

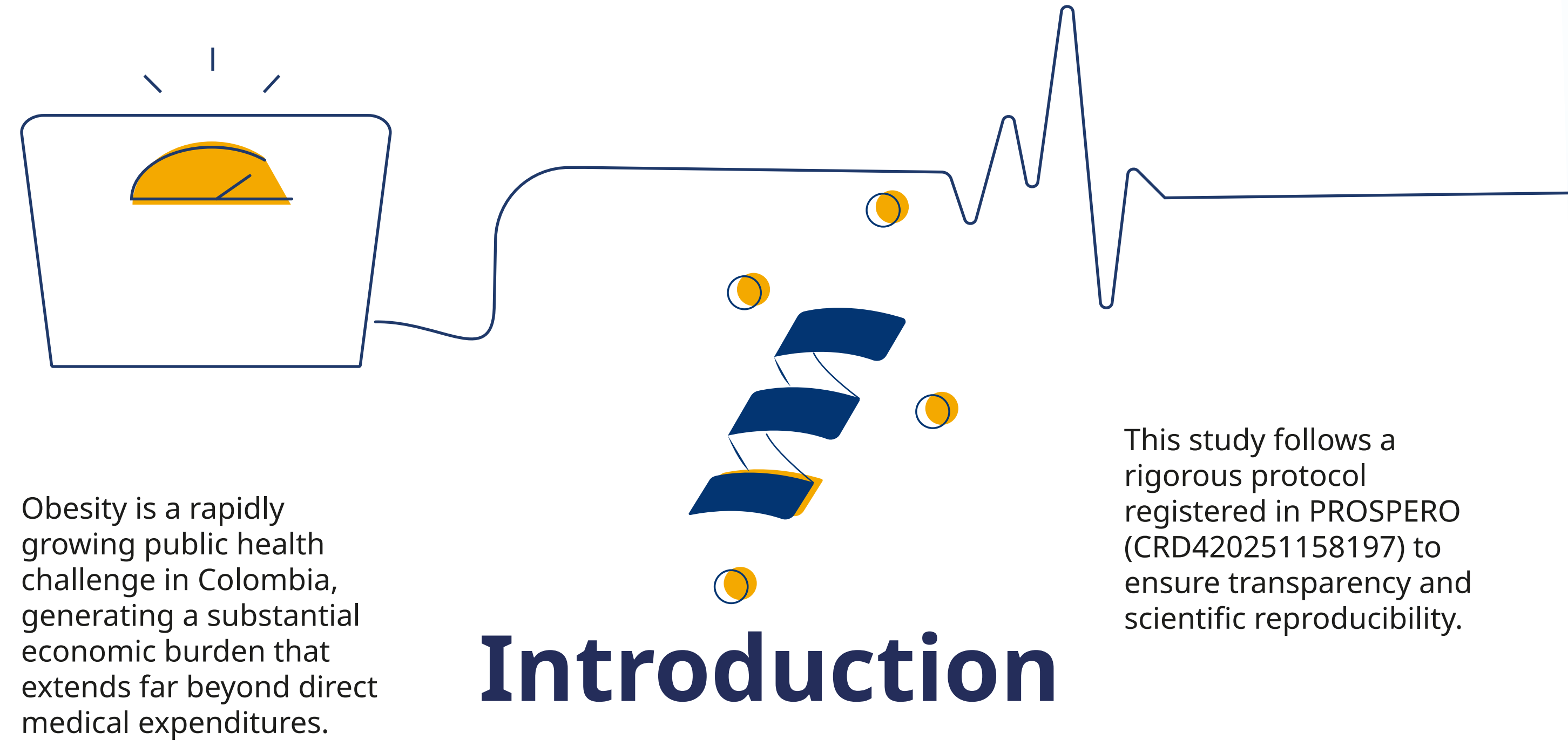
Indirect economic burden of adult overweight and obesity: A systematic review to inform policy and economic modeling in Colombia

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Aim

To synthesize global and local evidence on the indirect costs associated with adult overweight and obesity—specifically focusing on absenteeism, presenteeism, disability, and premature mortality—to provide standardized parameters for Health Technology Assessments (HTA) and value-based economic modeling in Colombia.



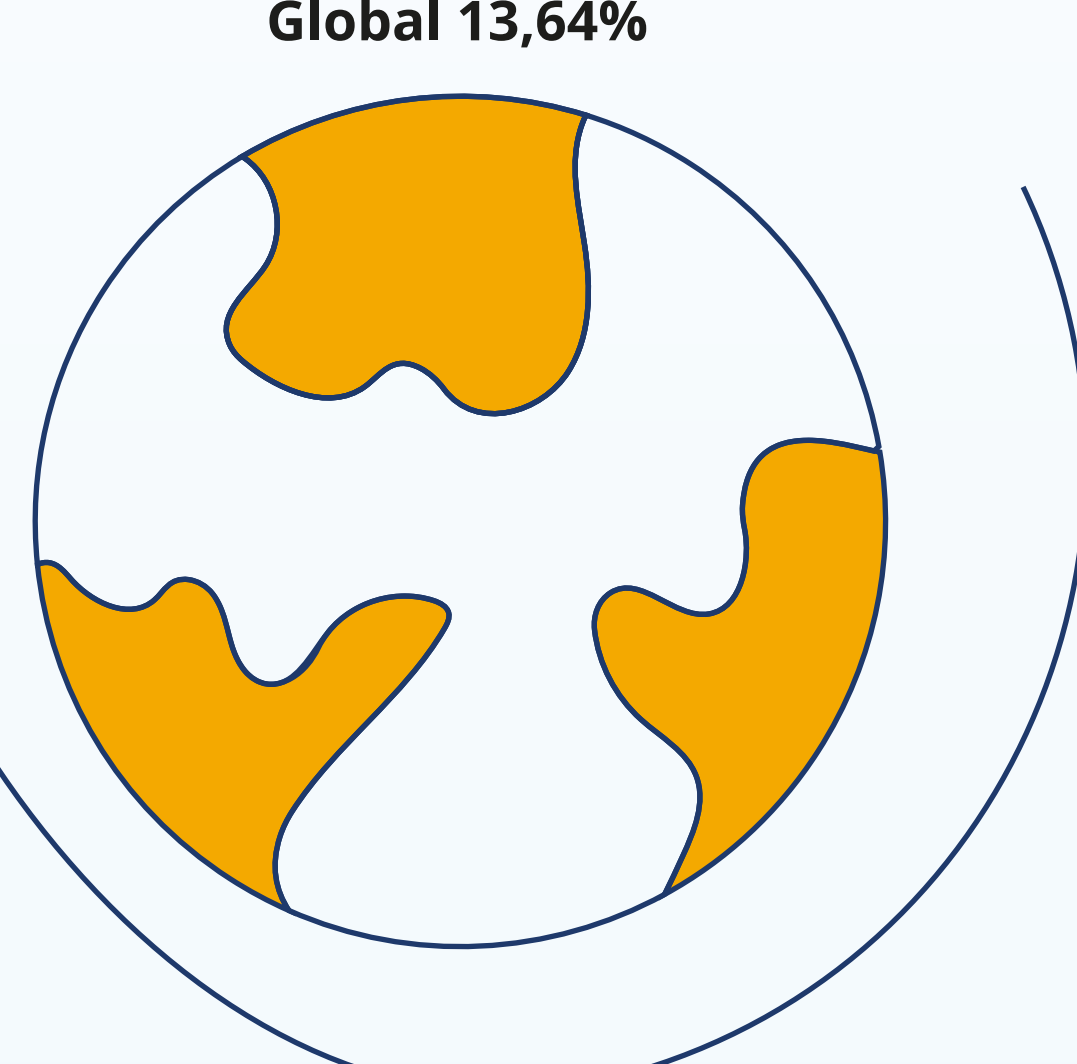
Introduction

Indirect costs, primarily driven by productivity losses, are often omitted from local HTA dossiers due to methodological heterogeneity and a lack of region-specific data.

The Rationale: Failing to account for these "hidden costs" leads to an incomplete understanding of the true societal value of obesity interventions.

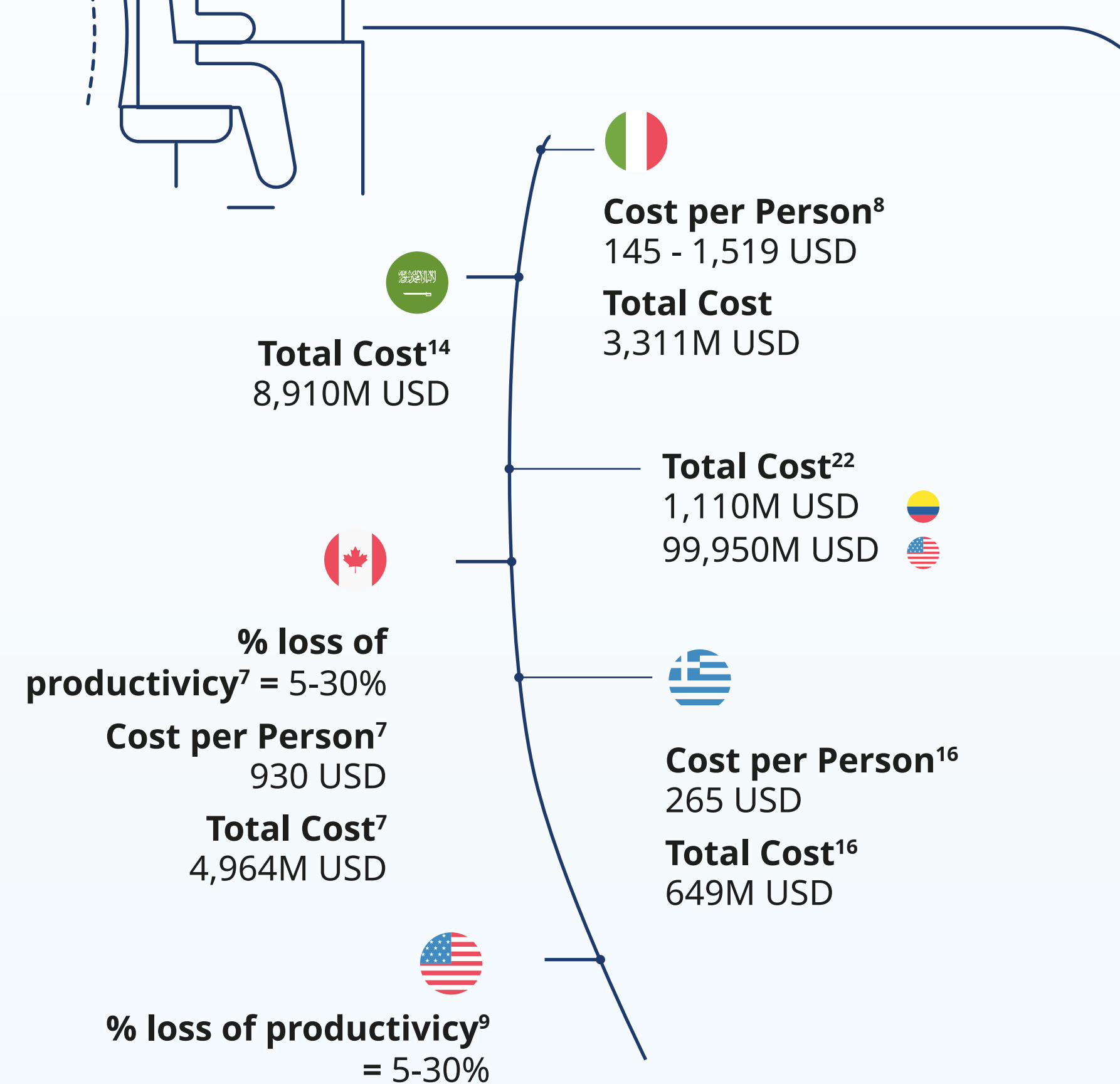
Results

Selection & Scope: 23 studies were included; while most originated from high-income countries, only 3 studies (13.6%) were specific to the Colombian context.



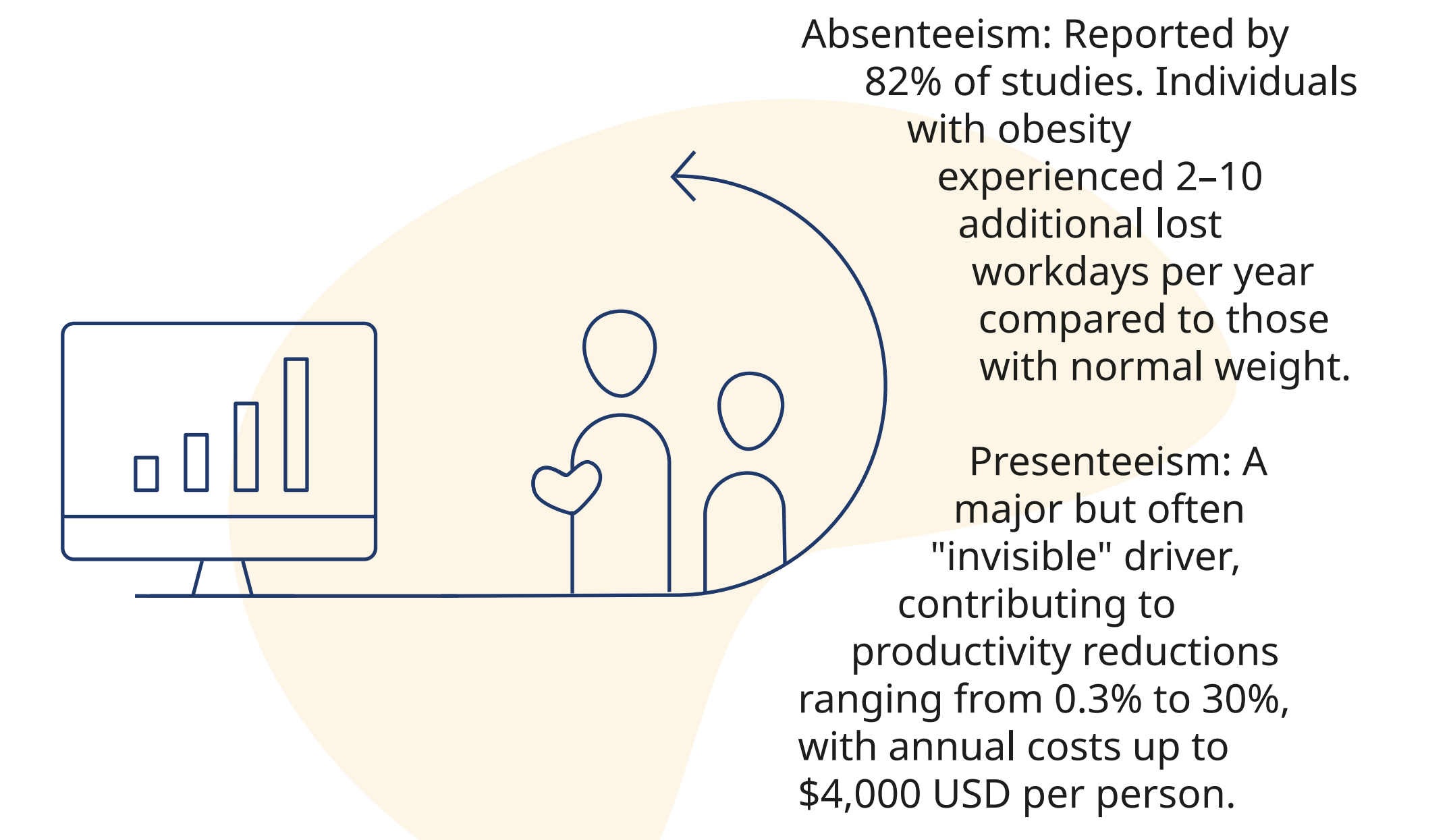
- Countries**
- 22,73%
 - 13,64%
 - 9,09%
 - 9,05%
 - 4,55%
 - 4,55%
 - 4,55%
 - 4,55%
 - 4,55%
 - 4,55%

Presenteeism



Summary

The evidence identified linked to obesity showed substantial heterogeneity in definitions, sources of information, and methods of quantification.



Long-term Impact: Disability and premature mortality jointly accounted for >50% of total indirect costs in several longitudinal models.

Conclusion

Incorporating indirect costs into Colombian HTA and decision-making frameworks is essential to transition toward a societal perspective.

Obesity management should be reframed as a high-yield economic investment rather than a healthcare "cost," given its potential to recover significant productivity losses.

These synthesized parameters provide a robust foundation for the development of local economic tools, such as the Obesity Indirect Cost Calculator for Colombia

References

Methods

Design: Rapid systematic review conducted in accordance with Cochrane standards.

- Population:** Adults ≥18 years with overweight (BMI 25-29 kg/m²) or obesity (BMI ≥30 kg/m²) in any setting: general population, working population, and patients with obesity-related conditions.
- Intervention / Exposure:** Exposure: presence of overweight/obesity (no active weight-loss intervention)
- Comparator:** Adults without overweight/obesity (BMI <25 kg/m²), or general population averages when a specific comparison group is not explicitly defined.

- Outcomes:** Primary outcomes:
 - Productivity loss / absenteeism:** lost workdays due to obesity (or obesity-related conditions), monetized as wages × days lost.
 - Productivity loss / presenteeism:** reduced work performance (e.g., % disability using WPAI or similar tools/surveys), monetized.
 - Work disability:** days or rates of temporary/permanent disability, monetized.
 - Premature mortality:** years of productive life lost (YPLL/YLPL), valued using human capital or friction cost methods.
 - Total indirect cost:** estimates combined per person and per population, stratified by sex, age, and obesity class. Additional outcomes: early retirement or unemployment attributable to obesity

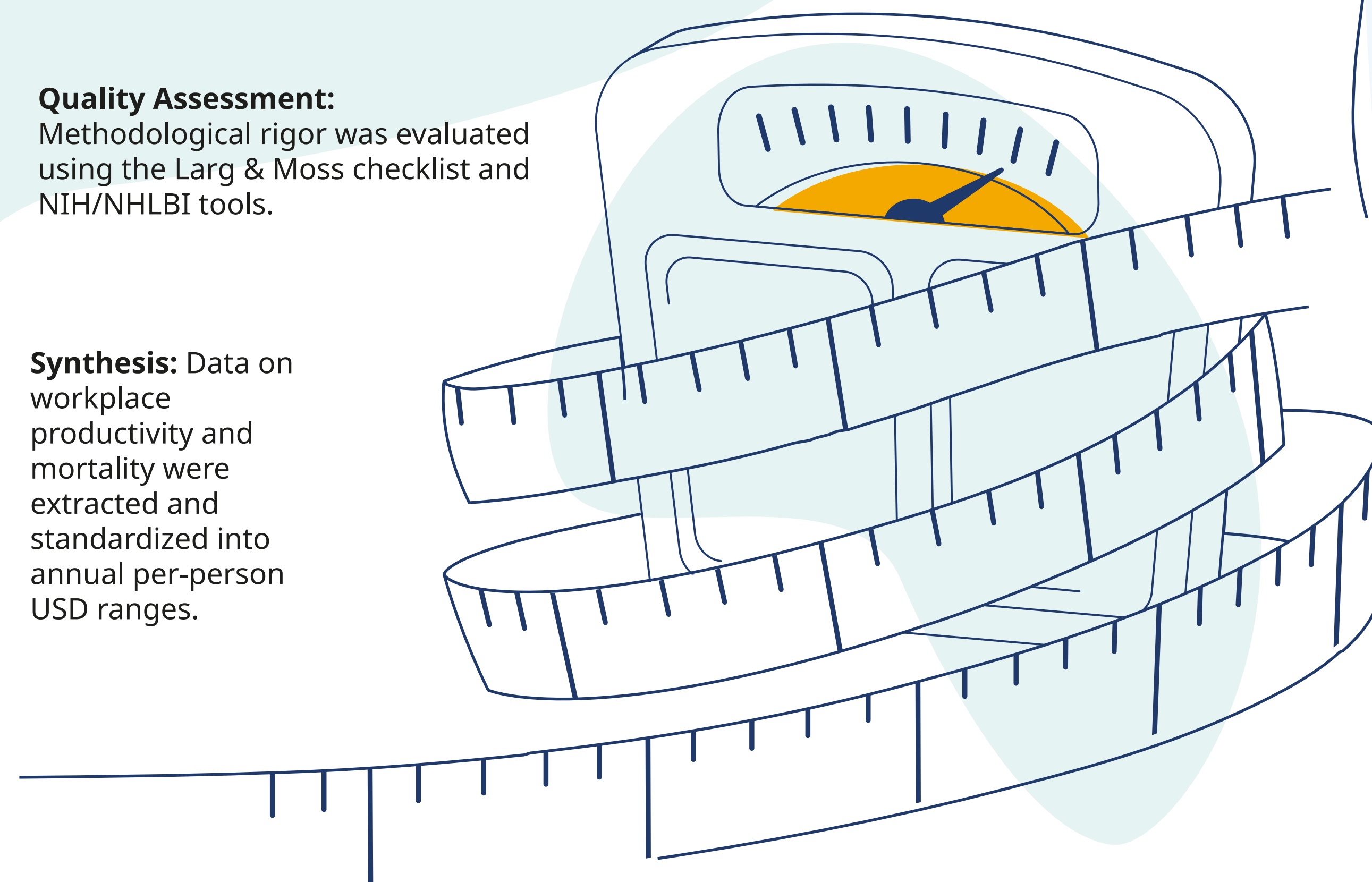
Search Strategy: Comprehensive searches in MEDLINE, Embase, Cochrane Library, DARE/NHS EED, LILACS, and gray literature through October 14, 2025.



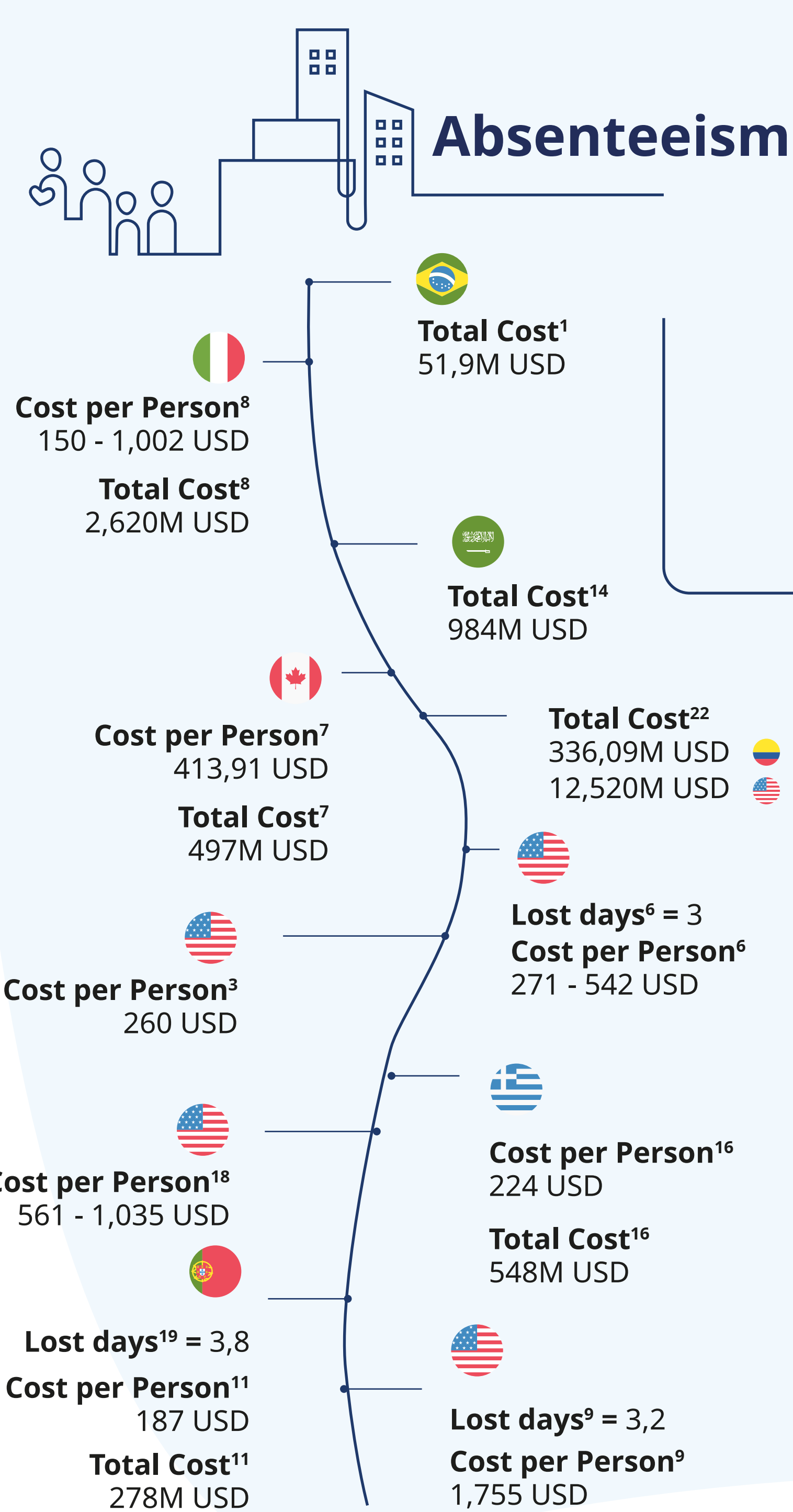
Eligibility: observational studies (cross-sectional, cohort, or case-control) that report indirect costs attributable to overweight/obesity; economic evaluations / burden-of-disease (cost-of-illness) studies where indirect costs (e.g., productivity loss, disability, premature mortality, and non-medical costs) are reported separately; secondary data analyses using administrative, employer, or insurer datasets to estimate indirect costs; and systematic reviews or meta-analyses on the indirect costs of obesity, used both as references and to identify additional primary studies.

Quality Assessment: Methodological rigor was evaluated using the Larg & Moss checklist and NIH/NHLBI tools.

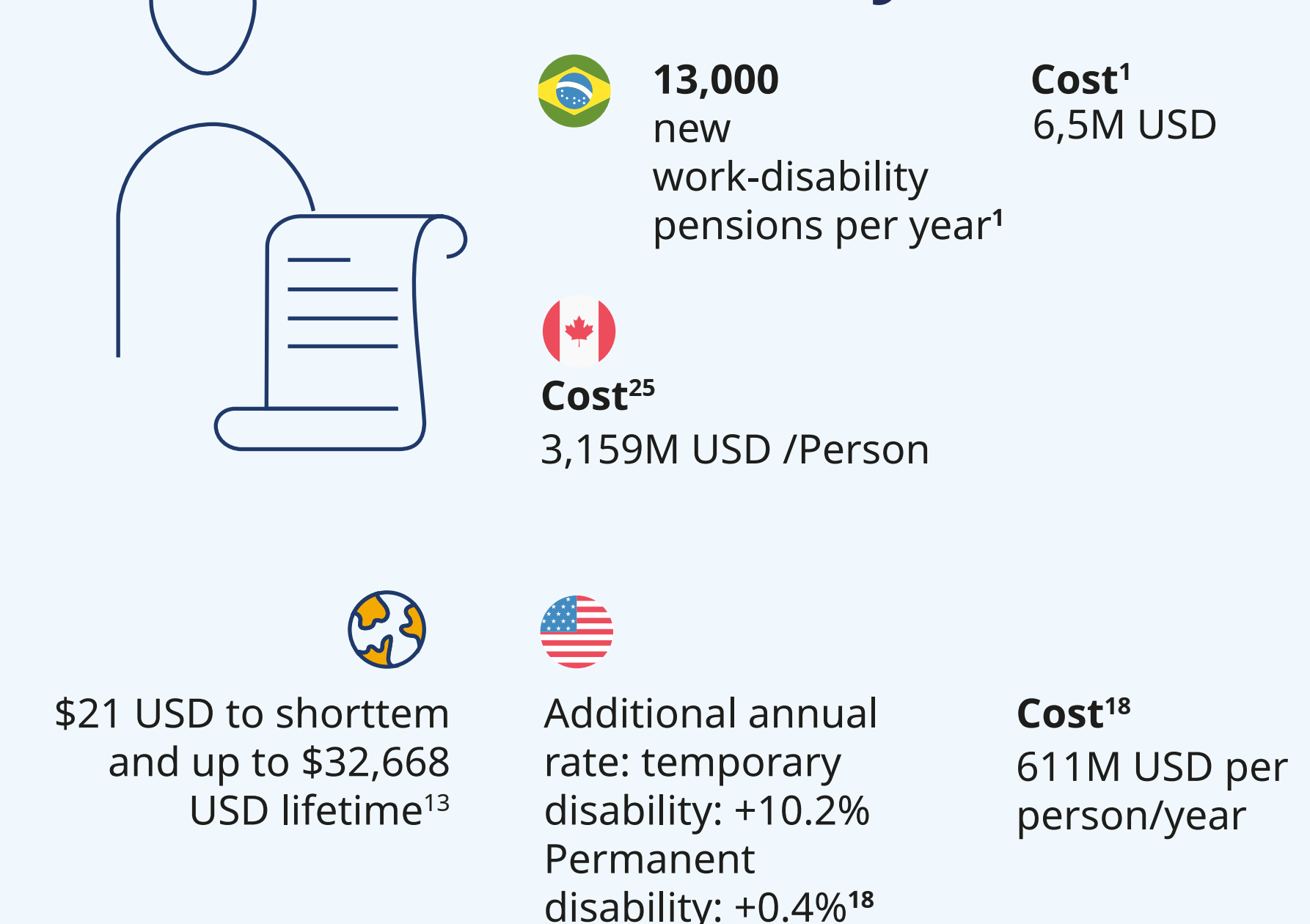
Synthesis: Data on workplace productivity and mortality were extracted and standardized into annual per-person USD ranges.



Methodological Quality: 40.9% of the evidence was rated as "High Quality," with the Human Capital Approach being the most frequent valuation method (36.4%).



Work Disability



Premature mortality



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