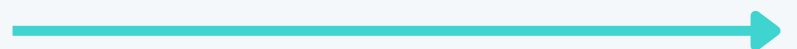# Artificial Intelligence in Early Discharge Follow-up After TAVI

Early and very early discharge in patients undergoing TAVI, supported by close follow-up using Tucuvi's AI, was shown to be safe and efficient

Study Abstract

**Transcatheter Aortic Valve Implantation (TAVI)** offers a minimally invasive option for patients with severe aortic stenosis, a procedure that is **growing exponentially.**

The **growing number of TAVI patients** is creating a significant burden on cardiology departments, making **early discharge** crucial for reducing bed occupancy. However, these programs must prioritize patient safety and **ensure follow-up care**, which is **challenging for overstretched healthcare systems.**

This study evaluates the **safety and effectiveness** of **very early** (<24h) and **early discharge** (24-48h) as compared to standard discharge (>48h), **supported by Tucuvi's AI (LOLA).**

Study Protocol

274 patients discharged during 2023 after TAVI
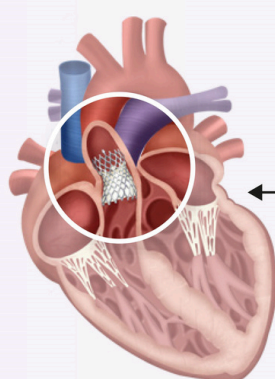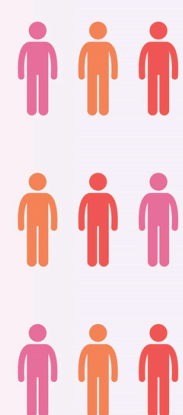
Very early discharge (< 24h): 110 (40.1%)

Early discharge (24–48h): 90 (32.9%)

Standard discharge (> 48h): 74 (27%)

Follow-up

Calls made by a voice-based clinical virtual assistant at week one, week two, week four, three months, and twelve months after hospital discharge

Responses were monitoring by the medical team allowing them to take the most appropriate action

No significant differences observed at 30-days follow-up among the three groups

Composite primary endpoint	☠		💧
9.1%	0.9%	1.2%	2.7%
11.1%	0%	3.6%	4.4%
9.5%	0%	2.0%	0%
p-value 0.88	0.47	0.56	0.19

93.92% of the calls completed
Adherence levels > 85%

44% of the calls with no alerts, so no review was required

Intervention in 57% of the calls

15 in-person evaluations (5.4%):
2 cases or third-degree auriculoventricular block,
3 case of femoral pseudoaneurysm,
1 case of critical stenosis of the common femoral artery

Customer Satisfaction (CSAT)

0   1   2   3   4   5

Single-arm prospective observational study that included consecutive patients who underwent TAVI in a tertiary hospital in 2023 and were discharged under Tucuvi's AI follow-up program.

Results

Discharging patients earlier with Tucuvi's AI achieves the **same outcomes**, with early and very early discharges resulting in similarly **low complication and readmission rates** as the standard discharge.

Tucuvi's AI platform played a crucial role in **detecting complications**, which were effectively evaluated and addressed.

Early discharge programs must prioritize **patient safety** and ensure **follow-up care equivalent** to or **superior** to that for patients with longer hospitalizations. Tucuvi's AI follow-up program presents these characteristics.

The majority of TAVI patients **(88.9%**), reported being **satisfied or very satisfied** with their interaction with **LOLA and 88%** rated the interaction as **very easy or easy.**

Early Discharge Program After TAVI Based On Close Follow-up Supported by Telemonitoring Using Tucuvi's Conversational Artificial Intelligence:

The TeleTAVI Study

Check out the Abstract here

European Heart Journal
Digital Health