

# Delivery of information to orthodontic patients using social media

## Abstracted from

**Al-Silwadi FM, Gill DS, Petrie A, Cunningham SJ.**

Effect of social media in improving knowledge among patients having fixed appliance orthodontic treatment: A single-center randomized controlled trial. *Am J Orthod Dentofacial Orthop* 2015; **148**: 231–237.

Address for correspondence: Fadi M Al-Silwadi, Department of Orthodontics, UCL Eastman Dental Institute, 256 Gray's Inn Rd, London WC1X 8LD, United Kingdom. E-mail: fsilwadi@gmail.com.

## Question: Does presenting information to orthodontic patients via social media improve knowledge?

**Design** Randomised controlled trial in a hospital setting.

**Intervention** Both groups were given standard verbal and written information for patients receiving orthodontic treatment. In addition, patients in the intervention group received e-mails asking them to view a specifically designed YouTube unlisted video accessible through a web link in the e-mail. All patients were administered with a baseline questionnaire at bond-up which was repeated at six weeks.

**Outcome measure** Change in question score from baseline.

**Results** Sixty-seven patients were randomised (control = 34; intervention = 34). Seven patients were lost to follow-up; four in the control and three in intervention group. In all the participants watched the video 90 times. Participants in the intervention group scored, on average, almost one point higher on the second questionnaire than did those in the control group (95% CI for the difference, 0.305–1.602;  $P = 0.005$ ). Ethnicity had a statistically significant effect on improvement in knowledge, but sex did not.

**Conclusions** Presenting audiovisual information through the YouTube web site to orthodontic patients resulted in a significant improvement in patient knowledge. Supplementation of verbal and written patient information with audiovisual information via the internet is therefore worthy of consideration.

## Commentary

It has been shown that the use of social media can positively influence and improve adherence to general health interventions.<sup>1</sup> This trial by Al-Silwadi *et al.* relates to an interesting and topical area; the use of social media as a learning adjunct in dentistry. The dropout rate in the study was quite low, which may indicate how generally well received the use of social media resources are.

Although sex and ethnicity were assessed for significance, it would have been interesting to know more about the age range of the patients included in the study, to ascertain whether age is a relevant factor in the uptake of social media resources. Younger patients may be more comfortable with the use of YouTube and social media resources and it would have been interesting to demonstrate this, if a difference were evident. However, as the sample size is relatively small, it may not have been possible to assess these factors for significance. The authors did stratify the patients by age to ensure there were equal numbers of adults and children in each group, so as to account for the possibility of different behavioural levels between adults and children, but the age stratification was not in relation to uptake of social media resources.

The study compared the difference in knowledge between the two groups, but as the authors acknowledge, the use of clinical parameters eg plaque scores, appliance breakage etc, as a means of assessing the effectiveness of the audio-visual information, would have been an important area to consider. We know that a change in knowledge does not necessarily equate to or result in a change in behaviour, and if there is no behaviour change, one could argue as to whether the results are relevant. This is certainly an area where the research could be broadened.

One flaw in the study design was that the patients were informed as to which group they had been assigned. This lack of blinding may have created bias in that patients may have been more inclined to participate fully with the awareness that they are in the intervention group. Blinding is an important aspect in the study design of a randomised controlled trial. Failure to appropriately conceal group allocation from patients or investigators can lead to biased assessment of outcomes and misleading results. The authors report that the groups were not blinded for ethical reasons, however, all the patients received the same information presented in different formats and so this should not have been an ethical concern.

We are told that the video was viewed 90 times in all by the patients in the intervention group, which is an average of three times per patient. However, we do not know whether the video was watched to the end, and indeed it may not be possible to

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investigate this, but it is possible the video was started multiple times and not watched to its completion. In addition, the timeline of when the video was watched in the six week period would be relevant to know, as if the video was mostly viewed closer to the patients' review appointments, it could reinforce the possibility that the patients were more enthusiastic because of the knowledge that they were in the intervention group. It also means they would be able to recall the information more readily than the control group, who may only have read the leaflets when they first received them. Additional information on when the patients in the control group read the leaflet, which could have been sourced from the questionnaire, and whether the patients in the intervention group also read the leaflet as well as watching the video may have also been interesting to know. As the patients in the intervention group received both the leaflet and access to the YouTube videos, their increased knowledge could be due, at least in part, to the fact that the information was repeated in multiple formats to them. A more direct comparison would have been if

one group received the leaflet and the other group received access to the YouTube video.

It would also be interesting to look into and compare the different social media platforms, not just YouTube. A narrative review of social media in online health promotion concluded that there is a need for RCTs of greater length in this area<sup>2</sup> and this point is also applicable to this trial, as a longer follow-up period would be necessary to assess whether the information is retained better in the long term, when presented through social media and audio-visual formats.

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**Sinead O'Brien and Brett Duane**

*Dublin Dental University Hospital, Dublin, Eire*

1. Valente TW. Social networks and health: models, methods and applications. UK: Oxford University Press. 2010: 296.
2. Balatsoukas P, Kennedy CM, Buchan I, Powell J, Ainsworth J. The Role of Social Network Technologies in Online Health Promotion: A Narrative Review of Theoretical and Empirical Factors Influencing Intervention Effectiveness. *J Med Internet Res* 2015; **17**: e141. doi: 10.2196/jmir.3662.

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