

COMPREHENSIVE APPROACH TO OUTCOMES MEASUREMENT IN BURN PATIENTS

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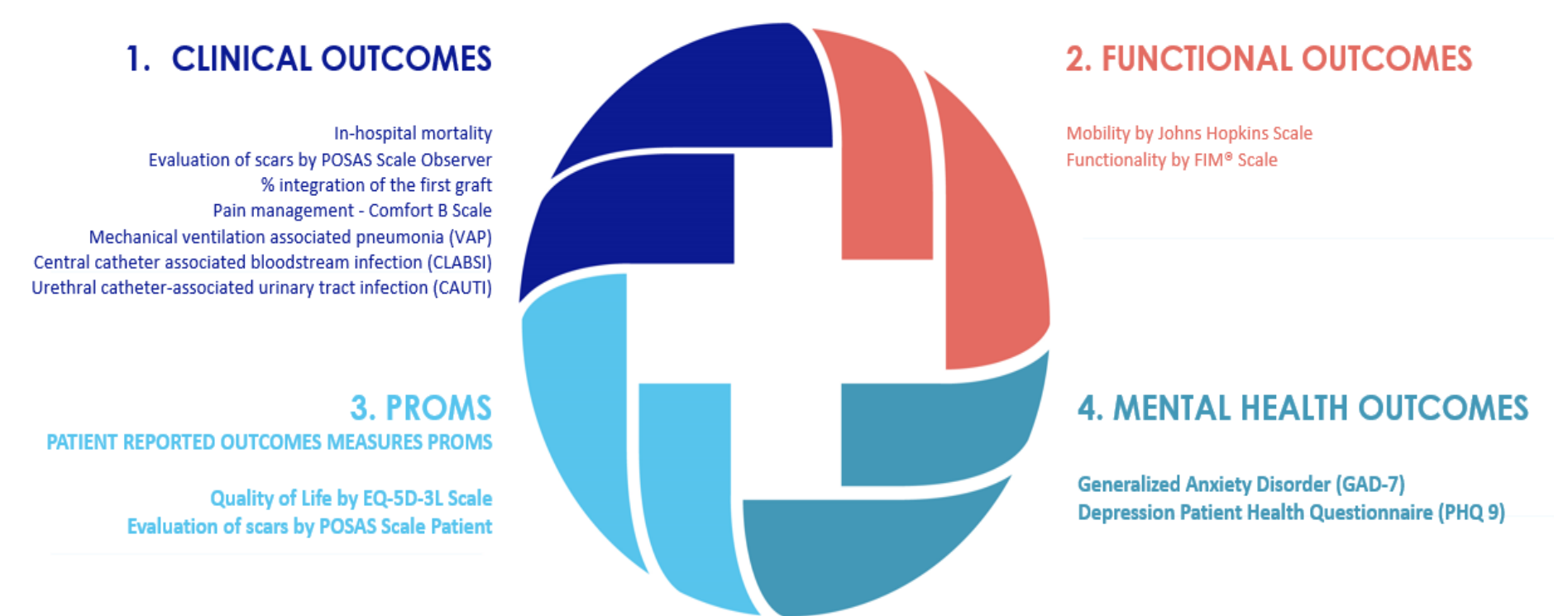
INTRODUCTION

Burn injuries significantly affect individuals by altering their appearance, physical abilities, social interactions, and psychological well-being. Effective treatment demands a multidisciplinary approach that focuses on high-quality care, tailored to patients' needs. At Fundación Santa Fe de Bogotá, we are dedicated to this comprehensive approach, monitoring long-term health outcomes of burn patients beyond immediate care, including clinical, functional, mental health, and Patient Reported Outcomes Measures (PROMS). This study describes our experience in implementing a holistic outcomes measurement program in our burn unit.

METHODS

The burn unit at Fundación Santa Fe de Bogotá evaluates patient recovery using a comprehensive approach that includes clinical outcomes (in-hospital mortality, graft integration), functional outcomes (Johns Hopkins Maximal Mobility Scale), patient-reported outcomes (EQ5D3L for quality of life, POSAS 2.0 for scar assessment), and mental health outcomes (with GAD-7 and PHQ-9 scales). Clinical and functional data are sourced from medical records, while patient-reported and mental health outcomes are collected through interviews and phone follow-ups at 1, 3, 6, and 12 months after discharge.

Figure 1. Comprehensive approach to outcome measurement in burn patients at Fundación Santa Fe de Bogotá.



RESULTS

A total of 461 patients were attended at the burn unit between November 2021 and December 2023.

Clinical Outcomes	Result	Literature benchmarks or baseline data Fundación Santa Fe de Bogotá
In hospital overall mortality	2,2% (*)	3,3% (1)
Graft integration > or equal to 80% in the first surgical attempt.	94,5%	92%
Functional Outcomes	Result	Baseline Fundación Santa Fe de Bogotá
Average score Johns Hopkins maximal mobility scale (JH-HLM). (Hospital Admission)	5,6	5,8
Average score Johns Hopkins maximal mobility scale (JH-HLM). (Hospital discharge)	7,4	7,2
Patient-reported Outcomes	Result	Literature reference or baseline Fundación Santa Fe de Bogotá
Average health status score EQ5D3L questionnaire (6 months)	84,2	65,9 (2)
Patient Scar Assessment Scale (POSAS 2.0) General opinion (>2 points)	84,9%	Under construction baseline
Mental health outcomes	Result	Baseline Fundación Santa Fe de Bogotá
Risk Anxiety Scale (GAD 7) (3 months)	26.1%	Under construction baseline
Risk of depression Questionnaire (PHQ 9) (3months)	39.1%	Under construction baseline

Notes:

(*) Nine adults classified as having a mortality risk of more than 50% and one child with a moderate mortality risk, who presented complications, died.

(1) American Burn Association (ABA) National Burn Repository Dataset. Zavlin, D., Chegiredy, V., Boukavalas, S., Nia, A. M., Branski, L. K., Friedman, J. D., & Echo, A. (2018). Multi-institutional analysis of independent predictors for burn mortality in the United States. *Burns & trauma*, 6, 24. <https://doi.org/10.1186/s41038-018-0127-y>

(2) Burn Unit, Uppsala University Hospital, Sweden. Oster C, Willebrand M, Dyster-Aas J, Kildal M, Ekselius L. Validation of the EQ-5D questionnaire in burn injured adults. *Burns*. 2009 Aug;35(5):723-32. Doi: 10.1016/j.burns.2008.11.007. Epub 2009 Mar 17. PMID: 19297100.

CONCLUSIONS

Burn patients experience changes not only in clinical and functional aspects but also in their emotional well-being, perception of scars, and overall quality of life. This study underlines the importance of outcome measurement to provide a comprehensive approach in patient care, within a multidisciplinary team. Additionally, results reinforce the importance of long-term follow-up for burn patients, to promote accurate monitoring of their physical and emotional progress. This includes mental health interventions, physical and occupational rehabilitation, and education on wound healing (including plastic surgery follow-ups and therapies to improve the appearance of scars). Further analysis would be needed for relating outcomes measurement results with the generation of education programs about burn prevention and promotion of safe living-working environments to avoid accidents and deaths.

