



National Survey of Zoom!™ Chairside Whitening System



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Introduction

Since its founding, Discus Dental has been a leader in the development of innovative tooth whitening technologies. Zoom!, its newest product, is a proprietary chairside tooth whitening system designed to be used by independent dental offices. The purpose of this summary is to describe the results of 500 cases performed at independent dental offices located throughout the United States.

Summary

The analysis of 500 Zoom! Chairside Whitening cases performed across the United States showed an average improvement of 8 shades using the VITAPAN™ System shade guide. The results showed that the darker the teeth, the greater the whitening effect. The average pre-treatment shade of these 500 cases was D3. An average shade improvement of 9 tabs was observed for cases with a starting shade of A3 or darker. Thirty-nine percent of all cases achieved a shade of B1 or lighter. Seventy-seven percent of patients achieved results of A1 or better. Eighty-two percent of patients achieved B2 or better. Thirty-nine percent of all patients achieved 9 shades or more.

The Zoom! Chairside Tooth Whitening System

The Zoom! Chairside Tooth Whitening System consists of a mercury metal halide lamp filtered to emit light in the 350nm – 400nm range. The lamp is mounted in a proprietary light that allows both the upper and lower arch to be treated at the same time. The Zoom! light is used in conjunction with a proprietary peroxide gel formulated to deliver maximum tooth whitening. The gel formula includes 25% Hydrogen Peroxide buffered to a pH between 7.5 and 8.5 to prevent damage to the teeth.

The Zoom! system also includes tissue isolation materials necessary to ensure patient comfort and safety during the procedure, as well as 1.1% Neutral Sodium Fluoride gel which is applied after the procedure to re-mineralize the teeth.

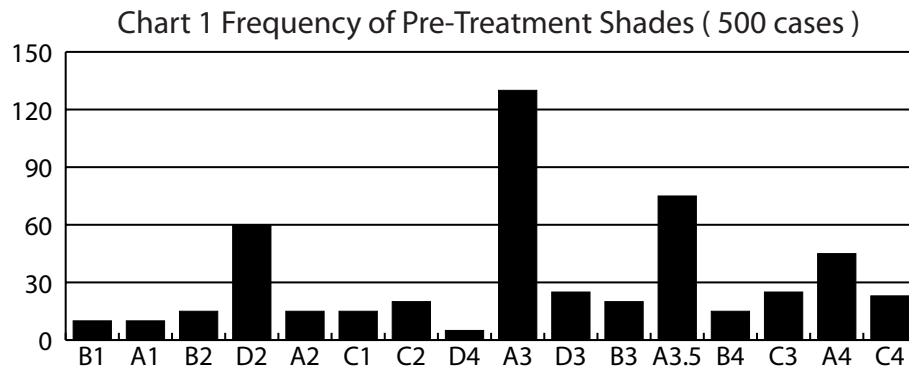
The tooth whitening procedure takes approximately 90 minutes and normally consists of the following steps:

- Polish the patient's teeth with pure pumice.
- A lip/tongue retractor is placed to expose all smile line upper and lower teeth.
- Measure pretreatment tooth color using a VITAPAN™ System shade guide.
- Apply protective lip cream to lips and lower 1/3 of nose.
- Place the protective face bib.
- Place Zoom! protective eyewear on patient.
- Isolate all soft tissue with cotton rolls and gauze.
- Apply Liquidam to exposed gingival tissue and cure for no more than 10 seconds.
- Apply Zoom! whitening gel to both arches 1-2 mm thick on the facial surfaces.
- Place light guides in patient's mouth.
- Align light using the light guides and occlusal plane.
- Illuminate teeth with the light for twenty minutes.
- Repeat the above three steps for a total exposure time of one hour.
- Whitening gel and all barrier materials are removed when procedure is complete.
- Fluoride is applied for 5 minutes.
- Post-treatment shade is measured.

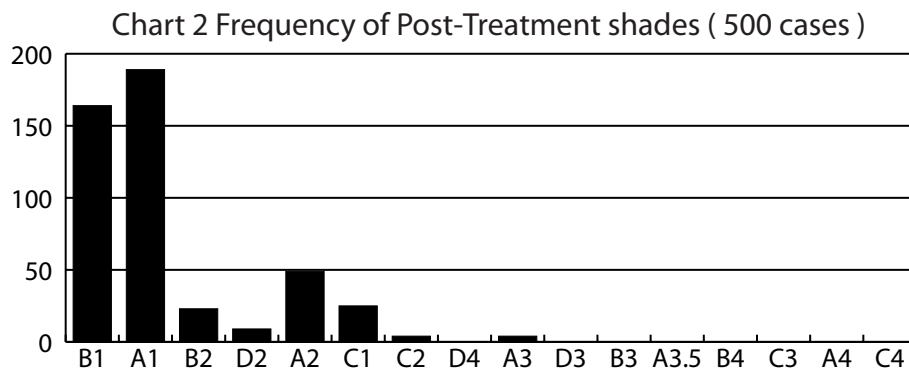
The VITAPAN™ shade guide was ordered in terms of brightness as recommended by the manufacturer, and the shade improvement was calculated by counting the tabs. One hundred sixty-three dentists across the United States were surveyed to obtain data on 500 patients.

Results

The distribution of pre-treatment shades for the 500 cases, shown graphically in chart 1 as follows:

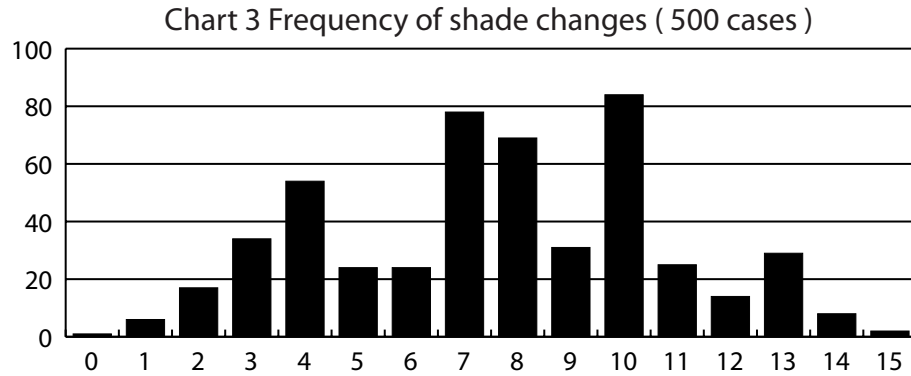


The frequency of post-treatment shades for the 500 cases are shown in chart 2 and were found to be as follows:

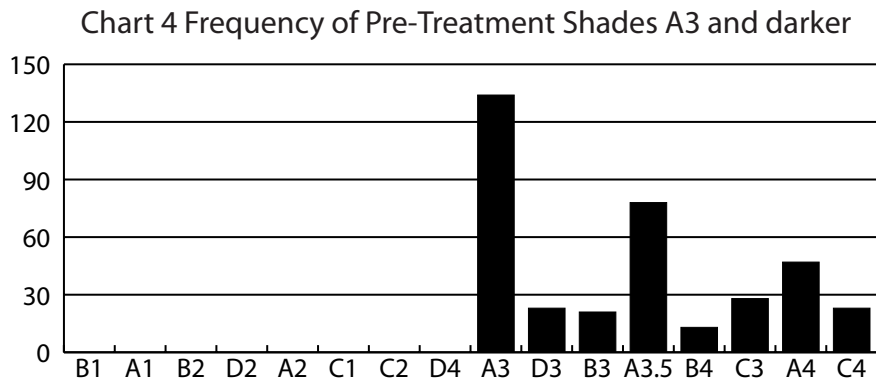


- The average pre-treatment shade for all patients was D3; average shade improvement was 8 tabs.
- The average post-treatment shade for all patients was A1.
- The darker the tooth color, the greater the improvement. For patients who began with a pre-treatment shade of A3 or darker (73% of the cases), the average pretreatment shade was A3.5 and the post treatment shade B2 showing an average improvement of 9 tabs.
- The overall results for all patients were as follows:
 - 77% of patients achieved results of A1 or better.
 - 82% of patients achieved results of B2 or better.

The distributions of shade changes for all patients are shown in chart 3 and were calculated to be as follows:

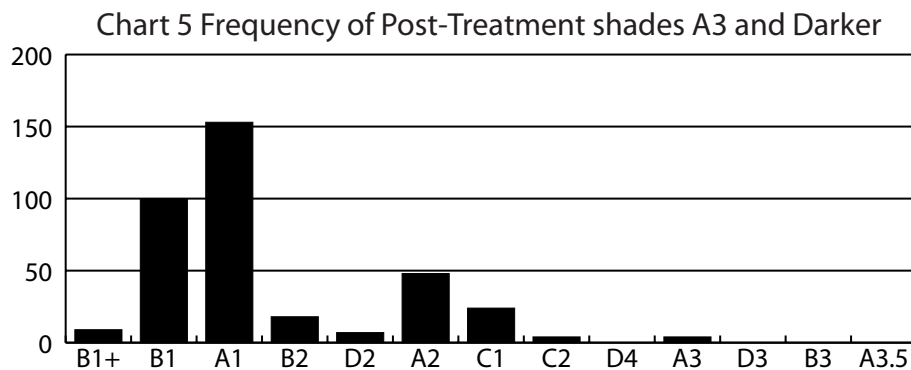


- The average shade change for all patients was 8 shades
- The average shade change for patients A3 and darker was 9 shades
- 39% of cases showed 9 shade changes or more



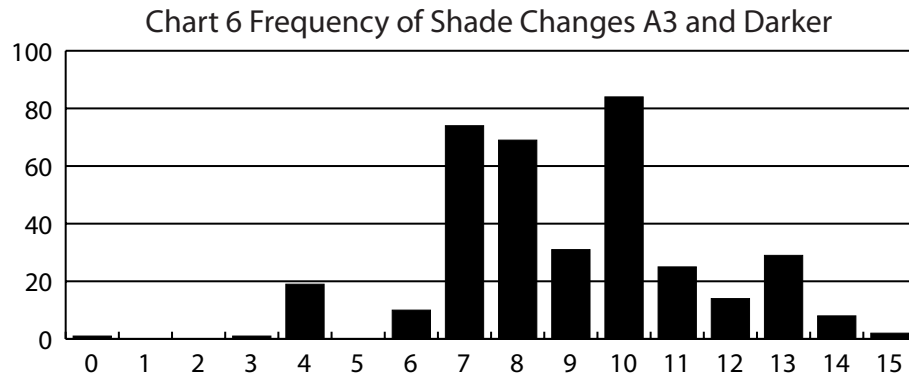
- The average pre-treatment shade for A3 and darker was A3.5

The frequency of post-treatment shades for cases A3 and darker are shown in chart 5 and summarized below:



- The average post-treatment shade was B2

The frequency of shade changes in individuals with a shade of A3 and darker are as follows and shown in Chart 6:



- The average shade change was 9 shades

Predictability

While patients differ greatly in tooth color, enamel thickness, and degree of staining, the results of these 500 cases demonstrate that in general most patients can expect to achieve 6 to 10 shades of whitening in one hour session unless their starting shade is quite light.

Conclusions

The survey results demonstrate that the Zoom! system can significantly whiten teeth to most patients' satisfaction and confirms the results of a previous clinical study.