Case Study

10.5% Reduction in CPAP Patient Dropout

Summary of success

A leading gas therapy company implemented Tucuvi's clinical AI agent, LOLA, to streamline the follow-up for CPAP therapy—an essential treatment often discontinued by patients due to discomfort in the first 30 days. Traditionally, preventing dropout requires manual, personalized follow-up by clinical teams.

The implementation of LOLA led to a **10.5% reduction in the patient dropout rate** compared to the period before LOLA, resulting in a **treatment adherence rate exceeding 98%**. Furthermore, the autonomous follow-up system **saved 18 hours of nursing time per week**, redirecting valuable clinical capacity from manual calls to more complex patient needs.

341

patients called

1,655

Follow-up calls completed

88%

Patient Rearch

98%

Adherence to CPAP usage

10.5%

Reduction in patient dropout rate compared to the period before LOLA

18 *hours/week*

of nursing workload freed up

Continue reading to get the full picture

tucuvi

Case Study

ANALYSIS AND INSIGHTS

Introduction

A **leading respiratory therapy company** implemented **Tucuvi's AI** to optimize follow-up care for patients using CPAP devices. CPAP (Continuous Positive Airway Pressure) therapy is a common treatment for Obstructive Sleep Apnea (OSA), a sleep disorder marked by repeated episodes of airway obstruction during sleep. The device delivers continuous airflow through the airway—primarily via the nose—to keep airways open and prevent breathing interruptions.

Early dropout is a major challenge in CPAP therapy, as many patients discontinue treatment within the first 30 days due to discomfort. **This makes intensive and continuous follow-up during the first month crucial to prevent patients from abandoning their treatment.**

Previously, the company dedicated an entire nursing resource to the monitoring and control of CPAP usage, a time-intensive, not structured process and not focused on the first 30 days of treatment prescription. Therefore, the company implemented LOLA, Tucuvi's clinical AI agent, to autonomous patient support during this critical early phase.
The objective was clear: improve patient adherence, reduce dropout rates, and make better use of valuable clinical resources.

Strategy and Implementation

Transform the follow-up process for CPAP patients into a **proactive, autonomous, and standardized system** that optimizes nursing resources, increases treatment adherence, and reduces abandonment rates.

Solution

During the initial period, patients receive a series of **5 autonomous calls from LOLA to monitor their CPAP use and overall treatment experience.** These structured follow-ups assess device usage, mask leaks, potential discomfort, and symptoms that may indicate poor treatment response — such as snoring, poor sleep quality, or excessive daytime sleepiness. In addition, LOLA delivers educational and reassuring messages to motivate patients and reinforce the importance of adhering to therapy.

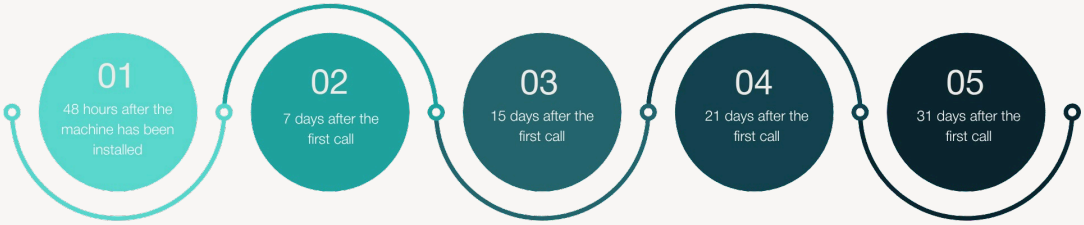
By leveraging LOLA's autonomous follow-up process, patients receive consistent, personalized support without overburdening clinical teams.

💡 The implementation of Tucuvi's AI led to a 10.5% reduction in the patient dropout rate in the first 30 days of treatment compared to the period before LOLA.

As a result, the nurse who previously dedicated entire shifts to monitoring treatment adherence in a non-standardized manner can now shift their focus to higher-value tasks. These include developing personalized care plans, implementing individualized monitoring to boost engagement with non-adherent patients, and allocating time for other critical therapies, such as oxygen therapy.

Case Study

How LOLA follows up with CPAP patients after initiating treatment:



Implementation

The implementation process was structured and collaborative. Tucuvi worked closely with the company to integrate LOLA into the hospital's existing workflows seamlessly.

PHASE 1: CONVERSATIONAL PROTOCOL DEVELOPMENT (2 WEEKS)

The implementation process was structured and collaborative. Tucuvi worked closely with the company to integrate LOLA into the hospital's existing workflows seamlessly.

PHASE 2: CLIENT TESTING (1 WEEK)

Extensive testing was done to ensure compatibility and efficiency.

PHASE 3: PLATFORM TRAINING

Training sessions for the company's nursing staff to manage and operate the platform effectively.

PHASE 4: GO LIVE

The system was initially tested with a small number of patients and then scaled up to full capacity, allowing for fully autonomous and efficient monitoring of CPAP patients.

PHASE 5: ITERATION

After one month of LOLA engaging with real patients, the protocol was refined by adjusting alerts and questions to better address the actual needs identified during follow-up, leading to the final configuration for enhanced effectiveness.

Case Study

RESULTS AND CONCLUSIONS

The integration of LOLA into the follow-up process of a leading gas therapy company has delivered significant and impactful results.

For Healthcare Provider:

- LOLA has completed over **1,600 follow-up calls**, ensuring continuous and structured monitoring of patients undergoing CPAP therapy.
- Since adopting LOLA's autonomous system, a total of **18 nursing hours per week have been freed up**, time that previously was spent to manually calling all patients in the treatment. This increased clinical capacity without adding to the team's workload.
- For each patient, this has saved an average of **102,95 minutes of manual calling.**
- The percentage of patients using **intermittently the CPAP** dropped from **4.47% at the first call to 0.89% by the fifth call, which represents an 80% relative decrease**, reflecting increased consistency in therapy usage after LOLA's continuous follow-up.
- **30% of the calls made by LOLA triggered clinical alerts**, enabling the care team to act promptly and prioritize those patients.
- The follow-up focused on key aspects such as **CPAP usage, mask leaks, discomfort, and risk symptoms** (including snoring, poor sleep quality, and daytime sleepiness), improving patient engagement and early detection of complications. The team achieved all of this over the course of 7 months, making this ideal adherence-improvement process difficult to implement due to time constraints and the need to prioritize more complex clinical tasks.

💡 **Ensuring adherence to CPAP therapy requires time-intensive follow-up from clinical teams. With LOLA, this follow-up is delivered with high adherence and clinical quality—without needing to dedicate entire nursing shifts to phone calls.**

For Patients:

- **88%** of patients engaged with **LOLA®**, completing all follow-up calls and benefiting from ongoing support.
- **More than 98%** of patients were still adhering to CPAP treatment at the end of the **30-day follow-up period**. Only 1,79% decided to abandon.
- With the implementation of LOLA, the **30-day treatment abandonment rate was reduced by 10.5%** comparing it with the year previous the healthcare provider was not using LOLA. This improvement is due to patients receiving continuous calls during the first month, which helps them feel more comfortable and confident using the CPAP.

With patient comfort crucial to treatment adherence, healthcare providers face the challenge of delivering consistent, personalized follow-up during the critical early weeks of CPAP therapy—something difficult to manage given clinical capacity limits.

By implementing Tucuvi's conversational AI solution, LOLA, healthcare providers can leverage autonomous follow-up processes, freeing clinical teams to focus on patients who need timely support. This approach enhances patient adherence and outcomes, all without increasing the workload on healthcare staff.