SPI-Hub™: a gateway to scholarly publishing information

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APPENDIX A

Knowledge Management Journal Record™ rationale and data sources

Knowledge Management Journal Record™ fields were defined after review of the literature for (1) guidelines, checklists, and guidance documents that promote sound publication practices; (2) published analyses of characteristics associated with journal quality; (3) criteria established by existing tools that aid in journal selection; and (4) standards for cataloging journal records. Based on these findings, the authors compiled a list of fields and reached consensus on data elements that are necessary to include in the record. Each Knowledge Management Journal Record is organized into four sections: (1) General Information about the journal, (2) Metrics & Indexing practices, (3) Publication Policies, and (4) Open Access details. The twenty-five data points provided in the record, in total, aid the understanding of a journal’s rigor and transparency practices.

General Information

The details in this section of the record are useful for assessing if the journal title is reflective of its stated aims, implies an overly broad scope, or combines unrelated subjects; these attributes have all been identified as potential indicators of a lack of editorial focus or transparency [1–3]. Affiliation details provide context for readily recognizing a relationship with professional or trade organizations [4]. International Standard Serial Numbers (ISSNs) are provided, as their absence may be a potential warning sign for journals that do not adhere to best publishing practice [5]. Publication frequency details can be used to assess if a journal offers a clear and predictable publication schedule [1, 2, 6]. An easily identified publication start year gives further insight, as journals with longer publication histories may have established transparent practices and predate the exploitation of open access publishing models [7].

Metrics & Indexing practices

A plethora of metrics exists to ascertain the publishing impact of a journal (or its included articles). While some impact metrics, such as the Clarivate’s Journal Citation Reports (JCR) impact factor, are only assigned to journals that meet specific quality criteria, other journal metrics might not evaluate journals for quality or rigor. Indicating in each record the specific impact metrics that a journal claims on its website aids the user in assessing the metrics with which each journal affiliates. Furthermore, if the journal claims to have an “impact factor,” the record’s inclusion of details from JCR provides a means to verify if that claim is true [3, 5, 7].

The journal’s inclusion in well-known, highly curated databases such as MEDLINE and Science Citation Index Expanded (SCIE) also denotes that the journal has met specific quality criteria [1, 3–6]. Some journals have limited, select article inclusion in PubMed given the requirements of the National Institutes of Health (NIH) public access policy [8]. While the reason for this limited inclusion varies (e.g., journal is overall out of scope, journal is only selectively indexed), this information is provided in each Knowledge Management Journal Record, if applicable, because some less rigorous journals claim “Indexed in PubMed” status on their websites even when the only articles present in the PubMed database are NIH-funded articles that require PubMed Central deposit [9].
Publication Policies

The cornerstone of evaluating journal rigor and transparency is understanding publication policies and practices. For example, multiple resources [1–4, 6, 10] state that journals should clearly and overtly describe their peer-review and editorial practices and adhere to best practice recommendations established by organizations such as the International Committee of Medical Journal Editors (ICMJE) [11] and the Committee on Publication Ethics (COPE) [12]. Beyond statement of adherence to best practice recommendations, journal membership in organizations like COPE is further testament to a commitment to ethical publication practices [1, 3]. To ensure the long-term preservation of the scientific record and firmly establish longevity of access, journals should also commit to stable archiving methods, whether through PubMed Central or other services such as CLOCKSS [1–4, 6, 10, 13, 14].

Open Access

Given the exploitation of the open access model by publishers who engage in less than transparent and possibly unethical publication practices, the metadata fields in the Open Access section of each Knowledge Management Journal Record are especially insightful. Similar to COPE, the Open Access Scholarly Publishing Association (OASPA) specifically promotes ethical practices for open access journal publishers [6]. Membership in OASPA or a journal’s inclusion in the Directory of Open Access Journals (DOAJ) can be an indicator of commitment to best practices in open access publishing [1]. While DOAJ provides a curated database of open access publications that adhere to a series of quality standards [10], journals that are awarded a DOAJ seal are recognized for their efforts to meet an “exceptionally high level of publishing standards” and the “highest level of ‘openness’” [15]. Additional best practices for open access publications include clearly listing article processing charges (APCs) and offering licensing options (such as Creative Commons) that allow author retention of copyright and flexible sharing and reuse of article content [1, 3, 4, 10].

Tables 1 and 2 provide descriptions of data points in the metadata fields.

**Supplemental Table 1.** Knowledge Management Journal Record™ metadata field descriptions

| Field name                        | Brief description                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------|
| General Information               |                                                                                   |
| Journal title                     | Title of the journal                                                              |
| Corporate author(s)               | Professional societies or organizations affiliated with the journal                |
| ISSN                              | The print and electronic ISSN numbers                                             |
| Scope/aims uniform resource locator (URL) | Hyperlink to scope or aims statement on journal website                           |
| Publisher                         | Name of the journal publisher                                                     |
| Publication start year            | The start year of the journal (or start year of the current title if journal has had a title change) |
| Publication frequency             | Frequency of publication (e.g., weekly, monthly, bimonthly)                        |
| Link to author instructions       | Hyperlink to author instructions page on journal website                           |
| Link to journal home page         | Hyperlink to home page of journal website                                         |
| Field name                  | Brief description                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Metrics & Indexing         |                                                                                                                                                   |
| Impact metrics listed on journal website | Article impact metrics reported on the journal website (e.g., JCR impact factor, Google Scholar h-5 index, Index Copernicus value, Scimago journal rank) |
| Verifiable JCR impact factor | Is the title included in the Clarivate JCR journals list?                                                                                         |
| MEDLINE indexing status    | Statement to describe the journal’s indexing status in NLM’s MEDLINE database                                                                     |
| Indexed in SCIE            | Is the journal indexed in the database?                                                                                                           |
| Publication Policies       |                                                                                                                                                   |
| Statement of peer-review policy | Does the journal state a peer-review policy?                                                                                                    |
| Adheres to ICMJE recommendations | Does the journal state adherence to ICMJE recommendations?                                                                                      |
| COPE member                | Journal’s membership status with COPE                                                                                                           |
| Archived in PubMed Central | Journal’s archiving status in PubMed Central                                                                                                    |
| Participates in national and international archiving services (e.g., CLOCKSS) | Journal’s participation in archiving services as documented in the Keepers Registry                                                             |
| Open Access                |                                                                                                                                                   |
| Open access publication    | Is the title an open access publication or is open access offered for authors on a per-article basis?                                               |
| OASPA member               | Is the publisher a member of OASPA?                                                                                                              |
| Included in DOAJ           | Is the journal included in the DOAJ directory?                                                                                                  |
| DOAJ seal                  | If the journal is in DOAJ, has it been awarded a DOAJ Seal of Approval?                                                                        |
| Clearly describes APCs     | Does the journal clearly state the applicable article processing charges?                                                                         |
| Statement of article copyright holder | Does the journal clearly state who holds copyright of an open access paper?                                                                    |
| Creative Commons licenses offered | Are Creative Commons licenses offered and if so, which ones?                                                                                   |

Abbreviations: APCs=article processing charges, COPE=Committee on Publication Ethics, DOAJ=Directory of Open Access Journals, ICMJE=International Committee of Medical Journal Editors, ISSN=International Standard Serial Number, JCR=Journal Citation Reports, NLM=National Library of Medicine, OASPA=Open Access Scholarly Publishing Association, SCIE=Science Citation Index Expanded.
### Supplemental Table 2 Knowledge Management Journal Record data sources, automation level, and stage of automation implementation

| Field name                  | Primary source                                      | Additional/confirmatory sources | Level of automation | Stage of automation implementation |
|-----------------------------|-----------------------------------------------------|---------------------------------|---------------------|------------------------------------|
| **General Information**     |                                                     |                                 |                     |                                    |
| Journal title               | NLM’s List of all Journals Cited in PubMed           | Not applicable                  | Automated           | 1                                  |
| ISSN                        | NLM’s List of all Journals Cited in PubMed           | Journal/publisher website; ISSN portal | Semi-automated      | 3                                  |
| Corporate authors           | NLM Catalog                                         | Journal/publisher website; society websites | Semi-automated      | 3*                                 |
| Scope/aims URL              | Journal website                                     | Not applicable                  | Semi-automated      | 4                                  |
| Publisher                   | NLM Catalog                                         | Journal/publisher website       | Semi-automated      | 3                                  |
| Publication start year      | Journal website                                     | NLM Catalog, Ulrichsweb, OCLC WorldCat | Semi-automated      | 3*                                 |
| Publication frequency       | NLM Catalog                                         | Journal/publisher website       | Semi-automated      | 3*                                 |
| Link to author instructions | Journal/publisher website                           | Not applicable                  | Publisher-level standardization and automation | 4 |
| Link to journal home page   | Journal/publisher website                           | Not applicable                  | Publisher-level standardization and automation | 4 |
| Metrics & Indexing          |                                                     |                                 |                     |                                    |
| Impact metrics listed on journal website | Journal/publisher website | Not applicable                  | Publisher-level standardization and automation | 4 |
| Field name                                      | Primary source                                      | Additional/confirmatory sources | Level of automation | Stage of automation implementation |
|------------------------------------------------|-----------------------------------------------------|---------------------------------|---------------------|------------------------------------|
| Verifiable JCR impact factor                   | Clarivate JCR impact factor database                | Not applicable                  | Semi-automated      | 3                                  |
| MEDLINE indexing status                        | NLM Catalog                                         | Not applicable                  | Automated           | 2                                  |
| Indexed in SCIE                                | Clarivate’s SCIE journal list                       | Not applicable                  | Semi-automated      | 3                                  |
| **Publication Policies**                       |                                                     |                                 |                     |                                    |
| Statement of peer-review policy                | Journal website                                     | OAPSA website                   | Publisher-level standardization and automation | 4                                  |
| Adheres to ICMJE recommendations                | ICMJE list of journals stating that they follow the ICMJE recommendations | Journal/publisher website       | Publisher-level standardization and automation | 4                                  |
| COPE member                                    | COPE website                                        | Not applicable                  | Semi-automated      | 3                                  |
| Archived in PubMed Central                    | PubMed Central Journals list                        | Not applicable                  | Automated           | 2                                  |
| Participates in national and international archiving services (e.g., CLOCKSS) | The Keepers Registry                                | Not applicable                  | Automated           | 2                                  |
| **Open Access**                                |                                                     |                                 |                     |                                    |
| Open access publication                        | Journal/publisher website                           | Not applicable                  | Publisher-level standardization and automation | 4                                  |
| OASPA member                                   | OASPA website                                       | Not applicable                  | Publisher-level standardization and automation | 4                                  |
| Field name                        | Primary source         | Additional/confirmatory sources | Level of automation                                           | Stage of automation implementation |
|----------------------------------|------------------------|---------------------------------|---------------------------------------------------------------|-----------------------------------|
| Included in DOAJ                 | DOAJ website           | Not applicable                   | Automated                                                     | 2                                 |
| DOAJ seal                        | DOAJ website           | Not applicable                   | Automated                                                     | 2                                 |
| Clearly describes APCs           | Journal/publisher website | Not applicable                  | Publisher-level standardization and automation                | 4                                 |
| Statement of article copyright holder | Journal/publisher website | Not applicable                  | Publisher-level standardization and automation                | 4                                 |
| Creative Commons license(s) offered | Journal/publisher website | Not applicable                  | Publisher-level standardization and automation                | 4                                 |

Abbreviations: APCs=article processing charges, COPE=Committee on Publication Ethics, DOAJ=Directory of Open Access Journals, ICMJE=International Committee of Medical Journal Editors, ISSN=International Standard Serial Number, JCR=Journal Citation Reports, NLM=National Library of Medicine, OCLC=Online Computer Library Center, OASPA=Open Access Scholarly Publishing Association, SCIE=Science Citation Index Expanded.

* Imported data for corporate author, publication start year, and publication frequency were verified in stage 4.
Supplemental Appendix A References

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