Missing Data and Missed Opportunities: A Potential Solution to Data Gaps for Societal Perspective Economic Evaluations

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Authors and Disclosures

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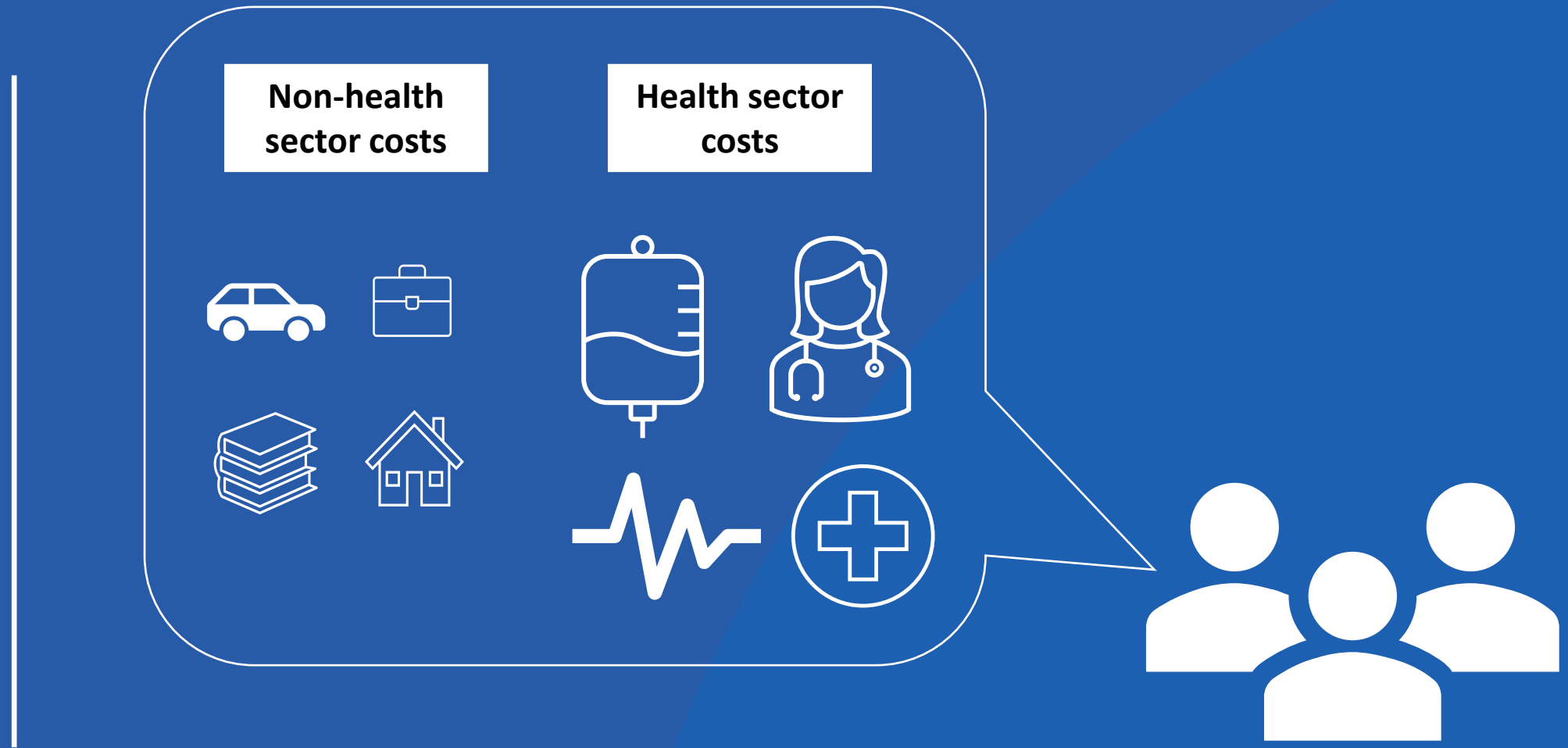
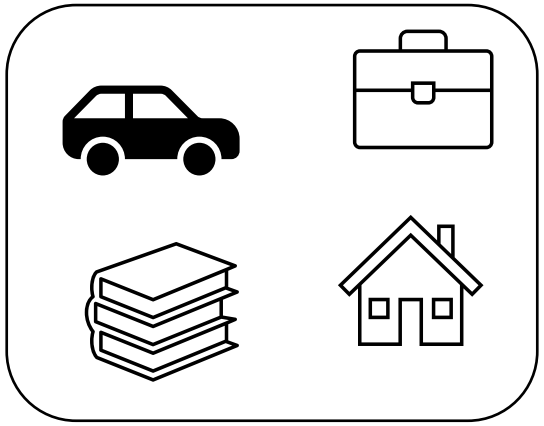
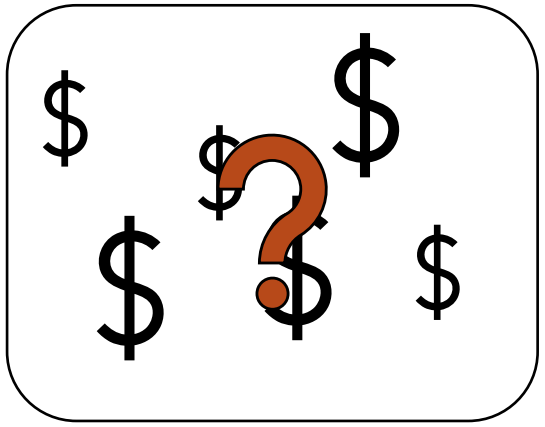

Non-health sector costs
Health sector costs

What information do we need to estimate costs from the societal perspective?

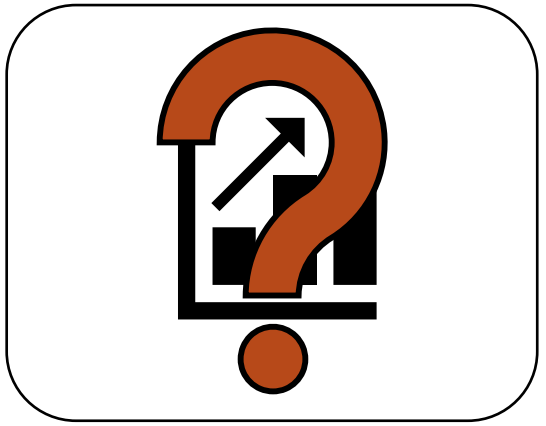
Resource categories



Level of resource use



Impact of treatment on resource use



Objective

To explore the relationship between incremental non-healthcare sector societal cost savings and incremental quality adjusted life years (QALYs) in published ICER economic evaluations.

Methods

- Searched for ICER ***drug*** reviews conducted between May 2019 and November 2021.
- Extracted and summarized data for ***each comparison*** (i.e., treatment vs. SOC) and perspective undertaken.
- Summarized categories of non-healthcare sector societal cost domains.
- Assessed (graphically and for fit) the relationship between ***incremental*** non-healthcare sector societal costs and ***incremental*** QALYs.

Methods

Inclusion criteria:

- Sufficient data available in the ICER report.
- Treatments that were more costly and more effective than SOC from a healthcare system perspective.
- Treatments that resulted in non-healthcare sector societal ***cost savings*** compared to SOC.

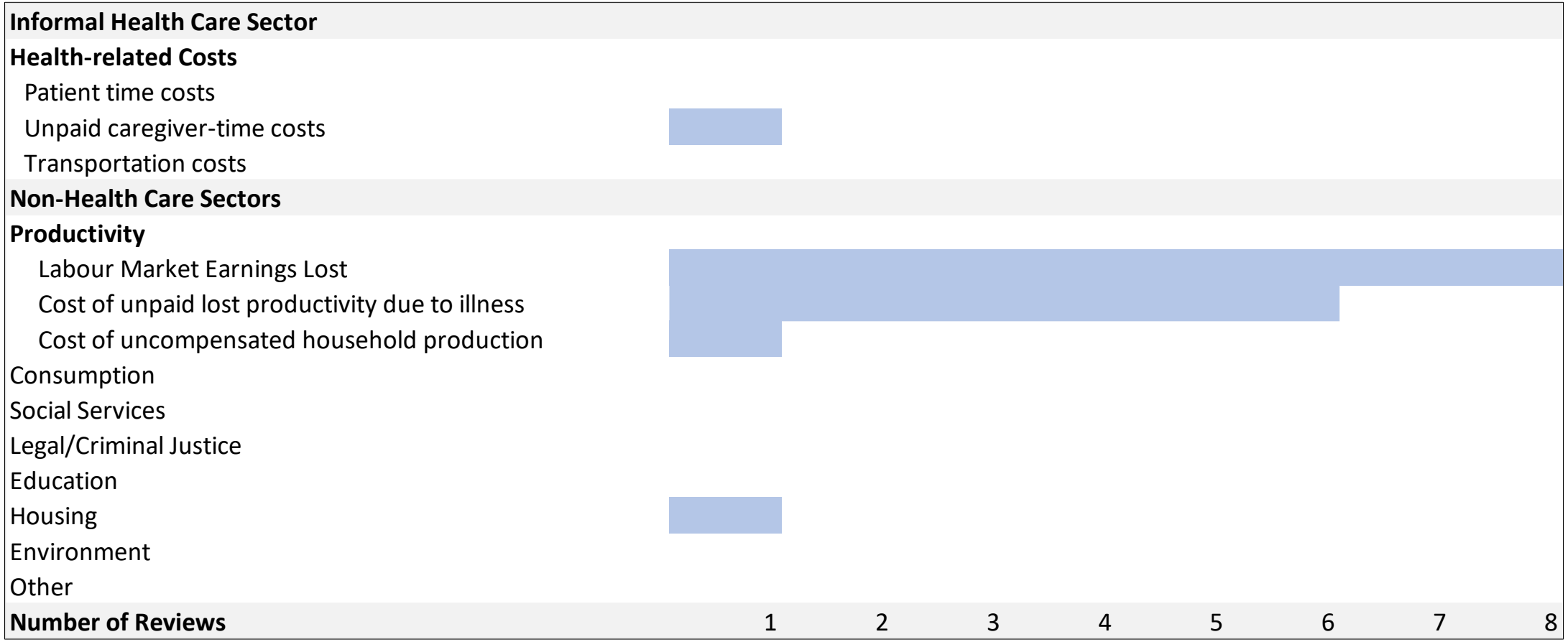
Results

8 Reviews; 28 pairwise comparisons

1. Alzheimer's Disease (1 comparison) } **Older Adults**
2. Spinal Muscular Atrophy (1 comparison) } **Children**
3. Ulcerative Colitis (11 comparisons)
4. Cystic Fibrosis (6 comparisons)
5. Atopic Dermatitis (5 comparisons)
6. Lupus Nephritis (2 comparisons)
7. Secondary Progressive Multiple Sclerosis (1 comparison)
8. Treatment Resistant Depression (1 comparison)

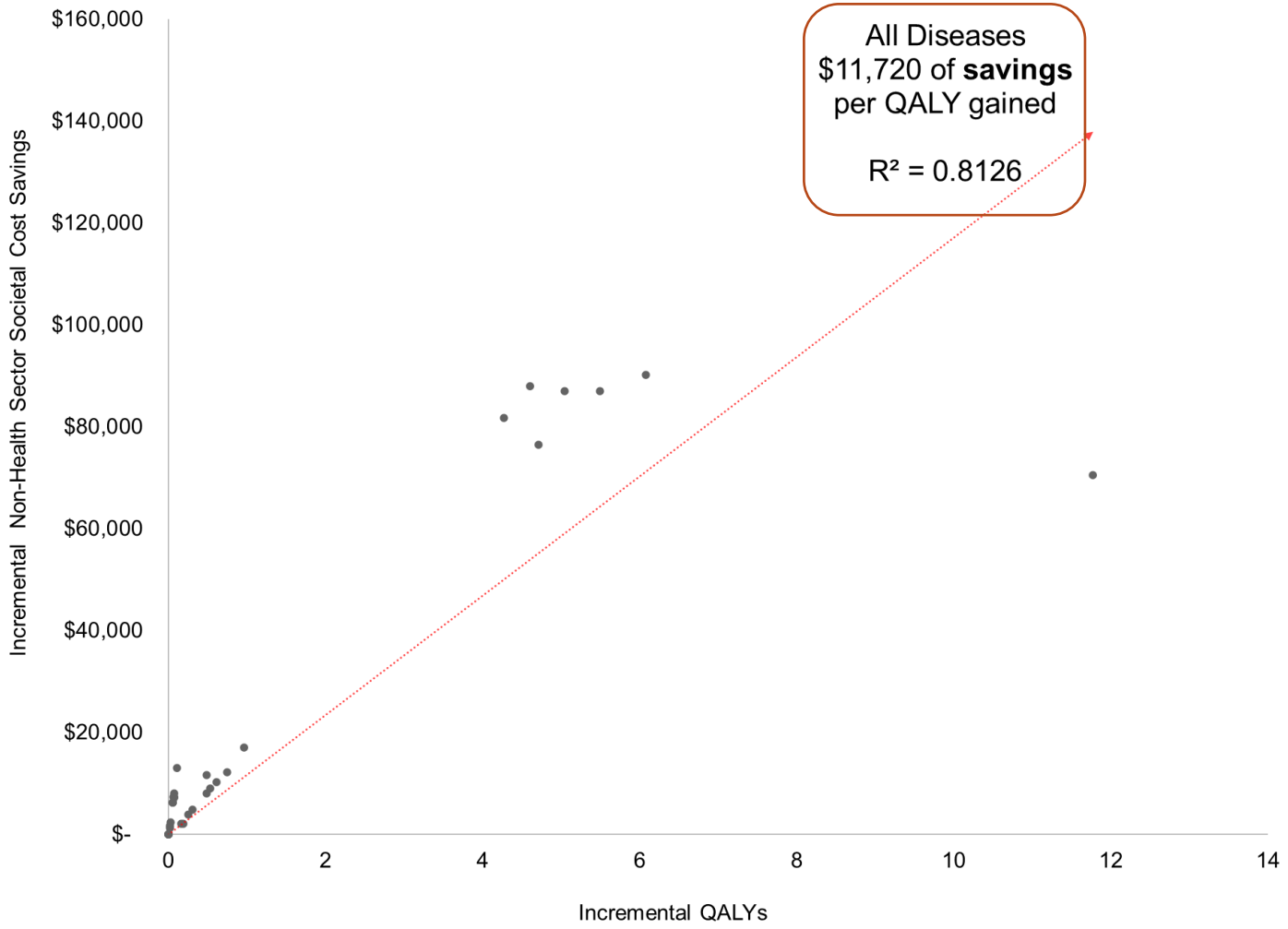
} **Working Adults**

Categories of non-healthcare sector societal cost savings

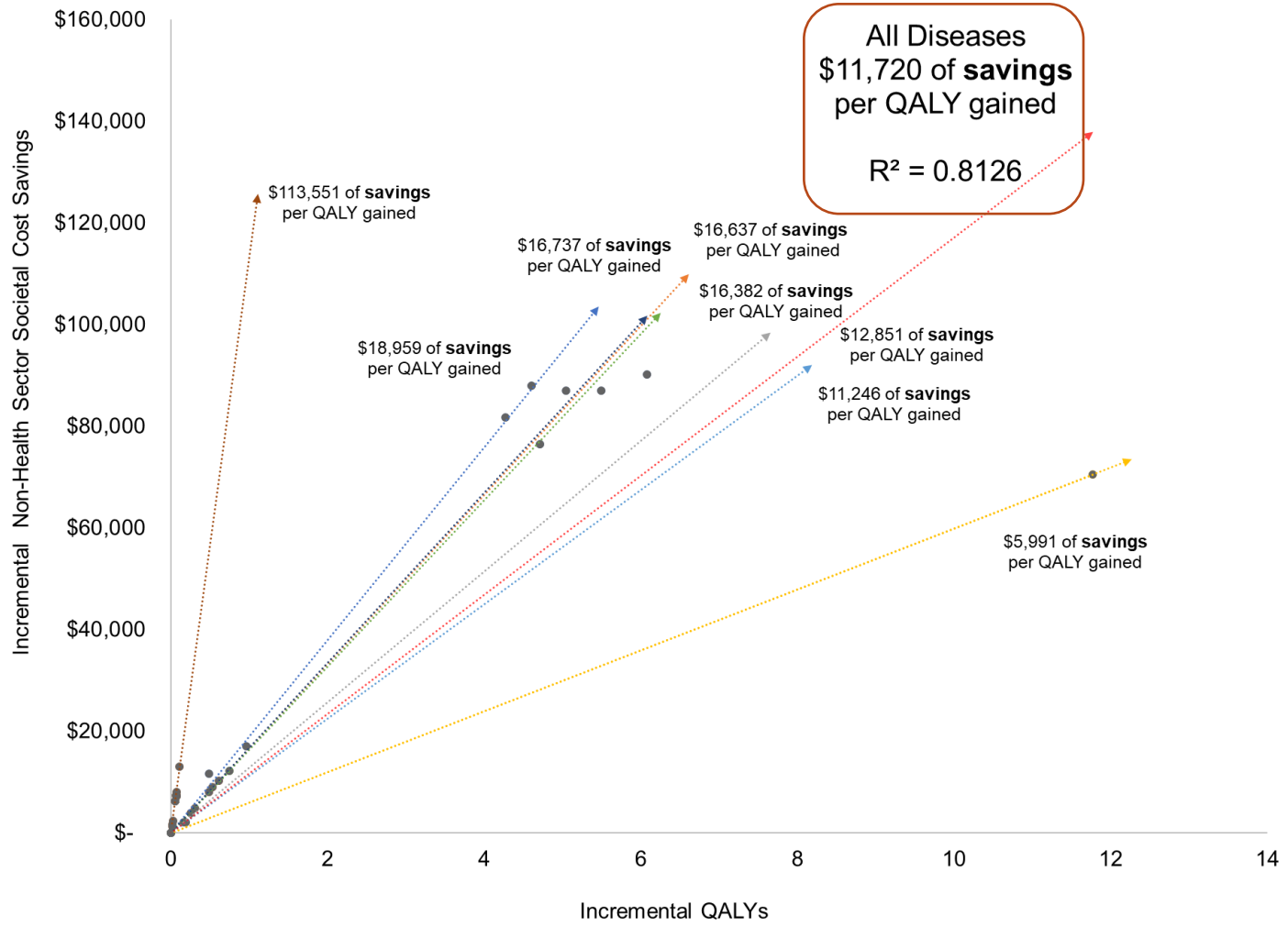


Note: Table adapted from the Second Panel's Impact Inventory

Cost Savings per QALY gained



Cost Savings per QALY gained



For every additional lifetime discounted QALY gained, the incremental non-healthcare sector societal cost savings increased by $11,720 (2021 USD) on average (range: $5,991 to $113,551).

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*e.g., your healthcare sector analysis for Tx. A found 5 incremental QALYs vs. SOC. Using the $11,720 per QALY in non-healthcare societal cost savings would result in **$58,600** in non-healthcare societal cost savings.*

5 Incremental QALYs x $11,720 per QALY savings = $58,600 in non-healthcare societal cost savings for Tx. A vs. SOC

Limitations

- Limited (n=8) number of reviews included; not enough data to explore potential differences between diseases and age groups
- Approach only considers costs (i.e., does not consider non-healthcare sector health outcomes – e.g., caregiver QALYs)
- Finding may be underestimated given that most reviews focused on productivity costs only (i.e., a modified societal perspective)
- Approach cannot be used in all cases (e.g., treatments that incur *[not save]* non-healthcare sector societal costs vs. SOC)

Strengths

- Approach allows for the use of a health outcome (i.e., incremental QALY) already produced in cost-effectiveness analyses to inform societal perspective cost savings estimates
- Does not require additional literature-derived estimates for non-healthcare sector societal cost savings
- Societal cost savings estimate would be consistently applied across reviews

Conclusions

- We offer a (non-perfect) solution to the missing data problem in societal perspective economic evaluations.
- Our estimate offers a placeholder value for calculating incremental non-healthcare sector societal cost savings that could be updated as additional data become available.

Thank you

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