Chagas disease, an evolving burden

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Context

Chagas disease: a neglected tropical disease
Chagas disease: a neglected tropical disease

What do we know?

- High prevalence in Latin America
- High burden of disease
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

Force of infection

- Geographical and temporal heterogeneities within countries

Cucunubá et al. 2016 (under review)
Improving burden estimation

**Force of infection**
- Geographical and temporal heterogeneities within countries

**Disease progression**
- Estimation of progression and mortality rates

![Graph showing force of infection and disease progression estimates](image)
Improving burden estimation

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
Key preliminary results

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

<table>
<thead>
<tr>
<th>Author</th>
<th>Total Cases</th>
<th>Cardiomyopathy</th>
<th>Incidence of infection</th>
<th>DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAHO (2010)</td>
<td>437,960</td>
<td>131,388</td>
<td>5,274</td>
<td>--</td>
</tr>
<tr>
<td>Imperial Model (2015)</td>
<td>306,435 (194,911-58,4234)</td>
<td>125,987 (85,434-275,678)</td>
<td>783 (130-3,454)</td>
<td>64,323 (41,876 – 95,678)</td>
</tr>
</tbody>
</table>
Thank you!

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Lesong Conteh
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Pierre Nouvellet