

Utilization Patterns of a Japanese Biomedical Database, Ichushi, in Real-World Evidence Review: a Scoping Review

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Introduction

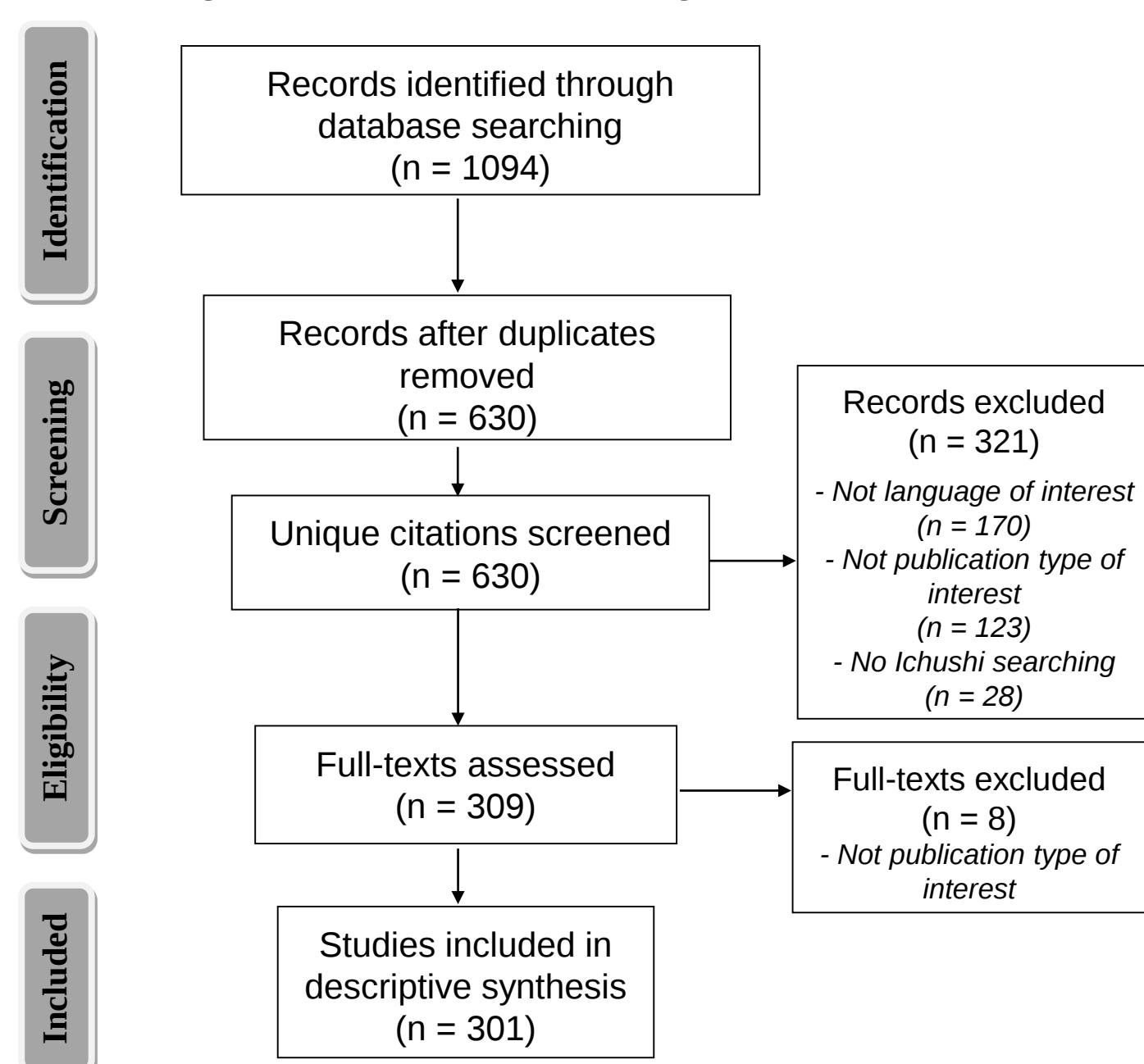
- Evidence-based health care and policy are strengthened by synthesis of diverse scientific evidence from various contexts.¹
- Gold-standard reviews curate a deeper evidence base by searching multiple scientific literature databases.
- Igaku Chuo Zasshi (Ichushi) is the largest and oldest Japanese-language biomedical database in Japan; over 300,000 new articles are indexed in Ichushi each year.³
- This scoping review maps how Ichushi has been utilized and added value to syntheses of real world evidence.

Methods

Search strategy

- Pubmed, Embase, Web of Science and the Cochrane Library were searched from inception to February 2020 for articles that searched Ichushi. All included articles were published in English and conference materials were excluded (Figure 1).

Figure 1. Search flow diagram

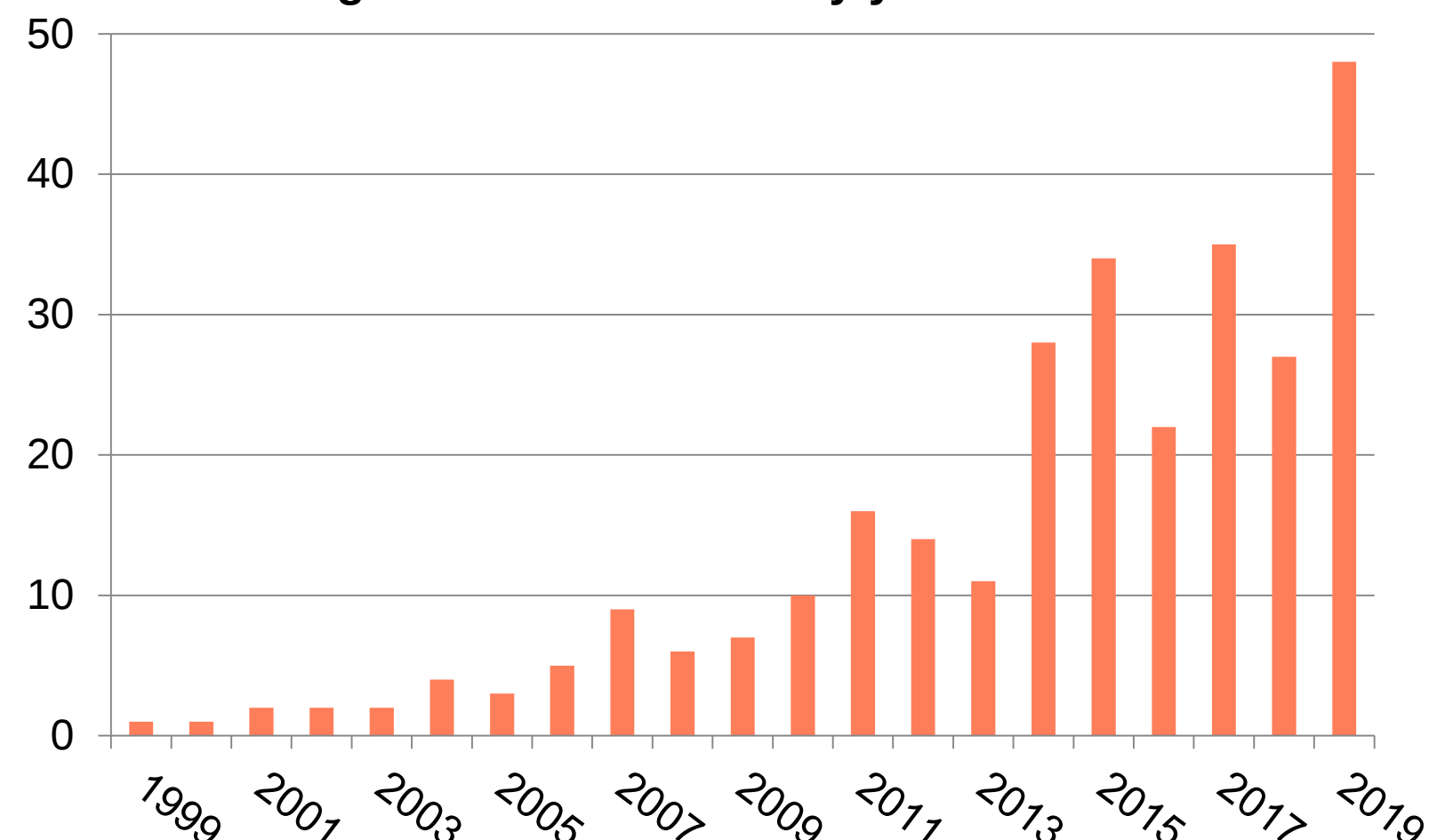


Results

Publication patterns

- Out of 1,092 records, 301 met all inclusion criteria. The first article was from 1999 (n = 1, 0.3%), an annual total which increased to 45 (14.9%) by 2019.

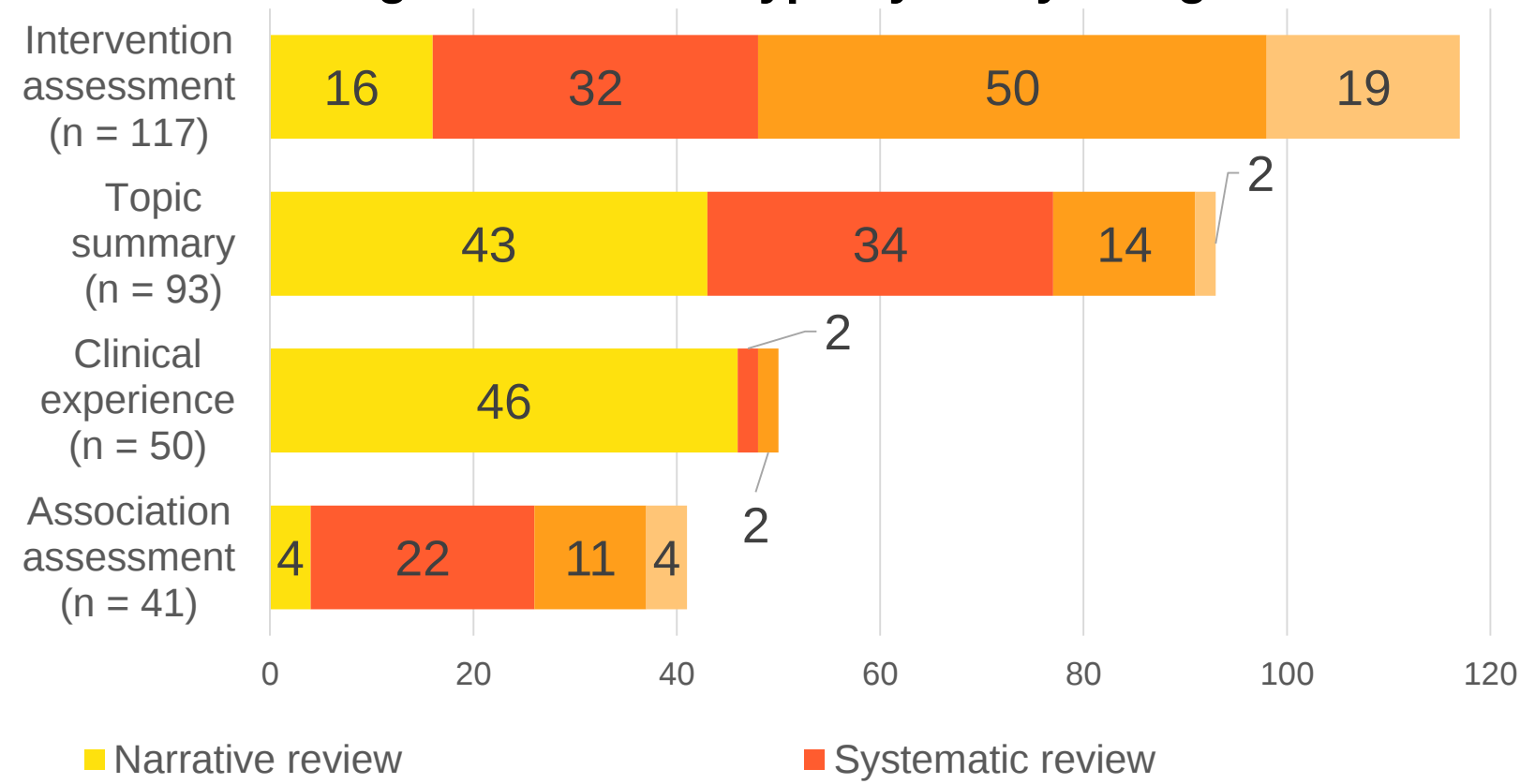
Figure 2. Publications by year



Review type

- Most articles evaluated clinical and non-clinical health interventions (intervention assessment; n = 117, 38.9%) or were summaries of a health field (topic assessment; n = 93, 30.9%).
- Other article subject types were clinical experiences, like case reports with reviews of the literature (n = 50, 16.6%), and research on health determinants (association assessment; n = 41, 13.6%).
- Narrative reviews were the most common study design (n = 109, 36.2%) followed by systematic reviews (n = 90, 29.9%) and systematic reviews with meta-analyses (n = 77, 25.6%).

Figure 3. Review type by study design

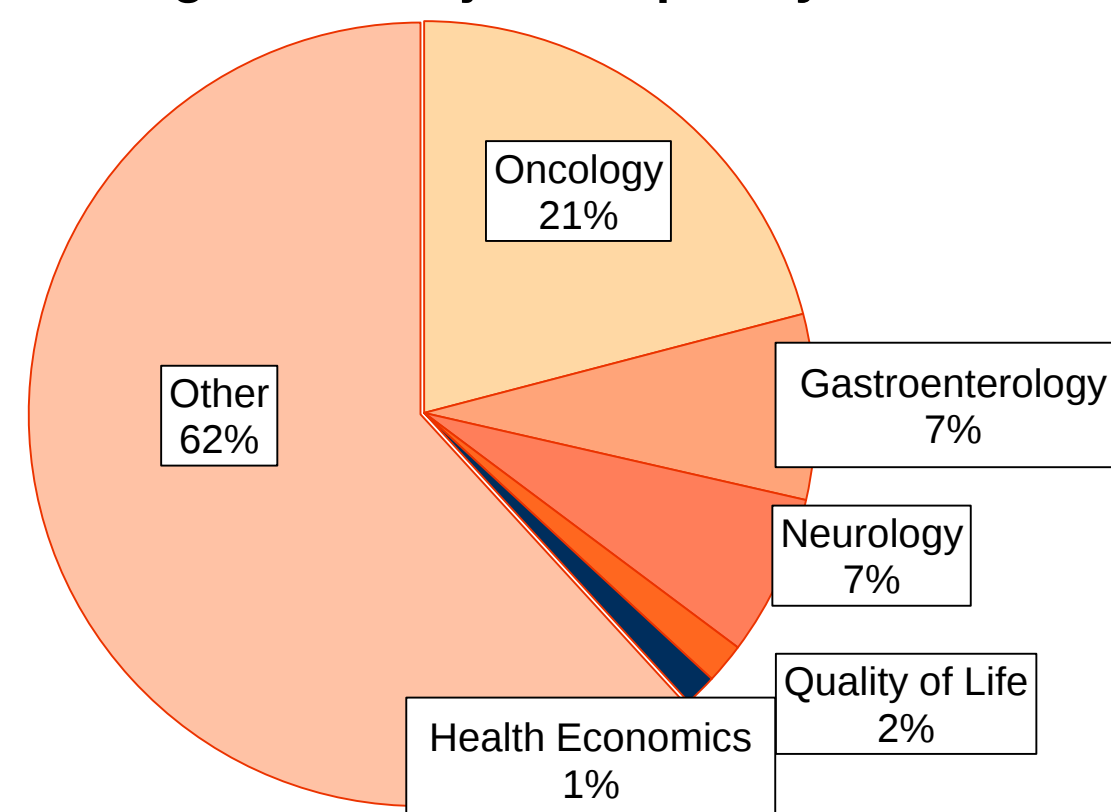


*"Meta-analysis" did not explicitly mention systematic review in title or methods but could often be considered to include such methods.

Diverse evidence syntheses

- The most common disease area was oncology (n = 63, 20.9%) followed by gastroenterology (n = 23, 7.6%) and neurology (n = 20, 6.6%). These areas were most commonly addressed with robust systematic reviews or systematic reviews with meta-analyses of health interventions and outcomes.
- In contrast, rarely studied health disciplines were quality of life (QoL; n = 5, 1.7%) and health economics (n = 4, 1.3%) mostly with lower quality narrative reviews.

Figure 4. Subject frequency



Discussion

Diversification of the evidence base

- Reviews of primary real world evidence must integrate findings from diverse contexts to provide stronger scientific insights in evidence synthesis.³
- Utilization of the Ichushi literature database has been steadily increasing, especially for reviews of interventions.
- High quality reviews have focused on clinical areas such as oncology suggesting Ichushi houses useful clinical evidence.
- Quality reviews of health economics and quality of life studies are lacking. Further research is necessary to determine if this paucity is due to an absence of evidence or an overlooked topic.
- Searching Ichushi in a systematic review of diagnostic testing for flu added novel evidence to the synthesis that otherwise was not be located with English-only searching.⁴

Conclusion

A resource for deeper evidence review

- Including the Ichushi literature database in a review or meta-analysis may add value by mining unique clinical and observational insights.
- With the appropriate research team, Ichushi can be leveraged to provide deeper and more generalizable insights for health decision-making in Japan and the Asia-Pacific region.

References

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