

## What makes an article impactful?

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What does an impactful article mean? In the current context these words usually draw one's attention to Journal Impact factors. Based on set formulae, these reflect the ability of the journals and editors to attract high quality manuscripts. An author's impact on their field of expertise is usually measured using the frequency of their publications and the number of times their academic publications are cited by other researchers/peers. Numerous algorithms based on publication data have been created (H-index, g-index, i10-index) in attempts to measure the quality and quantity of authors' work (1,2). In contrast, to be impactful, an article needs to have far ranging influence.

Regardless of the type of article the most important prerequisite for an "impactful article" is that it must have significant impact, positive or negative, on outcomes. It should demonstrate applicability, feasibility and reproducibility. It must pass scientific rigour and be well written to enable the message to be delivered in an unambiguous manner. It should be clear in delivering the message, cohesive on its ideas, precise on its delivery and focused on discussing its advantages and drawbacks. Ethical clearance endorsed by an Ethics Committee is mandatory. Centres of excellence with good track record are more likely to produce impactful articles as they will fulfil the aforementioned criteria, reviewed by a strong editorial process.

Clinical articles have direct impact on patient management while basic science articles have the potential to increase our understanding of underlying mechanisms and potentially be translated into clinical practice with changes in outcomes. The seminal paper of Marshall et al. on the association of *H. pylori* in peptic ulcer disease revolutionised its management and all but eliminated surgery as the

**This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: [10.1111/ans.15643](https://doi.org/10.1111/ans.15643)**

principle treatment strategy (3). The discovery of penicillin by Flemming drastically altered the understanding and management of infectious conditions (4).

An impactful article may take the form of meta-analyses or systematic review that analyses published data to reach a consensus statement. Alternatively, rare conditions and uncommon situations may be collected in to case series with expert commentary and serve as key references impacting on clinical practice.

Jin et al. have undertaken a bibliometric analysis of liver cancer in the current volume of ANZ Journal of Surgery (5). Analysing the 100 most cited publications they highlighted characteristics and the epidemiology of impactful papers. They demonstrated that an original idea is not a pre-requisite to be highly cited and that review articles can be highly cited and ranked in the top ten articles in their field. However, when it comes to impact, the likelihood of the article's conclusion in changing the treatment and improving the outcome plays the most important role.

In conclusion, an impactful paper should be scientifically sound, well written, have a focused message and have an impact on outcome, significantly changing current management or practise.

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**Title:**

What makes an article impactful?

**Date:**

2020-01

**Citation:**

Perini, M. V., Christophi, C. & Muralidharan, V. (2020). What makes an article impactful?. ANZ JOURNAL OF SURGERY, 90 (1-2), pp.8-8. <https://doi.org/10.1111/ans.15643>.

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