EVALUATING AND PROMOTING INTERDEPARTMENTAL CONTRIBUTION AND COLLABORATION IN DIAGNOSTIC IMAGING RESEARCH

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A common refrain: Researchers are publishing too much, too fast

- Bornmann et al (2014): Annual 8-9% increase in the number of publications and cited references

Scientific output doubles every 9 years!
Various specialties (Radiology, neurosurgery, orthopedic surgery) have seen increases not only in total number of publications, but also in the number of listed authors per reference.

Though recent studies have evaluated the rates of radiology publication over time (Chow et al.), no current study has examined published journal articles highlighting diagnostic imaging and whether primary author affiliations exclude the radiologist.
**Purpose:** To evaluate published journal articles with a major mesh heading of ‘Diagnostic Imaging’ in which a Radiology department was not listed as a primary or co-contributor
Retrospective bibliometric analysis of public data, exempt from Institutional Review Board approval

- National Library of Medicine MEDLINE database

**Examined**: Diagnostic imaging (DI) articles published with \( \geq 2 \) unique author affiliations between Dec 2013 – Nov 2014

Author specialty, total number of authors, article methodology and source(s) of funding were identified and recorded
9,084 total articles found

3,008 articles (33.1%) with at least two unique author affiliations

2,711 of 3,008 (90.1%) articles with an attributable specialty

The most common contributors in diagnostic imaging articles with greater than 2 unique author affiliations were radiology, surgery and medicine

Radiology: 53.6% (1,453/2,711)
Surgery: 39.8% (1,078/2,711)
Medicine: 37.0% (1,013/2,711)
1,453 of 2,711 articles (53.6%) with listed contribution from a radiologist

Most common co-contributors included:
- Medicine: 34.0% (537/1,453)
- Surgery: 34.8% (505/1,453)

1,258 of 2,711 articles (46.4%) exclude radiology as a primary or co-contributor
<table>
<thead>
<tr>
<th>Introduction</th>
<th>Purpose</th>
<th>Materials and Methods</th>
<th>Results and Discussion</th>
<th>Conclusion</th>
</tr>
</thead>
</table>

921 of 2,711 articles (34.0%) with listed contribution from a single specialty

Radiology: 38.8% (357/921)  
Surgery: 18.6% (171/921)  
Medicine: 13.8% (127/921)
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<thead>
<tr>
<th>Introduction</th>
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</tr>
</thead>
</table>

Mean number of listed specialties per article: 2.14

Mean number of listed specialties for:
- Review articles: 1.84 (n=382)
- Case reports: 2.12 (n=213)
- Clinical trials: 2.60 (n=97)
- Government funded articles: 2.81 (n=445)
A significant percentage of published journal articles highlighting diagnostic imaging with listed unique author affiliations exclude radiology as a primary or co-contributor.

Radiologists and radiology departments must recognize the growing importance of integrated healthcare and endeavor to promote interdisciplinary research collaboration in order to further establish their role as a valuable clinical and scholastic partner.
References

4. Rahman L, Muirhead-Allwood SK. How many orthopedic surgeons does it take to write a research article? 50 years of authorship proliferation in and internationalization of the orthopedic surgery literature. Orthopedics 2010; 33:478
Thank You
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