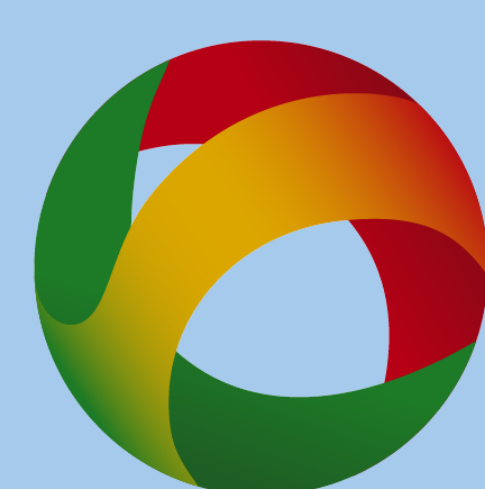




UNIDADE LOCAL DE SAÚDE
SÃO JOSÉ

EXTENDING AN ADULT CLASSIFICATION TO CHILDREN: VALIDATION OF THE BACH SYSTEM FOR PAEDIATRIC OSTEOMYELITIS

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INTRODUCTION & AIM

There is no widely validated or universally adopted classification system for paediatric osteomyelitis (PO).

BACH classification → strong predictive performance in adults.

This study aimed to assess if BACH can stratify disease severity and predict clinically relevant outcomes in PO.

METHODS

Retrospective cohort study : 92 children with PO

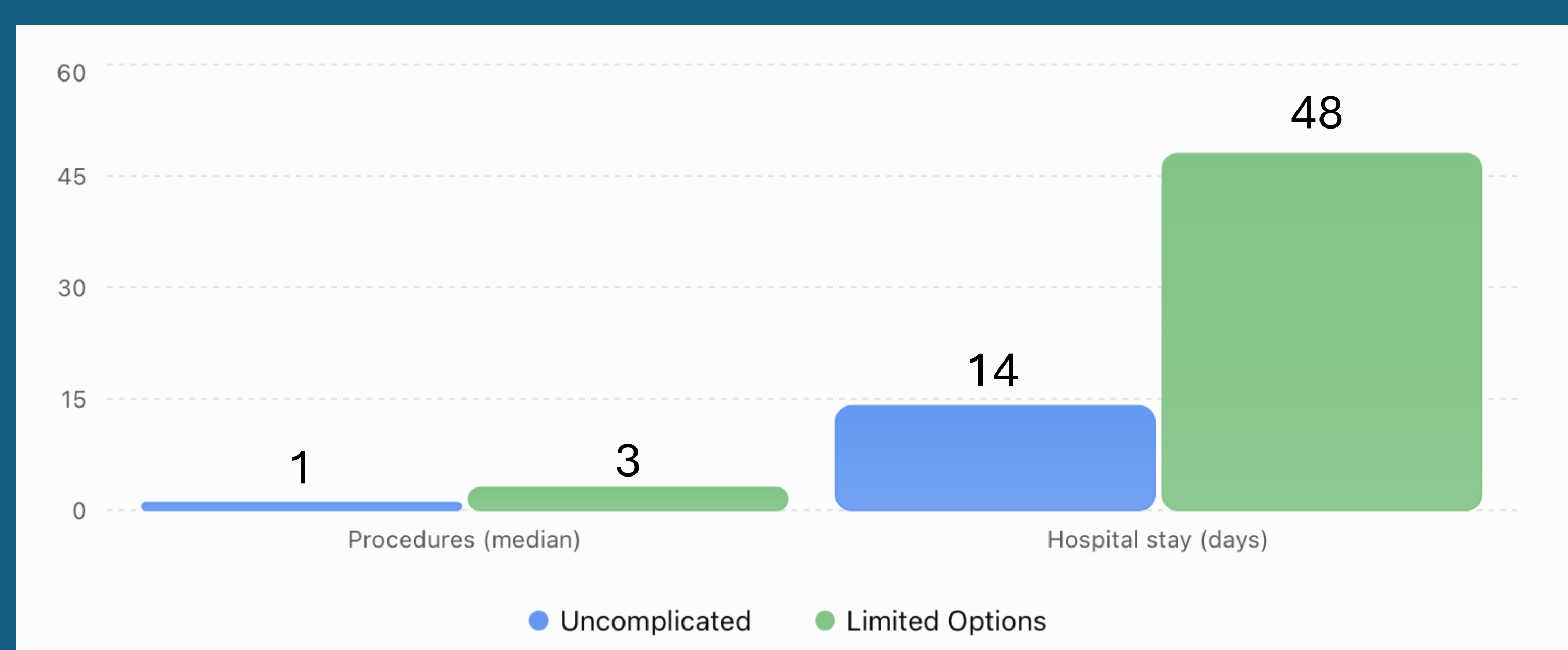
Classified using the BACH system and stratified into: Uncomplicated, Complex and Limited Options

Outcomes included surgical burden (need for ≥ 2 procedures), length of hospital stay, recurrence, and severe complications (amputation, sepsis, severe functional limitation).

RESULTS

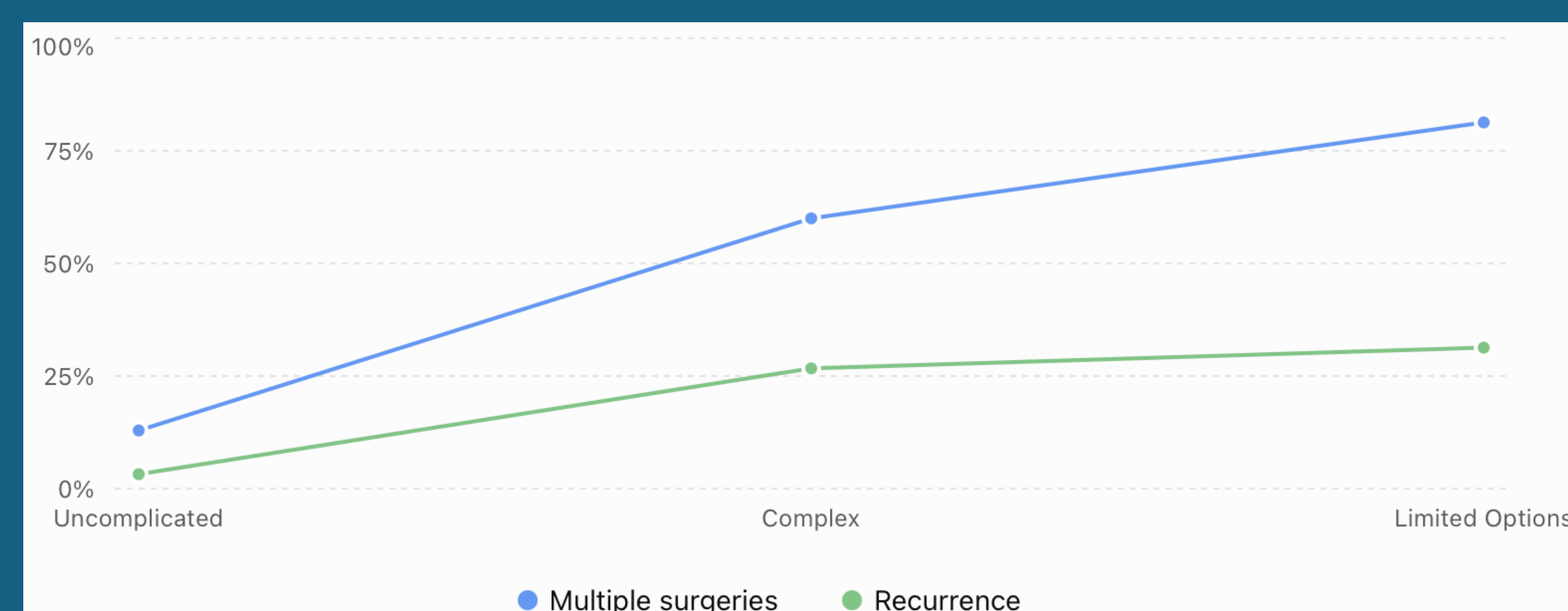
BACH demonstrated a gradient of severity across all outcomes.

Children in the limited options group required significantly more procedures (median 3 vs 1 in uncomplicated cases; $p < 0.001$) and had longer hospital stays (48 vs 14 days; $p < 0.001$).



The probability of requiring multiple surgeries increased markedly across categories (12.9% vs 60.0% vs 81.3%; $p < 0.001$).

Recurrence rates followed the same pattern (3.2% vs 26.7% vs 31.3%; $p = 0.008$).



CONCLUSIONS

- BACH has a strong predictive performance in PO
- Effectively stratifies disease severity and anticipates treatment burden
- This study supports its use as a unified classification with potential value for clinical decision-making and research standardisation