The clear advantage

The reasons why Invisalign is now my first and only choice for orthodontic treatment

By John M. Sparage, DMD

Orthognathic surgery has allowed us to achieve improved dental occlusions. Despite thousands of improvements in the appliance, some drawbacks persist. Discomfort, hygiene difficulties, fragility and aesthetics have been of concern, especially to the socially sensitive teen patient. While doctors utilize experience and education to improve their treatment outcomes, the quest for an orthodontic tool that is more “tolerable” to patients than traditional braces continues. Fortunately, we’ve seen dramatic technological advances in the last few decades. One key advance is the advent of clear aligners.

As one of the earliest entrants into the clear aligner market, Invisalign has become a household name in dentistry. Since its introduction of clear, flexible, virtually invisible appliances in 1997, the previously held notion that orthodontic appliances must be made of metal or rigid plastic or ceramic materials has gone by the wayside. Some dentists embraced this new concept readily within their practices; others rejected it outright. Most, though, took a “wait and see” attitude regarding its success. As time passed, and doctors heard of more and more Invisalign success stories, they began to take a closer look at clear aligner appliance treatments to better serve their patients.

My own experience was similar. I was treating a select group of patients using traditional appliances. As I studied the Invisalign clear aligner system, I realized it could offer advantages over conventional braces. It is easy to understand, comfortable to wear, and aesthetically appealing. Today, Invisalign is recognized as the gold standard in the orthodontic community. Since its introduction into the clear aligner market, Invisalign has become a household name in dentistry. Since its introduction of clear, flexible, virtually invisible appliances in 1997, the previously held notion that orthodontic appliances must be made of metal or rigid plastic or ceramic materials has gone by the wayside. Some dentists embraced this new concept readily within their practices; others rejected it outright. Most, though, took a “wait and see” attitude regarding its success. As time passed, and doctors heard of more and more Invisalign success stories, they began to take a closer look at clear aligner appliance treatments to better serve their patients.

For five years now, we have suggested a clear aligner treatment for each patient, no matter how difficult the case. And we have not started one full case of braces since. Some of these cases have been the most difficult I have ever seen. Invisalign clear aligner system, and my patients’ preference for it, that after four years of use, I decided to eschew conventional braces — clear, mini, lingual or otherwise. In 2005, we renamed our office “Clear Smiles Alaska” and committed ourselves to making our office a practice, professing “Invisalign … that’s all we do!”

Danielle Kirkpatrick: treatment time 21 months

By embracing clear aligner orthodontic practice, professing “Invisalign … that’s all we do!”

Ron McFarlin: treatment time 54 months

Invisalign is worn. For example, we have patients in the military who are deployed overseas while wearing aligners; they are instructed in proper aligner use for the duration of their deployment. Fixed braces are not allowed during deployment by the armed forces.

Treatment planning and progress monitoring are readily accomplished with the use of the Invisalign ClinCheck computer program for both doctor and patient. This is the best high-tech visual aid I have ever used in orthodontics.

Conversely, braces have some advantages over aligners:

• Braces maintain a firmer, fixed hold on individual teeth for manipulation by arch wires.
• Braces allow direct force application to individual or groups of teeth through the arch form while unified by an arch wire, though it remains somewhat flexible in shape and form.

Innumerable ingenious appliance improvements have been made to braces with which to apply desired forces, e.g., headgear, facemask, Class II springs and arms, torque springs, etc.

Techniques in braces therapy are well tested and their efficacy have been proven over time.

While we have eliminated first-phase treatment in our office, we selectively intercept more severe occlusal or skeletal discrepancies such as cross-bites, large overjets and Class II or III skeletal imbalances, with BRFs (rapid palatal expanders), 2x4 fixed braces and functional appliance therapy to ensure the safety and psychological acceptance of the growing child. We feel that nearly all the less severe problems can be successfully addressed after age 12 with auxiliary appliances followed by aligner treatment.

Auxiliary appliance needs for certain types of cases in aligner treatment — extraction cases in particular — must be anticipated by both the patient and the practitioner. As time and technology progress, however, we are seeing less demand. Roughly 20 percent of our aligner patients need application of brackets or auxiliaries such as hooks and elastics, bonded rotation or up-righting wires, during or after aligner wear to compensate for the deficiencies inherent in a flexible, non-bonded appliance, subject to patient cooperation whims.

Furthermore, about 25 percent of our aligner patients need to wear additional appliances after aligner therapy in what is called the refinement stage, used whenever we are not completely satisfied with original treatment results. This option is available and pre-paid for all of our Invisalign patients.

What positives then, can practitioners hope for from incorporation of aligner orthodontics into daily routines? We have experienced quite a few:

• Aligner patients are happier patients. Despite some extended treatment times, the needed addition of auxiliaries or extra aligners or the psychological commitment the patient must make to persevere in its daily, full-time use, only one or two patients out of every hundred in our office is frustrated or grumpy when they come to see us. That is in comparison to the 30 to 35 traditional metal braces patients out of every hundred that arrive for more involved care who are grumpy, irritable and only want to know, “When are these things coming off?”

1/4 mm incremental force applications.
• Aligners are more break-resistant than braces, at least when worn nearly all the time and not in pockets.
• Aligners are more aesthetic than braces, being clear and hardly visible; they are replaced every two to three weeks, so undue wear or staining are not experienced.
• Aligners offer a unified, consistent appliance platform within which individual teeth can be moved and also may be used as full-arch anchorage, e.g., Class II elastics.
• Aligner treatment can be interrupted, stopped or restarted at any time should the need arise, as long as a maintenance retainer is worn. For example, we have patients in the military who are deployed overseas while wearing aligners; they are instructed in proper aligner use for the duration of their deployment. Fixed braces are not allowed during deployment by the armed forces.
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Therefore, we can conclude:

• Invisalign is my first and only choice for orthodontic treatment.
Laboratory fees, while higher for aligners than for braces, are offset by substantial savings in hand instruments, pliers, wires, ligatures, separators and bracket costs.

Frequency of visits, and time spent in each, is considerably less for aligners than required for braces, despite recent advances in wire flexibility and "loose" bracket grips on such wires. We see our aligner patients every 12 weeks, though only after thorough patient education in what to look for and how to respond during absences. Patients who aren’t responding well are, of course, seen more frequently.

Hygiene problems are nearly nonexistent in aligners. In more than 600 cases successfully completed in our office, we have not had one case of tooth decalcification to date... knock on wood! Try saying that about braces!

Marketing or exposure of Invisalign aligner treatment to the public is exemplary. Align Technology has increased the orthodontic patient pool dramatically with professional, modern, compelling exposure in the media, prompting many calls to our office from prospective patients who make it clear (there’s that word again!) that they will come in to see us for aligner care but not braces. This exposure directly affects the success of our practice.

Professional stimulation of the practice is enhanced by the challenge to provide what the patient wants rather than what we expect to have the patient receive through conventional braces. Yes, there is increased cost and effort involved initially, but can we say there was none for Edward Angle when he developed his theorems in orthodontics and braces way back when? Look, if you will, where those efforts have taken us in our specialty. The recent development of temporary anchorage device (TAD) concepts in orthodontics as applied to aligners is certainly challenging and in its infancy. For the past two years, our office has employed strong, non-migrating TAD anchorage to our aligners on a daily basis, and we are seeing great results so far. No longer are intrusion, incisor torquing, distalization or molar uprighting the dirty words in aligner treatments they once were due to this ultimate anchorage technique. And we will never again need headgear tubes on molar bands with our TAD-anchored aligners.

Staffing requirements are decidedly different in Align orthodontics. I no longer search for or train technician-type people. I now look for people who are more compelling in their manner of communicating, who have the personal ability to "reach" a patient, so I can call them our “cheerleaders” in aligner treatment. Technical aspects have to be learned, of course, but that demand is now less stringent than it once was. The result is a more open, cheery office situation where staff members more frequently enjoy coming to work each day (of course excluding Mondays).

While I have attempted to present a clear (!) and concise picture of aligner-based orthodontic care, that is not to say life in aligners is perfect. We have learned much in the past nine years, and I admit it has not all been easy. But fruitful and gratifying? Absolutely.

In the competitive marketplace of orthodontics, the specialist who can offer more of what the patient demands, while achieving the successful treatment goals we have come to appreciate, will ultimately be the winner. We feel we are already.

Dr. John Sparaga earned his BA in biology from St. Vincent College in Latrobe, Pa., and his DMD from the University of Pittsburgh, Pittsburgh, Pa. He then earned his orthodontic certificate at the University of the Pacific in San Francisco. After graduation, he and his wife, Mary, headed straight to Anchorage, Alaska, to pursue their love of the outdoors and raise their family. Dr. Sparaga is certified as a diplomate by the American Board of Orthodontics, and his practice, Clear Smiles Alaska, was recently awarded the status of one of the top “100 Invisalign practices” in the world.