# Towards a High-Quality Hospital at Home in a post-COVID scenario

Authors:

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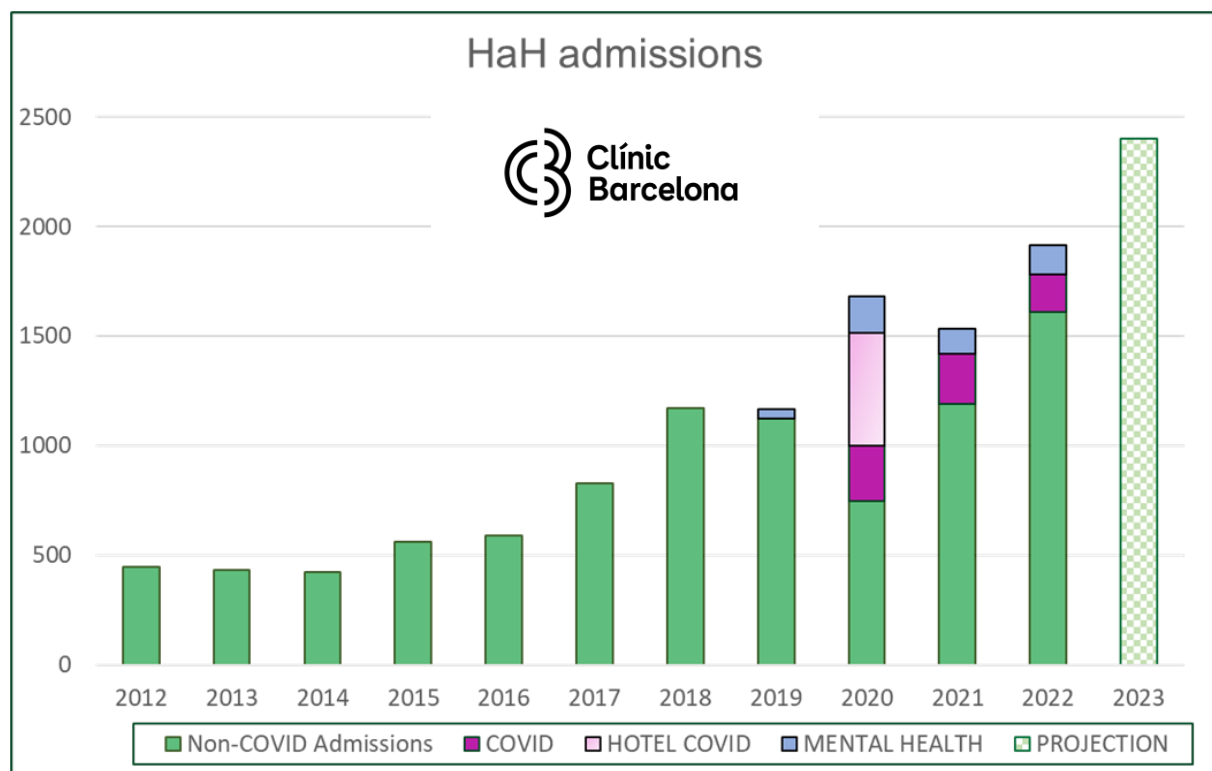Clínic Barcelona, Spain
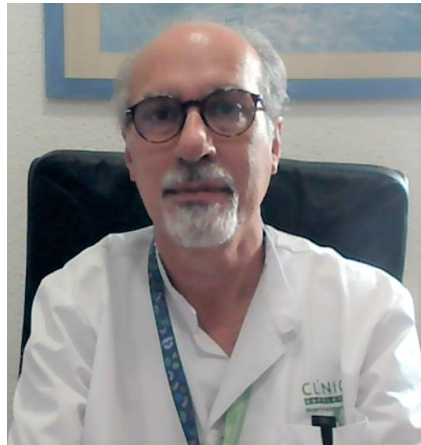
Introduction

- COVID-19 pandemic has reinforced the value of home-based models of care in a moment of serious risks derived from traditional health care systems.
- High-quality and economically sustainable home-based medical care represents an effective way to achieve the goal of patient centredness.
- To the maximum acceptance of this paradigm shift, it is suitable to have tools to better measure the outcomes of home-based hospital care.
- We are working on measures that allow us to advance in the management of quality and clinical safety and to be able to benchmark.

Setting

- In Catalonia, an autonomous region of Spain with a population of 7.7 million, currently there are 35 Hospital at Home (HaH) units distributed throughout the territory. Differences between Catalan HaH units exist, but we have few comparative data.
- In Barcelona HaH is provided by a network of healthcare facilities structured in 4 integrated health areas, one of which is the Integrated Health Area of Left Barcelona (AISBE).
- At the hospital level, AISBE is led by Clínic Barcelona, a 850-bed teaching hospital that covers a population of more than 500,000 citizens.
- The HaH Clínic Barcelona currently treats more than 2,000 patients each year and serves the adult population throughout the AISBE territory and other parts of Catalonia.

HaH admissions

Valoración 0 a 10
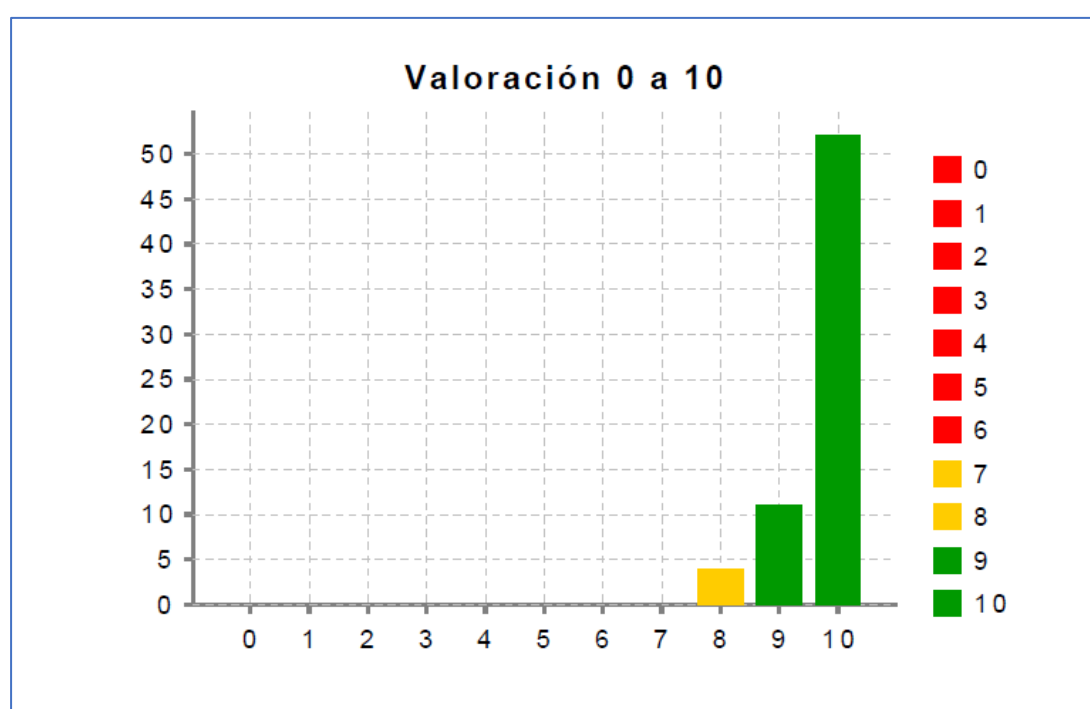
Methods

- HaH Clínic Barcelona care is delivered at home by a multidisciplinary team of 50 healthcare professional (doctors, nurses, administrative staff, pharmacist, physiotherapist, and social worker).

- To move towards a HaH of excellence, our HaH area is in the process of certification ISO 9001:2015 and UNE 179003:2013. The ISO 9001:2015 is an internationally recognized standard to help to improve organization performance. The Spanish standard UNE 179003:2013 complements the ISO providing healthcare organizations with a framework and a protocol for patient safety management.

- Patients most often treated in HaH Clínic Barcelona are frail patients with multi-morbidity that are admitted for exacerbation of chronic diseases, and/or infectious diseases that require intravenous antimicrobial treatment. Surgical pathology, either urgent or scheduled, and acute psychiatric pathology, both adult and adolescent, complete HaH service portfolio. Through an analysis of previous studies and an internal audit we have identified a set of key outcome indicators.

Results

During 2022, 1,967 patients were admitted at home, with a high degree of satisfaction of patients, caregivers, and professionals. Projections for 2023: 2,400 patients will be admitted to HaH (≈ 5 percent of hospital admissions). As a result of the analysis of the literature, the standards proposed by de Catalan Service of Health and the main risks that we have detected through the elaboration of the risk map for HaH, we propose a set of 24 key indicators, which will serve to monitor the HaH results (Table).

Indicator	Calculation formula	Proposed goal
Unequivocal identification of patients	EHR (SAP-BI)	>95%
Falls - Risk assessment	% assessed patients/admitted patients	≥90%
Falls - Notification of falls	Falls per thousand days stay	<2
Pressure sores (PS) – nosocomial	% Patients with PS/total patients	≤6%
Catheter (CVC) bacteraemia	N CVC bacteraemia/total days of CVC/1000	Trend to 0
Pain - Identification upon admission	% assessed patients/admitted patients	≥75%
Pain – Assessment	% Patients assessed at shift/Total HaH patients	≥85%
Medication administration errors	∑ Adverse events administration errors	Trend to 0
Medication adverse events (MAE)	∑ MAEs HaH	Trend to 0
Blood transfusion errors	∑ Reported errors	Trend to 0
HaH discharged patients	∑HaH discharged patients (SAP-BO)	Informative-Trend
HaH rejected patients	HaH rejected patients / Total consultations (SAP)	Informative - Trend
% HaH occupancy	(Patients admitted / Total virtual beds)*100	75%-95%
Urgent admissions during HaH (escalation rate)	HaH admissions number / Total HaH patients	< 10%
Mortality during HaH admission	SAP-BO	< 3%
Avoidance of Admission HaH modality	Patients admitted not from ward /Total admission	>60%
Early Discharge HaH modality	Patients admitted from ward/Total HaH admission	<40%
Patient complexity	Automatic calculation according to DRG	Informative - Trend
HaH average length of stay (LOS)	SAP-BO-BI	Informative -Trend
Destination at discharge	Destination at discharge/Total discharges*100	Informative - Trend
30-day readmission	Pts readmitted within 30 days of discharge	<10%
Patient experience	Anonymous NPS survey at HaH discharge	Informative - Trend
Caregiver experience	Anonymous NPS survey at HaH discharge	Informative - Trend
Internal customers opinion	Google Forms Average responses (1-4)	>3

Conclusions

- Hospital at home (HaH) has been expanding in many regions, especially during COVID-19 pandemic, meaning a new paradigm in hospital care.
- In the current post-COVID scenario, standards of quality and clinical safety for HaH at least as strict as those of conventional hospitalization must be required.
- To achieve excellent HaH services, easily measurable outcome indicators are important. We propose a set of HaH key outcome indicators. It should help to strengthen HaH, making continuous improvement and benchmarking between the different HaH possible.
- In parallel, we are working on more specific HaH patient-centred outcome measures.