Plastino K, Sumner B, Todd J, Reed C, Taranova AG. Feasibility and Outcomes of a Postpartum Hospital at Home Program. *The Journal of Advanced Home Medicine*. 2026;1(1):36-48. doi:10.64919/001c.2708448

Original Research

Feasibility and Outcomes of a Postpartum Hospital at Home Program

Kristen Plastino, PharmD, MD[1][a], Bridget Sumner, BS[2], Jennifer Todd, RN, JD[1], Charles Reed, RN, PhD[3], Anna G. Taranova, MD, MS[4]

[1] Obstetrics and Gynecology, The University of Texas Health Science Center at San Antonio, [2] Student, University of the Incarnate Word, [3] Center for Clinical Excellence, University Health, [4] Research, University Health

Keywords: Postpartum, Hospital at Home

https://doi.org/10.64919/001c.2708448

The Journal of Advanced Home Medicine

Vol. 1, Issue 1, 2026

Importance

Care for acutely ill patients at home is one of the most traditional care models used worldwide; however, post the Medicare Act of 1966, it has not been widely adopted in the U.S., primarily due to the lack of fee-for-service reimbursement for care in that setting. A 16-study Cochrane Review comparing hospital at home (HaH) programs with inpatient hospitalization showed that patients who participated in HaH reported higher levels of patient satisfaction (27-40% increase)6, without statistically significant changes in morbidity and mortality.7 HaH has also shown a reduction in the cost to the patient8, 9 with total average costs reported to be 19% to 30% lower than traditional inpatient care.

Objective

To evaluate the feasibility and operational performance of implementing a postpartum Hospital-at-Home (HaH) program, with a focus on identifying potential cost savings and informing recommendations for program refinement and sustainability.

Design

This study focuses on program evaluation to review the clinical impacts and benefits when providing inpatient-level care for postpartum patients at home.

Setting

Large university-affiliated 716-bed, acute care tertiary facility designated a Level 4 maternity care facility.

Participants Intervention/Exposure

Patients were admitted to Labor and Delivery and on postpartum day 1 were transferred to their home on the HaH service. Patients received twice daily in-home nursing visits and daily video visits with an obstetrician.

Results

Forty-three patients were enrolled between July 2021 and August 2022 with average age of 26.4 years; 86% Hispanic. Over half the patients delivered vaginally with an average length of stay of 2.7 days. Seven participants presented to the Emergency Department within the six-week postpartum period.

Outcomes

The average direct cost per patient per day for the HaH patients was $2,027 less than the traditional brick and mortar patients.

a Kristen Plastino PharmD, MD, plastino@uthscsa.edu is corresponding author

Conclusion

The implementation of this county hospital's innovative postpartum Hospital-at-Home (HaH) program successfully demonstrated operational feasibility and financial value. Over the 13-month study period, 43 postpartum patients were enrolled, with the majority identifying as Hispanic. The program enabled earlier discharge, helping to increase access to inpatient beds during the COVID-19 pandemic and allowing patients to recover at home with family support. Importantly, the HaH model resulted in an average direct cost savings of $2,027 per patient per day compared to traditional inpatient care, supporting its potential for sustainable integration into postpartum care delivery.

KEY POINTS

QUESTION

Is it feasible to implement a postpartum Hospital at Home (HaH) program, and what are its operational outcomes, including potential cost savings?

FINDINGS

Enrollment & Demographics: 43 postpartum patients enrolled between July 2021 and August 2022; average age 26.4 years; 86% identified as Hispanic/Latina.

Care Model: Patients received twice-daily in-home nursing visits and daily video visits with an HaH obstetric attending physician.

Clinical Outcomes: 7 patients visited the Emergency Department within six weeks postpartum.

Cost Savings: The HaH model resulted in an average direct cost savings of $2,027 per patient per day compared to traditional inpatient care.

MEANING

The postpartum HaH program is both operationally feasible and financially beneficial, offering a sustainable alternative to traditional inpatient care. It supports early discharge, enhances bed availability (especially critical during the COVID-19 pandemic), and allows patients to recover at home with family support, particularly benefiting underserved populations.

INTRODUCTION

Although the concept of delivering acute care in patients' homes is well-established and recognized internationally, interest in its widespread adoption in the United States has grown significantly over the past two decades. This momentum began in the 1990s with the development of the Hospital at Home (HaH) model at Johns Hopkins Medical Center, which aimed to provide older adults with safe, multidisciplinary care at home in response to the growing healthcare needs and costs associated with an aging population.[1,2] While several postpartum HaH services are visible online, such as those offered by The Royal Women's Hospital, Monash Women's in Australia, and UMass Memorial Medical Center in Massachusetts, these programs have not widely published outcome data.[3-5] This gap highlights the relevance and potential contribution of the current manuscript, which seeks to address the lack of publicly available evidence and provide insights into the effectiveness of postpartum HaH care.

A 16-study Cochrane Review comparing HaH programs with inpatient hospitalization showed that patients who participated in HaH programs reported higher levels of patient satisfaction (27-40% increase),[6] without statistically significant changes in morbidity and mortality.[7] HaH programs have also shown a reduction in the cost to the patient[8,9] with total average costs reported to be 19% to 30% lower than traditional inpatient care.

Moreover, Ricauda showed a decrease in the stress levels of caregivers of COPD patients enrolled in HaH programs six months later, when compared to the stress levels of caregivers of hospitalized patients.[10] Data analysis also showed lower rates of readmission, emergency department (ED) visits, and skilled nursing facility admissions for HaH patients[11] while also decreasing life-threatening iatrogenic complications including nosocomial infections, delirium, and functional decline.[12]

Despite the positive patient experiences and promising results, the lack of comprehensive reimbursement for HaH limited its adoption in the US until the U.S. Centers for Medicare and Medicaid Services (CMS) provided regulatory flexibility for delivering services beyond brick-and-mortar hospitals to address hospital bed shortages during the COVID-19 pandemic, making HaH an attractive alternative for hospitalization.[13] As of October 2024, there were 366 approved HaH facilities across 138 health systems in 39 states. Since its implementation into US healthcare, pregnant patients have only been enrolled in HaH programs for acute conditions such as COVID-19 and pneumonia.[14]

In our case, this postpartum HaH program was implemented for women within 48 hours of delivery, primarily to free up hospital beds for COVID-19 patients during the height of the pandemic. An additional goal was to allow postpartum women to recover at home surrounded by family and loved ones, as hospital visitor restrictions at the time prevented in-person support. This original research evaluated the feasibility and operational performance of the HaH model, focusing on its implementation, resource utilization, and potential for cost savings. The findings aim to inform recommendations for refining and sustaining the program in future healthcare delivery models.

METHODS

This study reports on two interrelated components: the intervention, defined as the postpartum Hospital at Home

(HaH) model delivering inpatient-level care in the home setting; and the implementation strategy, which includes the processes, staffing, and workflows used to integrate the HaH model into routine postpartum care during the COVID-19 pandemic. Both components are described and evaluated to assess feasibility, operational performance, and potential for sustainability. This manuscript was developed in accordance with the StaRI (Standards for Reporting Implementation Studies) guidelines. Discussion with the participant emphasized that any article containing identifiable or personal medical information will be kept strictly confidential.

SETTING

The HaH program was established at a single center postpartum unit in a county hospital in South Texas from July 2021-August 2022 accepting 8 patients per day depending on hospital census. The hospital was a large university-affiliated 716-bed, acute care tertiary facility that had been designated as a regional Level I trauma center and Level 4 maternity and neonatal care facility. The labor and delivery unit (L&D) had 10 beds and approximately 4,295 live deliveries during the inclusion period. The antepartum and postpartum floor was a combined unit with 37 beds that had 82% capacity during the observation period. While the patient was participating in the program, follow up came in the form of twice daily in-home nursing visits, video communication with the obstetric provider, and outpatient phone visits.

HAH TEAM COMPOSITION

The HaH team consisted of an obstetrician/gynecologist, registered nurses (RNs) specially trained in postpartum care, patient care coordinators, pharmacists, physical therapists, social workers, and information technology staff. Properly trained postpartum nursing staff was of the utmost importance for a successful and safe program. Since the physician visits were via video, the in-person nursing assessments needed to be trusted as decisions would be made based on the physical findings.

PARTICIPANT SELECTION AND ELIGIBILITY CRITERIA

Participants were selected from the county hospital postpartum unit and were eligible for the HaH program if they met all the inclusion criteria listed in Table 1. Patients were considered potential candidates if they were within 48 hours postpartum, regardless of delivery method, and demonstrated medical stability, with no immediate need for further surgical interventions. Both vaginal and cesarean section (c-section) deliveries were included in the program, although vaginal deliveries were initially prioritized. A review methodology specifically tailored for this patient population was developed to thoroughly examine the medical records and to identify demographics, key social determinants of health (SDOH), and clinical outcomes of interest. In November 2021, the Enhanced Recovery After Cesarean protocol was updated, and additional L&D faculty physician staffing allowed for completion of elective repeat c-sections earlier in the day. These changes supported earlier foley catheter removal, improved pain control, and increased mobility, enabling patients to feel ready for discharge as early as 24 hours post-op. However, hospital policy required at least a 48-hour stay to confirm spontaneous voiding post-catheter removal and provide postpartum teaching. These c-section patients became the ideal candidates for the postpartum program as they could be counseled pre-op, HaH staffing could be planned in advance, and clear expectations/milestones could be communicated to the patients. Patients could go home to be with their families, specifically their younger children who may not otherwise be able to visit the hospital due to COVID restrictions.

Patients were admitted to L&D utilizing American College of Obstetrics and Gynecology guidelines for a vaginal or c-section delivery. Postpartum, the electronic medical record (EMR), Epic®, was reviewed to identify "soft" factors that may preclude safe care at home: prolonged rupture of membranes, failed vaginal birth after c-section delivery, prolonged second stage, third or fourth degree vaginal/perineal lacerations, or postpartum hemorrhage. These "soft" factors were not strict exclusion criteria but were considered when the HaH obstetric attending physician chose patients for participation. Once the patient was determined to be a potential candidate, the HaH obstetric attending physician entered an Epic® referral to the HaH nursing team for further evaluation.

INFORMED CONSENT STATEMENT

All participants provided written informed consent prior to enrollment in the postpartum Hospital at Home (HaH) program. The consent process included a detailed explanation of the program's purpose, procedures, potential risks, and benefits. Participants were informed that their participation was voluntary and that they could withdraw at any time without affecting their standard medical care. Consent forms were available in both English and Spanish to accommodate the linguistic needs of the patient population. The study protocol and consent procedures were reviewed and approved by the institutional review board (IRB) of the participating hospital and at the University.

PROGRAM WORKFLOW AND HOME TRANSITION PROTOCOL

Within one hour of referral receipt, the HaH team met with the patient to review inclusion and exclusion criteria. If the patient met criteria and consented to participate, the HaH obstetric attending physician was notified and the two-hour process for transfer from the inpatient postpartum floor to home began. The neonate was at least 24 hours old and fully discharged from the hospital before transfer to home.

Table 1. Inclusion and Exclusion Criteria to be Eligible to Participate in the Postpartum Hospital at Home Program

Inclusion Criteria:	Exclusion Criteria:
● >/= 24 hours postpartum	● <24 hours postpartum
● Lives within 25 miles of participating hospital	● Lives >25 miles from participating hospital
● Home has electricity and running water	● Does not have electricity and running water
● Has a place of residence	● Patient is homeless
● Does not reside in a facility that provides onsite medical care	● Resides in a facility that provides onsite medical care
● Not an active drug user nor under the care of an active drug user	● An active drug user or under the care of an active drug user
● Enrolled in EMR Epic® MyChart	● Not enrolled in EMR Epic® MyChart
● Has cell phone coverage	● Does not have cell phone coverage
● Home has heat or air conditioning	● Home does not have heat or air conditioning
● Home is not prone to flooding	● Home is prone to flooding
● Home does not lose power when it storms	● Home loses power when it storms
● Does not have hypoxemia with oxygen saturation less than 90% or PO2 less than 60 mm Hg uncorrected with less than 6 liters per minute oxygen supplementation by nasal cannula	● Has hypoxemia with oxygen saturation less than 90% or PO2 less than 60 mm Hg uncorrected with less than 6 liters per minute oxygen supplementation by nasal cannula
● Does not require arterial blood gas measurement	● Requires arterial blood gas measurement
● Does not have acute illness requiring hospital admission independent of target diagnosis that cannot be managed at home	● Has acute illness requiring hospital admission independent of target diagnosis that cannot be managed at home
● Is not experiencing angina or ischemic-type chest pain or other symptoms suggestive of ischemia or myocardial ischemia	● Is experiencing angina or ischemic-type chest pain or other symptoms suggestive of ischemia or myocardial ischemia
● Did not experience septic shock hypotension not restored by SBP greater than 90 by less than 2-3 liters of oral or IV replacement.	● Septic shock hypotension
● Does not have hypotension systolic BP less than or equal to 90 mm HG that is not the patient's baseline BP	● Hypotension systolic BP less than or equal to 90 mm HG that is not the patient's baseline BP
● Medical provider does not believe that patient would be at significant risk	● Receives hemodialysis (dialysis dependent)
● Desires to participate in the HaH program	● Medical provider believes that patient would be at significant risk
● Neonate will be discharged home at 24 hours of life	● Procedures, magnetic resonance imaging, that cannot be done at home
	● Does not want to participate in HaH program
	● Neonate requires hospitalization > 24 hours of life

HOME-BASED CLINICAL CARE PROTOCOL

The initial home visit by an RN occurred within two hours of the patient leaving the hospital to provide standard postpartum care, deliver inpatient medications, and provide perineal care supplies. The nursing team also carried supplies for blood draws, intravenous fluids, and medications. A Wi-Fi connected tablet for video visits, blood pressure cuff and thermometer were provided to the patient with instructions on how to take vital signs and communicate with overnight nurses. Daily, a video visit was conducted by the HaH obstetric attending physician with the HaH nurse present to conduct a full review of systems; review vital signs and the physical exam performed by the RN. The HaH obstetric attending physician would provide brief patient education on postpartum expectations and scheduled postpartum visits. Video communication would continue with the nurse, patient, and physician to permit shared decision making whether it was safe to discharge the patient after the morning visit or if the patient needed another in-person nursing assessment later that day. If the patient continued receiving HaH services, the HaH obstetric attending physician would enter a progress note and the nurse would plan for the afternoon visit with the patient. When the patient was suitable for discharge from the program, the HaH obstetric attending physician would enter Epic® "discharge to home" orders. The nurse would collect the "inpatient medications" including pain medications post c-section to return them to the hospital. The RN would then provide the patient a 30-day discharge medication supply with further postpartum education. Standard postpartum inpatient discharge instructions would also be given to the patient including when to return to their clinic for follow up, when to call the office with concerns, and how to self-administer postpartum care. This model replicates inpatient-level postpartum care in the home setting, with coordinated physician oversight, nursing assessments, frequent visits, and access to hospital-grade interventions, making it a true HaH program.

POST PROGRAM FOLLOW UP

All patients were contacted by an outpatient obstetric nurses 5-7 days after discharge from the program to ask if the patients had any postpartum questions or concerns, review Maternal Early Warning System, and confirm postpartum follow-up visits.

ETHICAL CONSIDERATIONS

The Office of the Institutional Review Board of the University of Texas Health Science Center at San Antonio and

University Health, the participating hospital, determined that this program evaluation (Protocol #20220702NRR) was not regulated research (10/6/22) It was determined that the study does not require IRB approval because it does not constitute regulated research as defined by DHHS regulations at 45 CFR 46 and FDA regulations at 21 CFR 56.

DATA COLLECTION AND CHART REVIEW

A chart review of patients participating in the postpartum program was conducted. The data set extracted from the patient charts included dates of admission and discharge, patient demographics, prenatal and postpartum care, SDOH, and clinical outcomes of interest. Demographic information included patient age, race/ethnicity, type of health insurance, preferred language, and zip code of home address. The SDOH included alcohol, tobacco, or other substance use during pregnancy, history of postpartum depression, mental health conditions, food insecurity, and reliable transportation. The prenatal and postpartum care variables that were assessed included the trimester of first prenatal visit, quantity of prenatal visits, breastfeeding, contraception use, and compliance with 6-week postpartum follow up.

OUTCOMES AND FEASIBILITY MEASURES

The clinical outcomes of interest included postpartum ED visits and readmission within the 6-week postpartum period after discharge from the postpartum program, for both the mother and neonate. The variables that were assessed for the feasibility of a postpartum HaH program were recruitment capacity, sample characteristics, and the financial and human resources required to manage and implement the intervention.

DATA ANALYSIS

Data analysis was conducted using R software for all analyses. The analysis includes descriptive statistics of the demographics, clinical outcomes of interest, and feasibility variables.

The cost of care was calculated by comparing patients with the same MS-DRG codes treated within the same date range, averaging the costs for similar cases in both HaH and traditional brick-and-mortar hospital settings. On a per-patient, per-day basis, the direct cost that includes salaries, supplies, equipment, and purchased services, was compared between the two care models.

RESULTS

PARTICIPANT ENROLLMENT AND DEMOGRAPHICS

After obtaining patient's consent, and geo-locating patients, 43 patients were enrolled.

All the patients who participated identified as female with an average age of 26.4 years, ranging from 19-39 years old. (Table 2) Most patients racially identified as White (77%) and ethnically identified as Hispanic/Latina (86%) with English as the preferred language (81%) or Spanish (19%). Managed Medicaid and private insurance each contributed to approximately 40% of the funding sources with self-pay and CHIP-Perinate (women not qualifying for Medicaid) accounting for 7% and 9% respectively.

PRENATAL AND DELIVERY CHARACTERISTICS

Table 3 summarizes intrapartum and postpartum care received by participants. Twenty-eight participants received initial prenatal visits during the first trimester (65%), at least three prenatal visits during their second trimester (74%), and at least five prenatal visits during their third trimester (84%). Twenty-three patients (54%) underwent spontaneous vaginal delivery, 44% delivered via c-section, and one had a vacuum-assisted vaginal delivery. Most patients in the latter half of data collection of the program were status post elective repeat c-section deliveries (14 of 19 patients). The average length of stay from hospital admission to transfer to HaH to discharge was 2.7 days and the average time to transfer from the postpartum floor to home was 1.7 hours.

POSTPARTUM CARE AND HEALTH BEHAVIORS

Two-thirds of participants (23, 65%) attended their 6-week postpartum follow up with the majority breastfeeding (41, 95%). There were no adverse outcomes for mothers or infants. Most were using contraception upon discharge (61%) with bilateral tubal ligation and progestin-only pills as the most common forms, at 19% each. None of the participants drank alcohol, smoked cigarettes, or used other drugs during pregnancy. Eight of the participants had previous mental health diagnoses (19%) (Table 4). Three of the participants had a history of postpartum depression (7%). All patients had reliable transportation, and no patient reported food insecurity during the screening process.

ED VISITS AND READMISSIONS

Seven participants presented to the ED for various reasons (Table 5) within the six-week postpartum period. Five of the ED visits were within the first week from program discharge (n=5). Of the seven patients who presented to the ED, three of them were readmitted to the hospital. One patient was readmitted for biliary pancreatitis, and two patients were readmitted for postpartum sepsis secondary to pyelonephritis/pneumonia and endometritis. The average length of stay for readmission was 1.7 days. One patient was also seen outpatient for breast pain at two weeks. There were no neonatal visits to the ED.

COST COMPARISON AND LENGTH OF STAY

Utilizing the 2021-2022 cost of care, the average cost per patient per day for HaH patients was $2,027 less than the traditional hospitalized patients, with the largest portion of the direct cost decrease coming from salaries, which cost about $1,089 less per day. Overall, the length of stay was the same for the HaH patients (2.7 days total, including the

Table 2. Patient Demographics

Table 2: Patient Demographics	
Age, mean, years	26.4
Age, y (%)	
18 - 24	19 (44)
25 - 30	15 (35)
31 - 35	6 (14)
36 - 40	3 (7)
40+	0 (0)
Race, n (%)	
White	33 (77)
Black	1 (2)
Asian	0 (0)
Indigenous/Alaska Native	0 (0)
Pacific Islander/Hawaiian	0 (0)
Other	
Hispanic	7 (16)
Multi-Racial	1 (2)
Unknown	1 (2)
Ethnicity, n (%)	
Mexican, Mexican American, Chicana	19 (44)
Not Hispanic, Latina, or Spanish origin	6 (14)
Other Hispanic, Latina, or Spanish origin	18 (42)
Preferred Language, n (%)	
English	35 (81)
Spanish	8 (19)
Other	0 (0)
Insurance, n (%)	
Medicaid	19 (44)
Private	17 (40)
Self-pay	3 (7)
CHIP Perinate (Women not eligible for Medicaid)	4 (9)

hospital stay) and patients that were cared for at the main hospital (2.7 days), which is consistent with the CMS report based on other diagnoses. This cost difference primarily reflects the more efficient use of resources and lower overhead expenses associated with delivering care at home compared to the traditional inpatient hospital environment.

FEASIBILITY OUTCOMES

Recruitment Capacity: During the 13-month study period, 43 patients were successfully enrolled in the postpartum HaH program. The program operated with a daily capacity of up to 8 patients, depending on hospital census. Recruitment was facilitated by preoperative counseling for elective repeat c-sections and real-time EMR screening for eligible postpartum patients. Data was not collected on reasons patients were not enrolled (Lack of interest or inability to meet inclusion criteria).

Financial Resources Required for Implementation: The HaH program utilized existing hospital infrastructure and staff, with additional training provided to postpartum nurses. The primary financial resources included salaries for nursing staff, equipment for home visits (e.g., tablets, BP cuffs, thermometers), and transportation logistics. The program demonstrated cost-effectiveness, with an average direct cost savings of $2,027 per patient per day compared to traditional inpatient care, primarily due to reduced staffing and overhead costs.

DISCUSSION

The 2024 CMS report on HaH programs indicated that hospitals participating in the program invested in and expanded their operational capabilities to safely treat patients with specific conditions at home, primarily focusing on clinical conditions that posed a lower risk to patient safety. HaH, originally intended for the care of non-preg-

Table 3. Intrapartum and Postpartum Care

Intrapartum Care	
Delivery Type	***n (%)***
Spontaneous Vaginal Delivery	23 (54)
C-Section	19 (44)
Other	(0)
Vacuum-assisted vaginal delivery	1 (2)
Length of Stay (hospital admission to discharged from HaH)	***n (%)***
1-2 days	20 (47)
3-4 days	22 (51)
5-6 days	1 (2)
>6 days	0 (0)
Length of Hospital Stay (prior to HaH transfer) in days	
Mean:	2.71
Median:	3.0
Interquartile Range (IQR):	1
Length of Stay for HaH in days	
Mean:	1
Median:	1
Interquartile Range (IQR):	0
Time to Transfer	***n (%)***
1 hour	19 (44)
2 hours	21 (49)
3 hours	2 (5)
4 hours	0 (0)
5 hours	1 (2)
>5 hours	0 (0)
Postpartum Care	
Breastfeeding?	***n (%)***
Yes	41 (95)
No	2 (5)
Offered contraception prior to discharge?	***n (%)***
Yes	43 (100)
No	0 (0)
Contraception upon discharge?	***n (%)***
Yes	26 (61)
No	17 (40)
Contraception type upon discharge	***n (%)***
Progestin Only Pills (POP)	8 (19)
BTL	8 (19)
Nexplanon	4 9)
Hormonal IUD	3 (7)
Condoms	2 (5)
DMPA	1 (2)
Abstinence	0 (0)
Non-Hormonal IUD	0 (0)
Other	0 (0)

nant/postpartum patients, was first tried by the UT Health San Antonio Obstetrics and Gynecology Department at University Hospital in San Antonio, Texas (Bexar County) to help battle the capacity issues of a growing obstetric vol-

Table 4. Social Determinants of Health

Table 4: Social Determinants of Health	
Alcohol use during pregnancy?	***n (%)***
Yes	0 (0)
No	43 (100)
Smoking during pregnancy?	***n (%)***
Yes	0 (0)
No	43 (100)
Other drug use during pregnancy?	***n (%)***
Yes	0 (0)
No	43 (100)
Mental health diagnosis?	***n (%)***
Yes	8 (19)
No	35 (81)
Mental health diagnosis	***n (%)***
Anxiety	4 (9)
Depression	6 (14)
Other	
ADHD	2 (5)
Time of diagnosis	***n (%)***
Before this pregnancy	8 (19)
After this pregnancy	0 (0)
	(0)
History of postpartum depression	***n (%)***
Yes	3 (7)
No	40 (93)
Food Insecurity	***n (%)***
Yes	0 (0)
No	43 (100)

ume and a limited number of beds during the COVID-19 pandemic.

The population that participated in the HaH program was younger (26.4 years) than the Bexar County (28.7) and national average for pregnancy (29.4),[15] but not statistically different. Most participants were Hispanic/Latina (86%), which is consistent with the demographic makeup of Bexar County, where 66% of the population[16] identifies as Hispanics/Latino. This is in significant contrast to the 19% of the United States population[16] identifying as Hispanic/Latino. Hispanic/Latino individuals value family-orientated care and show high levels of perceived familial support, regardless of country of origin and acculturation.[17] It is difficult to conclude if the clinical outcomes vary by race and ethnicity due to the number of non-Hispanic patients that participated in this program, however, the high proportion of Hispanic/Latina population women consenting to this postpartum program makes it a valuable alternative for cultures that may be more family-orientated and prefer to provide "family-care" over hospital care.

While this postpartum program does not target prenatal care nor were patients excluded for the lack of prenatal care, it is known that early prenatal care is essential to the clinical outcomes of both the mother and the newborn.[18] Most of the patients who participated in this program had at least five prenatal visits during the third trimester (84%) which is consistent with Texas data from the CDC that shows of all Texas women that initiate prenatal care, those that initiate care in the third trimester averaged 5 visits before delivery.[19] In the future, the requirement for prenatal care may be in the inclusion criteria to help choose patients with the lowest risks for maternal and newborn morbidity before transfer to HaH.

Readmission of postpartum patients can be as high as 2% in the 6-week postpartum period, as reported by Nasab *et al*. in a tertiary care setting where hypertensive disorders, infections, and surgical complications were common contributors to readmission.[20] Rousseau *et al*. found that up to 25% of postpartum patients present to the ED in the first six months postpartum, with up to nearly half of those visits occurring within the first ten days of discharge; their study used statewide hospital discharge data and included a diverse population across urban and rural hospitals.[21] In comparison, in this postpartum HaH population, fewer

Table 5. Clinical Outcomes

Table 5: Clinical Outcomes	
Postpartum ED visit?	***n (%)***
Yes	7 (16)
No	36 (84)
How many weeks postpartum was the ED visit?	***n (%)***
<1 week	5 (12)
1-2 weeks	1 (2)
2-4 weeks	1 (2)
4+ weeks	0 (0)
Reason for ED visit	***n (%)***
Burning with urination	1 (2)
Epigastric pain	1 (2)
Fever and breast pain	1 (2)
Fever and abdominal pain	1 (2)
Incisional pain	1 (2)
Leg swelling	1 (2)
Transfer of care for postpartum sepsis	1 (2)
Postpartum hospital admission?	***n (%)***
Yes	3 (7)
No	40 (93)
Reason for postpartum admission	***n (%)***
Biliary pancreatitis	1 (2)
Postpartum sepsis	2 (5)
Length of Hospitalization	***n (%)***
1-3 days	3 (7)
3-6 days	0 (0)
>1 week	0 (0)
Follow-up visit before 6 weeks?	***n (%)***
Yes	1 (2)
No	42 (98)
Reason for follow-up?	***n (%)***
Breast pain	1 (2)
Did they attend a 6 week follow-up?	***n (%)***
Yes	28 (65)
No	15 (35)
Neonatal ED Visit?	***n (%)***
Yes	0
No	43

postpartum patients presented to the ED (16%), all within six weeks of delivery, with 86% of those visits within ten days postpartum; three patients (7%) were readmitted to the hospital after discharge from the postpartum HaH program including two patients with postpartum sepsis (pyelonephritis with pneumonia and endometritis) and another with biliary pancreatitis. These findings suggest that the HaH model may be associated with lower ED utilization and readmission rates, though differences in patient populations and care settings should be considered when interpreting these comparisons.

Postpartum follow-up appointments are essential to assess the patient's physical, social, and psychological well-being and are also crucial for contraception, infant care, and sexuality after giving birth.[22] Most Texans attend their 6-week postpartum follow-up appointment (88%).[19] However, patients in this study were substantially less likely to attend their postpartum follow-up appointment (65%). Explanatory factors may include HaH RNs often contacted pa-

tients via telephone to check on them outside of required HaH protocol and this county hospital's data showed fewer 6-week postpartum visits as compared to the state of Texas. Patients may not have felt the need to attend their visits because they often had direct contact with HaH nursing staff in the postpartum period. High COVID-19 infection rates in the community, at the time, may also have been a barrier to healthcare access during the time of this study. Finally, in a randomized, non-blinded trial, it was concluded that younger age, multiparity, and being a patient at a high-risk obstetric clinic are predictors of postpartum visit non-attendance.[23] Thus, the study's younger patient cohort may help explain the rate of missed postpartum visits. While communicating the importance of postpartum visits with patients; it should be emphasized to ensure they understand the benefit and a reevaluation of the in-person requirement is necessary as we consider the patient's needs for transportation, childcare, and time off from work.

Financially, the HaH program cost $2,027 less per patient per day than traditional hospital care yet not a decrease in the length of stay. Also, a brick-and-mortar hospital bed becomes available for another patient with acute care needs and can generate further revenue.

COMPARISON WITH EXISTING POSTPARTUM HOMECARE PROGRAMS

This study contributes to the growing body of literature on postpartum homecare by evaluating a HaH model tailored for postpartum patients in a U.S. county hospital setting. While the structure and intensity of care may differ, several international studies offer valuable context for comparison.

For example, Zbiri *et al*. examined the French PRADO program, a coordinated home-based postnatal care model, and found that enrollment and full participation were influenced by both individual and healthcare system factors, particularly access to midwives and prenatal education.[24] Similarly, Boulvain *et al*. conducted a randomized trial comparing home-based and hospital-based postnatal care in Switzerland. Their findings showed no significant differences in maternal readmission rates and highlighted greater satisfaction and fewer breastfeeding problems among women receiving home-based care.[25] Forster *et al*. surveyed public hospitals in Victoria, Australia, and found that most women received at least one home-based postnatal visit, with service provision generally consistent across the state.[26]

Compared to these models, our HaH program provided acute hospital-level care at home, including nursing assessments, physician oversight via video visits, and access to inpatient medications and interventions. Unlike the PRADO and Swiss models, which focused on midwifery support for low-risk vaginal deliveries, our program included both vaginal and c-section deliveries, with a significant proportion of patients undergoing elective repeat c-sections. Additionally, our program operated during the COVID-19 pandemic, which may have influenced patient preferences and healthcare delivery logistics.

These comparisons underscore the importance of tailoring postpartum homecare models to local healthcare infrastructure, patient population needs, and available resources. Future studies should explore how different models impact maternal and neonatal outcomes, satisfaction, and cost effectiveness across diverse settings.

While formal patient satisfaction data were not collected, anecdotal observations and staff feedback suggested that patients and their families appreciated receiving postpartum care in the comfort of their own homes. This perception was especially relevant during the peak of COVID-19 healthcare utilization, when concerns about hospital-based exposure were high. The opportunity to recover at home was likely to have a major factor influencing families' decisions to participate in the program and facilitated earlier return home after delivery.

Implementation and execution of this county hospital's innovative postpartum HaH program was successful and received several local and state accolades. Furthermore, since patients were leaving the hospital earlier, this is likely to have increased access to postpartum hospital beds. Despite the success, the small sample size of the study prohibits conclusions regarding clinical outcomes based on demographics and prevents it from being generalized to the overall population. With the evolving COVID-19 pandemic during the study period, many variables contributing to varying outcomes could not be controlled.

Additionally, HaH may pose certain safety concerns as nurses are called to provide care outside of the traditional hospital setting and require further training and practical experience to operate at the maximum scope of their licensure and professional responsibility. Finally, the selection bias towards patients with elective c-section may have an influence in the patients' behavior regarding compliance with follow-up scheme as these patients often receive structured preoperative counseling and are more engaged in their care plans, which can improve adherence to follow-up protocols.[27] This is consistent with findings from Enhanced Recovery After Surgery (ERAS) literature, which emphasizes the role of patient education and planning in improving postoperative outcomes and engagement.[28] This study demonstrates that postpartum HaH care is feasible and can result in significant cost savings, particularly when implemented with a well-defined patient population and structured care protocols. However, it does not provide outcome data on patient satisfaction, long-term maternal health, or newborn well-being, which are critical for evaluating the full impact of HaH care. Furthermore, the program's success may be partially attributed to the unique circumstances of the COVID-19 pandemic, including staffing availability and patient motivation to leave the hospital early. These factors may not be replicable in other settings or under normal conditions.

This study demonstrates that the postpartum HaH program is feasible from both operational and financial perspectives. Recruitment capacity was sufficient to meet program goals, with no major barriers to enrollment. For improved patient acceptance, recruitment should begin early in prenatal care to allow patients to plan and incorporate home care into their birth plan. The program also leveraged existing staff and infrastructure, requiring min-

imal additional resources for training and equipment. The significant cost savings observed further support the sustainability of the model. These findings align with the feasibility criteria outlined in the Methods and reinforce the program's potential for broader implementation beyond the pandemic context.

A larger, prospective study, outside of a pandemic is necessary to support the utilization of a postpartum HaH program and to evaluate its clinical outcomes, scalability, and sustainability.

ACKNOWLEDGMENTS

Authors have no acknowledgments to declare.

FUNDING

Authors have no funding source to declare.

DATA SHARING

All authors had full access to all the data related to the study. The study data can be accessed by contacting the corresponding author.

CONFLICTS OF INTEREST

No relevant disclosures.

AUTHOR CONTRIBUTIONS

Writing – review & editing: Kristen Plastino (Lead), Anna G. Taranova (Supporting). Writing – original draft: Bridget Sumner (Supporting), Jennifer Todd (Supporting), Charles Reed (Supporting).

CORRESPONDING AUTHOR

Kristen Plastino: plastino@uthscsa.edu

Submitted: April 29, 2025 EDT. Accepted: October 21, 2025 EDT. Published: March 16, 2026 EDT.

REFERENCES

1. Leff B, Burton L, Guido S, Greenough WB, Steinwachs D, Burton JR. Home hospital program: a pilot study. *J Am Geriatr Soc*. 1999;47:697-702. doi:10.1111/j.1532-5415.1999.tb01592.x. PMID:10366169

2. Leff B, Montalto M. Home hospital - Toward a tighter definition. *Journal of the American Geriatrics Society*. 2004;52(12):2141-2141. doi:10.1111/j.1532-5415.2004.52579_1.x

3. The Royal Women's Hospital. Factsheet. Victoria, Australia. Accessed 2023. https://www.thewomens.org.au/patients-visitors/clinics-and-services/hospital-in-the-home

4. Monash Health Women's. https://monashwomens.org/patients/postnatal-care/

5. Pitts B. Unique Postpartum Program at Massachusetts Hospital Helps Moms Recover at Home. 2024. https://www.cbsnews.com/boston/news/umass-memorial-medical-center-postpartum-home-care/

6. Shepperd S, Iliffe S, Doll HA, et al. Admission avoidance hospital at home. *Cochrane Database Systematic Review*. 2016;9(9):CD007491. doi:10.1002/14651858.CD007491.pub2. PMID:27583824

7. Arsenault-Lapierre G, Henein M, Gaid D, Le Berre M, Gore G, Vedel I. Hospital-at-Home Interventions vs In-Hospital Stay for Patients With Chronic Disease Who Present to the Emergency Department: A Systematic Review and Meta-analysis. *Journal of the American Medical Association, Network Open*. 2021;4(6):e2111568. doi:10.1001/jamanetworkopen.2021.11568

8. Levine DM, Ouchi K, Blanchfield B, et al. Hospital-Level Care at Home for Acutely Ill Adults: A Randomized Controlled Trial. *Annals of Internal Medicine*. 2020;172(2):77-85. doi:10.7326/M19-0600

9. Centers for Medicare & Medicaid Services. *Acute Hospital Care at Home Reports. Report on the Study of the Acute Hospital Care at Home Initiative.*; 2024. Accessed October 15, 2024. https://qualitynet.cms.gov/acute-hospital-care-at-home/reports

10. Ricauda N, Tibaldi V, Leff B, et al. Substitutive "hospital at home" versus inpatient care for elderly patients with exacerbations of chronic obstructive pulmonary disease: a prospective randomized, controlled trial. *Journal of the American Geriatrics Society*. 2008;56(3):493-500. doi:10.1111/j.1532-5415.2007.01562.x. PMID:18179503

11. Federman AD, Soones T, DeCherrie LV, Leff B, Siu AL. Association of a Bundled Hospital-at-Home and 30-Day Postacute Transitional Care Program With Clinical Outcomes and Patient Experiences. *American Journal of Preventive Medicine Internal Medicine*. 2018;178(8):1033-1040. doi:10.1001/jamainternmed.2018.2562

12. Kanagala SG, Gupta V, Kumawat S, et al. Hospital at home: emergence of a high-value model of care delivery. *Egypt J Intern Med*. 2023;35:21. doi:10.1186/s43162-023-00206-3

13. Anthony M. Hospital-at-Home. *Home Healthcare Now*. 2021;39(3):127. doi:10.1097/NHH.0000000000000984

14. Trostle M, Silverstein J, Tubridy E, et al. COVID-19 in pregnancy: creating an outpatient surveillance model in a public hospital system. *Journal of Perinatal Medicine*. 2020;48(9):959-964. doi:10.1515/jpm-2020-0309

15. Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from the Natality Records 2016-2021, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed January 21, 2023. http://wonder.cdc.gov/natality-expanded-current.html

16. United States Census Bureau. U.S. Census Bureau Quickfacts: United States. U.S. Census Bureau Quickfacts. 2021. Accessed January 23, 2023. https://www.census.gov/quickfacts/fact/table/US/PST045221

17. Tienda M, Mitchell F, Landale NS, Oropesa RS, Bradatan C. Hispanic Families in the United States: Family Structure and Process in an Era of Family Change. In: *Hispanics and the Future of America*. The National Academies Press; 2006. Accessed May 5, 2023. https://www.ncbi.nlm.nih.gov/books/NBK19902/

18. Dooley EK, Ringler RL. Prenatal care: Touching the future. *Primary Care: Clinics in Office Practice*. 2011;39(1):17-37. doi:10.1016/j.pop.2011.11.002

19. Centers for Disease Control and Prevention. Selected 2016 through 2020 maternal and child health (MCH) indicators. Prevalence of Selected Maternal and Child Health Indicators for Texas, Pregnancy Risk Assessment Monitoring System (PRAMS), 2016–2020. 2020. Accessed January 23, 2023. https://www.cdc.gov/prams/prams-data/selected-mch-indicators.html

20. Nasab SH, Moussa HN, Alrais MA, Sibai BM, Blackwell SC. Postpartum Readmissions: What We Can Learn From Numbers? *Obstetrics & Gynecology*. 2018;131:123S. doi:10.1097/01.AOG.0000533520.08596.85

21. Rousseau EC, Danilack V, Cai F, Matteson KA. Emergency Department Visits for Postpartum Complications. *J Womens Health (Larchmt)*. 2018;27(3):253-257. doi:10.1089/jwh.2016.6309. PMID:28937843

22. The American College of Obstetricians and Gynecologist. Optimizing Postpartum Care. Committee Opinion. 2021. Accessed January 23, 2023. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/05/optimizing-postpartum-care

23. Pluym ID, Tandel MD, Kwan L, et al. Randomized control trial of postpartum visits at 2 and 6 weeks. *Am J Obstet Gynecol MFM*. Published online 2021. doi:10.1016/j.ajogmf.2021.100363

24. Zbiri S, Rozenberg P, Milcent C. Access-to-care: Evidence from home-based postnatal coordinated care after hospital discharge. *BMC Health Services Research*. 2021;21(1137). doi:10.1186/s12913-021-07151-3

25. Boulvain M, Perneger TV, Othenin-Girard V, Petrou S, Berner M, Irion O. Home-based versus hospital-based postnatal care: A randomised trial. *BJOG: An International Journal of Obstetrics and Gynaecology*. 2004;111(8):807-813. doi:10.1111/j.1471-0528.2004.00227.x

26. Forster DA, McLachlan HL, Davey MA, et al. The structure and organisation of home-based postnatal care in public hospitals in Victoria, Australia: A cross-sectional survey. *BMC Health Services Research*. 2015;15:399. doi:10.1186/s12913-015-1085-4

27. Sackett DL. Bias in analytic research. *J Chronic Dis*. 1979;32(1-2):51-63. doi:10.1016/0021-9681(79)90012-2

28. ERAS Committee. Cesarean delivery best practices & guidelines – The ERAS Committee recommendations. The ObG Project. 2025. https://www.obgproject.com/2018/11/25/eras-guidelines-best-practices-for-optimum-recovery-following-cesarean-delivery/