**To:** Jeffrey Slovin, Dentsply Professional CEO

**From:** Siarra Sens, Registered Dental Hygienist

**Date:** October 6th 2016

**Subject:** *Proposal for Determining the Feasibility of Adding a New Innovative Product to Your NUPRO with NovaMin Prophy Line*

**Introduction**

In the world of dentistry, there is a growing population of patients who are becoming fluoride-free. Moreover, it goes without saying that the general population is moving to a more natural way of living, or a way of living that involves a reduced use of chemicals. In the few years that I have been working as a dental hygienist, I have used one general type of polishing paste, which has fluoride as well as several unnatural ingredients in it, as this polishing paste also comes in several unnatural flavours like Piña colada or bubble gum or cotton candy etc. One in a hundred of my patients will admit actually enjoying the taste of the polish, yet the majority find the taste repulsive and repeatedly ask if there is a more natural alternative, or a fluoride-free alternative. My desired answer always screams yes! In a world of infinite possibilities, there must be a polish for everyone! But my real answer sadly remains: no. No, not yet.

**Statement of Problem**

In previous years, the standard of care for the dental hygienist performing a prophylaxis included coronal polishing until research discovered that polishing removed valuable enamel. The American Dental Hygienists' Association (ADHA) came on board with their position paper on polishing that stated the following:

* Polishing is viewed as a cosmetic procedure with little therapeutic value
* Thorough brushing and flossing can produce the same effect as polishing
* Continuous polishing can, over time, cause morphological changes by abrading tooth structure away
* Fluoride in the outer layers of enamel is removed through polishing

Their main conclusion was that “polishing should be performed only as needed and not be considered a routine procedure.” In other words, rather than polishing every tooth surface, the dental hygienist should evaluate which teeth require it and then polish only those tooth surfaces.

With that said, I question whether it was appropriate for the ADHA to make a broad statement against polishing. Is polishing all of the teeth always detrimental or can there be possible benefits, in remineralizing the teeth, aiding in gum health, or even just providing the patient with an overall feeling of smooth and shiny teeth? Since every ingredient in my polish paste has a proven beneficial effect for the oral cavity, there is absolutely no harm done. Have dental hygienists, in general, adhered to the “selective polishing” concept? Probably not, since most dental hygienists include full mouth coronal polishing as an integral part of their prophylaxis procedure. This is just the reality! Patients expect it; if there is no polishing, they may feel shortchanged, not to mention, the treatment of polishing is undoubtedly favourited among the majority of patients. In the past, many would say there was no real benefit to full mouth polishing. But in the practice of today's dental hygiene, this is not the case. It is time to rethink where the profession of dental hygiene stands regarding this issue. I believe it is to the benefit of the patient and the dental hygiene practitioner to take a closer look.

Additionally, as I stated above, there has not yet been a natural prophy paste invented to appease the growing population of alternative patients who seek chemical and fluoride free-options. I am not saying that I am against the use of fluoride, but after years of altering my treatment plan to suite the needs of these patients, I am left with one last dilemma: the limiting amount of prophy pastes that are fluoride-free.

**Proposed Solution**

My product consists of high-quality natural and organic ingredients including Redmond bentonite clay, calcium carbonate powder, xylitol, baking soda, and various carefully selected essential oils like lavender, peppermint, cinnamon, clove, and sweet orange. All of these ingredients have beneficial properties to the teeth and surrounding tissues, which I would be more than happy to share with you upon request. My primary four ‘flavours’ I plan to create include lavender, cinnamon, peppermint, and sweet orange. I have extensively researched three main recipes for gum health, caries prevention, and desensitization. I have undergone several successful trial runs on myself and volunteers before finally mastering these recipes, though I require your assistance in further medical testing to gain FDA approval of this product. Indeed, my product has several therapeutic effects, though with the addition of your active ingredient, of hydroxycarbonate apatite (HCA) in NovaMin®, my product would more efficiently and effectively aid in the remineralization of enamel.

I understand that NUPRO® NUSolutions™ with NovaMin® is the newest Dentsply Professional prophy paste. It is currently the only product powered by NovaMin, which has only recently been introduced in the dental industry and is made of a synthetic mineral containing sodium, calcium, phosphorous and silica—all elements found naturally in the body. I am impressed by the clinical studies that have shown how these particles attach to the tooth surface and continue to release ions and remineralize the tooth surface after initial application, for up to two weeks. To date, there has been no other prophy paste product that can make this claim, which is why I am extremely interested in combining my creation with yours. The potential for NovaMin as an ingredient in innovative dental products remains very positive. I require a reputable company in the dental industry to launch my natural product, and dare I say you require a cutting edge new product that meets the needs of today’s growing “alternative” clientele.

**Scope**

To assess the feasibility of developing a market for “alternative”, natural prophy paste, I plan to pursue six areas of inquiry:

1. Are dentists using any natural tooth polish products presently?
2. How large exactly is the demand for natural prophy paste?
3. Does the market contain room for natural prophy paste?
4. How exactly does each of the ingredients benefit the teeth (what evidence-based research is there to prove these benefits)?
5. What are the costs of retrieving and producing high quality natural prophy paste? What prices for the products can the market bear?
6. Are there any possible adverse reactions in this product and if so, how will it go about to be tested and FDA approved for market release?

**Methods**

All patients (from October 31st – Nov 15th 2016) who volunteer to be part of the study and who have had the polish treatment were asked to take 5 minutes to write the anonymous survey questionnaire after their dental appointment. Afterwards, the patients would fold their answers and submit them confidentially in a folder at the front desk on their way out of the office.

Participants are representative of the general population, though the selection process was restricted by the small number of participants (N = ~40). No participants were eliminated.

Standard equipment used include generic prophy paste, standard dental polishing equipment, pen and paper (for recording survey questions, see attached document).

**My Qualifications**

My Diploma in Dental Hygiene and Bachelor’s Degree in Dental Science serve as the platform and foundation for dental-related knowledge and pursuits. However, my research and driving passion for natural healthcare began over decade ago after visiting the pyramids of Egypt, and learning that the use of botanicals and essential oils as healing agents is a long-standing practice throughout human history. I have been working with essential oils and herbs for several years now, creating natural body care products with a friend’s local company where I live on Vancouver Island. However, I am eager to expand my entrepreneurial skillsets and meet the needs of a larger population. I see great potential in the ever-evolving dentistry industry and I am now asking you to explore this proposition with me.

**Conclusion**

As a dental hygienist, the goal of my practice centers around providing preventative care, yet polishing currently aims only to treat the ‘symptom’ of stained teeth. I propose a prophy paste that not only removes unwanted stain, but aids in gum health and preventing caries formation. Natural health solutions are undeniably the hottest products on the market today, so I urge you not to miss out on this opportunity to release a product that promises inevitable success worldwide.