Review Article

Indian Journal of Anaesthesia and Analgesia
Volume 1 Number 1, January - June 2014

Critical Care Journals: From Providing Care in Intensive Units to Ensuring Care for Publishing Evidence

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Abstract

This review article was primarily intended to update the evidence on analyses of critical care journals through a search of PubMed database. There were 11 studies analyzing critical care journals in aspects of journals' prices, editorial board composition, impact factor, national representation, national productivity, international representation, European contribution, Chinese contribution, and equal-credit authorship, survey reporting, and referencing accuracy. There is need for recent studies on analyzing methodological issues, ethical issues and conflicts of interest policies in critical care journals.

Keywords: Critical care; Intensive care; Journal trend; Publication policies; Anesthesiology research.

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Price Development

Boldt *et al* analyzed the development in prices of anesthesia/critical care journals (Anesthesiology, Emergency Medicine & Critical Care, Surgery, Medicine (General), and Cardiac & Cardiovascular Systems) and compared them to prices of other disciplinary journals. There was an increase in prices in the range of 13% to 199%. The mean price increase was higher for Critical care than Anesthesiology, and the journals' size (number of articles or pages) was not found to increase proportionally with the increase in prices.[1]

Composition of the Editorial/Advisory Boards

Boldtand Maleck analyzed 18 Anesthesiology and 16 Emergency Medicine & Critical Care journals about the editorship and the membership of advisory boards. There were 140 editors and 423 advisory board members In the Anesthesiology section, and they were from 14 and 30 countries respectively whereas there were 159 editors and 835 advisory board members in the Emergency Medicine & Critical Care section, and most of them were from USA.[2]

Impact Factor

Boldt *et al* analyzed the impact factors (IFs) of Anesthesiology and Emergency Medicine & Critical Care journals and most IFs constantly increased over the years, with EM&CC having better increase in trend.More Anesthesiology and Emergency Medicine & Critical Care journals were from the USA and they showed an IF >2.0 over the past 10 years compared to those ofEuropean journals.[3]

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National Representation

Boldt *et al* studied the national origin of articles published in 17 Anesthesiology and 13 Emergency Medicine & Critical Care journals for the country of origin of the first author. Among the 10,643 articles in 30 journals, 4,283 articles were from USA, 1418 articles were from UK. In 14 of the 17 US journals, >50% of the publications came from the US.The impact factor per million inhabitants ratio was higher forthe small highly industrialized nations (Finland and Sweden)than large highly industrialized countries (USA, Germany and Japan). The United States was found to be the most active nation in this medical area, followed by the United Kingdom.[4]

National Productivity

Li *et al* examined the national productivity of 17,667 articles published in 20 highly cited journals. The productivity was more from North America, West Europe, and East Asia; with high-income countries publishing 89.68% of the total articles. The United States published the most number of articles followed by United Kingdom, Germany, France, and Australia. Besides, the United States also had the most number of randomized, controlled trials, the highest total impact factors, and the highest total citations. Articles published per million population size revealed that Australia had the highest number of articles, followed by Netherlands, Switzerland, Austria, and Belgium.[5]

International Contribution

Shahla *et al*x assessed the publications per million inhabitants of major countries by examining the published papers in five major respiratory and intensive care journals (Intensive Care Medicine, Critical Care Medicine, Chest, The American Review of Respiratory Disease, and Circulatory Shock). USA and Canada were found to be the predominant contributors followed by the other countries in the following order: Switzerland, Sweden, Belgium, the Netherlands, Finland, Austria, Denmark, UK, France, Spain, Italy, Norway, Japan and Germany.[6]

European Contribution

Shahla *et al* assessed the European contribution to the intensive care medicine literature by reviewing all original articles and case reports in 5 major journals (Critical Care Medicine, Intensive Care Medicine, Chest, The American Review of Respiratory Disease and Circulatory Shock). Journal-specific differences were noted and an overall decline in the US contributions and a corresponding increase in the European participations to Chest and the American Review of Respiratory Disease was found, but not to Critical Care Medicine or Circulatory Shock. There was a progressive increase in the French, Italian and Spanish contributions among the European articles.[7]

Chinese Contribution

Li *et al* examined the Chinese contribution in 932 articles published in 18 critical care journals from three major regions of China—Mainland (ML), Hong Kong (HK), and Taiwan (TW). TW had greater number of articles and with impact factors than ML and HK, and their numbers increased from 1999 to 2008. HK had the highest average citations per article, followed by TW and ML. The most popular journal was Journal of Trauma.[8]

Equal-credit Authorship

Wang *et al* investigated the prevalence and characteristics of equal-credit authorship in publications in four major journals of critical care medicine

(American Journal of Respiratory and Critical Care Medicine, Critical Care Medicine, Intensive Care Medicine, and Critical Care). All four journals had 'equal-author' articles, with an increasing trend over the years. The first two authors received equal credit in most articles, and none of the four journals provided specific guidance regarding this practice in their instructions to authors.[9]

Reporting of Surveys

Duffett *et al* analyzed the quality of reporting of 151 surveys published in five critical care journals (American Journal of Respiratory and Critical Care Medicine, Critical Care, Critical Care Medicine, Intensive Care Medicine, and Pediatric Critical Care Medicine).[10]

The journals published at a rate of 0.38 per 1000 citations per yearand the median number of respondents and reported response rates were 217 and 63.3%, respectively. United States and Canada were commonly surveyed, and theyfrequently examined practice (78.8%), attitudes or opinions (60.3%), and less frequently knowledge (9.9%). The commonly reported survey design and methods were: 1) instrument development, instrument testing and clinimetric properties.

Referencing Accuracy

Oermannand Ziolkowski evaluated the number and types of errors in references in 3 critical care nursing journals (Journal of PeriAnesthesia Nursing, American Journal of Critical Care, and Critical Care Nurse). The authors examined 244 referencesand found 56 errors at an overall error rate of 22.9%. 19.6% had major errors (misspelled or omitted author names and initials) and 45% wereminor errors (non-first page discrepancies). Errors in author names combined with incorrect or missing volume or issue numbers were the 2 most common errors, accounting for 61% of errors.[11]

There were 11 studies analyzing critical care journals in aspects of journals' prices, editorial board composition, impact factor, national representation, national productivity, international representation, European contribution, Chinese contribution, and equal-credit authorship, survey reporting, and referencing accuracy. There is need for recent studies on analyzing methodological issues, ethical issues and conflicts of interest policies in critical care journals.

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