

# Optimization Strategies to Achieve the Quintuple Aim in Health in Colombia: A Focus on Health Economics

Pérez-Olivo JL<sup>1</sup>, Alvis Guzmán N<sup>2</sup> Fernández Mercado J<sup>3</sup>, Alvis Zakzuk NR<sup>4</sup>

1Secretaría de Salud Bolívar Colombia -University of Cartagena, Cartagena, BOL, Colombia,

2 Universidad De La Costa, Barranquilla, Colombia,

3 Universidad de Cartagena, Cartagena, BOL, Colombia

4ALZAK Foundation – Institución Universitaria Mayor de Cartagena, Bolívar, Colombia

## Objectives

To evaluate and optimize the cost management of health insurance in Colombia to achieve the quintuple aim: improving population health, enhancing patient experience, reducing costs, improving workforce health, and ensuring health equity. Costs in the contributory and subsidized regimes during 2022 and 2024 were analyzed to identify areas of expenditure and efficiency factors.

## Results

Per capita costs varied significantly between regimes, with an average increase of 10% in 2024. The largest areas of expenditure were hospitalization and medications. Resource use efficiency slightly improved in the contributory regime. Proposed optimization strategies included integrated service management, digitalization, health promotion, and outcome-based payment models. These strategies contributed to a 5% reduction in hospitalization rates for preventable diseases, improved patient satisfaction, an 8% reduction in administrative costs, improved health worker well-being, and a 6% increase in equitable access to quality services.

## Methods

Quantitative and qualitative approaches were used. In the quantitative analysis, econometric models were applied to identify trends and key cost determinants, comparing per capita costs and costs by service type. The qualitative analysis included interviews and focus groups with managers, health professionals, and patients to understand the challenges and opportunities in cost management and assess the patient experience.

## Conclusions

Cost management of health insurance can be optimized through integrated, data-driven strategies. These strategies not only reduce costs but also improve population health, patient experience, and ensure equitable resource distribution. This approach is crucial for developing sustainable policies that promote efficiency and equity in the Colombian health system.

