Context  Little is known about qualitative and quantitative characteristics of indexed health sciences electronic journals.

Methods  To determine peer-review practices and qualitative and quantitative characteristics of different types of indexed health sciences e-journals, 3 types of e-journals indexed in MEDLINE were compared (type 1, completely electronic with no print counterpart; type 2, print and electronic versions with the same title but each publishing some unique content; and type 3, print and electronic versions containing equal content).

Results  There were 13 type 1 journals, 16 type 2 journals, and 16 type 3 journals. Most journals in each category (85%-94%) imply or state the use of peer review. Significant differences ($P<.05$, analysis of variance) exist among the e-journals for the inclusion of complex types of publications (clinical trials, randomized controlled trials, meta-analyses, and practice guidelines) (15%-100%), editorials (0%-75%), letters to the editor (10%-88%), and case reports (17%-94%); the average number of items indexed in MEDLINE (22.5-544.5); and the number of complex publication types, editorials, letters, and case reports.

Conclusions  Type 1 e-journals do not have the qualitative or quantitative complexity of traditional print journals. Although editors’ statements on editorial peer review are similar, there are differences in number and type of materials included in the 3 different types of e-journals.

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A search in August 2001 of Institute for Scientific Information’s Web of Science determined frequency of citations to each e-journal. The ISI captures all cited references in each journal it covers independent of whether the title is covered by the database; 54% of type 1 e-journals are covered by ISI. An average of 4.62 articles published in type 1 e-journals in the year 2000 were cited, whereas more than 350 articles published in type 2 and type 3 e-journals in the year 2000 were cited (P = .01, single-factor analysis of variance).

TABLE 2 compares results when separate data exist for type 2 e-journals. There were statistically significant differences among the e-journals (P < .001) indexed as complex publication types. The type 1 and the electronic type 2 were less likely (P < .001) than print type 2 or type 3 e-journals to publish editorials, letters to the editor, and case reports.

For the year 2000, type 1 and electronic type 2 published significantly fewer items than print type 2 and type 3 (P < .001). There were also statistically significant differences for the average number of items indexed as complex types of publication (P = .01). Both type 1 and electronic type 2 published significantly fewer editorials (P = .03), letters (P = .002), and case reports (P = .004) than print type 2 and type 3.

COMMENT

The following qualitative measures were similar for all types of e-journals: peer-review statements, requirement of original research, and the inclusion of editorial boards. A lack of a statement on peer review or original research does not mean that no policy exists. Editors address the editorial peer-review process in journal guidelines more frequently today than they did in 1987.² The structured abstract was proposed for medical journals in 1987.⁴ One third to two thirds of all types of e-journals in this study used this format. This study confirmed the earlier study by Harter⁵ that type 1 e-journals continue to be infrequently cited. This phenomenon may continue until type 1 e-journals become established, mainstream medical literature.

Many electronic type 2 publications serve a specialized function and may represent a trend to publish journals with different content in the print and electronic versions. The electronic type 2 publications often include only 1 type of feature, such as short reports, rapid communication, or letters. For example, one electronic type 2 e-journal published all letters electronically, while another published only “ultra-rapid” communications, and another let the author choose which version for case reports. Eleven (69%) of the 16 type 2 journals stated specific criteria for inclusion in the electronic only version.

The 13 indexed health sciences type 1 e-journals lack the depth and breadth of traditional print journals. The type 1 and electronic type 2 e-journals published significantly fewer indexed complex types of publications, editorials, letters, and case reports than either type 2 print or type 3 e-journals. Data from this study provide an early snapshot of e-journals. The type 1 e-journals will probably become more numerous and more accepted, but they currently do not have the complexity of traditional print journals.

REFERENCES