Oral Appliance Management of Obstructive Sleep Apnea: Why Bother?

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INTRODUCTION:

An oral appliance (OA) that manages Obstructive Sleep Apnea (OSA) works by holding the jaw in a slightly forward position and preventing it from dropping back. The resulting muscle activity increases airway caliber which reduces airway collapsibility and reduces the likelihood of the tongue dropping back and occluding the airway during sleep. Tension created on soft tissues such as the soft palate reduce tissue vibration, which either lessens or eliminates snoring sounds. Considered first line therapy for the conservative management of snoring since 1995 to date, current medical guidelines document an OA as a standard of care for management of all OSA severities if the patient cannot tolerate Positive Airway Pressure (PAP) therapy or prefers an OA to PAP therapy.[1]

The important question is why bother with OA management of OSA? Afterall, Positive Airway Pressure (PAP) is effective and has been referred to as "Gold Standard" therapy for years. In fact, if one considers solely efficacy, there is no need to bother with any other alternative. Unfortunately, this sentiment, which has dominated therapeutic decisions for years, has resulted in less than favourable outcomes in our battle against OSA. Poor OSA treatment outcomes can often be explained by the following:

> *"We are not actually treating OSA, we are treating patients that are afflicted with OSA; therefore, the patient's ability to consistently adhere to use of a chosen therapy will ultimately determine its therapeutic effectiveness, and the ultimate outcomes."*

This update on OSA treatment will contrast therapeutic outcomes associated with both PAP and an OA to manage OSA; efficacy, effectiveness, adherence, ability to normalize co-morbidities, such as measures of sleepiness, daytime vigilance, quality of life indices, cardiovascular endpoints, and finally, patient preference will be discussed, and recommendations will be made regarding how OA therapy could play a meaningful role in improving the outcomes we are currently experiencing in our battle against OSA.

OBSTRUCTIVE SLEEP APNEA PREVELENCE AND BURDEN:

Unhealthy sleep results in substantial economic and health costs world-wide, approaching $700 billion/year.[2] A major contributor to unhealthy sleep is OSA, which impacts on the ability to breathe during sleep, resulting in both sleep arousals and a reduction in the amount of restorative stages of Deep Stage III sleep, and Rapid Eye Movement (REM) sleep, all of which contribute to daytime somnolence and a host of other medical co-morbidities. A 2015 Frost and Sullivan report commissioned by the AASM found that in the United States, sleep disorders are responsible for approximately $150 billion in workplace and motor vehicle accidents, lost productivity, and comorbid diseases.[3] Worldwide, the number of people affected by sleep apnea is approaching 1 billion, with prevalence exceeding 50% in some countries, of which approximately 85% remains undiagnosed.[4] Considering that the prevalence of Canadian adults with, or at high risk of having sleep apnea is approximately 26.8%,[5] approximately 8.6 million Canadians and 3.3 million Canadians that live in Ontario

remain undiagnosed and suffering. When considered either globally, or locally, these statistics justify a growing concern regarding current OSA prevalence, the level of patients undiagnosed, and the importance of ensuring that resources are best utilized, and that outcome levels are optimized, in our battle to treat OSA.

WHO BEARS THE RESPONSIBILITY FOR OSA TREATMENT?

OSA is a medical disease that should be managed under the supervision of a physician. It is recommended that a diagnosis be made by a Board-Certified Sleep Specialists.[6] However, in collaboration with a physician, a dentist can also participate in the management of OSA through OA therapy. This involves the use of an OA that is worn during sleep to help maintain airway patency. A report on the State of Oral Health in Canada, published by the Canadian Dental Association (CDA) in 2017 begins with these words, "Good oral health is essential to overall health and quality of life. Good oral health enables us to speak, smile, breathe, drink, and eat."[7] That same year, the American Dental Association (ADA) published a policy statement on the role of dentistry in the treatment of Sleep-Disordered-Breathing (SDB), stating:

> *"Dentists should screen patients for Obstructive Sleep Apnea (OSA) as part of a comprehensive medical and dental history... Oral appliance therapy is an appropriate treatment for mild and moderate sleep apnea, and for severe sleep apnea when a Continuous Positive Airway Pressure (CPAP) is not tolerated by the patient".*[8]

The current American Academy of Sleep Medicine (AASM) Guidelines state that although PAP is first line therapy for the management of OSA, an OA is indicated as a standard of care for patients that cannot tolerate PAP or simply prefer an oral OA to PAP. These guidelines which were published jointly by both the American Academy of Sleep Medicine (AASM) and the American Academy of Dental Sleep Medicine (AADSM) clearly define the dentist's role in treating OSA, which includes playing an integral role in reducing public health burden of undiagnosed and untreated OSA by patient screening and medical referral when appropriate, and by participation in the management of OSA, under the supervision of a physician, with an OA that has been prescribed by a physician.[1]

OA Vs PAP EFFECTIVENESS:

A therapy's performance under "ideal and controlled conditions" is referred to as it's "efficacy". A therapy's "effectiveness" on the other hand, refers to its performance under "real-world conditions".[17] PAP's very high efficacy has positioned it as the Gold Standard therapy for management of OSA,[5] and to date, PAP remains the dominant therapeutic endpoint. However, poor PAP adherence is also well documented in the literature, a meta-analysis of 20 years of research demonstrates no material improvement in PAP adherence, notwithstanding the tremendous improvements in PAP therapy devices and mask interfaces.[18] Studies show that approximately 50% of patients prescribed PAP drop therapy at 6 months and continue to drop off leaving approximately 17% adherence at 5 years.[9,10,11,12] Notwithstanding the clear superiority of PAP efficacy for eliminating apnea, the literature shows health outcomes associated with both PAP and an OA to be similar, thought to be due to the superior adherence associated with an OA.[12,13,14,15,16] This is found to be the case for measures of functional outcomes,[16] hypertension outcomes[14] and cardiovascular mortality outcomes.[15]

Unlike PAP, OA therapy does not always result in a complete elimination of OSA, however, a systematic review and meta-analysis of the literature clearly documents that OA therapy has a superior treatment adherence.[19] In contrast to a low to moderate level of PAP adherence, [9,10,11,12,18] OA therapy

adherence is approximately 90% at 2.5-year follow-up.[20] with nightly usage averaging approximately 7.5 hours.[21] The net result being that health outcomes associated with both therapies are similar.[12,13,14,15,16] This is possibly explained by a "dose dependent effect" for PAP, where health benefits are related to level of usage. For instance, PAP studies indicate the need for 6 hours of nightly use for objective sleepiness to be resolved, greater than 5.6 hours of nightly use for objective hypertension to be resolved and more than 6 hours of nightly use for the greatest mortality risk reduction to be experienced.[12] Yet, 4 hours use/night, 5 nights/week remains the commonly cited industry benchmark for demonstrating PAP adherence.

Unfortunately, due to the strongly entrenched position that PAP is Gold Standard therapy, and a general lack of awareness of how comparable an OA is to PAP regarding effectiveness, it is often not considered or simply dismissed in favor of PAP.[9,10,11,12,18] Additionally, in an attempt to encourage a patient to try harder to adhere with PAP, physicians sometimes dismiss an OA as a less effective option. Although the intentions may be honorable, the result can be potentially harmful; patients that ultimately do not adhere to PAP therapy may in fact not even consider an OA since they have heard from the physician that they are ineffective. The potential for these patients to remain untreated due to this misinformation cannot be ignored.

Perhaps the most meaningful long-term concerns for patients afflicted with OSA revolve around cardiovascular endpoints. A recent systematic review and meta-analysis found that both PAP and OA therapy reduce blood pressure by a similar and statistically significant amount in patients with OSA.[13] A randomized controlled trial published in 2013 evaluating 24-hour mean arterial blood pressure found OA therapy to be non-inferior to PAP, this same study documented that OA therapy is superior to PAP in improving quality of life.[14]

A collaborative effort between physicians and dentists could best serve sleep apnea patients. Those patients that can adhere with PAP would be considered a "fait accompli". However, for patients that cannot tolerate PAP, by offering an option that has a documented high adherence with similar treatment outcomes to PAP, overall outcomes for managing OSA would improve. Further, by offering this option to those patients that are having difficulty wearing their PAP all night and thus remaining sub optimally managed, these outcomes would improve even further. [22] For those skeptical about proceeding with a therapy that might not be effective, there are literature validated protocols available that provide proof of concept by evaluating the effectiveness of OA therapy prior to proceeding. [23]

In Canada, 80% of the populace have a dentist, and approximately 86% visit a dentist within a 2-year period.[24] In the United States, a survey of American oral health behaviour during the COVID-19 Pandemic found that 90% believe that maintaining oral health is essential to protecting their overall health during the pandemic and that 93% plan on visiting a dentist in 2021. [25] Considering the level of participation in general dental services, and the prevalence of OSA in the general population, mandatory, or more consistent dental involvement could significantly decrease the level of undiagnosed OSA that currently exists. A 2019 questionnaire-based study involving American dental schools found that 45% of dental schools have sleep clinics and 91% have dental sleep medicine CE programs[26] However, a 2021 survey conducted by the National Dental Practice-Based Research Network found that only 4% of dentists are currently trained to an Expert level in OA therapy [27] This highlights two very important issues; that dentistry needs to become more routinely involved by becoming adequately trained and implementing regular screening for each and every patient that attends their office, and also the importance of seeking out a dentist that is adequately trained in the management of OSA with OA Therapy when a patient is seeking out a dentist to render treatment. Likewise, when a Sleep physician is seeking out a dentist to collaborate their patient management.

Considering that 50% of PAP prescriptions are found to be non-adherent by 6 months, referring these patients to a qualified dentist could improve current outcome levels by decreasing the number of PAP non-adherent diagnosed OSA patients that remain untreated. [9,10,11,12]

> *"Medical-Dental cross education that fosters collaboration could go a long way in reducing the epidemic level prevalence of OSA."*

TIME FOR A TREATMENT PARADIGM SHIFT:

Notwithstanding the "Gold Standard" moniker, a recently published Agency for Healthcare Research and Quality (AHRQ) draft report documented a low strength of evidence that PAP use improves hypertension, cardiovascular disease, heart attacks, stroke, diabetes, depression, and quality of life indices.[28] Over a dozen organizations, including the AASM penned a response[29] to the AHRQ providing insights and suggestions to be considered for the final report. This response stated, "AHRQ conclusions do not reflect the totality of available evidence" and pointed out that measures of excessive sleepiness, blood pressure reduction, and motor vehicle accident reduction were omitted as clinically significant outcomes in the draft report. The response also discussed that AHI is a less than optimum surrogate of outcome,[30] and that PAP has a "dose response", and as with most treatments, PAP adherence is variable.[31,32] Studies show us that measures of sleepiness as documented by the Functional Outcomes of Sleep Questionnaire, Epworth Sleepiness Score, and the Multiple Latency Score have been shown to be related to hours of nightly PAP use.[32] The response letter proposed at least two more appropriate approaches for examining the dose-response nature of PAP clinical outcomes. The first involves reduction of AHI, along with proportion of total sleep time the therapy is used; MDA Index[33] and the effective AHI.[34,35] The second involves examining the relationship between hours of therapy use and improvements in clinical outcomes.[35,36,37]

The AASM's recommendations were suggestive of replacing the "Gold Standard" approach with one that considers both efficacy and adherence, a protocol for which the literature documents similar therapeutic outcomes with both PAP and OA therapy.[12,13,14,15,16]

OPTIMIZED CARE THROUGH PERSONALIZED TREATMENT:

To be clear, PAP efficacy is not being challenged regarding its ability to reduce or eliminate OSA. However, routinely prescribing PAP in a polarized fashion and dismissing other therapies as less effective or even ineffective is being challenged. This approach leaves too many patients either sub-optimally managed because they wear their PAP only part of the sleep period, or unmanaged all together because they simply cannot adhere to PAP therapy. Adding insult to injury, many of these patients don't pursue alternatives because they have been told that PAP is the only effective therapy. A patient that has an AHI of 80 that can wear PAP for only 4 out of every 8-hour sleep period would be told they are adherent to therapy. Notwithstanding the 320 events they continue to experience during that sleep period. If that same patient were able to wear an OA all night long but the residual AHI were 25 events per hour, they would be advised that their OA is not working, and that they should try harder to use PAP. Yet, they are experiencing 320 events for the full night while using PAP and only 200 events for the full night while using their OA. A significant percent of PAP adherent patients remove their PAP device after only 4 hours of wear and for some, less than 4 hours wear,[38,39,40] resulting in a meaningful level of unmanaged residual OSA. In some patients, partial use of their PAP devices leaves patients more poorly managed than the incomplete OSA resolution they experience with an OA. This concept, referred to as Mean Disease Alleviation (MDA),

was first published for PAP vs OA therapy by Vanderveeken in 2013, documenting it to be remarkably similar.[41] This comparison, which resulted in an MDA of 50% for PAP vs. an MDA of 51% for an OA, utilized objective monitoring of OA adherence. OA adherence was objectively documented as 91.2%, which is remarkably similar to the OA adherence subjectively reported by Yoshida in the year 2000.[20] Others have also documented a similarly high OA adherence using objective measurements; 86.1%.[42] Clearly, outcomes for patients afflicted with OSA can be optimized by personalizing their care, time spent on and off treatment in real-world conditions must be considered in determining the true effectiveness of a given therapy and the most appropriate therapy for a given patient.

The current FDA recall of 3-4 million Philip's devices,[43,44,45] along with the COVID Pandemic induced microchip shortage has resulted in a very meaningful shortage of PAP devices. FDA recommendations to deal with this recall include considering alternative treatments for sleep apnea, such as positional therapy or an OA.[46] In consideration of both the urgent shortage of PAP devices, and the shift to placing more emphasis on patient adherence to therapy, for those patients that present as good candidates for an OA, it simply makes sense to consider prescribing an OA and preserving PAP devices for those patients who need them most. A shift in paradigm from a polarized 'Gold Standard" therapy approach to one based on effectiveness determined during 'real world conditions" stands to dramatically improve OSA therapy outcomes.

In both the USA and Canada, a dentist completes their dental degree with either minimal or no training in the use of OA therapy to manage OSA.[47] However, to optimize outcomes, it is recommended to work with an adequately trained dentist qualified to provide OA therapy. The American Academy of Dental Sleep Medicine (AADSM) provides a "Qualified Dentist" designation, which requires a dentist to successfully complete the AADSM's Mastery Course I.[48] Upon successful completion of this program a dentist is provided an official credential demonstrating basic competency in dental sleep medicine. Obtaining this credential also provides a solid foundation of knowledge for those dentists interested in becoming a Diplomate of the American Board of Dental Sleep Medicine (ABDSM). Working in collaboration with a physician, a well-trained dentist is ideally positioned to have a significant impact on all levels of patient interaction, including screening, referral, management, and follow-up.

For PAP non-adherent patients, the best conservative therapy remains an OA, with similar outcomes to PAP when treatment adherence is considered.[12,13,14,15,16] However, as of the writing of this article there are over 100 FDA approved OSA OA devices available, how does one choose? To start, the AADSM provides helpful guidance regarding the characteristics of an OSA OA.[49] These characteristics include being custom fabricated, using biocompatible materials, being adjustable in 1mm increments (or less), engaging both the upper and lower arches and maintaining the mandible in a prescribed position. Comfort is critical to facilitate optimum patient adherence, and other important characteristics include accurate and consistent manufacturing, and durability. Working in a CAD|CAM environment enables the use of excellent space-age materials that are unavailable when manufacturing an OA with traditional dental technologies. These materials are much more durable than traditional dental materials and the technology helps to ensure accuracy, consistency and continuous research and development which allows for continuous improvement of appliance design.

For patients that experience residual apnea with OA therapy, various adjunctive therapies can be utilized to reduce it; these include sleep position,[50] head elevation, [51] weight loss,[52] myofunctional therapy,[53] and increasing fitness levels,[54] all of which have the potential to further reduce OSA levels. Optimizing OA therapy outcomes involves optimally calibrating the OA and then implement-

ing patient appropriate adjunctive therapy to further reduce any residual OSA.

> *"For some patients, an OA represents the full journey to wellness, and for others, an OA represents the beginning of their journey to wellness; personalized patient treatment optimizes both care and outcomes."*

DEALING WITH OBSTACLES:

Locating a Qualified Dentist:

- Visit AADSM.org and click on "Find an AADSM Dentist"

- 83% of surveyed sleep physicians cite the lack of adequately trained dentists as an obstacle for them prescribing OAT.[55] This can be addressed by better advocacy and education.

- Effective OA therapy must include patient evaluation regarding dental and periodontal health, oral-facial skeletomuscular health, selecting the device design that is most appropriate for both the patient, and the baseline sleep study findings, and sufficient knowledge and skill for the dentist for the delivery and calibration of the OA, with full physician-dentist collaboration and communication throughout.

Inconsistent Communication with the Dentist:

- The best way to avoid this issue is to align with a dentist that has obtained sufficient training; by working with an AADSM Qualified Dentist, one can expect that an adequate minimum level of training has been obtained.

- The AADSM has published on "Dental Sleep Medicine Standards for Screening, Treating, and Managing Adults with Sleep-Related Breathing Disorders"[56] this document reviews expectations for each step of the treatment process including physician reporting protocols.

- Often, a physician simply hands a prescription to a patient and requests that they visit with their dentist to obtain an OA to manage their OSA. Under these circumstances, there is no guarantee the appliance will be provided by a trained dentist, or that the dentist will even be aware of the recommended reporting protocols. When an untrained dentist is approached with a prescription, it is always best that they refer the patient to a qualified dentist. However, there is no guarantee this will happen so it is recommended that the initial physician referral is to a qualified dentist.

Can't Predict OA Treatment Response:

- 88% of surveyed Sleep Physicians cite unpredictable, variable performance of OA as a reason for not prescribing it.[55] This concern revolves around the expectation of eliminating the AHI.

- However, when considering reduction of symptoms or MDA, rather than elimination of AHI, OA treatment response is equivalent to that of CPAP.[12,13,14,15,16]

- Nevertheless, for those seeking pretreatment objective verification, literature validated tools such as the ApneaGuard are available to help pre-establish OA outcomes before initiating OA therapy with a custom OA.[23]

Medical and Dental Electronic health records are not integrated:

- This continues to be an obstacle since medicine and dentistry currently does not share patient records. Allowing dentists access to the medical data base would help to facilitate both medical-dental communication and collaboration in the effort to manage patients afflicted with OSA.

OA Adherence is subjective, not objective:

- 86% of surveyed sleep physicians cite lack of compliance monitoring and data as a reason to not prescribe OA therapy. [55] However, PAP routinely offers this feature.
- Current OA objective adherence technology does exist, but it is bulky, cumbersome, adds an additional expense and as such is not often prescribed. To date, it has not been established as a standard of OA therapy practice.
- However, the ability to monitor both adherence and outcomes is very important to physicians and is a standard of care for PAP.

CPAP provides a trial period:

- A 30 or 90-day (depending on insurance) PAP trial period can be used to evaluate tolerance and effectiveness of PAP. This is not available for an OA.
- Over-the Counter (OTC) devices are available for a trial period but unfortunately are not representative of what a custom-made oral appliance has to offer. They are typically bulkier, less adjustable, less retentive, and less durable. This may result in a negative impression on the patient. If one elects to use an OTC device as a trial, it is important to use one that has similar characteristics as the custom appliance that will be used.
- However, the literature lends support to the notion that most patients will be tolerant of wearing an OA (90% at 2.5 years), [20] and that they will wear it for most of the sleep period (7.5 hours/night).[21]

Dentists do not want to be linked to Medicare / CMS rules and regulations

- Dentists are unfamiliar with this environment and as such there is a learning curve for them. However, there are several 3rd-party companies that can successfully aide the dentist in navigating these unfamiliar areas of practice.

Physicians say PAP simply works; OA therapy only works 50% of the time:

- These statistics are based on the likelihood of reducing AHI to below 5 in a controlled environment, disregarding adherence. The ability of PAP to perform very well under these circumstances led to the “Gold Standard” approach that has been used since the early 1980’s.
- Unfortunately, this approach has resulted in less than favorable outcomes with many patients left unmanaged due to being genuinely intolerant to using PAP, or sub managed, due to taking their PAP off after only a few hours of wear each night.

- However, when one considers the dose dependent effect of PAP use,[32,33,34] and implications of MDA,[40] OA therapy and PAP result in similar outcomes.[12,13,14,15,16]

Five days for patient to obtain a PAP, an OA device takes several weeks:

- 82% of surveyed Sleep Physicians cite lengthy time to treatment as a main reason for not prescribing OAT.[55]

- The efficiency of digital scanning, transmission of files and CAD|CAM design and manufacturing of the OA has helped to streamline this process such that many custom OA manufacturers have brought manufacturing time down to less than a week.

- For patients in urgent need of immediate relief, prefabricated devices are available for immediate, same-day delivery, that can be used while the custom-made OA is fabricated and can be delivered. However, studies show us that custom fabricated OA's are preferred by patients and had increased adherence in comparison with over-the-counter non-custom appliances.[57]

- Often, lengthy time-to-therapy timelines is the result of inefficient physician-dentist communication. The AADSM provides guidance regarding protocols and communication that efficiently enable the provision of OA therapy.[56] With standardized protocols, efficient communication and digital CAD|CAM technologies, OA therapy with a custom manufactured OA can be provided within a couple of weeks of the physician referral.

Multi-disciplinary practices not economically viable:

- In fact, there are several successful multi-disciplinary practices in North America, where sleep physicians, dentists and other health care providers work collaboratively under one roof.

Lack of OA Insurance Re-imbursement:

- 94% of surveyed Sleep Physicians cited a lack of OA therapy insurance coverage (private and Medicare) as a main reason for not recommending an OA.

- Insurance re-imbursement varies depending on jurisdiction. On a global scale OA therapy prescription is related to the existence of insurance coverage. Of course, in the end, the decision whether, or not, to proceed with therapy is the patient's prerogative. It is critical that the patient make an informed decision, which requires full disclosure of the OA alternative, regardless of insurance coverage in a particular jurisdiction.

Switch in therapy from CPAP to OAT is not covered:

- Insurance carriers will typically not cover a switch in therapy in the same 5-year period. Generally, insurance pays for PAP, so to quickly provide the patient therapy, PAP is often prescribedimmediately. With this practice, the PAP non-adherent patient, has lost any eligibility for OA therapy coverage due to the 5-year rule. The solution to this problem is to routinely prescribe a PAP Trial Period in order to demonstrate adherence and tolerance to PAP before committing to it, and by doing so, the patient will have preserved any existing OA benefits should they in fact experience difficulties with PAP.

OA therapy involves concerning side effects:

- 88% of surveyed Sleep Physicians cited concern of side effects as an obstacle to prescribing OA therapy. Interestingly, 78% cited concern for a patients' ability to tolerate wearing an OA or that they are painful, difficult to use or break frequently.

- It is important to note that there is no published data whatsoever to support these concerns. In fact, these concerns contradict literature data that long-term adherence to OA therapy is an established 90% at 2.5 years.[20] If patients found an OA difficult to wear, painful, or difficult to use, surely, long term OA adherence studies would document lower than 90% adherence to therapy.

- Provided the OA is properly delivered by a Qualified Dentist, side effects regarding comfort are very well documented to be mostly short lived, during the initial adjustment period.[58] These include excessive salivation, dry mouth, gum irritation, tooth tenderness/pain, abnormal dental occlusion in the morning, masticatory muscle tenderness and temporo-mandibular joint discomfort and/or stiffness.[59, 60]

- There is no published evidence of significant or persistent temporo-mandibular joint dysfunction or an increase in its prevalence.[61]

- Long term side effects mostly revolve around bite changes,[58] which are also associated with long term PAP wear.[62,63]

- It is important to note that side effects may be undesirable, but are usually well tolerated[64,65,66,67] by patients and do not result in discontinuance of OA wear, particularly when symptomatic relief of their condition is achieved.

- Overall, the frequency and intensity of OA side effects have been found to be similar to reports of PAP side effects,[16] and crossover comparison studies comparing patient preference for PAP vs. OA, document that patients prefer OA therapy to PAP in all aspects evaluated.[13] In fact, multiple studies have found that patients prefer OA therapy to PAP.[12] It is this preference that may be translating into superior usage and adherence in real world conditions.

When a Sleep Physician refers a patient to a dentist, they often don't return for follow-up:

- Once again, much of the time this problem results from working with a dentist that is inadequately trained.

- An adequately trained dentist will always report back to the prescribing physician after the initial consultation, upon delivery of the OA, once the OA is optimally calibrated, at their 6-month follow-up appointment and yearly thereafter. The physician should also be advised once you become aware that a patient is no longer wearing their OA, or if a patient has re-commenced wearing their OA after dropping out of treatment.

- Of course, there are those patients that refuse to return for the efficacy study once their symptoms are relieved. However, an adequately trained dentist will always encourage the patient to do so and will communicate in a timely manner with the patient's physicians. Communication is key.

THE CALL TO ACTION IS CLEAR – ARE WE PREPARED?

With the worldwide incidence of OSA approaching 1 billion, and prevalence exceeding 50% in some countries, of which approximately 85% remain undiagnosed,[3] the call to action expressed by both the CDA and ADA regarding the role of dentistry for management of OSA is both timely and understandable. This call to action becomes even more meaningful when one considers that approximately one in 3 adult dental patients are likely to be at intermediate or high risk for OSA,[68] regular screening by all dentists for all adult patients could meaningfully impact on the number of undiagnosed patients. PAP's position as the most efficacious non-invasive OSA therapy remains unchallenged, however, modest PAP adherence, results in OA therapy outcomes being comparable to those afforded by PAP; likely due to a lesser efficacy being offset by a higher level of usage, due to superior adherence.[69,70,71] A shift to effectiveness being determined during 'real world conditions", which considers adherence to therapy stands to dramatically improve OSA therapy outcomes by leaving the current polarized therapy approach behind. Both the AHRQ draft report and the AASM response letter acknowledge the need for better research, the shortcomings of using AHI as an outcome marker, the importance of considering treatment adherence, and the evaluation of treatment alternatives that patients are more likely to comply with. All of which bodes very well for OA therapy as a viable treatment alternative. The potential for physician-dentist collaboration is exemplified by how dentistry has positioned itself to help patients during the COVID-19 pandemic, the Phillips PAP recall, and the microchip shortage.

This article has attempted to address obstacles commonly cited by Sleep Physicians that interfere with prescribing an OA to manage OSA. Many of the cited obstacles could be addressed by more consistent physician-dentist communication, by better dental education for dental providers, by a shift towards recommending therapy that patients adhere to and continued technological advancements such as objective OA adherence monitoring, objective OA calibration methods, and theragnostic technologies to help determine OA candidacy.

Just how prepared are physicians and dentists to collaborate in fulfilling this call to action? It all starts with a will to do what's best for the patient.

ABOUT PANTHERA DENTAL

Panthera Dental designs, manufactures and markets dental prosthetic, implantology and sleep breathing disorder solutions using an innovative CAD/CAM process and superior quality materials. Both a pioneer and a leader in the field of custom-made dental solutions, its proprietary technology allows it to offer next-generation products to the widest range of patients possible. Panthera Dental is headquartered in Quebec City, Canada, with subsidiaries in the USA, France and Germany, and associates worldwide.

Panthera Dental website: www.pantheradental.com

Panthera Dental's sleep division website: www.pantherasleep.com

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