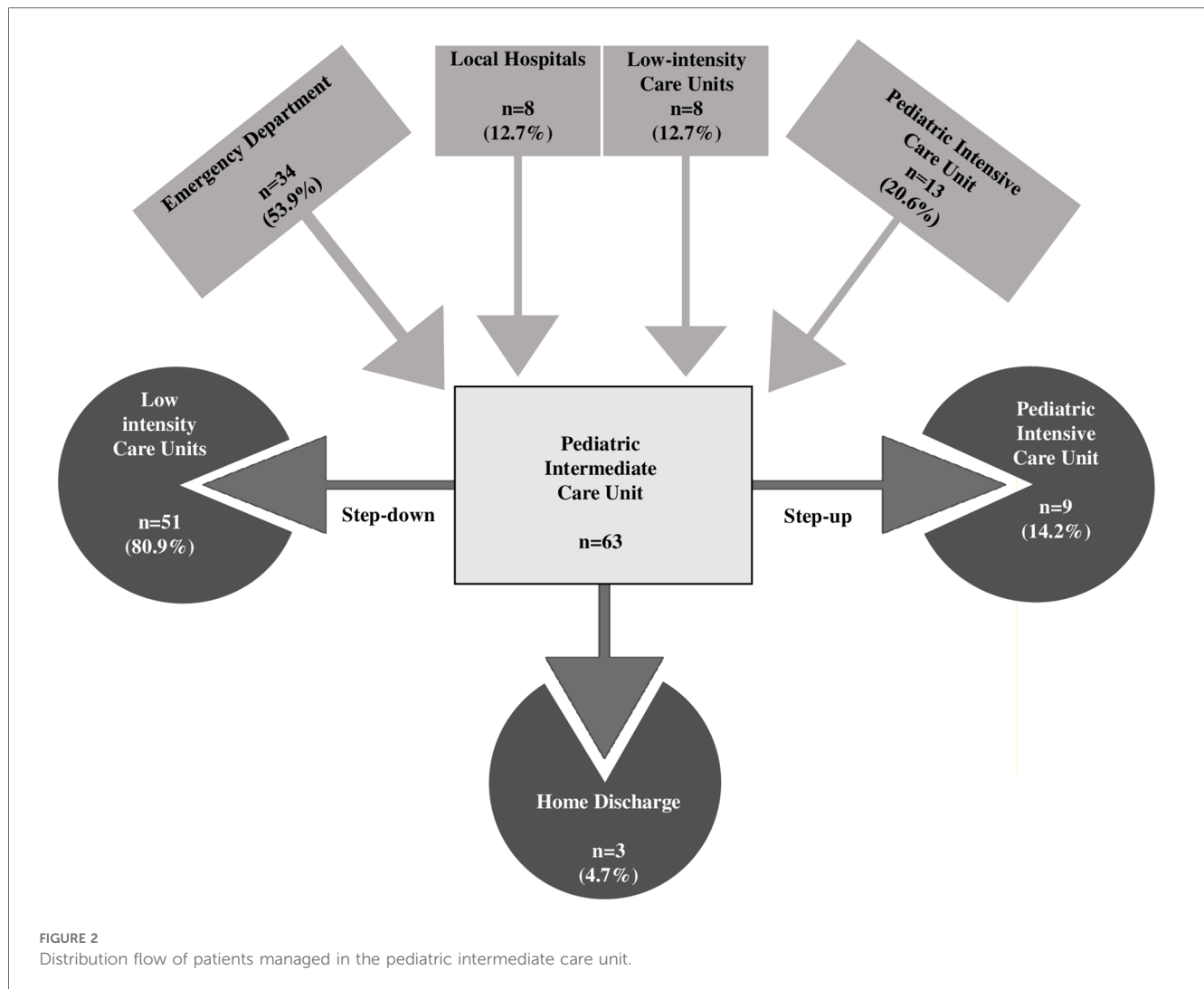




respiratory, and cardiovascular status as well as metabolic, fluid, and electrolyte balance status (31).

A significant cause of admission to the IMCU was represented by respiratory complications with 59% of patients who needed initiation or increase of respiratory support.

Noninvasive positive pressure ventilation (NIPPV) is increasingly used to manage acute respiratory failure in patients with NMDs and had a tremendous impact on prolonging survival in this population (32–34). An effective treatment of respiratory complications including NIPPV and manual and mechanical mucus clearance techniques is a cornerstone when facing respiratory failure in children with NMDs. However, it requires qualified and skilled staffing with strong interdisciplinary team communication, rigorous monitoring, and frequent reassessment processes.

Pediatric IMCU may be the appropriate setting where patients at nonimmediate risk of requiring intubation can start or potentiate NIPPV. Similar protocols have been successfully implemented in adult IMCUs (16) while pediatric experiences are still limited (35).

Although the short study period reduces the power of our observations, with the establishment of the new IMCU a decreasing trend of ICU admission rates and shorter ICU length of stay has been recorded in patients affected by NMDs. This

consequently may result in lower healthcare costs and reduced complications associated with intensive care settings. Furthermore, this may alleviate pressure on the ICU beds and improve appropriate ICU patient care.

In our Institute some patients affected by NMDs aged over 18 years are regularly followed by the Myology Centre. Although this may be considered a limit of the study, they were included in our study to reflect and describe as faithfully as possible the reality of our setting. As survival rates for patients affected by NMDs improve, complexity and criticalness consequently increase with age, along with the need for specialized tertiary care, intense monitoring, and advanced therapies. Reflecting this, in our study population, about 50% of patients older than 18 years had heart disease and tracheostomy.

However, regardless of major complexity, more comorbidities, and chronic therapies, the length of stay of these patients alone was comparable to the whole population and only one adult patient required ICU admission, highlighting the value of IMCU management.

Limitations

Our work has several limitations. We did not conduct a cost analysis, which might have better revealed the importance of the