

# Chagas disease, an evolving burden

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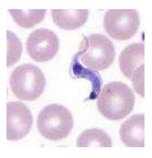


### Context



Chagas disease: a neglected tropical disease





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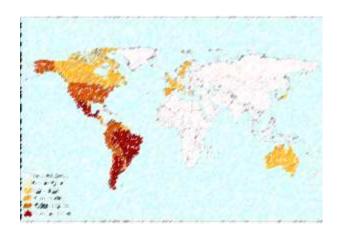
# Chagas disease: a neglected tropical disease

#### What do we know?

- High prevalence in Latin America
- High burden of disease







### Context



# Chagas disease: a neglected tropical disease

#### What do we know?

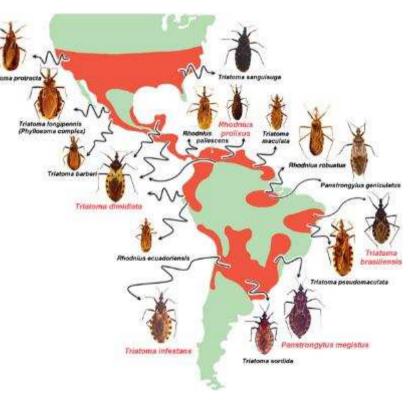
- High prevalence in Latin America
- High burden of disease

#### Challenges:

- Understanding of the dynamics of transmission (e.g. multiple vectors/ hosts/ transmission mode)
- Poor estimation of incidence
- Poor understanding of aetiology/ progression of the disease in human
- Poor estimation of burden





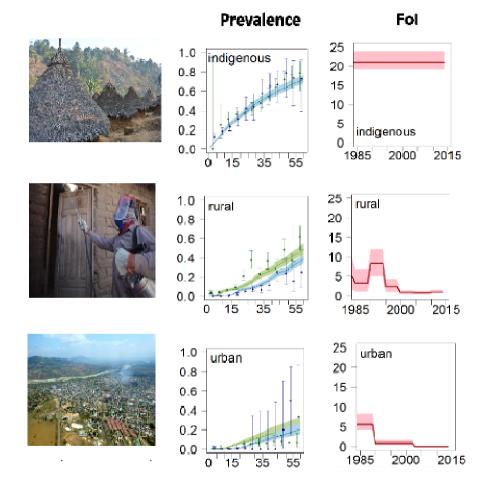


## Improving burden estimation MRC Outbreak Analysis and Modelling



#### Force of infection

Geographical and temporal heterogeneities within countries



Cucunubá et al. 2016 (under review)

### Improving burden estimation MRC

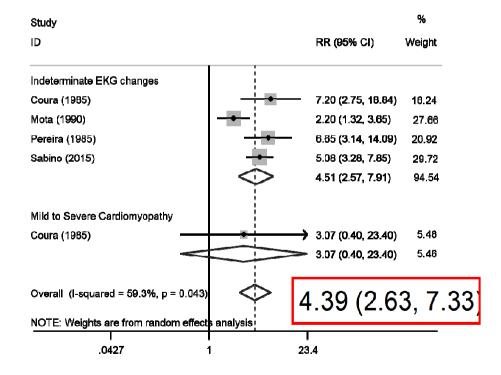


#### Force of infection

Geographical and temporal heterogeneities within countries

#### Disease progression

Estimation of progression and mortality rates



### Improving burden estimation MRC Outbreak Analysis and Modelling



#### Force of infection

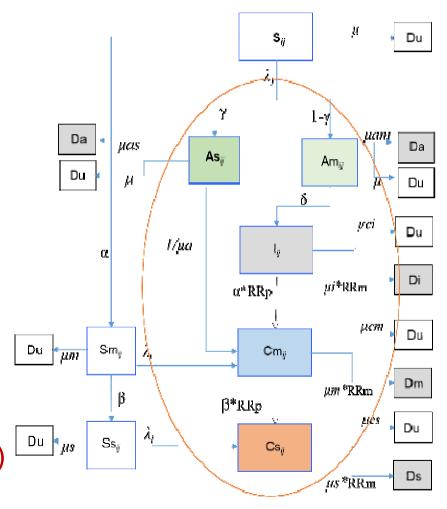
Geographical and temporal heterogeneities within countries

#### Disease progression

Estimation of progression and mortality rates

#### Burden estimation

Considering co-morbidities with other causes of chronic heart diseases (cardiovascular diseases)

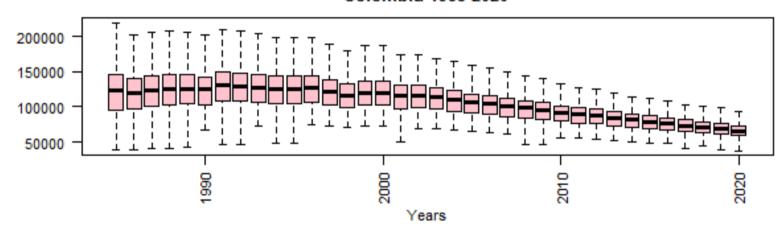


## Key preliminary results

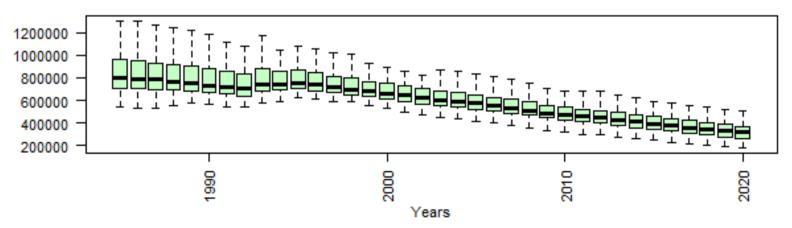


Estimate of burden with time

#### DALYs over time Colombia 1985-2020



#### Total Cases over time Colombia 1985-2020



### Key preliminary results



- Estimate of burden with time
- Current burden in Colombia, compare to other estimate

Author	Total Cases	Cardiomyopathy	Incidence of infection	DALYs
PAHO (2010)	437 ,960	131, 388	5, 274	
GBD (2015)	186, 332 (151,912 – 226,971)		326 (255-457)	5, 342 (4,575- 6,304)
Imperial Model (2015)	306, 435 (194,911-58,4234)	125, 987 (85,434-275,678)	783 (130-3,454)	64,323 (41,876 – 95,678)

## Thank you!





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