Ensuring healthy lives and promoting well-being for all people is the goal of Sustainable Development Goal 3 (SDG 3). Teleophthalmology provides an opportunity to access specialized visual health services in areas where they are not available in person. At the Mexican Institute of Ophthalmology, IAP, a model of ophthalmologic care is implemented for patients from remote locations.

Despite the significance of achieving improvements in the quality of life through teleophthalmology, initiatives to enhance medical care, particularly teleophthalmology, are often not sustained or expanded because their impact on society, healthcare, patients, and their environment is not quantified. This is due to limited experience with sustainability and profitability models, making them difficult to replicate. Therefore, the objective of this work is to evaluate and quantify the economic and social impact of implementing remote ophthalmologic care.

Method:

Teleophthalmology
- Can be an alternative to satisfy ophthalmologic coverage
- Especially in areas with difficult access and/or lack of availability

However, it is not applied because:
- There are no studies quantifying the impact on society and the environment
- Lack of standard information, that leads to inability to replicate.

The objective of the study is:
- Identify and quantify the economic and social value of applying the teleophthalmology medical care model, via the Social Return of Investment (SROI) methodology

How do we establish the “Theory of Change” in the SROI methodology for teleophthalmology?

Stakeholders

<table>
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<th>Activities</th>
<th>Short-term changes</th>
<th>Long-term changes</th>
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<td>Attendance the Vision Center</td>
<td>Possibility of visiting the ophthalmologist</td>
<td>Improvement in quality of life due to access to visual health care.</td>
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<td>Take care/ Accompany</td>
<td>Access to ophthalmological studies at an affordable cost</td>
<td>Gain in quality-adjusted life years (QALYs) due to the timely detection of disabling diseases.</td>
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<td></td>
<td>Savings on visual and diagnostic exams in a single consultation</td>
<td>Visual health care, savings.</td>
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<td>Immediate attention</td>
<td>Maintain productivity</td>
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<td>Avoiding productivity losses</td>
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<td>Reduction in travel expenses</td>
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<td></td>
<td>Avoiding dependency on others</td>
<td>Emotional well-being</td>
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</tbody>
</table>

Key insights:

Economic Impact:
- 84% of respondents agreed that having access to teleophthalmology in their place of origin improves their quality of life, due to saving money (24%), allowing time for other activities (20%), and avoiding work absences (10%).

Time Impact:
- Companies expressed mainly work-related limitations (42%) while accompanying their patients during their visits to urban centers.

Health Impact:
- The total benefit per person from attending a teleophthalmology consultation is equal to the present value of all future outcomes.
- According to existing literature, the social benefit and economic efficiency of the intervention were identified by quantifying the “years of vision saved” through the detection of the most prevalent vision-threatening diseases: cataract (4.7 years), diabetic retinopathy (9.0 years), diabetic macular edema (5.9 years), and glaucoma (0.9 years), expressed in quality-adjusted life years (QALYs) gained through early detection.

Conclusions:

This study demonstrates the positive effect of teleophthalmology on quality of life, economic costs, years of vision saved, prevention, and hence the well-being of patients and their companions and society. Remote ophthalmology consultations present a low cost for stakeholders, at a level that would otherwise not be viable for a segment of the low-income population or those who have to travel long distances. Therefore, it is crucial to evaluate the impact of such interventions that help vulnerable populations. Additionally, measuring its social profitability can be beneficial for ongoing efforts to gain support and reduce the prevalence of visual problems in the population by demonstrating the significant value of its impact for individuals, institutions, and governmental entities. This study measures and presents the benefits of investing in visual health, hoping that our results will drive the expansion and relevance of visual health in policy formulation and the expansion of teleophthalmology.

Declaration: The authors declare that they have no funding, financial, non-financial or personal relationships with other people or organizations that could improperly influence this work. They also declare that they have no conflict of interest regarding the findings and conclusions of this study. This study was approved by the participating institutions, in accordance with their national regulations and the Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects.