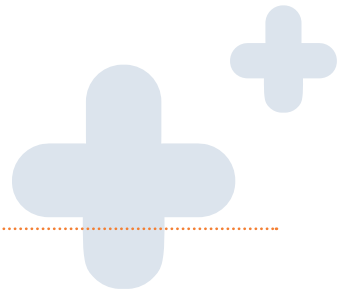# Institutional Experience

with WatchPAT® and SleePATh® in improving clinical, operational, and economic efficiencies

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Overview

A performance study was conducted in a high-volume sleep center at a large healthcare facility serving the greater Dallas, Texas, area. With hundreds of referrals coming in each month, the clinic sought solutions to streamline its workflow and reduce a 2-month patient backlog.

The clinic identified 2 areas that were impacting process efficiency and patient throughput: call-based screening and the time-consuming limitations associated with its home sleep apnea tests (HSATs)—including data downloading, device disinfection, manual scoring, and a finite number of patients who could be tested at any given time.

The clinic switched to WatchPAT® ONE, a fully disposable HSAT with SleePATh Patient App. SleePATh Patient App provides a digital screening tool, digital patient questionnaires, and enables a sleep report that includes patient self-reported data and sleep study objective data.

RESULTS*:

47% increase in obstructive sleep apnea (OSA) testing per month

~70% reduction in patient backlogs

Up to **75%** reduction in patient wait time for testing

Up to **~1.75** hour total time-savings for staff per patient

47% increase in screening questionnaire response rate
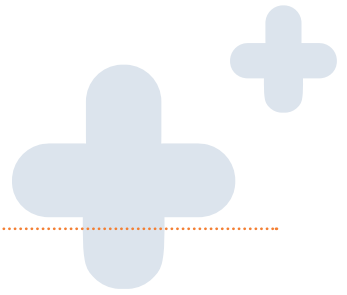
Time-Savings Per Patient

- No screening calls for data collection: 30- to 45-minute savings per patient
- No data downloading and manual scoring: 30- to 45-minute savings per patient
- No device returns/cleaning: 15-minute savings per patient

*Based on the first 241 patients.

" It's saving time… so much time. "

– Clinic Supervisor

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Background

INSTITUTION

A high-volume sleep center at a large healthcare facility serving the greater Dallas, Texas, area.
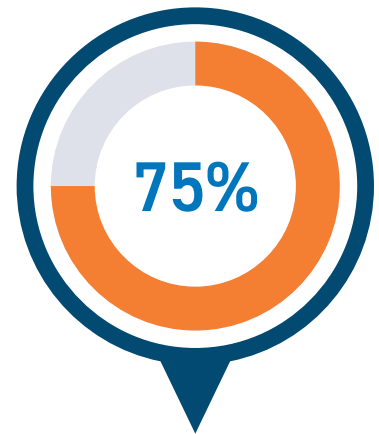
VITAL STATISTICS

~400

Referrals per month are received for various sleep disorders

50%

Of referrals are from primary care providers (PCPs), and 50% are from sleep specialists

75%

Of patients are assigned an HSAT, while 25% undergo in-lab testing

HSAT PROCESS

For patients referred by a PCP on suspicion of OSA, the clinic's protocol is to screen for risk and assign an HSAT to qualified patients before they see a clinic sleep specialist.

With the clinic's previous HSAT, the clinic could conduct a maximum of 24 home sleep studies per week, based on the 6 devices onboard and availability of their sleep technicians.

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The Challenges
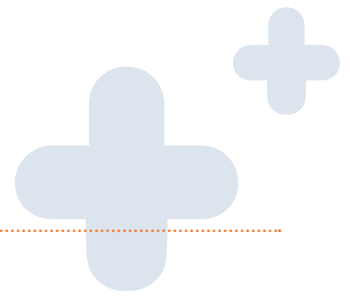
With its very high volume of referrals, the clinic was dealing with a 2-month patient backlog. The clinic identified 2 areas that were impacting process efficiency and patient throughput: call-based screening and the limitations associated with its HSATs.

CHALLENGES WITH CALL-BASED SCREENING AND PRE- AND POST-STUDY QUESTIONNAIRES

50% Only 50% of the patients answered the phone

30-45 MINUTES Of the patients who answered, screening calls took from 30 to 45 minutes

CHALLENGES WITH PREVIOUS HSATS

Operational
- 15-minute cleaning process
- 30- to 45-minute data downloading and manual scoring time
- Variable wait times for device returns

Clinical
- Raw data only
- Manual scoring, which is subject to inter-reader variability
- No sleep staging

Economical
- Suboptimal throughput speed
- Finite supply of devices, limiting the number of patients who could be tested at any given time
- Lower reimbursement vs WatchPAT® ONE HSAT

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The transformation with WatchPAT® ONE and SleePATh®

WatchPAT® ONE is a fully disposable, simple-to-use HSAT that transmits the study to the cloud for immediate* review of the study results. **SleePATh®** is a digital screening and questionnaire solution, personalized to the patient and customizable by the clinic enabling:
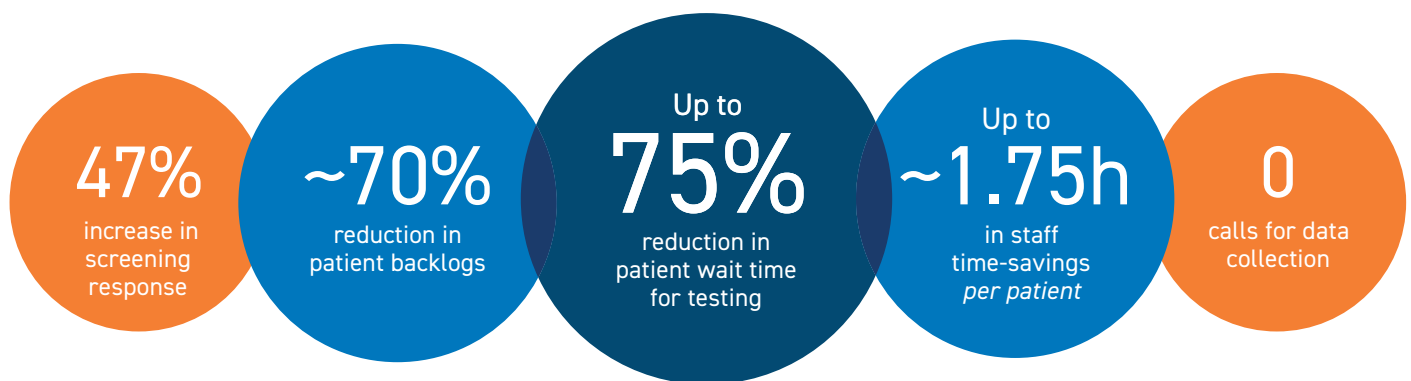
1. Fast screening with digital questionnaires and communication tools;

2. Enhanced diagnosis with a single report, including patient self-reported data and sleep study objective data;

3. End-to-end clinician-patient experience and improved communication, with reminders and notifications.

Spearheaded by the clinic supervisor, the clinic switched from its previous HSAT to WatchPAT® ONE[†] and incorporated SleePATh® into its practice.

THE RESULTS[‡]
Dramatic improvements in process efficiency and patient throughput

47% increase in screening response	~70% reduction in patient backlogs	Up to 75% reduction in patient wait time for testing	Up to ~1.75h in staff time-savings *per patient*	0 calls for data collection

> **"** Everything is moving a lot more quickly, and it has helped tremendously with the backlog. **"**
>
> - Clinic Supervisor

*Within minutes of study completion.
[†]With the exception of patients without smart phones or with limited Wi-Fi access.
[‡]Based on the first 241 patients.

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Up to 45 minutes savings per patient in screening time with SleePATh®

Previously, the clinic was unable to reach half their patients over the phone to complete preauthorization screening. And when they did, the interviews took approximately 30 to 45 minutes. With the SleePATh® digital screening tool, response rates climbed to nearly 3 in 4 patients—with no calling.

MAJOR IMPROVEMENTS IN THE SCREENING PROCESS 3-month results (N=241)			
	Before SleePATh® (calls and paperwork)	**With SleePATh® (digital screening)**	**Results**
Screening Response Rate	50%	73%	**47% increase**
Staff Screening Time Per Patient	Avg 30-45 min (up to 3 calls)	0 calls	**30-45 min savings per patient**

SAVINGS OF UP TO 1 HOUR PER PATIENT BY ELIMINATING DEVICE PROCESSING

No device returns/cleaning:
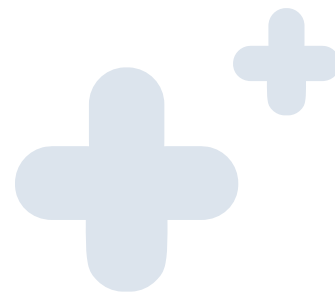**15-minute** savings per patient

No data downloading and manual scoring:
30- to 45-minute savings per patient

> " I didn't expect the response rate to be what it was. "
>
> - Clinic Supervisor

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How WatchPAT® ONE and SleePATh® made a difference

WATCHPAT® ONE FEATURES THAT HELPED THE CLINIC ACHIEVE ITS GOALS:

- Full study results instantly delivered to the cloud, eliminating data downloading

- Automated scoring of respiratory indices with sleep stages, eliminating the need for manual scoring (raw data is available for healthcare providers for reviewing and editing)

- Fully disposable, eliminating the need for device returns and disinfection

- No limits to the number of patients that can be tested at any given time

" Just sheer volume as far as what we're able to do with the WatchPAT® has had a significant impact. **"**

- Clinic Supervisor

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SleePATh® features that helped the clinic achieve its goals:
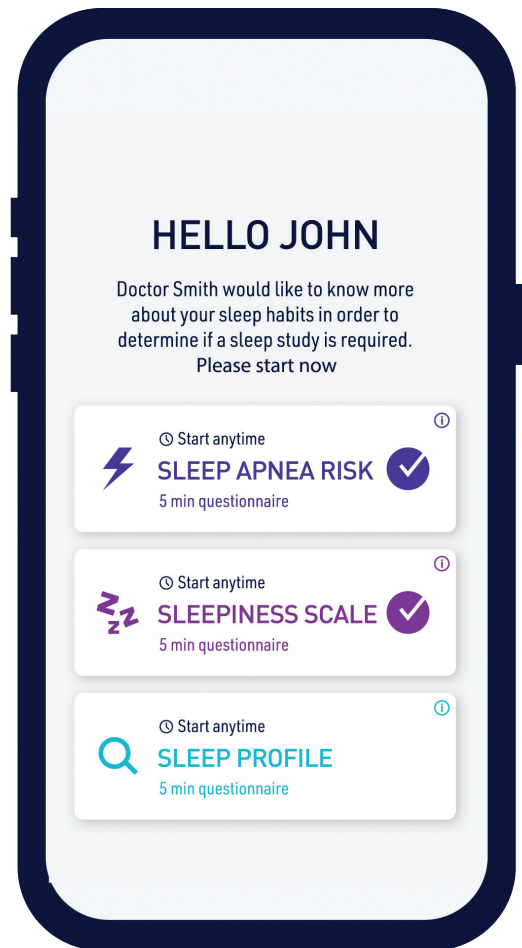
SCREENING TOOL

A digital screening tool that includes STOP-Bang, the Epworth Sleepiness Scale, and standard questionnaires, eliminating countless hours on the phone—and increasing the response rate—for preauthorization screening

CUSTOMIZABLE ASSESSMENT

Customizable digital assessment and pre- and post-test questionnaires, so the staff has been able to reduce paperwork and time-consuming manual data entry

REPORTS

SleePATh enables single study reports that include both objective and subjective data, providing their sleep specialists with all the information they need in one place
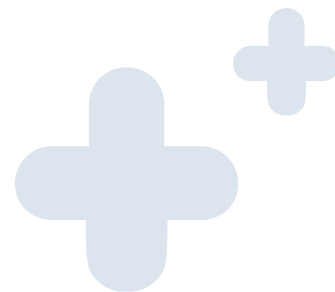
HELLO JOHN

Doctor Smith would like to know more about your sleep habits in order to determine if a sleep study is required. Please start now

> Start anytime
> **SLEEP APNEA RISK** ✓
> 5 min questionnaire

> Start anytime
> **SLEEPINESS SCALE** ✓
> 5 min questionnaire

> Start anytime
> **SLEEP PROFILE**
> 5 min questionnaire

" It has made life easier. There was [initially] a little reluctance in certain places, and then they're like, 'Oh my gosh, this is so much better. "

- Clinic Supervisor

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Before WatchPAT® and SleePATh®

STEP 01
Arrival of test order

STEP 02
30- to 45-min screening calls (avg)

STEP 03
Information hand entered in system

STEP 04
Preauthorization

STEP 05
Test scheduled

STEP 06
Assessment questionnaires emailed

STEP 07
Device training

STEP 08
Test taken; device and questionnaires returned

STEP 09
Device disinfected

STEP 10
Test manually scored (approx 30 min)

STEP 11
Questionnaire responses hand entered in system

STEP 12
Data downloaded

STEP 13
All data submitted to sleep specialist

STEP 14
Results interpreted by HC provider, next steps determined

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AFTER bringing WatchPAT®
and SleePATh® onboard

WITH WATCHPAT® AND SLEEPATH®, THE CLINIC OFFERS PATIENTS A STREAMLINED PATHWAY TO CARE

STEP 01
Arrival of test order

STEP 02
Link to screening
tool texted to patient

STEP 03
Preauthorization

STEP 04
Test scheduled

STEP 05
Device training,
if needed

STEP 06
Test and in-app
questionnaires
completed

STEP 07
Automated report
for sleep specialist

STEP 08
Results interpreted by HC
provider, next steps determined

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This case study represents true collaboration between healthcare organizations and tech innovation, placing the patient and their needs in the center.

It emphasizes that embedding digital-based solutions in traditional healthcare can provide not only significant value to patients and increased accessibility, but also significantly reduce the burden on the healthcare system and enable streamlined processes.

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