

# Cost-effectiveness analysis of Premature Infant Oral Motor Intervention (PIOMI) in the neonatal intensive care unit in Colombia. Eusse-Solano PA<sup>1</sup>, Beleño-Rico IP<sup>2</sup>, Jervis-Jálabe DS<sup>3</sup>, Alvis NR <sup>3,4</sup>, Alvis-Zakzuk NJ <sup>3,4</sup>

#### OBJECTIVES

The cost-effectiveness of Premature Infant Oral Motor Intervention (PIOMI) in treating Preterm Infants (PI) in the Newborn Intensive Care Unit (NICU) is unknown. Of interest are the possible economic implications of using it as standard treatment. This study evaluated the costs and effectiveness of this care.

### METHODS

hospital stay were the measures of A CEA of PIOMI vs. traditional PI care was performed in a cohort of Pl effectiveness. Cost-Effectiveness treated in a NICU in Barranquilla Ratio (CER) for each alternative and Incremental Cost-Effectiveness (Colombia). Direct costs of care were estimated from a third-party Ratio (ICER) were estimated. payer perspective. Weight gain and

## RESULTS

The average cost of stay with PIOMI (SD: 22.73). The average weight gain was higher in those treated with IMOwas USD 7.118,49 (SD: 5.347,10) and with traditional treatment, USD RNPT (1.05 oz – SD: 66.38 vs. 0.81 oz 10.322,04 (SD: 8.859,82). The - SD: 95.12). The RCEI was USD average length of stay for PIOMI was 12,012,58 per oz-day of weight 20.55 days (SD: 13.31) versus 29.00 gained.

AFILIATIONS

<sup>1</sup> Universidad Libre, Barranquilla, Colombia; <sup>2</sup> Organización Clínica Bonadona-Prevenir, Barranquilla, Colombia; <sup>3</sup> Universidad de la Costa, Barranquilla, Colombia; <sup>4</sup> Alzak Foundation, Cartagena de Indias, Colombia

Table 1. Results of the cost-effectiveness analysis for PTNB who received traditional treatment and SSTCS admitted to the NICU

Treatment	Average cost of stay (COP)	Marginal cost	Effectiveness (Weight gain in g / day)	Marginal effectivene ss	Average EC ratio	ICER
PIOMI	812.402	- 617.457	29,66	6,60	27.393,08	-93.585,60
Traditional treatment	1.429.859		23,06		62.007,55	

Table 2. One-way sensitivity analysis (univariate) of the cost-effectiveness analysis for PTNB who received traditional treatment and SSTCS admitted to the NICU

Aspect	Traditional attention	s I	SSTCS	s2	Difference (%)	ACE results	р					
Base case	23.905.273	22.596.516,42	23.469.761	15.040.610,45	-1,82	Dominant	0,833					
Variation in average total costs by stay												
+ 15% stay compared to												
base case	27.437.095	22.596.516,42	26.678.695	15.040.610,45	-2,76	Dominant	0,714					
- 15% stay compared to						<b>—</b> · ·						
base case	20.373.451	25.947.655,37	20.260.826	17.124.537,61	-0,55	Dominant	0,962					
+ 50% stay compared to	20.069.016	10 245 202 54	20 007 620	12 056 772 02	2.40	Dominant	0.541					
- 30% stay compared to	50.908.910	19.240.060,04	29.007.030	12.950.772,02	-5,49	Dominani	0,541					
base case	16.841.629	29.298.798,32	17.051.891	19.208.524,62	1,25	Dominated	0,937					
Variation in average total costs according to specialist fees												
+ 15% fee compared to base												
case	23.923.273	22.596.516,42	23.715.261	15.191.669,97	-0,87	Dominant	0,920					
<ul> <li>15% fee compared to base</li> </ul>												
case	23.887.273	22.596.516,42	23.224.261	14.889.619,21	-2,78	Dominant	0,748					
+ 30% fee compared to base												
case	23.941.273	22.596.516,42	23.960.761	15.342.795,75	0,08	Dominated	0,993					
- 30% fee compared to base	~~ ~ ~ ~ ~ ~ ~	~~ ~~ ~ ~ ~ ~ ~ ~	~~ ~~~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			<b>—</b> ·						
case	23.869.273	22.596.516,42	22.978.761	14.738.698,36	-3,73	Dominant	0,666					

#### CONCLUSION

The effectiveness indicator (average weight gain) was higher, and the average costs per patient were slightly lower in patients with PIOMI, meant a better cost-effectiveness ratio of this treatment strategy.



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Simulation of different scenarios in which the cost of professional fees and length of stay in the NICU increased or decreased by 15% and 30% showed that PIOMI is the dominant alternative.