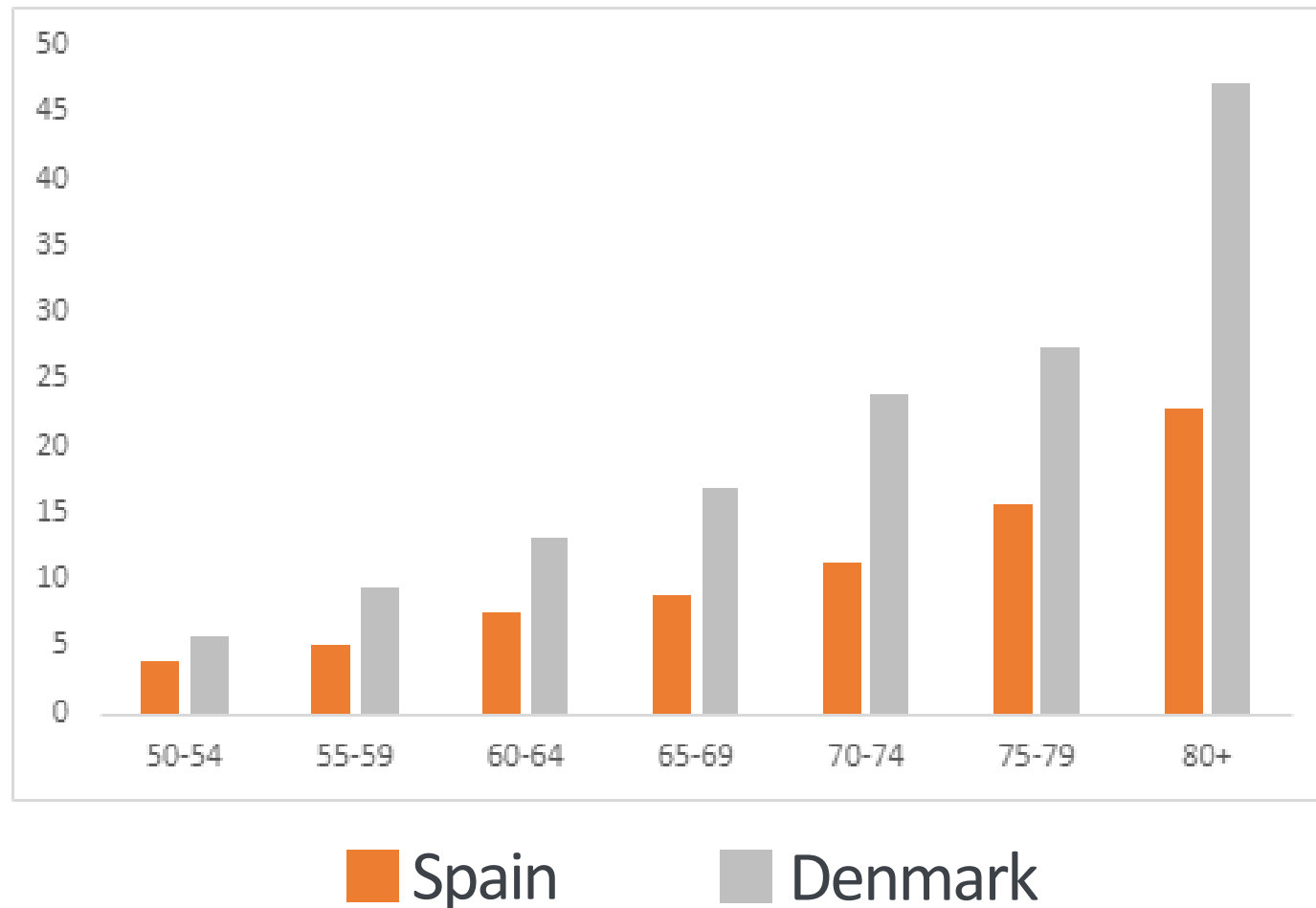
Hospital



# “ Results



IR **IPP** by year & site



**IR (overall)**

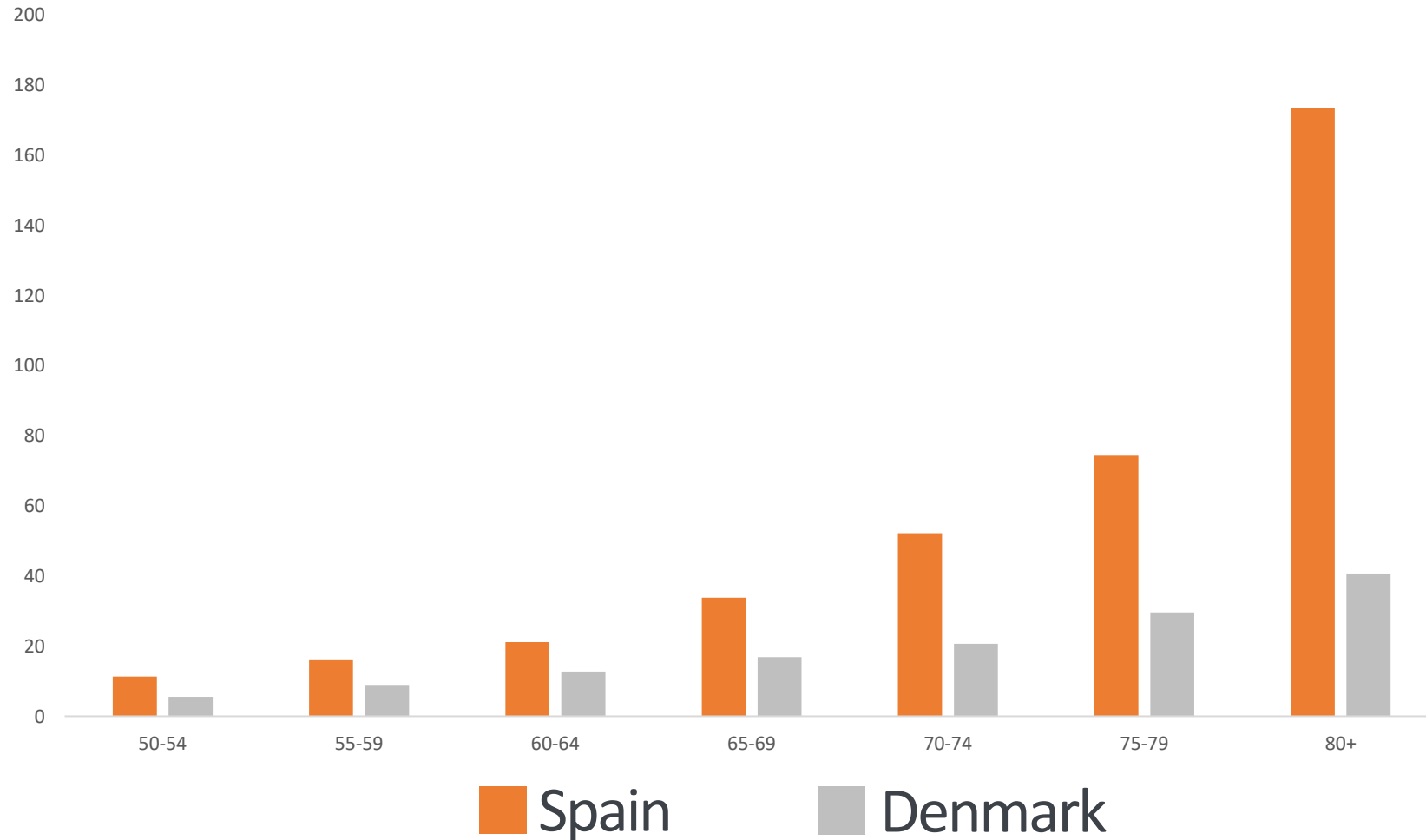
10 ( $10^5$ )

19 ( $10^5$ )

# “ Results

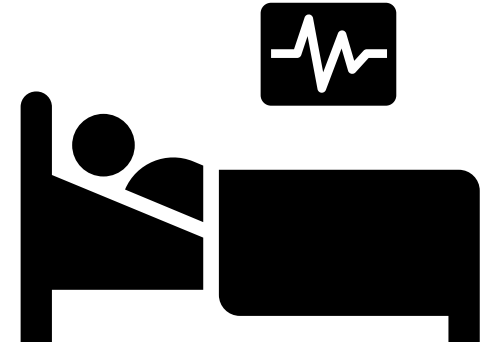
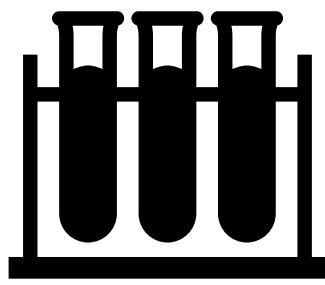
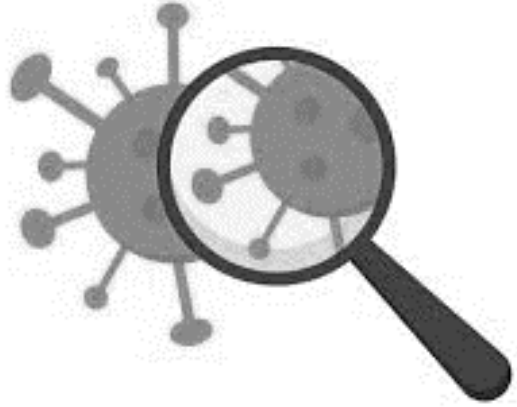


IR **NIPP** by year & site

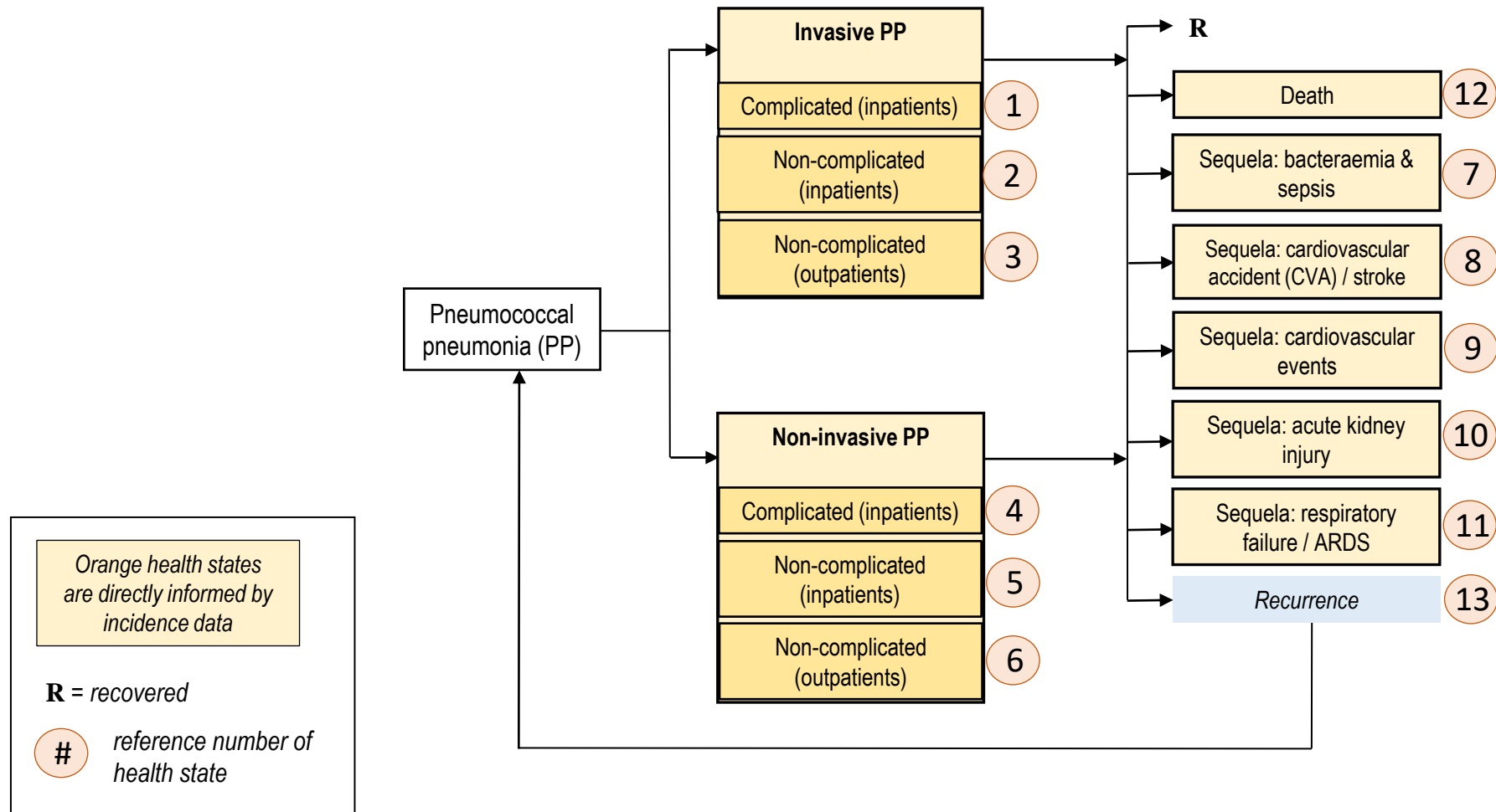


**IR (overall)**  
48 ( $10^5$ )  
17 ( $10^5$ )





# “ Ongoing: DALYS



# Thanx!



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