Plain language summaries of publications (PLSPs) and original articles: An assessment of article-level metrics

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Key Takeaways

- Plain Language Summaries of Publications (PLSPs) address the need to make clinical data more accessible to patients, caregivers, and non-specialists.
- The original articles for which PLSPs have been developed consistently achieve high Altmetric scores and citation counts.
- PLSPs have much lower Altmetric scores and citation counts than their corresponding original articles.
  - This could be because engagement with PLSPs is often less measurable. For example, PLSPs may be shared offline by healthcare professionals with their patients or within patient advocacy groups.
  - Additionally, the audience for PLSPs, such as patients and non-specialists, typically does not engage in academic citation practices.
- Importantly, the publication of PLSPs does not negatively impact engagement with the original articles, and there is no evidence that PLSPs diminish their academic impact.

Introduction

- PLSPs aim to make scientific data accessible to a broad audience, including patients, caregivers, and non-specialists.
  - Readers may then refer to the original articles for more detailed information.
- Some journals do not grant permission for PLSPs of their articles in other journals, possibly due to concerns the PLSP may constitute duplicate publication or divert traffic away from the original article.
- We explored the impact of PLSPs on the metrics of original articles by examining publication trends, therapy areas, and article-level metrics for both PLSPs and their corresponding original articles.

Methods

- We performed a literature search on PubMed to identify articles with "Plain Language Summary" in the title, and a publication date between January 1, 2015, and December 31, 2024.
- Patient authorship was assessed by searching for "patient" in the affiliation field.
- For PLSPs published in 2024, we identified the associated original publications.
  - We collected data on therapy area, Altmetric score, citation count, and journal for both the PLSPs and the original articles. The number of views was also captured for PLSPs.
- Two PLSPs reporting results from pivotal phase 3 studies (EMBARK, NCT02319837, and TALAPRO-2, NCT03395197) were selected as a case study for further qualitative analysis.
  - Altmetrics were used to assess the impact of PLSP publication on engagement with the original article.
  - Google Trends was used to investigate the effect of PLSP publication on worldwide web searches for the drug.

1. Gurgel RK, et al. *Otolaryngol Head Neck Surg.* 2024;170(S1):S1–S42. **2.** Tsai Do BS, et al. *Otolaryngol Head Neck Surg.* 2024;170(S2):S1–S54. **3.** Freedland SJ, et al. *N Engl J Med.* 2023;389(16):1453–1465. **4.** Freedland SJ, et al. *Future Oncol.* 2025;21(5):501–514. **5.** Agarwal N, et al. *Lancet.* 2023;402(10398):291–303. **6.** Agarwal N, et al. *Future Oncol.* 2024;20(29):2123–2135.

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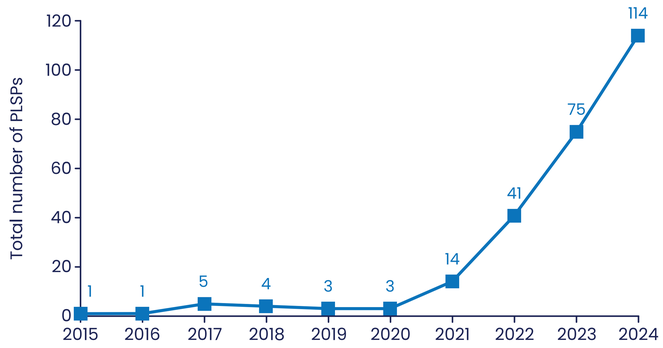
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Results

- PLSP numbers increased over time, with 114 PLSPs published in 2024 (Figure 1).
  - There was a notable jump in PLSP publications in 2021, followed by a steady annual increase.

Figure 1. Number of PLSPs published over time (2015–2024).



- Interestingly, only 32 PLSPs published since 2020 had a patient listed as an author in the affiliation field, with 12 of these in 2024.
- Few PLSPs were published in peer-reviewed journals prior to 2020. Future Science Group published their first PLSP in August 2020, and we saw this as a tipping point for the PLSP concept. The number of different journals publishing PLSPs also expanded, from two journals in 2020 to 24 in 2024 (Supplementary Figure 1).
- A total of 114 PLSPs were published in 2024 across a range of therapy areas. Oncology was the most common therapy area, comprising 46% of all PLSPs published in 2024 (Table 1).
  - Mean Altmetric scores and citation counts for original articles were generally high, particularly in oncology; cardiovascular, renal, and metabolism; and respiratory (Table 1).
  - Mean Altmetric scores for PLSPs were considerably lower than for the original articles. Moreover, citation counts for the PLSPs were very low (Table 1).
  - The Altmetric score of the original articles did not appear to correlate with the Altmetric score of the PLSP (Figure 2A) or with the number of views of the PLSP (Figure 2B).

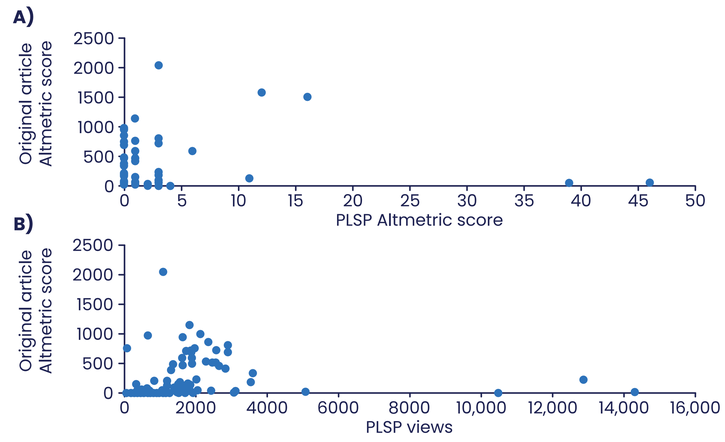
Table 1. Metrics for PLSPs published in 2024, and their corresponding original articles

		PLSP		Original article	
Therapy area	Number	Altmetric score (mean [range])	Citation count (mean [range])	Altmetric score (mean [range])	Citation count (mean [range])
Oncology	52	1 (0–6)	0 (0–2)	343 (0–2037)	225 (0–2242)
Infectious disease	9	1 (0–4)	0 (0–0)	14 (0–62)	17 (0–35)
Neurology	9	2 (0–11)	0 (0–1)	24 (1–131)	16 (1–97)
Food safety	8	0 (0–1)	0 (0–2)	18 (0–58)	8 (0–44)
Cardiovascular, renal, and metabolism	8	2 (0–16)	0 (0–0)	265 (1–1507)	155 (2–1197)
Rare	6	0 (0–2)	0 (0–0)	72 (1–336)	101 (8–474)
Respiratory	4	12 (1–39)	1 (0–2)	216 (2–806)	28 (3–79)
Other†	18	4 (0–46)	0 (0–1)	157 (0–1577)	50 (0–304)
Total	**114**	**2 (0–46)**	**0 (0–2)**	**216 (0–2037)**	**133 (0–2242)**

†Other includes therapy areas with fewer than 4 PLSPs in 2024: hematology n=3; immunology n=3; female health n=3; formulation n=2; PLS guidance n=2; esthetics n=1; gastrointestinal n= 1; ophthalmology n=1; otology n=1; rheumatology n=1.

- The PLSPs with the two highest Altmetric scores (39 and 46, respectively) were published in *Otolaryngol Head Neck Surg* and both were clearly signposted from the original article published in the same journal, with hyperlinks to the PLSP both within the original article and at the top of the online publication.[1,2]

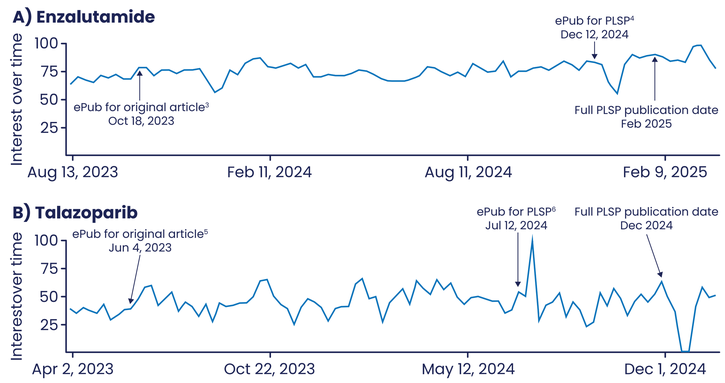
Figure 2. (A) Altmetric scores and (B) views for PLSPs published in 2024, versus Altmetric scores for the corresponding original articles.



EMBARK and TALAPRO-2 case study

- Publication of the PLSP did not appear to impact engagement with the original article for either EMBARK or TALAPRO-2 (Supplementary Figure 2).[3–6]
- Following publication of the EMBARK PLSP on December 12, 2024,[4] there was no evidence that the number of web searches for enzalutamide increased (Figure 3A).
- In contrast, web searches for talazoparib appeared to increase following publication of the TALAPRO-2 PLSP on July 12, 2024,[6] peaking in late July (Figure 3B).

Figure 3. Worldwide web searches for (A) enzalutamide or (B) talazoparib from 2 months before the original article ePublication date until 1 month after the PLSP full publication date based on Google Trends.



Panel A from https://trends.google.com/trends/explore?date=2023-08-18%202025-03-31&q=%2Fm%2F047rn4_&hl=en-GB.
Panel B from https://trends.google.com/trends/explore?date=2023-04-04%202025-01-31&q=%2Fg%2F11clgg6_gg&hl=en-GB.

Limitations

- All publication dates were sourced from PubMed, and we relied on the accuracy of these entries.
- Our search for articles with "plain language summary" in the title may have returned some articles that do not meet the current definition of PLSPs (https://editorresources.taylorandfrancis.com/reviewer-guidelines/review-checklist/plain-language-summary-of-publication-peer-review-guidelines/).
- We did not apply the PubMed meta-tag for plain language summaries to our search, this may have identified additional articles; however, the meta-tag may also have identified abstract-style plain language summaries, which would not have been relevant to our research.
- In general, PLSPs were published after the corresponding original articles, which could affect Altmetric scores and citation counts as these metrics are known to increase over time. However, the scores for PLSPs were generally low, and there was no evidence that a longer time between publication and our analysis resulted in higher scores.