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Social media and anaesthesia journals

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Editor—Social media, such as Twitter, YouTube and Facebook, have rapidly become a highly-influential part of both our personal and professional lives. In stark contrast to journals or websites, where users are limited to passive viewing of content, social media facilitate crowd-sourced knowledge sharing, learning and social interaction.

Anaesthetists must divide their time between clinical practice, administration, research and teaching pressures and their own personal commitments. During those brief pauses in a busy day - waiting for the next patient to be sent for, drinking your morning coffee - social media allows anaesthetists to engage with the most-recent innovations in anaesthesia, participate in current debates on clinical practice and view the latest journal publications. Although not traditionally viewed as an important research tool, social media are becoming the first point-of-access for information and as anaesthetists we should be utilizing and improving our understanding of the importance of social media.

Twitter, with 218 million monthly active users and an average of 500 million ‘tweets’ each day, was originally designed as a social media tool to discuss and disseminate information relating to entertainment and current affairs. Over time however, Twitter has diversified and expanded to become a medical education tool that links clinical vignettes with teaching points and updates from the literature. Publications exploring the emerging influence of social networking in medicine are helping to further expand the use of Twitter as an education tool and assessing its merit.

A Twitter search for ‘anaesthesia’ yields a continuous stream of tweets from organizations and individuals, ranging from updates about an individual’s medical care to anaesthesia job postings, news articles about new techniques and developments, and communication between providers and patients. One innovative use has been to facilitate an on-line journal club to revitalize the traditional journal club setting (#FOAMcc). Medical conferences develop conference-specific hashtags (#ANES2014, #AAGBI14) to allow live ‘tweeting’, engaging attendees, promoting scientific discussion and interacting with a broader audience.

Fig 1 Scatterplot of ‘delta impact’ (change in Thompson-Reuters Journal Impact Factor between 2010 and 2014) vs Klout and BirdSong metrics of Twitter performance.
We observed that anesthetic journal Twitter presence and interaction correlated with a positive change in their impact factor from their first adoption of Twitter to date. Recognizing that correlation does not imply causation, we examined this perceived relationship. Seven of 25 (28%) indexed anesthesiology journals have a Twitter account. We correlated Twitter presence, user/content interaction and validated metrics of social-media influence (Klout and BirdSong scores) with the journal's current impact factor. We also looked at the change in impact factor since Twitter adoption by each journal and the number of article citations (Fig. 1). Comparison was made with the change in impact factor of anesthesiology journals without Twitter accounts over the same period.

An active Twitter account with a high Klout score directly-correlated with higher journal impact factor (P=0.034) and with a greater number of article citations (P=0.016) than journals not embracing social media. A highly-performing Twitter account was also associated with an increase in impact factor in the period after Twitter adoption (P=0.01), while journals without a social media presence, on average, saw a net stasis or decline in their impact factor.

Twitter offers a unique platform for fast dissemination and discussion of the latest publications in anesthesiology. With smartphones and tablet devices allowing constant access to social media, anesthesiologists communicate via social media to discuss journal publications and respond to journal editors. To encourage further adoption by our academic journals, we share our observations of a positive correlation between journal editorial interaction on Twitter and a subsequent increase in journal impact factor. Journals which did not actively embrace Twitter as a 21st-century Letter to (and from) the Editor saw a net stasis or even decline in impact factor.

doi:10.1093/bja/aev389

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**Transitioning from routine to on-demand test ordering in intensive care units: a prospective, multicentre, interventional study**

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**Editor**—In intensive care units (ICUs), blood and imaging test ordering is an important part of a physician’s duties. Given the increase in observational studies and concerns regarding test costs and adverse effects, unnecessary tests should be limited.¹² Three practical problems in implementing this strategy are changing routine habits. The limited guidelines pertaining to testing practices in the ICU are invariably viewed with skepticism.³ The guidelines are criticized for recommending too little or too much testing. We tested the hypothesis that the implementation of an educational tool based on timely and ideally located reminders would be an unobtrusive method of reducing unnecessary, commonly ordered ICU tests.

We investigated how an educational program impacted 7 commonly ordered tests with a multicentre, prospective and interventional study in four academic ICUs in France (total of 65 beds and 3322 admissions per yr). The local ethics committee approved the study (Rennes, France, n° 11-23, 2011). All patients from April 2011 to July 2011 constituted the baseline and were compared with patients from the intervention period, April 2012 to July 2012. During the baseline period, the physicians were unaware and free to order tests. The intervention period consisted of educational measures including daily information for medical staff and reminder support at the bedside, including test indications and costs. The following tests (prescriptions on emergency or for the subsequent day) were evaluated: complete blood cell count, blood and urinary chemistry, arterial blood gas, prothrombin and partial thromboplastin times, and chest X-ray (CXR). The relative risk variations between the baseline and intervention periods were determined for all biological tests and CXRs.

During the baseline and the intervention periods, 886 and 931 patients were included, respectively (Table 1). Routine laboratory tests were significantly affected by the incentive strategy, with a relative risk reduction of −7.48% per patient ICU-day ranging from −0.43 to −29.97% per patient ICU-day (Table 2), depending on the laboratory tests. With the incentive strategy, the reduction for the CXR ordering was −10.09% (95% CI: −15.32; −4.86) per patient ICU-day. The extrapolated one-year potential cost saving was 157,000 Euros.

Using an incentive strategy with a combination of two educational tools consisting of rational indications and knowledge of the costs, allowed us to reduce the frequency of routine blood/urinary tests and CXRs. Although the approach was cost effective and without any apparent adverse effects, this reduction may appear moderate. A greater effort was expected given the economic context and daily debates concerning high financial cost of healthcare systems. One plausible explanation is the strength of tradition within ICUs.⁴⁵ The guidelines are criticized for recommending too little or too much testing. We tested the hypothesis that the implementation of an educational tool based on timely and ideally located reminders would be an unobtrusive method of reducing unnecessary, commonly ordered ICU tests.

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