

Quality assessment of online information on orthodontic Web sites in the United States

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Introduction: The objective of this study was to assess the quality of online information on orthodontic treatment provided by orthodontic Web sites in the United States and investigate their claims. **Methods:** Three hundred and one American orthodontic Web sites were identified after an advanced Google search. Data collection included: the location of the clinic, treatment options offered, quality-of-information assessment using the DISCERN tool, and finally, claims when promoting 1 treatment option against another, as well as the presence of information on relapse risk and retention needs. **Results:** All Web sites belonged to private clinics, with more than half (60.5%) in a single location. Invisalign (Align Technology, Santa Clara, Calif) was the most commonly promoted treatment option (94%), followed by the full fixed appliance (FFA) (92%). The mean DISCERN total score was poor (36.78 out of 80.00), whereas the mean reliability (questions 1-8) and quality-of-information (questions 9-15) scores were 17.06 out of 40.00 and 16.85 out of 35.00, respectively. Almost one-third (28%) of the Web sites compared aligners to FFA, whereas 25% claimed that aligners are less painful than FFA, faster than FFA (14%), or give better results than FFA (1%). Almost half of the Web sites (47%) failed to display information on relapse risk and retention needs after orthodontic treatment (41%). The Web sites that displayed such info had higher DISCERN total scores ($P < 0.001$). **Conclusions:** Invisalign seems to be the treatment modality most commonly mentioned online. According to DISCERN, U.S. orthodontic Web sites display poor or fair quality information. On many Web sites, aligner treatment was compared with FFA, with some stating that aligners cause less pain than FFA or are more efficient/faster than FFA. Moreover, almost half of the American orthodontic Web sites failed to display information on the relapse risk or retention need. Display of such information can be an indicator of better-quality Web sites. There is ample room for improvement in the online information American orthodontists provide to potential patients. (*Am J Orthod Dentofacial Orthop* 2023;163:843-50)

The Internet has grown to such an extent that dental Web sites are usually the first point of contact between the clinician and the patient. They also provide a useful source of marketing information for available services and treatment options.¹ In a large European study, more than 71% of Internet users had used the Internet to seek health information.² Young adults, which often is the majority of the orthodontic population, demonstrate much higher use of the Internet

(99%) than those aged ≥ 70 years (22%).³ Among other things, young adults use the Internet to find health information, with the majority using a search engine, such as Google, rather than visiting an official Web site.⁴ The challenge is that information on the Internet is not peer-reviewed or regulated.^{5,6} This raises questions about the quality and accuracy of this information.

To tackle this challenge, tools have been developed to assess the quality of online health information and educate Internet users to be more vigilant in terms of online health information.⁷ Some tools include the *Journal of the American Medical Association* information appraisal tool, Health On the Net organization, and the DISCERN instrument.⁶⁻⁸ Their main purpose is establishing a high standard on which patients and health providers alike can assess the quality of online health information, which needs to be evidence-based but at the same time readable and clear. This is

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