

# Analysis of the Impact Factor of Emergency Medicine Journals in the Past 10 Years

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To the Editor: The journal “impact factor (IF)” was conceived by Garfield in 1955 to help librarians identify the most influential journals based on the number of citations, and the first ranking of journals by IF was published in 1972.<sup>[1]</sup> We systematically analyzed the IFs of emergency medicine journals published in Journal Citation Report® (JCR) for the past 10 years (2005–2014).

Twenty-four journals in emergency medicine are listed according to the 2014 JCR Science Edition [Table 1]. Nine journals have originated from the USA, four from the UK, four from Germany, and others from seven different countries. The number of journals increased from 11 in 2005 to 24 in 2014. Compared with 2005 (or the 1<sup>st</sup> year IF documentation), the IFs of 17 out of 24 journals increased in 2014, with a median level of +62.42% (ranging from +0.31% to +344.44%), while seven journals' IFs decreased, with a median level of -10.78% (ranging from -1.825% to -36.108%).

In the majority of emergency medicine journals, the IF shows a gradually increasing trend. The mean and median levels of IF increase from 2005 to 2014 are 1.876% and 36.069%, respectively. In journals in English language, those from Europe had a higher increase than those from the USA ( $[0.745 \pm 0.538]$  vs.  $[0.693 \pm 0.588]$ ,  $0.555$  [ranging from  $-0.151$  to  $+1.363$ ] vs.  $0.402$  [ranging from  $-0.720$  to  $+1.894$ ]); this similar phenomenon also appears in the subject category of critical care medicine and infectious diseases.<sup>[2]</sup> While considering originating countries, the mean IF of journals from the USA shows higher than that from European countries. One factor is language. Editors of the European journals traditionally published in local languages have made an attempt over the last years to change the language of publication into English, so as to increase the appearance of the journals in the scientific community.<sup>[3]</sup> This might have led to a rise of the IF.

Since 2003, the “category data” of journals of each discipline has been available, and there were 171 categories in 2005, which rose to 176 categories in 2014. Among the 32 categories related to clinical medicine, the aggregate IF and the median IF of emergency medicine journals ranked 29–31 and 27–32 through the period of 2005–2014, respectively. This directly indicates that emergency

medicine developed slowly in research. Possible reasons are that on the one hand, emergency medical journals published more randomized trials, status analysis, and less large-scale clinical trials and basic researches, which affected the increase in their IFs, and on the other hand, a lot of quality articles contributed to specialized journals.<sup>[4]</sup> Unequal distribution of emergency resources also hinders the entire discipline development.<sup>[5]</sup>

Despite the general increase in IF, emergency medicine in research remains a slow development. Emergency medicine specialists are still few and tend to work in large emergency departments seeing critically ill patients. We are confident that the medical quality and scientific development of emergency medicine will consistently improve.

## Financial support and sponsorship

This study was supported by a grant of The Beijing Municipal Science and Technology Project (No. Z1311070022131142), Peking University Key Clinical Project (No. bysy2012208).

## Conflicts of interest

There are no conflicts of interest.

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**Received:** 10-05-2016 **Edited by:** Li-Shao Guo  
**How to cite this article:** Liang Y, Ge HX, Ma QB. Analysis of the Impact Factor of Emergency Medicine Journals in the Past 10 Years. *Chin Med J* 2016;129:2504-5.

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**Website:**  
www.cmj.org

**DOI:**  
10.4103/0366-6999.191826

**Table 1: Change in IF of emergency medicine journals from 2005 to 2014**

Journals	Language	Country	IF in 2014	Change from lowest to 2014 (%)	Change from 2005 or the first IF to 2014 (%)
<i>Annals of Emergency Medicine</i>	English	USA	4.676	1.894 (68.081)	1.894 (68.081)
<i>Resuscitation</i>	English	Ireland	4.167	1.853 (80.078)	1.363 (48.609)
<i>Emergencias</i>	Spanish	Spain	2.895	0.409 (16.452)	-0.19 (-6.159)
<i>Injury-International Journal of The Care of The Injured</i>	English	England	2.137	1.218 (132.535)	1.218 (132.535)
<i>Scandinavian Journal of Trauma Resuscitation and Emergency Medicine</i>	English	England	2.025	0.345 (20.536)	-0.151 (-6.939)
<i>Academic Emergency Medicine</i>	English	USA	2.006	0.265 (15.221)	0.217 (12.130)
<i>Emergency Medicine Journal</i>	English	England	1.843	1.042 (130.087)	1.042 (130.087)
<i>Prehospital Emergency Care</i>	English	USA	1.763	0.515 (29.212)	0.515 (29.212)
<i>European Journal of Emergency Medicine</i>	English	USA	1.583	0.85 (115.962)	0.85 (115.962)
<i>World Journal of Emergency Surgery</i>	English	England	1.473	0.555 (60.458)	0.555 (60.458)
<i>Emergency Medicine Australasia</i>	English	Australia	1.296	0.395 (43.840)	0.395 (43.840)
<i>American Journal of Emergency Medicine</i>	English	USA	1.274	0.122 (10.590)	-0.72 (-36.108)
<i>Canadian Journal of Emergency Medicine</i>	English	Canada	1.163	0.503 (76.212)	-0.352 (-23.234)
<i>Pediatric Emergency Care</i>	English	USA	1.046	0.465 (80.034)	0.402 (62.422)
<i>Journal of Emergency Medicine</i>	English	USA	0.969	0.191 (24.550)	0.184 (23.439)
<i>Journal of Emergency Nursing</i>	English	USA	0.787	0.442 (128.116)	0.787 (228.116)
<i>Emergency Medicine Clinics of North America</i>	English	USA	0.778	0.106 (15.774)	-0.094 (-10.780)
<i>Unfallchirurg</i>	German	Germany	0.649	0.089 (15.893)	0.002 (0.309)
<i>Notfall &amp; Rettungsmedizin</i>	German	Germany	0.472	0.153 (47.962)	-0.101 (-17.627)
<i>European Journal of Trauma and Emergency Surgery</i>	English	Germany	0.346	0.139 (67.150)	0.139 (67.150)
<i>Notarzt</i>	German	Germany	0.292	0.217 (289.333)	0.217 (289.333)
<i>Ulusal Travma ve Acil Cerrahi Dergisi-Turkish Journal of Trauma and Emergency Surgery</i>	Turkish	Turkey	0.269	0.058 (27.488)	-0.005 (-1.825)
<i>Hong Kong Journal of Emergency Medicine</i>	English	China	0.212	0.109 (105.825)	0.045 (26.946)
<i>Signa Vitae</i>	English	Croatia	0.200	0.155 (344.444)	0.155 (344.444)

IF: Impact factor.

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