

# EXPAND OHSU'S PEDIATRIC SLEEP MEDICINE PROGRAM TO MEET THE UNMET NEEDS OF CHILDREN AND FAMILIES IN OREGON AND THE PNW REGION

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June 2024

## EXECUTIVE SUMMARY

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### BACKGROUND

The OHSU Doernbecher Pediatric Sleep Lab program is facing significant capacity and financial challenges amidst a growing demand for pediatric sleep medicine and a shortage of regional providers. As part of Oregon's only academic healthcare center, the Doernbecher Pediatric Sleep Medicine Program accommodates a disproportionate share of safety net care and is the only program positioned to deliver tertiary and quaternary care for its pediatric patients. The program provides over 1,000 sleep studies annually and has seen an exponential increase in referrals, especially from underserved populations, leading to long wait times and potential adverse health outcomes. The current infrastructure limits the program's ability to expand and negotiate better reimbursement models. This crisis affects various surgical services that are dependent on the sleep lab, thereby hindering clinical and research advancements (Aurora et al., 2011; Marcus et al., 2012). OHSU leadership has partnered with the OHSU-PSU Healthcare MBA program to assess needs and propose operational improvements. The goal is to enhance the lab's capacity and efficiency, ensuring better healthcare outcomes and financial stability. While philanthropic support for expansion potentially exists, the team must articulate its value proposition in terms of both departmental financial health and patient-specific outcomes.

### FINDINGS

Over 12 weeks, we conducted 24 interviews with key stakeholders, performed three external pediatric sleep lab assessments, and visited two pediatric sleep labs. We found significant challenges in the current state of pediatric sleep labs. Patients face an approximate 15-month wait for polysomnography (PSG) studies, with only about 57% of scheduled pediatric sleep studies being completed without rescheduling or cancelling. Although the six-bed facility can theoretically conduct 2,100 studies annually, only around 900 pediatric studies are completed, as last-minute reschedules and cancellations are often backfilled with adult PSG appointments due to the blended infrastructure of the adult and pediatric labs. Financial challenges are further compounded by the fact that over half of the patients are on Medicaid. While serving low-income, vulnerable patients aligns with OHSU's mission to provide compassionate and quality care to all children, the reimbursement rates are typically below 60% of charges, substantially impacting revenue.

However, through quantitative and qualitative analyses, we found that the Pediatric Sleep Lab is a cornerstone service at OHSU and the value of a pediatric PSG extends far beyond the initial service or the isolated lab revenue. Several service lines are dependent on PSG to provide guideline-directed care and facilitate and validate response for surgical treatment options. The net revenue for these downstream services is over double that which is brought in by the Pediatric Sleep Lab alone.

## RECOMMENDATIONS

We propose two options based on this comprehensive assessment. Option 1 (“the blank check”) is an immediate move toward independence for the OHSU Pediatric Sleep Lab while also considering future needs for growth. Option 2 is a multi-phased approach that assumes limited upfront financial burden and is designed to optimize available resources and maximizing access while planning for expansion to meet current and future demand. For both options, we considered the current and anticipated needs of patients and staff, the concerns of OHSU leadership and management, and the Mission and Vision of OHSU.

### OPTION 1: THE BLANK CHECK

To achieve the objectives of this initiative, securing philanthropic or institutional funding is crucial for gaining independence and autonomy for the Pediatric Sleep Lab. The goal is to build a state-of-the-art 12-bed facility modeled after Seattle Children’s Hospital, obtain hospital licensure, and hire three full-time dedicated schedulers along with at least nine technologists.

### OPTION 2: MULTI-PHASED APPROACH

The multi-phased approach accounts for current state optimization and demonstration of the lab’s value proposition. This phase involves hiring dedicated schedulers to mitigate cancellations and no-shows, prioritizing beds for pediatric patients to maximize space utilization, and establishing protocols to achieve over 80% throughput. These protocols include curating and confirming hierarchical wait lists, ensuring no beds remain empty regardless of prior authorization and sunk costs, and optimizing technologist utilization through overtime and on-call options to address sick days and last-minute schedule changes.

Demonstrating the value proposition involves maintaining quarterly Key Performance Indicator (KPI) reports that track primary and secondary revenue sources, efficiencies in bed capacity utilization, as well as patient and healthcare provider satisfaction. Furthermore, initial expansion efforts will focus on identifying additional bed space within existing hospital-licensed buildings. The generation of KPIs and return on investments (ROIs) will establish the comprehensive value of a Pediatric Sleep Lab expansion.

## REFERENCES

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