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### Course Synopsis:

The CE webinar will include an opportunity for the participant to assess their present whitening program and ensure best practices are being represented. The support of strong evidence-based science will be highlighted to provide the dental professional with a solid conviction to guide their decision-making in implementing best whitening practices.

### Educational Objectives:

*To understand the science and mechanisms of professional teeth whitening products*  
*To evaluate and assess the dental client proactively to ensure best treatment outcomes*  
*To apply innovative strategies to proactively address desensitization and remineralization*  
*To critically evaluate the comprehensiveness of professional whitening options available in your practice*

### References & Resources:

(All sites accessed October 2020)  
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Woodley S. Could 10% carbamide peroxide be considered an adjunctive therapy for risk management of COVID-19? *Dentistry IQ* September 2020.  
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World Health Organization. Clinical management of COVID-19. May 27, 2020.  
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Molayem S, Pontes CC. The mouth-COVID connection: I1-6 levels in periodontal disease—potential role in COVID-19-related respiratory complications. *J Calif Dent Assoc.* July 2020.

## Setting Up the Ideal Whitening Practice

### The Quest for the Perfect Smile

Alive and well and supporting a multi-million-dollar teeth-whitening industry  
Living in a world of ‘instant gratification’ has influenced society’s pursuit of obtaining quick results  
With advancements in innovative product design, there are several options that deliver fast, comfortable and effective results

### Obstacles to Whitening:

Obstacles to Professional Whitening  
64% - Too expensive  
40% - I keep forgetting to get it done  
39% - It may damage my teeth  
34% - I have sensitive teeth  
18% - It might hurt  
17% - It might make my teeth look too white

### *To understand the science and mechanisms of professional teeth whitening products*

### Historical Overview of Whitening

- Hydrogen peroxide was used in dentistry over 100 years ago for use in periodontal treatment and wound healing
- Use of peroxide-containing gingival strip to heal periodontal tissues with unintentional outcome of tooth whitening
- Custom fitted vacuum-formed trays with a carbamide gel emerged in the late 1960’s
- Overnight whitening emerged on the scene in the late 80’s; introduction of Opalescence

### Fast Forward to a COVID World

Could 10% carbamide peroxide be considered an adjunctive therapy for risk management of COVID-19?

- Oxidation principle of hydrogen peroxide has the ability to inactivate viruses and bacteria
- Penetration into the gingival crevice results in removal of gram-negative bacteria, further cleansing and stimulation of healing
- Low concentrations of H<sub>2</sub>O<sub>2</sub> over extended periods of time have a direct effect on minimizing inflammation, thereby reducing cytokine and IL-6 levels
- It is recommended that poor oral hygiene be considered a risk for COVID-19 complications supported by the fact that COVID-19 patients who have been hospitalized are far more likely to die of respiratory failure if they suffered from periodontitis before contracting COVID-19





Notes:-

**STUDY:** in vivo study

### 180 day investigation of bleaching gel efficacy with ACP

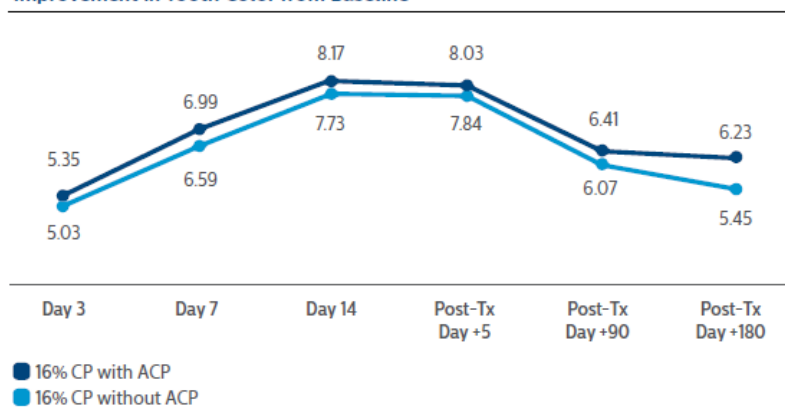
**Objective:** To determine if there are any long-term clinical benefits or side effects caused by addition of ACP to professional 16% CP bleaching gel

**Methodology:** Continuation of previously published short term study. Two groups using either 16% CP bleaching gel with ACP or 16% CP without ACP. Long term effects of ACP assessed for shade, gingival health and dentinal hypersensitivity.

**Results:** Statistical shade difference almost doubled for ACP group at day +90 and more than doubled again at day +180. Tooth sensitivity, gingival and soft tissue health remained similar to baseline levels.

**Conclusion:** The study demonstrated that the addition of ACP offers greater long-term whitening efficacy with no adverse gingival or other effects at day +90 and day +180.

Improvement in Tooth Color from Baseline



### STUDY: Comparison of the tooth shade reduction and color change effects of 6% HP with and without Philips Zoom WhiteSpeed LED acceleration followed by use of Philips Zoom NiteWhite 16% CP

**Objective:** Shade reduction comparison following application of 6% HP with and without LED acceleration including evaluation of safety, tooth color at all time points and tooth shade at Day 14 post in-office bleaching

**Methodology:** Randomized, single-blind, split-mouth (opposing arch) design. Study subjects randomly assigned to opposing arch in-office whitening with 6% HP with and without Philips Zoom WhiteSpeed LED acceleration assessed at Day 7 and 14. At Day 7 subjects were provided a three dose NiteWhite 16% CP overnight application kit, soft-bristle MTB and Sensodyne True White dentifrice for duration of study.

**Results:** Statistically significant shade reduction immediately following, at Day 7 and Day 14 with 6% HP with LED acceleration

**Conclusion:** In-office tooth bleaching with 6% HP with Philips Zoom WhiteSpeed LED acceleration was superior to in-office bleaching without LED acceleration at all study time points.

### References:

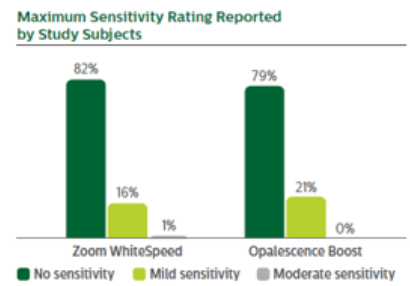
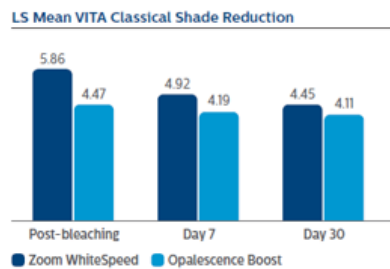
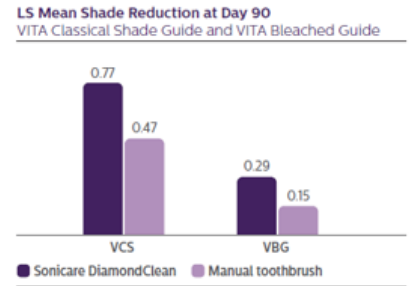
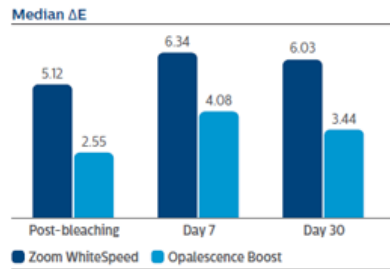
- Giniger M, Spaid M, MacDonald J, Felix H. A 180-day clinical investigation of the tooth whitening efficacy of a bleaching gel with added amorphous calcium phosphate. *J Clin Dent* 16:11-16, 2005.
- Ontiveros J, Eldiwany MS, Arriaga DM, Fay RM, Gonzalez MD, Pereira Sanchez NA, Sly MM, Paravina R. Clinical efficacy & sensitivity on in-office tooth whitening with & without light treatment combined with at-home bleaching. *J Cosmetic Dent.* Winter 2019. Vol 34 (4): 70-79.





Notes:-

**Conclusions:** At Day 7 following tooth bleaching, Philips Zoom WhiteSpeed showed statistically greater change in overall tooth color and shade than Ultradent Opalescence Boost PF. At Day 90 following tooth bleaching, Philips Sonicare DiamondClean powered toothbrush-maintained tooth shade significantly better than a manual toothbrush. Both chair-side tooth bleaching products and the toothbrushing regimens are safe for use.



**To evaluate and assess the dental Patient proactively to ensure best treatment outcomes**

### Pre-whitening Clinical Assessment and Evaluation

Personal history

Medical/Dental History

Intraoral assessment

- Use of magnification and dedicated light source
- Radiographic interpretation

Self-Assessment

Determine cause of discoloration

Identify any additional contraindications or barriers to achieving optimal results

### Pre-Whitening Patient Assessment (included in HANDOUT)

Purpose:

- Identify candidacy for whitening
- Identify patient expectations and priorities
- Inform patient of any perceived or known contraindications
- Evaluate sensitivity pre-whitening and make appropriate recommendations
- Documentation of shade
  - Centrals, cuspids, gingival third

### References:

[www.vanhaywood.com](http://www.vanhaywood.com)

### Additional Resource:

[http://www.vanhaywood.com/uploads/forms/S\\_MILE%20Analysis%20Form.pdf](http://www.vanhaywood.com/uploads/forms/S_MILE%20Analysis%20Form.pdf)





