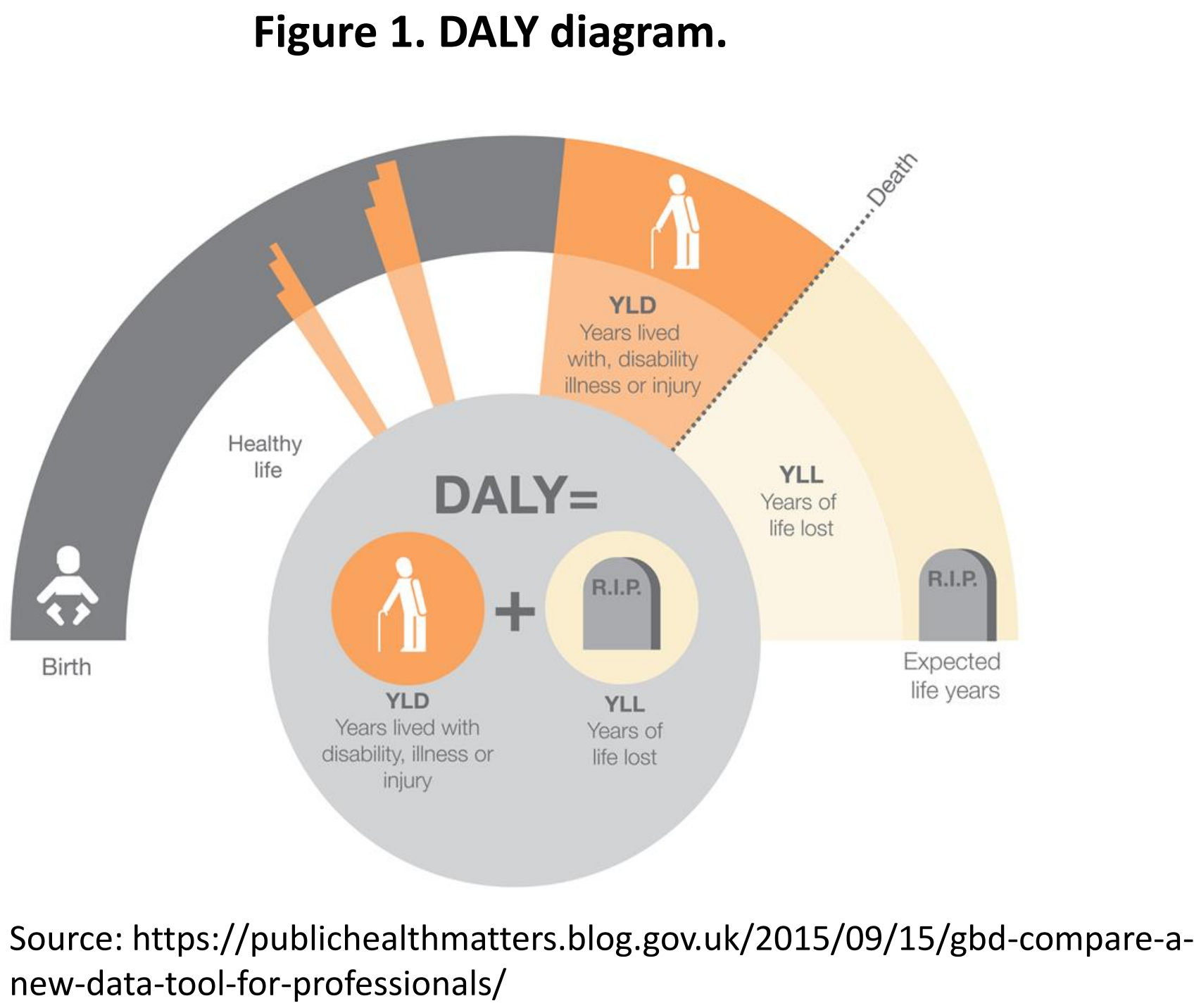


BACKGROUND AND OBJECTIVE

- Cardiovascular disease (CVD) remains the leading cause of death in Portugal¹ and across the world.² Atherosclerosis (AS) is the most common pathophysiologic process underlying CVD.
- The objective of this study was to estimate the burden of disease attributable to AS in Portugal for 2016.

METHODS

- The burden of disease was measured in Disability-Adjusted Life Years (DALY) estimated as the sum of Years Lost due to Disability (YLD) and Years of Life Lost (YLL) due to premature mortality.³
 - YLD were computed as the number of cases of acute myocardial infarction (AMI), stable angina, ischaemic heart failure (HF), ischaemic cerebrovascular disease (ICD) and peripheral artery disease (PAD) multiplied by the disability weight for each AS clinical manifestation as estimated by the Global Burden of Disease (GBD) Study 2017.⁴
 - The disability caused by AMI was deemed to be associated with the acute phase of this event (first 28 days) in accordance with the GBD study.⁴
 - Prevalence of the different clinical presentations were estimated using the microdata of the 2014 National Health Survey⁵, the microdata of a national community-based epidemiological survey on HF prevalence⁶, the national diagnostic-related-group database⁷ and a national PAD prevalence study⁸.
 - A regional primary care database covering 318,692 patients with AS in 2016 was used to estimate the overlap of different clinical presentations.⁹
 - YLL were calculated from the number of AS deaths in 2016 (data source: Portuguese Directorate-General of Health) multiplied by a standard life expectancy at the age of death.¹⁰
 - AS deaths included ischaemic heart disease, ICD, PAD and atherosclerosis/arterial embolism and thrombosis of other territories as a cause of death.



RESULTS



Years lost due to disability (YLD)

740,000 adults with symptomatic AS

Figure 2. YLD attributable to each AS presentation, Portugal mainland, 2016.

	Prevalence	Disability weight	YLD
AMI	12,671*	0.01	97
Stable angina	375,278	0.07	27,864
Ischaemic HF NHYA II-IV	91,046	0.06	5,828
ICD	136,725	0.21	29,137
Symptomatic PAD	153,570	0.01	2,150

*This prevalence refers to the MI acute episode (lasting 28 days only) and hence it corresponds to the incidence of the event.

NB: the total amount of YLD due to AS does not correspond to the sum of all AS presentations, since the same patient may experience more than one presentation.

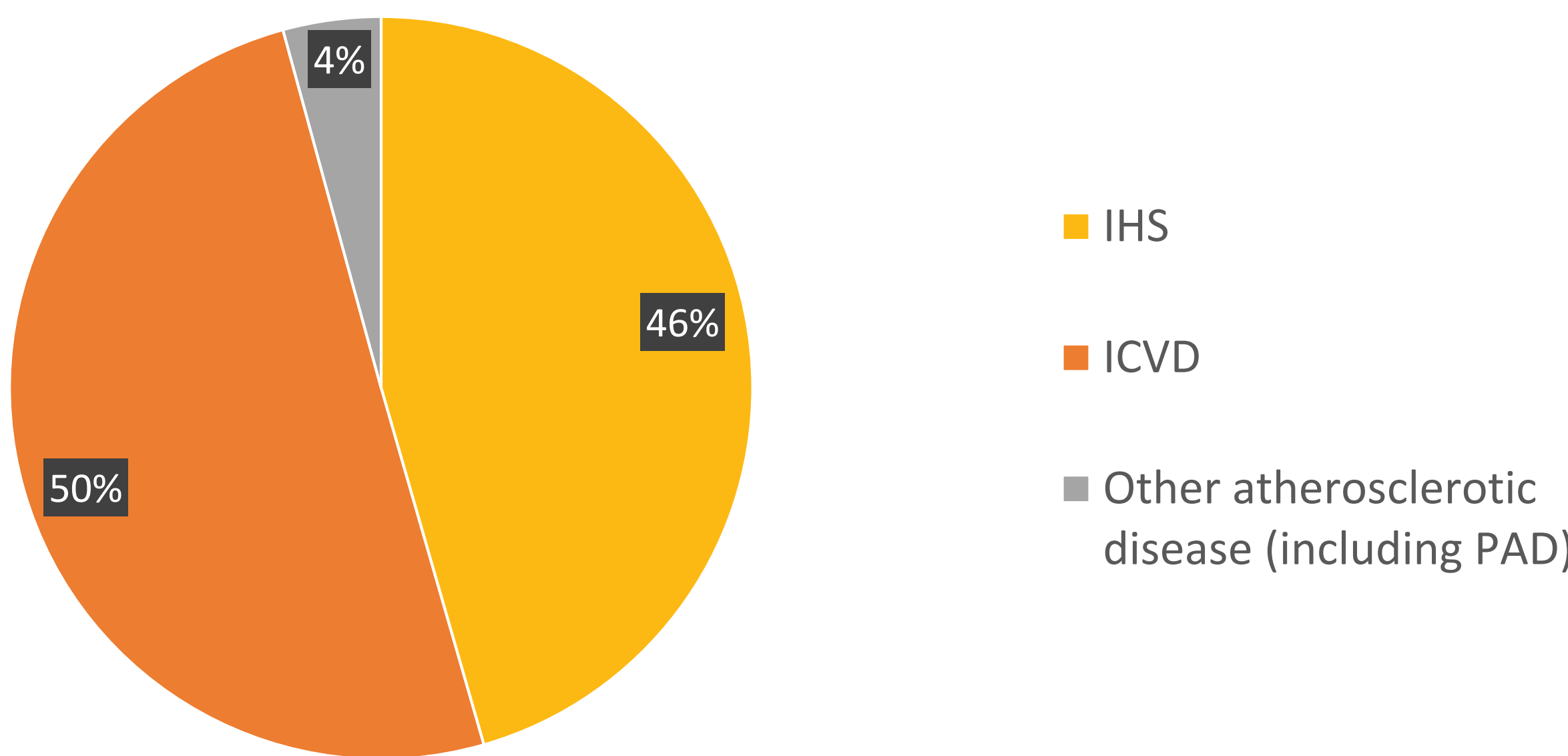
64,505 YLD caused by overall AS morbidity



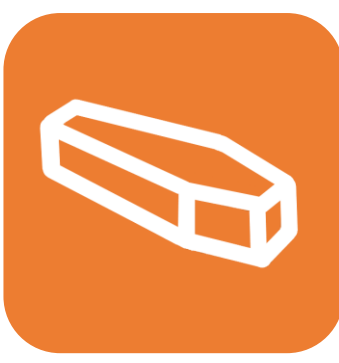
Years of life lost (YLL)

15,123 AS deaths, representing ≈ 50% of the deaths caused by CVD and 14% of total deaths

Figure 3. Distribution of AS deaths by causal AS presentation.



196,438 YLL, about 12% of the total YLL in Portugal during 2016



260,943 DALY

10 days/
year/
person

DALY totaled 260,943. 75% of this amount is due to YLL, which underlines the mortality impact of this disease.

Loss of 10/day per Portuguese adult

CONCLUSIONS

- In 2016, AS was responsible for 260,943 DALY in Portugal, representing a loss of around 3% of the life time (10 days/year) of each Portuguese adult.
- AS is an important cause of disease burden in Portugal and should be an important target for health policy interventions.

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