How can we share research together? Insights from a graphic designer

By **Gill Brown** 4 June 2024

In this second article in our special series about our PPI project 'How can we share research together? A co-creation project to make scientific research more accessible' we hear from graphic designer, Gill Brown. Gill's role was central to this project, no amount of discussion would've resulted in an accessible information sheet without Gill's skills and expertise. Here, Gill reflects on her experience of being part of this novel project.

This entry is part 2 of 3 in the series How can we share research together?

I come from a scientific background, having worked as a geophysicist for many years before studying graphic design. I collaborated with research scientists during my graphic design PhD and continue to do so in my freelance work, helping them produce effective visual communication, including illustrated patient information sheets. However, up to this point I had only worked directly with the researchers, never with the people who would be using the information. Any feedback we received from non-scientists was always after the design work had been completed.

Being involved from the start

As the graphic designer working with this project, it was extremely useful to be involved in the project from the start and to attend the first workshop with the patient representatives, as they discussed the research paper with the scientists.

Despite my scientific background, I have no experience of radiotherapy or knowledge of artificial intelligence. I therefore found parts of the paper as difficult to understand as the patient representatives did, and I missed or misunderstood some of the key points.

This workshop and the one following two weeks later allowed us to identify where the technical language had to be simplified and where illustrations would be needed, to make the important information contained in the research paper comprehensible to all readers.

It also meant that I learnt and understood enough about the scientific information being communicated in the paper to be able to make meaningful contributions to the design process, rather than being brought in towards the end of the project just to make the content 'look nice'.

The design process

As Catarina and Lisa discussed in the first article, the design of the information sheet was very much an iterative process. After a lot of discussion about radiotherapy, artificial intelligence and imaging we started to think about what might be included in the information sheet. We had an initial plan but the reality was we worked simultaneously on:

1. the illustrations required for the figures.
2. the design of the four main figures.

3. the explanatory text.
4. the overall design of the sheet, including the graphic elements.

Ensuring that the illustrations and figures were scientifically accurate required additional online meetings with the research scientists, where progress could be made more quickly than via email exchanges. I am very grateful to the scientists for giving so much of their time to engage with this process and explain their science to me.

During at least one online session we engaged in real-time graphic design (see image below), trying different layouts of text and figures to see what would work best, which helped us to make more rapid progress.

As it had been agreed to keep the information sheet to two pages of A4 (or one A3-sized spread), space was at a premium and every word of text was scrutinised, revised, or re-written to make it fit within the layout.

I think we made a significant step forward when all of the text in the layout was re-written by a non-scientist. This helped us to make the break from purely technical language, even though significant revisions continued to be made to the text following that step.

As I became more familiar with the content I was able to make minor text revisions by myself, knowing that I was not affecting its scientific meaning, which helped to speed up the process.

Again, thanks must be given to the scientists who were willing to drastically cut the contents of their paper to create an accessible, yet still accurate, summary. As a former scientist, I know how painful that process can be.

Compromises and knowing when to stop

As Catarina and Lisa mentioned in the previous article, with several people giving input to the project, there inevitably had to be some compromise in the design process (although not with the scientific accuracy of the information). This was especially true when the patient representatives gave their input to a 'close to final' version of the information sheet during our third online workshop, as we then had eight opinions to consider.

I was very impressed and pleased with how engaged the patients remained with the project, despite the relatively long wait for a final result, and their input at this stage was key to making the information sheet appear reader-friendly and accessible.

As the graphic designer in the process, it was important for me to make clear to everyone what could and could not be achieved in terms of the layout, and also to suggest calling a halt when we had reached a point where we were no longer progressing. My own feeling is that if everyone involved in a collaborative project is only a little bit unhappy with the final output, then that is probably a pretty good result.

The final output – an illustrated information sheet

Although the original intention of the project had been to create an 'infographic', I don't think this is a useful term to apply in this case. An infographic implies the use of limited, or no, text in the final design and it can run the risk of appearing too simplistic.

For a subject as complex and important as this scientific research paper, the inclusion of a significant amount of text (albeit using simplified language) is essential if it is going to be understood by a lay reader. However, working with the patient representatives made it clear that the inclusion of graphic elements (such as bullet point summaries and icons) was important, to make the layout look much more accessible than the original research paper.

The comparison to a (well-designed) scientific poster is, I think, an appropriate one, albeit a poster aimed at an interested lay audience. All things considered, the term 'illustrated information sheet' perhaps best describes our final output. The researchers asked the journal to include the information sheet as supplementary information to the published paper. They agreed to this and readers can now link to the information sheet directly from the paper which is fantastic, and creates a credible, accurate and accessible resource.

Follow-on project

Having attended the final workshop, Dr Lim was keen to use some of the illustrations in a patient information sheet for an upcoming radiotherapy research study. I am therefore working with Dr Lim and two of her research colleagues to create two illustrated figures (showing the radiotherapy treatment pathway and the differences between two types of radiotherapy) and to make the patient information sheet more accessible to a reader. This study is designed for very young radiotherapy patients, therefore being able to provide their parents and guardians with clear and comprehensible information is incredibly important.

In general, the clear communication of science, particularly health-related science, is vital, especially in a time of so much mis- and dis-information. Effective visual communication is an important part of making scientific facts and information accessible to all, and helping scientists achieve that is something I feel passionately about. Working directly with both patients and researchers has been a new and extremely rewarding experience for me, and I'm keen to work on similar collaborative projects in the future.