

EDITORIAL

What is the role of Pediatric Emergency Departments in a Hospital-at-Home program? Is it a current priority for pediatric emergencies?

Abel Martínez Mejías¹, Paula Vázquez López²

¹Department of Pediatrics. Consorci Sanitari de Terrassa. ²Pediatric Emergency Coordinator. Hospital Universitario Gregorio Marañón. Associate Professor Universidad Complutense de Madrid. President of the Spanish Society of Pediatric Emergencies

On November 27th, the Spanish Society of Pediatric Emergency Medicine (SEUP) held its traditional SENIOR day. The conference was attended by a total of 42 pediatricians recognized for their contributions to Pediatric Emergency Departments (PEDs), the scientific community, or their expertise in the field. The objective was to explore the significance of a Hospital-at-Home (HaH) program and its impact on patients, families, and PEDs. The discussion aimed to determine whether an HaH program should be regarded as a strategic initiative by the SEUP and a direction for PEDs to pursue.

After delving into the theoretical aspects of the subject, we aimed to discuss the following four basic questions:

- Is it possible to implement an HaH Unit through a PED?
- Which patients can be admitted to an HaH program directly from a PED?
- Is coordination between the HaH team and the PED feasible?
- What priorities should PEDs have for the implementation of an HaH program?

IMPLEMENTATION OF AN HaH PROGRAM

Hospital at Home⁽¹⁾ emerged with the objective of providing care for patients, including those with acute or chronic conditions experiencing exacerbations, in their own homes—patients who would traditionally have been admitted to a hospital. An HaH program is a resource that offers patients

and their families an alternative to conventional hospitalization.

The World Hospital at home community defines HaH as “an acute clinical service that takes staff, equipment, technologies, medication, and skills usually provided in hospitals and delivers that hospital care to selected people in their homes...”. It is not to be confused with a hospital prevention program, primary care check-ups, or specialized outpatient follow-up.

This innovative alternative in healthcare brings benefits to the child, the family, and the health care system and attempts to:

- Improve the quality of life of patients and their families through a comprehensive biopsychosocial approach (providing humanization and promoting well-being, health education, and better doctor-patient/family communication).
- Ensure safety (by reducing risks associated with hospitalization).
- Enhance efficiency (by providing greater economic and resource management benefits)⁽²⁾.
- Avoid the negative emotional and behavioral impacts that conventional hospitalization may cause, both immediately and in the long term, particularly in the pediatric age group^(3,4).
- Increase family empowerment and understanding of the disease, providing greater security, comfort and, overall, a more humanized care experience.

An HaH program should be developed by a multidisciplinary team consisting of pediatricians and nurses with experience in conventional hospitalization. The program should be integrated within the general care activity of the hospital from its start, supported by specialists, and establish strong interrelationships and partnerships with other services. Additionally, it will require the cooperation of families and caregivers (identifying and training a responsible caregiver before admission will be crucial in every aspect). All partic-

Received on April 12, 2024

Accepted on April 12, 2024

Corresponding author:

Dr. Abel Martínez Mejías

E-mail: amartinez@cst.cat

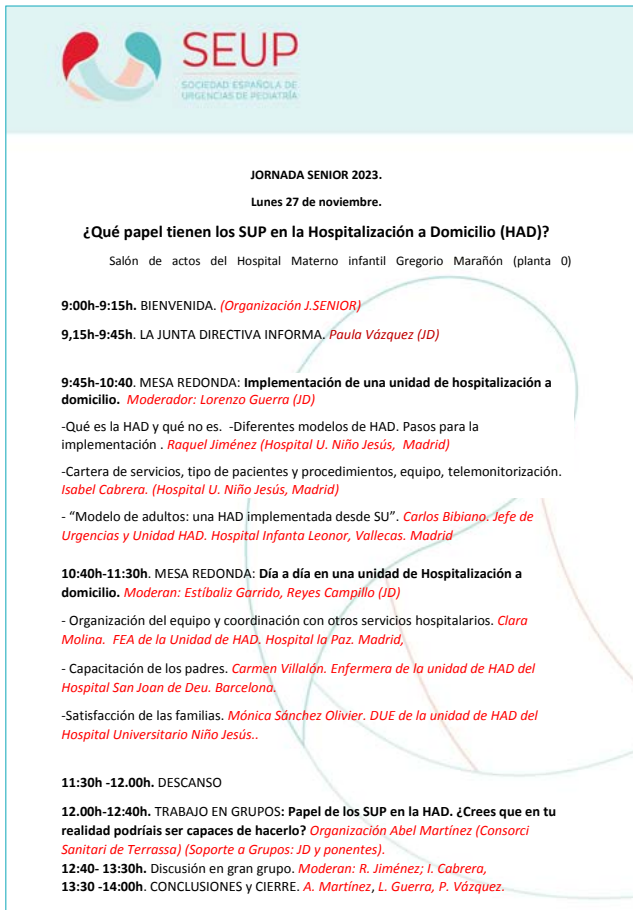


FIGURE 1.

ipants in the program should clearly understand their roles and perceive themselves as part of a unified effort.

LET'S TALK ABOUT THE PATIENTS

The screening and selection of HaH patients is usually carried out jointly by physicians and nurses from the HaH and conventional hospitalization teams. Patients who are candidates for HaH are usually admitted to the hospital or come directly from the PED; in the latter case, PED pediatricians should be involved and be in charge of screening candidate patients and managing referral to the HaH program. The most common conditions of pediatric acute patients in an HaH setting include acute respiratory diseases and parenteral antibiotic therapy for certain bacterial infections, such as cellulitis, urinary tract infection/pyelonephritis, infected eczema, pneumonia, and lymphadenitis.

The criteria for a PED patient to be eligible for entry into an HaH program should include:

- A clear diagnosis.
- Adequate patient conditions: clinical (acute but stable disease), social and geographic (distance, accessibility).
- Treatments that allow for referral to the program, together with family compliance and education, including once or twice/day treatment administrations (e.g., ceftriaxone and gentamicin) or short interventions.
- Minimal risk of serious/urgent complications that are rapidly and safely resolved (e.g., septic shock, hypoxemia).

- Supervision by parents/caregivers who accept the care plan, in a "home-like" environment that is gentle and familiar to the child.

Home treatment does not appear to be less safe than hospital treatment^(5,6). Studies show that the programs are satisfactory for patients and families and less costly per episode than inpatient treatment (by 30-75%).

The training of patients and especially caregivers is a fundamental requirement and is usually performed by the nurses of the HaH program. Ensuring care, proper patient follow-up, and clinical stability is imperative. The schedule of in-person visits (medical and/or nursing visit) should be flexible and adapted to the conditions. Telephone or telemedicine support should be provided to the families whenever possible (ideally 24/7). In necessary cases, the PED could be a good resource to complement the ongoing care of the patients. Coordination with other hospital services is essential.

LET'S TALK ABOUT COORDINATION

In addition to accurately selecting patients, the success of the program's implementation depends on having competent, motivated, trained, and adaptable healthcare professionals, establishing a network with adequate circuits within the healthcare center and throughout the territory, and promoting effective communication and coordination among the various services and levels of care involved.

PEDs and HaHs should establish collaboration systems and circuits for patient transfer or referral. It must be ensured that the patient's condition permits it, that there is proper planning, and that the family consents. The benefits and limitations of each option should be clearly understood and evaluated; healthcare teams should make collaborative decisions to ensure a rational use of resources, which, although limited in time, can provide greater comfort and well-being for patients and families.

The factors to consider for the implementation and operation of an HaH program should include a series of more "internal" aspects, such as those related to the team (who, what training) or to the patients (inclusion/exclusion criteria, origin, age, disease, need for complementary tests, risk of incidents), or what resources are available (financing, telemonitoring, types of therapies), and other more "external" aspects involving other departments, such as the service portfolio (number of patients to be treated, maximum mean length of stay, hours of care, and care modalities), the interrelations between specialties and other units (pharmacy, admissions, radiology, laboratory, primary care, and the 112 emergency system), responsibility assignment, patient transportation circuits, or other aspects that should involve the hospital direction and management, such as program design, training, and fostering a culture of HaH.

PRIORITIES FOR A PED TO START AN HaH PROGRAM

The SEUP is a national society representing and involving the majority of Spanish PEDs. One of its notable features is its significant heterogeneity, evident in its diverse composition,

organization, and even geographical locations (urban/rural; differences in levels of care; number and specialty of human resources; belonging to exclusively pediatric hospitals; autonomy of pediatric emergency units, etc.). This diversity presents challenges for developing and implementing unified plans.

Currently, PEDs are engaged in the analysis and improvement of their own needs and significant deficits impacting daily pediatric care persist and are considered a priority. An HaH program that depends on pediatric emergency care will require different resources and partnerships, many of which the PEDs presently lack. Consequently, although the implementation of an HaH program from the PEDs is recognized as an important opportunity to improve the quality of care, it does not appear feasible for the majority of PEDs at this time, nor is it considered as a current strategic direction of the SEUP as a society.

Nevertheless, and for the benefit of the patients, their families, and the improvement of the quality of care, SEUP acknowledges the need to raise awareness on the subject, to promote the culture of HaH, to encourage partnerships, and to provide information and support to those PEDs that, due to their capacity and circumstances, prioritize HaH programs.

IN CONCLUSION

In pediatrics, HaH is an adequate alternative resource and equivalent to conventional hospitalization; it is efficient, safe, and greatly satisfying for both users and healthcare teams.

HaH requires an expert and multidisciplinary team, a specific patient selection process, and the involvement of family members and caregivers.

Interrelationships, partnerships, hospital involvement, and coordination between levels of care are essential to implement an HaH program.

Previous experiences both in adult and pediatric settings support the feasibility of implementing an HaH program from an emergency department; however, due to the amount and variability of resources and coordination required, the process should be tailored to the specific circumstances of each PED.

REFERENCES

1. Batlle A, Aldemira A, Agúndez B, Cabrera I, Esquerdo E, López S, et al; Grupo de Trabajo de Hospitalización a Domicilio de la SE-PIH. Home hospitalization of the acute patient: a new approach to care. *An Pediatr (Engl Ed)*. 2023; 99(5): 329-34.
2. Bibiano Guillén C. Direct admission to home hospitalization from the emergency department: feasible, efficient, and necessary. *Emergencias*. 2023; 35(3): 163-4.
3. Brennan TA, Leape LL, Laird NM, Hebert L, Localio AR, Latheters AG, et al. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *N Engl J Med*. 1991; 324(6): 370-6.
4. De Mula-Fuentes B, Quintana M, Rimbau J, Martínez-Mejías A, Úriz MS, Rivera-Pérez C, et al. Anxiety, hospital fears and conduct and behavioral alterations during pediatric hospitalization. *Actas Esp Psiquiatr*. 2018; 46(2): 42-50.
5. Bryant PA, Katz NT. Inpatient versus outpatient parenteral antibiotic therapy at home for acute infections in children: a systematic review. *Lancet Infect Dis*. 2018; 18(2): e45-54.
6. Norris AH, Shrestha NK, Allison GM, Keller SC, Bhavan KP, Zurlo JJ, et al. 2018 Infectious Diseases Society of America Clinical Practice Guideline for the Management of Outpatient Parenteral Antimicrobial Therapy. *Clin Infect Dis*. 2019; 68(1): e1-35.