

Taking a structured approach to problem-solving: A case study in Open Access retrieval

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The challenge

It is important that health professionals have timely access to contemporary literature as it is used to inform patient care, research, education and guideline development (Harnegie, 2020). Healthcare organisations provide access for staff via a subscription-based online information portal (OIP) and for many health professionals, especially those without a university affiliation, this is commonly the most reliable source of access to full-text scholarly literature (Logullo et al., 2024). That said, Open Access publishing models are evolving and an increasing number of health science journal articles are being made freely available in full-text on the web (Logullo et al., 2024). The challenge is that OIPs cannot always adapt their algorithms as quickly as journal publishing models change. As a local library team, we experienced frequent instances where the OIP did not retrieve freely available full text articles from credible sources, such as PubMed Central. As a result, two search engines (the OIP and Google) were required to retrieve the desired article.

By nature of their roles, library staff are prepared to search thoroughly to retrieve articles of interest, but we theorised that health professionals may not have the time nor inclination to search beyond the OIP. They may instead accept a less targeted or less contemporary article that can be more easily retrieved (Laera et al., 2021). Given the importance of evidence-based practice in healthcare, we sought to better understand and respond to this challenge for health professionals.

As strong advocates for our OIP and the resources contained within, we proposed to gather data to share with our OIP provider as a means of enhancing the portal's capabilities. We felt it was timely to explore how a health service OIP can best leverage Open Access content to provide health professionals with easy, direct access to contemporary resources for the benefit of patient care and service delivery.

Our goal

Within this article, our goal is to share our approach to collecting data to understand and quantify a challenge, and to work with key stakeholders to respond to this challenge in a meaningful way. We want to encourage our colleagues in other libraries to take action based on an initial 'hunch' to effect change and provide better service delivery.

What we did

We noticed multiple instances in which Open Access material could not be retrieved via the OIP. This prompted us to ask:

- Is it just us?
- Is it just our OIP?
- Could this be a challenge more broadly?

Our standard operating procedure is to report individual errors to the OIP helpdesk, such as broken links or technical problems. Recognising the frequency of reporting this challenge we proposed it would be more helpful to collect a broader dataset that could help quantify retrieval gaps, and thus identify specific opportunities for OIP enhancement.

In line with this, we tested our anecdotal experience with our statewide network of health libraries to understand if others experienced this challenge, and if it was an initiative for the statewide network to progress. We received great support from the network, particularly as we offered to take carriage of the process.

Importantly, we also engaged the OIP provider in the planning stage. One of our underlying principles was that we wanted to work with the provider and gain their insight to help enable meaningful OIP retrieval enhancements and thus the client experience. As such, it became more than just an idea. Improving the retrieval of Open Access content via our OIP became a project.

How we did it

Our network of health libraries is fortunate to have access to a statewide, professionally managed OIP containing a broad range of research, point-of-care, medicines and other databases relevant to healthcare delivery. The data we aimed to capture for this project related to instances in which our OIP did not retrieve Open Access full text resources. To demonstrate this, citations of instances were sourced

during business-as-usual activities such as PDF requests from clients, or articles for literature searches conducted by library staff on behalf of clients. At this point, contact was also made with the OIP provider to invite their input with the aim that their comprehensive product could be made even better.

To encourage libraries within our network to participate in the project and to make data collection easy we prepared an Excel template that included columns for each data point populated with a couple of example citations. The data points included (a) the full citation, (b) permalink URL to the OIP entry, (c) URL for the freely available full text online, and (d) optional comments. The data collection period was 19 working days and we emailed weekly encouraging reminders during that period. Seven libraries within our network opted to participate.

Once each library's data had been collated to a master spreadsheet, we verified each data point. During this process we also collected additional data for each citation including (e) whether the journal was available via the OIP, (f) type of Open Access model used by the journal, (g) source of the freely available full text, and (h) journal quartile rank sourced from SCImago Journal & Country Rank website (SCImago, n.d.). We chose to collect this additional data ourselves to reduce the workload for participating libraries.

A descriptive analysis of this data was then conducted to summarise the information, gain insights, and identify trends. This methodology was chosen as it is relatively straightforward to do and appropriate for the data collected. The descriptive analysis was incorporated into a formal report that was sent, along with the full dataset, to the OIP provider. Their team re-verified the data and offered a meeting to discuss the findings.

Action points from the project

We were delighted that the OIP provider engaged so positively with the report. We were interested to learn of the challenges experienced by the OIP provider relating to the evolving level of publisher metadata detail that can make retrieval difficult. Another challenge for the provider was balancing the need of librarians and researchers to retrieve all relevant citations regardless of full text availability, with the desire of some clinicians for immediate full text access only. The provider was keen to continue ensuring that articles with potentially problematic copyright, such as those provided by ResearchGate or Academia, be excluded from results lists but hoped to tweak their algorithms to improve access to PubMed Central and some hybrid Open Access journals. The provider was also investigating improved use of a third-party link resolver to increase Open Access retrieval. This positive, collaborative approach to problem-solving and improved service provision will result in better outcomes for clinical staff and library teams alike.

What we learnt for next time

- It is worthwhile acting on your hunch to improve client experience
- Use data to identify and describe the challenge as this can lead to more focused solutions
- Include your colleagues or network to improve the data set and encourage participation
- Take a structured approach as this will be better received by stakeholders who may then be more willing to explore and help resolve
- If we can do it, so can you!

Conclusion

This case study detailed a structured approach for improving access to Open Access articles through an OIP used by healthcare professionals. Our exploration highlighted trends in the difficulty retrieving some full-text Open Access articles via OIPs. It also demonstrated that improvements could be achieved by creating a simple yet well-constructed dataset to identify and report trends, and working collaboratively with the OIP provider. Seemingly small challenges can be a catalyst for change, which in our environment contributes to better patient care.

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