COPD

THE IMPACT OF IMPROVING THE CURRENT APPROACH TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE WITHIN THE SPANISH NATIONAL HEALTHCARE SYSTEM: A SOCIAL RETURN ON INVESTMENT ANALYSIS.

Merino M[1], Martín Lorenzo T[1], Maravilla P[1], Villoro R[2], Hidalgo-Vega A[2,3], Ancochea Bermúdez J[4], Gómez Sáenz JT[5], Hass N[6], Molina París J[7], Peces-Barba G[8], Trapero Bertran M[9], Trigueros Carrero JA[10]

[1]Weber, Madrid, Spain, [2]Fundación Weber, Madrid, Spain, [3]Universidad de Castilla-La Mancha, Toledo, Spain, [4]Hospital La Princesa, Madrid, Spain, [5]Centro de Salud de Nájera, Nájera, La Rioja, Spain, [6]Asociación Nacional de Pacientes con EPOC (APEPOC), [7]Centro de Salud Francia, Fuenlabrada, Madrid, Spain, [8]Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain, [9]Universitat Internacional de Catalunya, Barcelona, Spain, [10]Centro de Salud de Menasalbas, Menasalbas, Toledo, Spain.

OBJECTIVES

Objective 1: To establish a set of **proposals to improve the current approach to Chronic Obstructive Pulmonary Disease** (COPD) within the Spanish National Health System (SNHS).

Objective 2: To estimate its potential **clinical, healthcare, economic, and social impact** in the first year of implementation.

METHODS

A multidisciplinary group of 20 representatives of the main COPD-related stakeholders participated in an **on-line consultation process** using three questionnaires to agree on **15 proposals** to improve COPD management within the SNHS in **4 areas of analysis**:

1) **Diagnosis**
2) **Risk stratification**
3) **Management of exacerbations**
4) **Management of stable COPD**

#1 Collect proposals | #2 Vote proposals | #3 Value proposals

STAKEHOLDERS

- ☑ Pulmonologists
- ☑ Primary care physicians
- ☑ Internal medicine
- ☑ Case management nurses
- ☑ Respiratory nurses
- ☑ Hospital pharmacists
- ☑ Primary care pharmacists
- ☑ Respiratory physiotherapy
- ☑ Social workers
- ☑ Patient associations
- ☑ Patients with COPD
- ☑ Informal caregivers
- ☑ Health economists
- ☑ Hospital managers

A **forecast-type social return on investment (SROI)** analysis was used to estimate the tangible and intangible impact of the hypothetical implementation of these proposals with respect to the required investment.

The relationship between the impact and the investment is summarized in the **SROI ratio**, indicating the amount of social value created for every euro invested in the set of proposals.

$$\text{SROI ratio} = \frac{\text{Total IMPACT (€)}}{\text{Total INVESTMENT (€)}}$$

A SROI ratio **greater than 1 is considered positive**, meaning that the total impact is greater than the total investment required.

To determine **the effect of varying assumption-based data** on the SROI ratio, a **sensitivity analysis** was performed.

RESULTS

Table 1. Investment and impact for each proposal and area of analysis.

Area of Diagnosis	Investment (million €)	Impact (million €)
Proposal 1. To ensure spirometry availability in primary care, and to provide training on its use and interpretation.	1.14	1.27
Proposal 2. To provide training on COPD for primary care professionals.	2.13	24.71
TOTAL	**3.27**	**25.98**

Area of Risk stratification	Investment (million €)	Impact (million €)
Proposal 3. To inform patients and families about the disease and its treatments.	68.09	1,254.74
Proposal 4. To agree with patients and caregivers on the treatment and management of COPD.	62.40	34.13
Proposal 5. To establish coordinated programs between primary and specialized care, and of these with other centers and nursing homes, to enable comprehensive COPD management.	4.91	22.96
Proposal 6. To promote the use of a compatible primary/specialized care medical record to identify patients included in chronicity strategies.	7.29	5.49
TOTAL	**142.69**	**1,317.32**

Virtual ISPOR Europe 2021
30 November - 3 December

This study was supported by: Chiesi gsk

RESULTS (continued)

Table 1. Investment and impact for each proposal and area of analysis (continued)

Area of Management of exacerbations	Investment (million €)	Impact (million €)
Proposal 7. To provide training on therapeutic adherence.	92.31	117.38
Proposal 8. To ensure continuity of care after an exacerbation, in coordination with primary care.	163.31	377.25
Proposal 9. To ensure availability of adequate resources for exacerbations that require hospitalization.	106.97	165.58
Proposal 10. To reconcile and explain medication at hospital discharge.	6.17	1.30
TOTAL	**368.75**	**661.51**

Area of Management of stable COPD	Investment (million €)	Impact (million €)
Proposal 11. To implement a smoking cessation plan for smokers with COPD.	123.48	1.04
Proposal 12. To implement a social evaluation of the patient from a multidimensional point of view.	13.86	24.18
Proposal 13. To promote the application of bioethical principles: inform patients and caregivers to facilitate their participation in decision making.	13.21	35.95
Proposal 14. To develop a pharmacological and non-pharmacological palliative care plan for end-stage patients.	0.07	7.00
Proposal 15. To promote training on the management of palliative respiratory patients, especially in advanced and terminal phases.	2.43	5.79
TOTAL	**153.05**	**73.96**

Total **IMPACT** € 2,079 million / Total **INVESTMENT** € 668 million =

SROI ratio

- Best-case scenario € 3.62
- € 3.11
- Worst-case scenario € 2.71

The resulting SROI ratio was estimated at 3.11:1, meaning that **every euro invested in the hypothetical implementation of the 15 proposals would yield € 3.11 social return** (€ 3.62 in the best-case scenario and € 2.71 in the worst-case scenario).

The implementation of the group of proposals for the **management of exacerbations would account for the largest proportion of the investment**, while those within the area of **risk stratification would yield the greatest proportion of the impact** (Figure 1).

Most of the generated social return would be of **intangible nature**, especially within the area of risk stratification, such as improvement of patient health literacy, patient and caregiver satisfaction with the SNHS, or patient self-perceived health status (Figure 2).

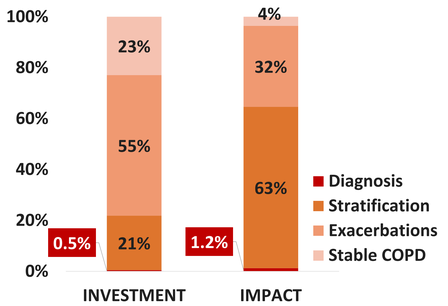

Figure 1. Distribution of investment and impact by areas.

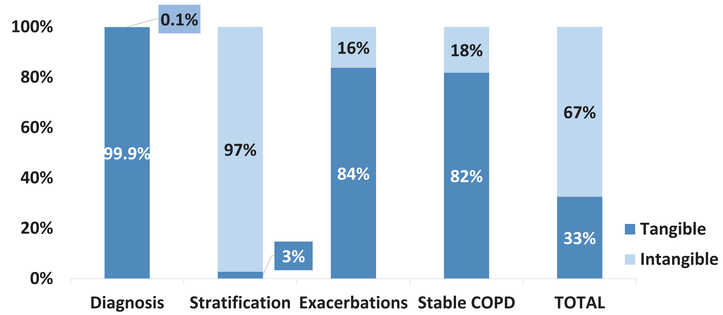

Figure 2. Distribution of impact by typology (tangible or intangible) in each area.

CONCLUSIONS

- ❖ Implementing the entire set of proposals would have a positive impact, mostly of intangible nature, generating a three-fold return of the investment.
- ❖ These results may be used to make decisions relative to healthcare policy and practice regarding COPD management within the SNHS, further contributing to reduce the large burden of COPD.