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Readability of patient educational materials in paediatric orthopaedics

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Background: Parents are increasingly turning to the Internet to seek paediatric health information. Numerous organisations advise that patient educational materials (PEMs) should not surpass the 6th grade reading level. We aimed to assess the readability of online paediatric orthopaedic (PEMs).

Methods: A total of 176 articles pertaining to paediatric orthopaedics from the American Academy of Orthopaedic Surgeons (AAOS), Pediatric Orthopaedic Society of North America (POSNA) and American Academy of Pediatrics (AAP) websites were assessed, using eight readability formulae; the Flesch-Kincaid Reading Grade Level, the Flesch Reading Ease Score, Raygor Estimate, SMOG, Coleman-Liau, Fry, FORCAST and Gunning Fog. The mean reading grade level (RGL) of each article was compared to the 6th and 8th grade reading level. The mean RGL of each website's articles were also compared.

Results: The cumulative mean RGL was 10.2 (range, 6.6–16.0). No article (0%) was written at a 6th grade reading level and only 7 articles (4.0%) were written at or below the 8th grade reading level. The mean RGL was significantly higher than the 6th (95% CI, 4.0–4.4; $P < 0.001$) and 8th grade reading level (95% CI, 2.0–2.4; $P < 0.001$). The mean RGL of articles on the POSNA website was significantly

lower than the AAOS ($P < 0.001$, 95% CI, –1.8 to –1.0) and AAP ($P < 0.001$, 95% CI, –2.9 to –1.1) websites.

Conclusions: Paediatric orthopaedic PEMs produced by the AAOS, POSNA and AAP websites have readability scores that exceed recommendations. Given the increasing preference for online health information and the vital role health literacy plays in patient outcomes, significant work is required to address the readability of these materials.

Keywords: Health literacy; paediatric orthopaedics; patient education; readability; reading grade level

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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