PROSIDIO

Prosidio White Paper

Enhancing Private Practice Sustainability through Strategic Equipment Acquisition

A Quantitative Analysis of Productivity Gains in Nasal Endoscopy Procedures

April 2024

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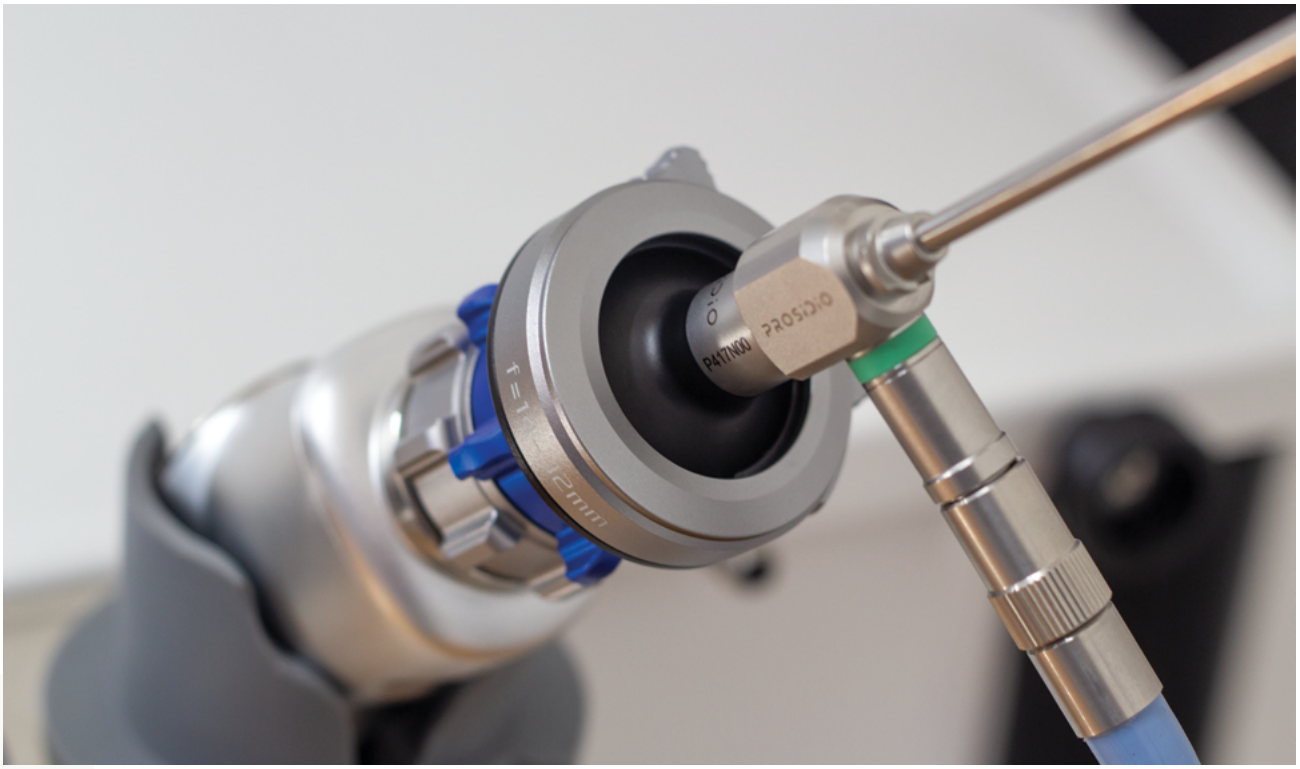
Abstract

Endoscopic technologies have revolutionized Otolaryngology, but their accessibility in private practices is limited by cost and complex systems designed for larger institutions. This disparity hinders optimal patient care. Prosidio addresses this gap by offering affordable, high-performance endoscopy solutions specifically designed for private ENT practices.

This white paper explores the impact of Prosidio's technology through a study in a five-physician practice. The study demonstrates a significant increase (15.6%) in nasal endoscopy procedures following Prosidio system implementation. This rise is attributed to factors like readily available equipment and improved image quality, potentially leading to more accurate diagnoses and enhanced patient care.

Prosidio's focus on cost-effectiveness challenges the traditional medical device model, promoting a more equitable distribution of advanced endoscopy technology. This empowers independent ENT practices to deliver state-of-the-art care and improve long-term practice sustainability. The paper concludes by highlighting the need for further research while acknowledging Prosidio's potential to transform the ENT technology landscape and ultimately improve patient outcomes.



Introduction

Endoscopic technologies have significantly advanced the field of Otolaryngology, providing unprecedented visualization of intricate anatomical structures within the nasal cavity and paranasal sinuses. Their diagnostic and therapeutic applications have become indispensable in modern ENT practice. However, the adoption of these technologies in the private practice setting has often been hampered by economic constraints and a medical device industry that can prioritize complex, high-cost systems primarily intended for large institutions. This has created a disparity in access to optimal endoscopic equipment, potentially affecting patient care in smaller or independent practices.

Private ENT practices operate within a challenging healthcare landscape characterized by stagnant reimbursements, escalating operational costs, and the administrative complexities of healthcare delivery[1]. The traditional medical device industry, often focused on the needs of hospitals and academic centers, can exacerbate these challenges. Incremental improvements and complex feature sets that drive up the cost of medical equipment may be at odds with the cost-consciousness and streamlined workflows essential for the sustainability of private practices[2].

"Studies demonstrate that physicians are more likely to utilize available diagnostic tools if readily accessible, leading to a potential under-utilization of beneficial technology."

A prime example of this disparity is the availability of high-quality endoscopy systems. Many ENT practices lack dedicated endoscopes and camera systems in every examination room. This logistical hurdle can impede the ability of physicians to perform thorough nasal endoscopies as part of routine evaluations. Studies demonstrate that physicians are more likely to utilize available diagnostic tools if readily accessible, leading to a potential under-utilization of beneficial technology[3].

Furthermore, traditional endoscopes that rely on a direct eyepiece view can limit visualization of subtle pathologies. Modern camera-based endoscopy systems that project magnified, high-resolution images onto a large display screen offer superior diagnostic precision due to enhanced image clarity and zoom capabilities[4]. Additionally, the ability to record and store images and videos creates a valuable reference for longitudinal patient monitoring, facilitates trainee education, and empowers patients through visual explanations of their condition[5].

The medical device industry often struggles to provide solutions that offer true value within the context of private practice. Value, in this sense, implies not merely technological advancement but a tangible, quantifiable improvement in patient outcomes while maintaining cost-effectiveness and seamless integration into existing clinical workflows. Prosidio is committed to addressing this gap. Our focus is on empowering independent

ENT practices with innovative, high-performance endoscopy solutions meticulously engineered with both affordability and practitioner usability at the forefront. By integrating the latest technologies, such as Sony CMOS sensors, and prioritizing intuitive design principles, Prosidio's all-in-one systems and rigid endoscopes deliver superior imaging quality and functionality without the typically associated prohibitive costs.

This commitment to accessible, value-driven technology directly translates into a more robust and sustainable model of ENT care. To investigate the impact of Prosidio's approach, we conducted a study within established private practices. This study examined the effects of incorporating Prosidio's endoscopy systems on diagnostic procedures, patient outcomes, and overall practice performance. We examined data from five physicians across multiple practice settings over a predetermined time period, providing quantitative insights into this transformative potential.

"Modern camera-based endoscopy systems that project magnified, high-resolution images onto a large display screen offer superior diagnostic precision due to enhanced image clarity and zoom capabilities."

About

Prosidio spearheads advancements in medical technology, transforming diagnostics across diverse specialties including Otolaryngology, neurosurgery, plastic surgery, obstetrics and gynecology, urology, and orthopedics. Our dedication to innovation stems from our leadership team of seasoned healthcare professionals, ensuring deep insight into the real-world challenges faced by today's clinicians.

Our product range features cutting-edge rigid and flexible endoscopes, microscopes, and integrated imaging systems powered by the latest optical and digital technologies, including Sony CMOS sensors. This translates to unparalleled clarity and diagnostic precision, enabling accurate evaluations and facilitating informed medical interventions.

Prosidio champions a sustainable and cost-conscious approach. Our commitment to durable, reusable equipment offers the dual benefits of reduced long-term costs and a minimized environmental footprint – a clear reflection of our values.

As a privately held company, we have the strategic autonomy to prioritize long-term value over short-term gains. This allows us to avoid the industry pitfalls of overengineering and reliance on disposables, instead focusing on authentic innovations that genuinely enhance clinical practice.

We foster a strong collaborative relationship with medical professionals, ensuring our technology aligns with the real needs of a modern healthcare setting. Our mission is clear: to democratize access to world-class medical diagnostics, guaranteeing that every practice, regardless of size, has the tools necessary to provide outstanding patient care.

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Prosidio isn't just entering the medical technology arena – we're positioned to lead it. Our relentless innovation, focus on quality, and commitment to empowering healthcare providers will reshape patient care on a global scale. Join us in driving this transformative change.

Methodology

Research Design

This study employed a retrospective, observational design to assess the impact of integrating Prosidio's all-in-one endoscopy camera systems and rigid endoscopes into a private ENT practice setting. The primary focus was to evaluate potential changes in diagnostic procedure rates, patient outcomes, and overall practice efficiency following the implementation of Prosidio's technology. A comparative analysis of data from before and after the integration of Prosidio's systems formed the foundation of this investigation.

Study Setting and Participants

We collaborated with a single established ENT practice located in Connecticut. This practice comprised a total of five physicians specializing in otolaryngology and encompassing three distinct practice locations. Notably, this practice was selected as a representative sample due to its limited or inconsistent access to camera systems and rigid endoscopes for every clinic room prior to their engagement with Prosidio.

Intervention

The intervention centered around the provision of Prosidio's endoscopy solutions. In March 2022, the practice received five all-in-one endoscopy camera systems and an adequate supply of rigid endoscopes, ensuring that each examination room was fully equipped. Practitioners received training from Prosidio personnel for optimal device utilization.

Data Collection and Analysis

We retrieved de-identified practice data covering a four-year period, spanning two years prior to the intervention (pre-Prosidio) and two years following the implementation of Prosidio's systems (post-Prosidio). The total dataset encompassed records from over 13,258 patient encounters. Nasal endoscopy (CPT 31231) volume was the primary metric, analyzed both by individual provider and in aggregate. We employed both descriptive and inferential statistical techniques for our comparative analyses between the pre-Prosidio and post-Prosidio periods. Practice billing accuracy, consistent coding practices, and negligible non-billable procedures are assumed in this analysis.

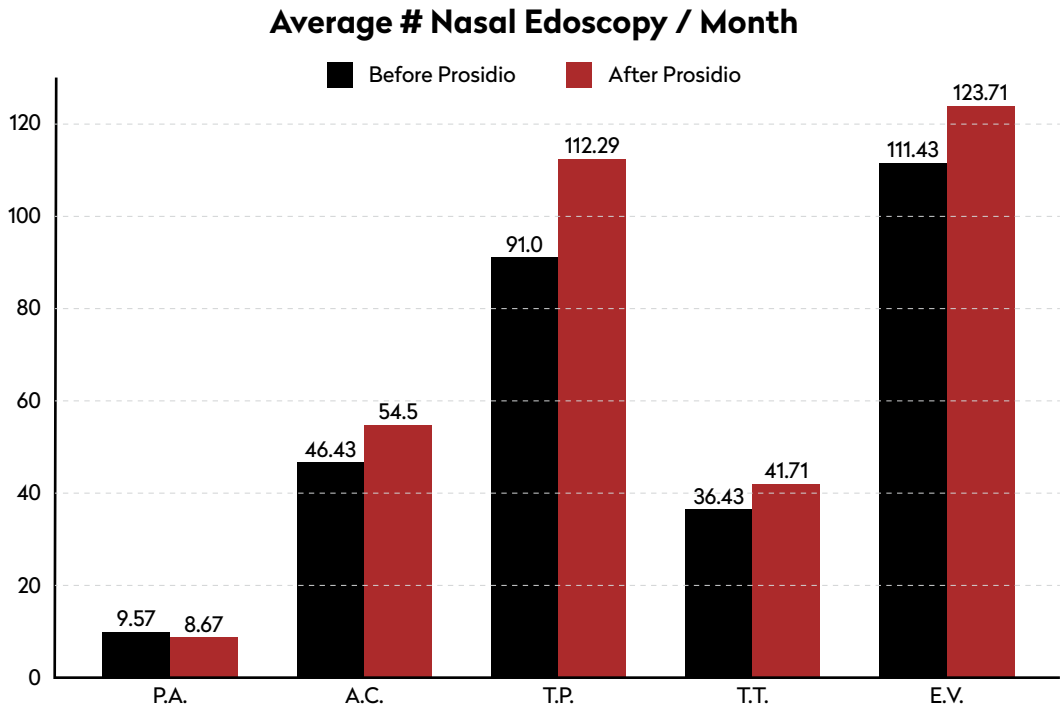
Results

Following the implementation of Prosidio's all-in-one endoscopy systems within a 5-ENT practice group (March 2022), a significant change in nasal endoscopy (CPT 31231) volume was observed:

The average monthly nasal endoscopy volume increased by 15.6% across the practice post-Prosidio implementation. This equates to an average increase of approximately 46 additional procedures per month.

Provider-Specific Results

ENT Specialist	Pre-Implementation (Procedures/Month)	Post-Implementation (Procedures/Month)	% Change
P.A.	9.6	8.7	-9.5%
A.C.	46.4	54.5	+17.4%
T.P.	91.0	112.3	+23.4%
T.T.	36.4	41.7	+14.5%
E.V.	111.4	123.7	+11.0%



Assumptions on cost

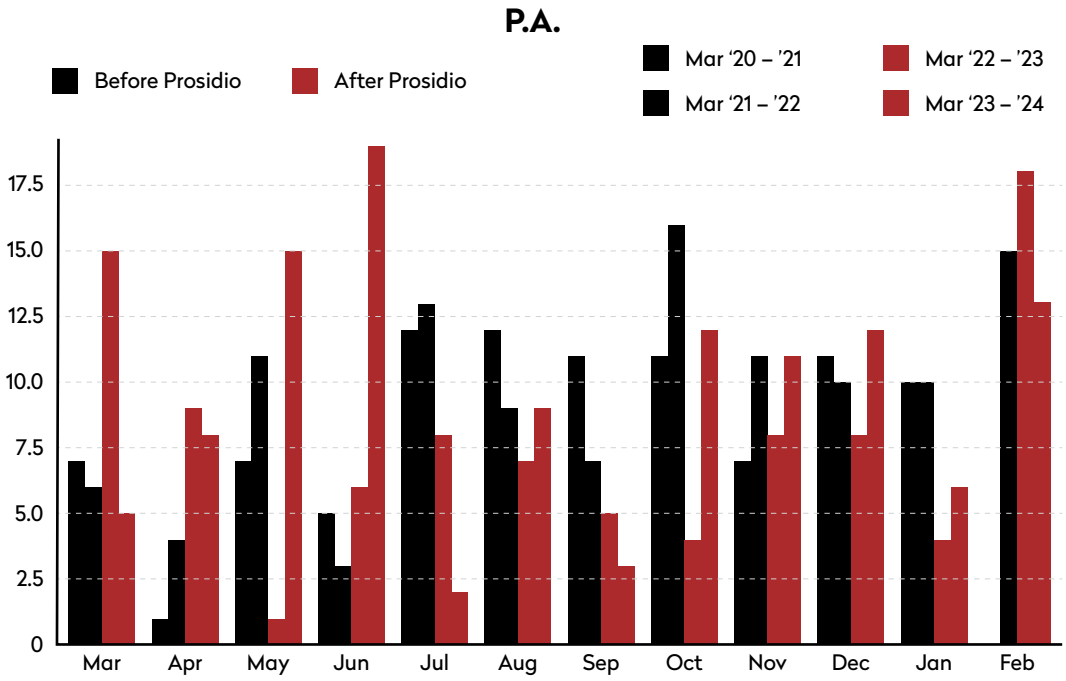
- Average 2024 Medicare Reimbursement = $247 ($184 facility, $63 provider)
- Estimate average private insurance reimbursement = $1000
- Payoff timetable assuming cost of camera system and endoscope = $15,000

Payoff Time table	P.A.	A.C.	T.P.	T.T.	E.V
Medicare	N.A.	7.5 months	2.9 months	11.5 months	4.9 months
Private insurance		1.9 months	0.7months	2.8 months	1.2 months

Payoff Time table	P.A.	A.C.	T.P.	T.T.	E.V
Medicare	N.A.	225.7 days	85.6 days	345.1 days	148.4 days
Private insurance		55.8 days	21.1 days	85.2 days	36.6 days

Discussion

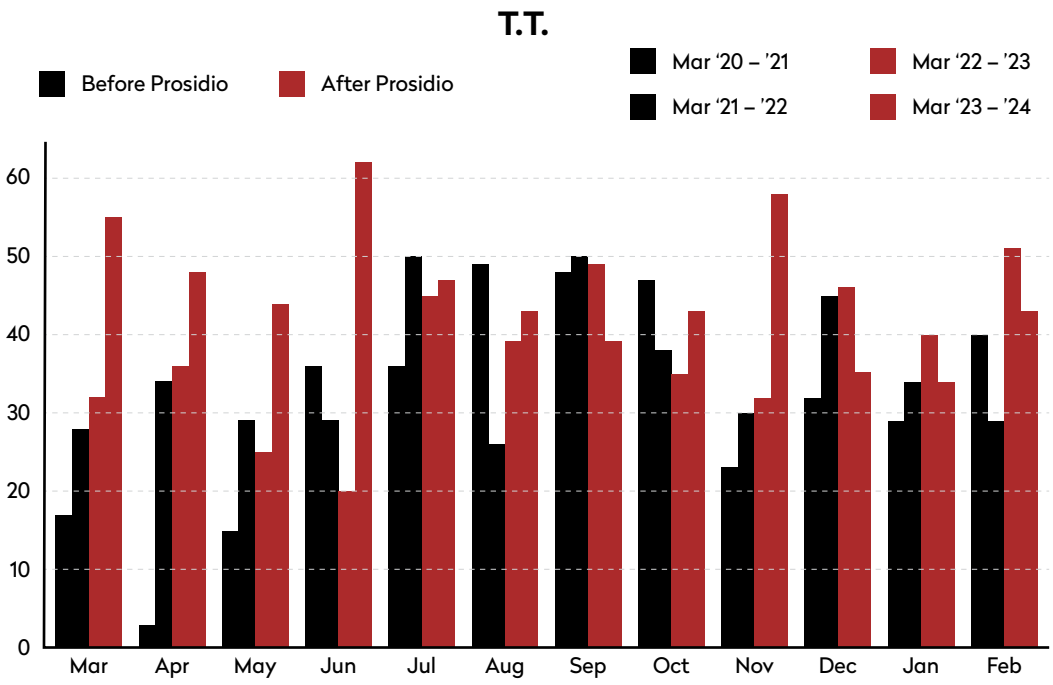
The observed rise in nasal endoscopy procedures following Prosidio system implementation highlights their value in facilitating wider utilization of this essential diagnostic modality. This aligns with previous research demonstrating a link between readily available equipment and physician adherence to diagnostic guidelines. Endoscopy enhances the ENT specialist's ability to visualize intricate anatomical structures, potentially uncovering pathologies that might otherwise be missed. The observed volume increase suggests that Prosidio's systems empower practitioners to confidently integrate this tool into their diagnostic decision-making processes.

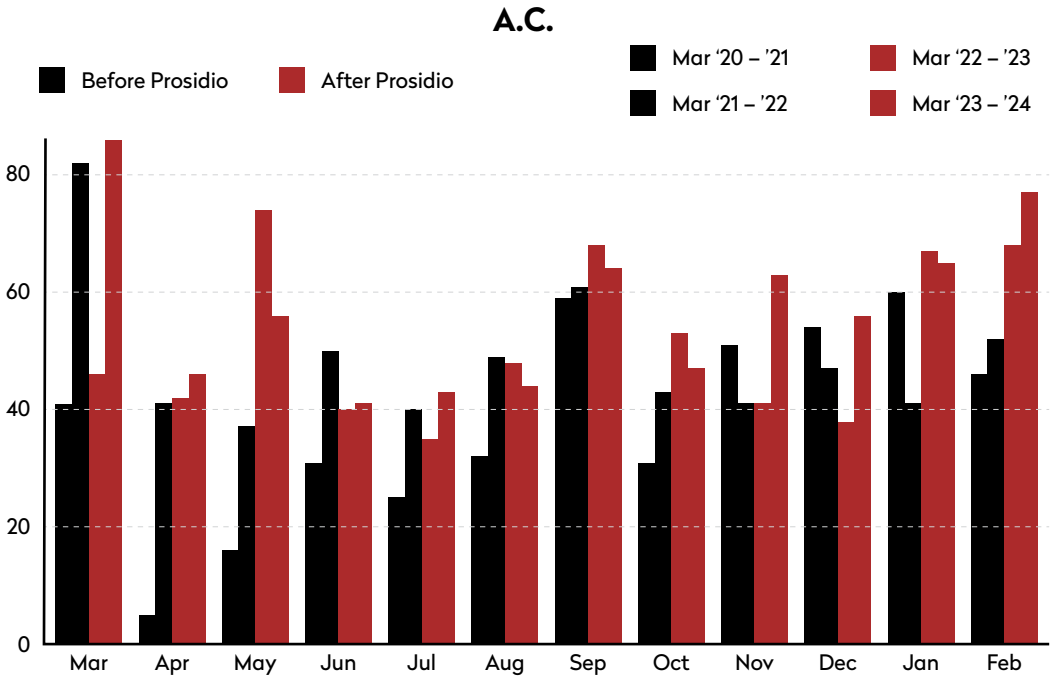


The slight decrease observed with one provider P.A. reflected a practice pattern that relied less on nasal endoscopy. This could be due to a preference for other diagnostic modalities or a focus on different aspects of ENT care. It's also possible that this provider, a more seasoned physician, was accustomed to a workflow that didn't heavily integrate endoscopy.

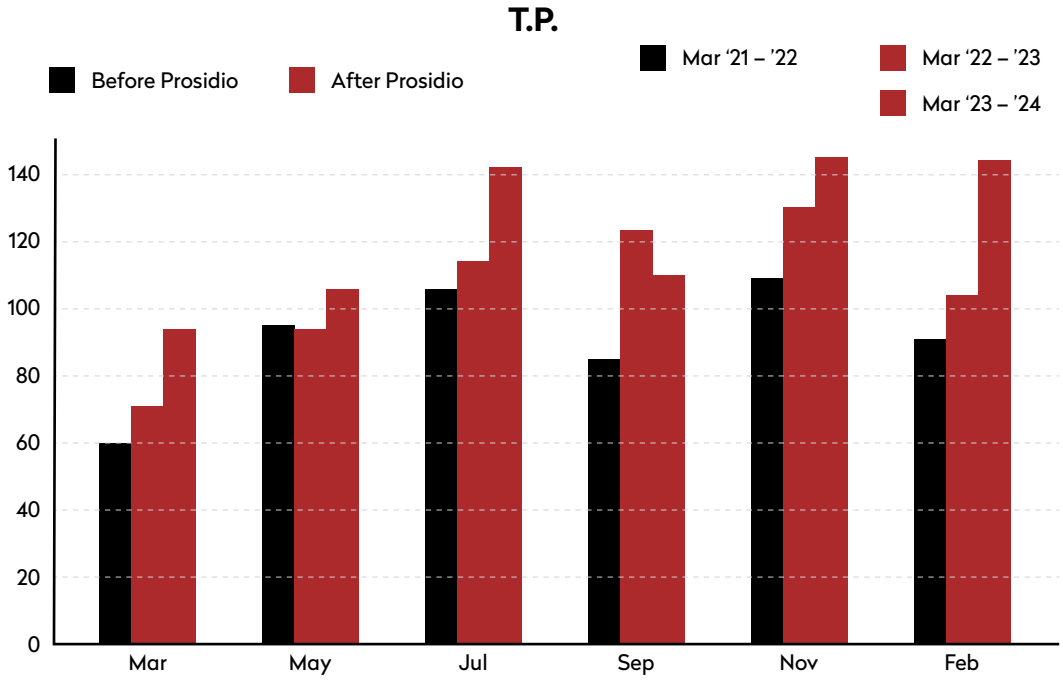
Conversely, the substantial increases in endoscopy volume seen with some providers like T.T. and A.C. likely stemmed from a combination of factors. These physicians might have previously depended on shared endoscopy resources that were not always available, leading to logistical issues that could delay clinic schedules and discourage the

performance of nasal endoscopies. Prosidio's systems, by equipping most examination rooms, remove this barrier and encourage seamless, in-the-moment utilization.





Furthermore, the convenience and image quality of Prosidio's technology may have inspired a shift towards a more actively endoscopy-centric diagnostic approach. In cases where the clinical picture is complex or a nuanced diagnosis is needed, endoscopy provides the enhanced visualization necessary for a confident assessment. Having this reliable visual information likely empowers providers to proactively incorporate endoscopy into their decision-making processes, leading to its increased use. When examining the graphs above for providers A.C. and T.T, it is evident that the number of endoscopies performed after the installation of Prosidio's equipment not only increases, but continues to grow between the first and second year. This trend indicates a growing accustomization to the benefits of using the system and a positive reinforcement of its utility.



It's noteworthy that two of the participating ENT specialists, T.P. and E.V., are also rhinologists. Rhinologists are ENTs who subspecialize in diseases and surgical procedures of the nose and sinuses. Practices with a focus on rhinology, like those with rhinologists on staff, are particularly likely to benefit from Prosidio's technology. The significant increase in endoscopy volume observed with T.P., a young physician, underscores this point. Dr. T.P.'s experience reflects a potential trend – new physicians are likely

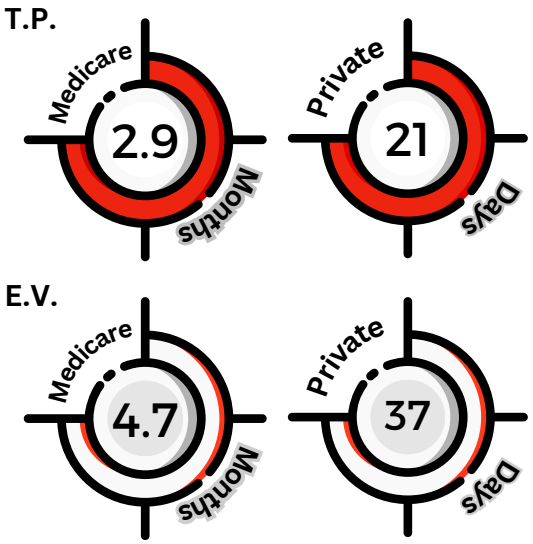
"...the number of endoscopies performed after the installation of Prosidio's equipment not only increases, but continues to grow between the first and second year. This trend indicates a growing accustomization to the benefits of using the system and a positive reinforcement of its utility."

more accustomed to using camera-based endoscopy systems during clinic exams due to their prevalence in academic training centers and greater recognition of their ergonomic benefits[6]. As a result, young physicians entering private practice may be more negatively affected by a lack of readily available endoscopy equipment compared to more established practitioners who may have adapted to workflows that don't rely as heavily on this technology.

The estimated 45-50 day timeframe within which Prosidio's systems can potentially pay for themselves represents a compelling return on investment (ROI). This rapid ROI contributes to practice sustainability by offsetting technology costs and potentially freeing up financial resources for other aspects of patient care or practice infrastructure. Smaller or independent ENT practices, often operating with tighter margins, stand to benefit substantially from this cost-effectiveness. Moreover, ENT specialists with a significant focus on sinus-related procedures (such as T.P. & E.V.) will find the ROI even more advantageous, as the increased frequency of such procedures can accelerate the payoff period, making the investment in Prosidio's technology not just viable but highly profitable in a shorter span. This accelerated payoff is particularly critical in high-volume sinus practices, where the efficiency and effectiveness of Prosidio's systems can be maximized, enhancing both the financial health and the quality of care within these specialized settings.

"As a result, young physicians entering private practice may be more negatively affected by a lack of readily available endoscopy equipment compared to more established practitioners who may have adapted to workflows that don't rely as heavily on this technology."

Average ROI timeframe for T.P. And E.V. Based on insurance type



Modern rigid and camera-based endoscopes offer superior visual precision compared to traditional direct-view systems. Prosidio's technology likely contributed to improved diagnostic accuracy, allowing providers to identify subtle pathologies that might be difficult to visualize otherwise. The ability to capture and store high-resolution images and videos doesn't just aid diagnosis; it also helps patients become active participants in their care. By visualizing their condition, patients gain a better understanding, potentially leading to improved treatment adherence and better outcomes. This clear communication also promotes shared decision-making. Additionally, enhanced diagnostic precision, enabled by superior visuals, can

potentially streamline the path to recovery. This benefits both patients and providers, increasing patient satisfaction while also potentially maximizing reimbursement through accurate procedure documentation.

The results of this study are encouraging, but limitations exist. As a single-practice study, the generalizability of findings requires validation through further research encompassing other practice settings. Additionally, while this study focused on procedure volume, future investigations should directly assess the impact of Prosidio's systems on clinical outcomes, patient satisfaction, and long-term practice performance measures.

"ENT specialists with a significant focus on sinus-related procedures (such as T.P. & E.V.) will find the ROI even more advantageous, as the increased frequency of such procedures can accelerate the payoff period, making the investment in Prosidio's technology not just viable but highly profitable in a shorter span."

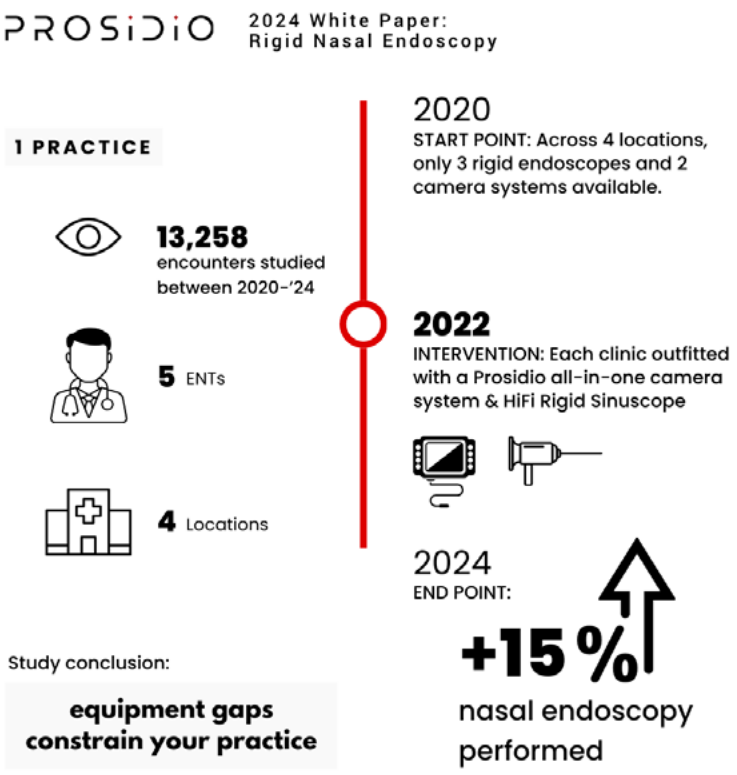
Traditional medical device manufacturers often prioritize complex, high-cost systems designed for large institutions. This can exacerbate technology access disparities between large hospitals or academic centers and smaller Otolaryngology practices. Prosidio's mission is fundamentally different. We believe that every doctor, regardless of practice size, deserves access to the best tools to care for their patients. Our commitment to affordability, coupled with uncompromising image quality and functionality, empowers private practices to provide the same level of diagnostic excellence found in the most prestigious institutions. By democratizing cutting-edge technology, Prosidio isn't just another medical device company – we're championing physicians and ensuring that all patients, no matter their location, receive the exceptional care they deserve.

Conclusion

This study's results provide compelling evidence that Prosidio's approach directly benefits private Otolaryngology practices. By providing affordable, high-quality endoscopy solutions seamlessly integrated into clinic rooms, Prosidio empowers practitioners to confidently leverage the diagnostic power of endoscopy. The increased utilization of nasal endoscopies translates into improved diagnostic capabilities and elimination of bottlenecks that can constrain the profitability of a private practice.

Prosidio's commitment to accessible, value-driven technologies challenges the limitations of traditional device manufacturers. Their model addresses a critical need within the private practice landscape, contributing to a more equitable distribution of advanced equipment. This democratization of technology empowers independent otolaryngology specialists to deliver state-of-the-art care, potentially improving clinical outcomes and fostering long-term practice sustainability.

While further research is needed to fully explore the broader implications, this study offers a promising foundation. It highlights Prosidio's disruptive potential in improving the sustainability of private practice ENT. Their focus on delivering cost-effective excellence aligns with the evolving needs of community physicians, ultimately advancing the quality and accessibility of patient care within the Otolaryngology field.



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Citations

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