Fig. 1 Rate of article publication in four journals combined between 2006 and 2013

duty for doctors at 48 hours per week.¹ The Accreditation Council for Graduate Medical Education in the US implemented the duty hours policy, a similar restriction on maximum hours worked, set at 80 per week, which took effect in 2003.² We aimed to establish the extent of research on the impact of work time restrictions (WTRs) in the oral and maxillofacial surgery literature.

We performed an electronic search of the *British Journal of Oral and Maxillofacial Surgery* (BJOMS), the *Journal of Cranio-Maxillofacial Surgery* (JCMFS), the *Journal of Oral and Maxillofacial Surgery* (JOMS) and the *International Journal of Oral and Maxillofacial Surgery* (IJOMS). Journal websites were searched for all publications containing the terms 'working time directive' or 'duty hours policy' in the abstract, title or keywords from inception to February 2014.

Of the 42,788 articles archived in BJOMS, JCMFS, JOMS and IJOMS, only 10 (0.02%) addressed WTRs. The earliest article was published in 2006. Between 2006 and 2009, 0.19 articles/month were published on the topic. The highest rate of publication occurred in 2009 with 0.33 articles/month published (Fig. 1). Since 2009 there has only been one article published (in 2011) on the topic.

In light of the considerable impact WTRs have on surgical practice and postgraduate training,³ only a very small proportion (0.02%) of articles in general OMFS journals have discussed this issue. There is therefore a need for more original research exploring the impact of WTRs on OMFS training and practice. A large US study found a significant decrease in operative experience of general surgery trainees after the implementation of WTRs when compared to before its implementation.³ Concerns have also been raised in the UK about the effect of WTRs on exposure to teaching⁴ and on the need for surgical cross-cover to meet on-call requirements.⁵

The debate on WTRs has largely centred on general surgery; however, the effects on OMFS should be studied in greater

depth. Subsequent studies would inform the specialty ensuring surgical training, alongside the time restrictions, maximises trainee development without compromising patient safety.

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SHORT-TERM ORTHODONTICS

History puts it straight

Sir, in the debate on short-term orthodontics (STO) (*BDJ* 2014; **216**: 386–389), going back to the roots of the argument may lead to a clearer understanding as in the 'great extraction debate' of 1908 between Edward Angle, a prosthodontist famous for his early occlusal analysis and Kelvin Case, an orthodontic specialist.^{1,2} Angle felt that all 32 teeth should be aligned into a wider dental arc, without extraction, to give the best occlusal and facial aesthetic result. Case, for whatever reason, felt that the inherited dental arch form should be respected and thus to preserve this, extraction of teeth was necessary in the crowded arch, to produce long term stability and worthwhile change. At the debate's conclusion it was judged that Dr Angle had won and the non-extraction approach was triumphant. The Angle school thus flourished until his death at the end of the 1920s.

One of Angle's pupils, Dr Charles Tweed, took the expansionist philosophy back to his

practice and used it in the first years of his practising life to correct malocclusion and particularly crowding. You may well say the STO approach, since that is what it was.

Tweed kept meticulous records and found that relapse, sometimes total, was the common long-term outcome. On review, he decided to re-treat the same patients, extracting premolars in crowded cases. He respected the presenting arch form and inter-canine width, particularly controlling the spatial position of the lower incisors, preventing labial movement of this group of teeth. All these factors are currently ignored by STO.

Tweed thus built the impressive database of long-term results, initially comparing and contrasting an expansionist *versus* an extractionist approach, each former patient thus being both control and experimental subject. This has become the Tweed Foundation in Tucson, Arizona and provides the evidence to the veracity of extraction *versus* non-extraction treatment. The evidence was unequivocal, non-extraction treatment, of all but minor crowding, relapses unless held for life by retaining devices. Life for adult patients, the focus of STO, means up to 50 years. Is this a reasonable proposition for most patients, who will pay for this lifelong retention, and what are the costs?

STO and other current non-extractionist approaches, such as dental aligners, Damon philosophy, the six-month smile etc are, like the Angle approach, expansionist treatments and as Tweed so elegantly demonstrated, are doomed to relapse without permanent arch retention. To receive informed consent patients should be aware of the length of time needed to retain these unstable treatment approaches and also the costs, which are not inconsiderable. Are all of today's patients informed of all these issues at the outset?

There is increasing litigation following expansionist treatment modalities, as relapse and instability become apparent. This of course is regrettable. Within the legal process for plaintiffs, powerful arguments are available to bring their legal action to successful outcome, the above being just one source of evidence. Perhaps this leads to the next debate for the *BDJ*: The need for orthodontic retention in contemporary practice.

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