

The winner of the 2023 Academy Award for Best Picture, the sci-fi multiverse comedy 'Everything Everywhere All at Once', is a film in which every imaginable universe is unique and bizarre (take the universe in which the lead character has hot dogs for fingers, for example). Imagine if there was a universe in which everyone could access everything they needed, everywhere or anywhere they went, at any time they wished.

Why create materials that a sizeable proportion of our audience cannot read, simply because we thought that green text on a red background would look nice for a seasonal marketing campaign?

There are many factors that can affect accessibility. For example, older age groups may not be familiar with digital formats, or people who have English as a second language may require simplified content. Additionally, there are socio-economic determinants of health that could affect health literacy – here, both non-digital formats and non-technical writing could have a huge impact.

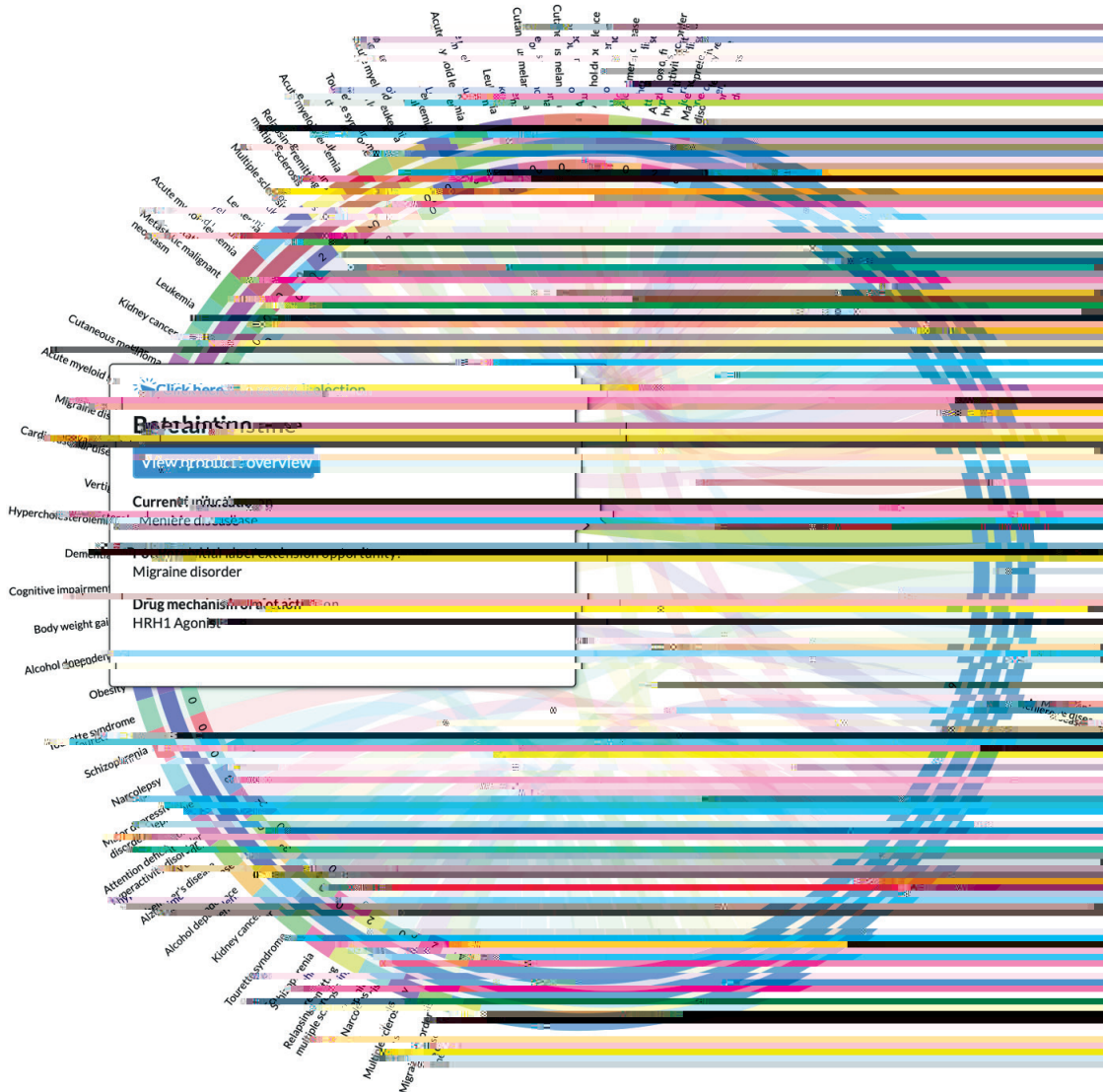
How else can we make a difference? A snapshot from 2020–2021 showed that an estimated 1.3 billion people, approximately 16% of the global population, are living with a disability.¹ A study in the UK found that in individuals with a disability, impairments affected a wide range of abilities, including dexterity (23%), hearing (10%) and vision (9%), all of which have an impact on access to healthcare materials. Many disabilities are 'invisible', with an estimated 15–20% of the UK population thought to be neurodiverse^{2,3} (conditions include attention deficit hyperactivity disorder, autism, dyscalculia and dyslexia), so tailoring materials to accommodate these individuals would have a significant positive impact on improving the accessibility of health information.

What is health literacy and why is it relevant?

Low health literacy is remarkably common. Nearly 50% of adults from a selection of European countries may have problematic or insufficient health literacy, and 88% of US adults may not be able to make effective use of health information from community sources, with only 12% having proficient health literacy.⁸

In the UK, five key populations with disproportionately low or inadequate health literacy have been identified: disadvantaged

Making data accessible is not a new concept. Florence Nightingale famously saw the need to 'simplify the complex' and made strides in novel data visualization techniques with her rose diagram, intended to present statistics in an engaging and accessible medium to attract a greater breadth of readers. Her efforts ultimately led to a reform in health and sanitation policy in Victorian Britain.¹⁰ In our AI and Data Science Team, we are keen to present data with a visual impact that maintains a focus on clarity. The example below shows the interrelation of diseases based on overlapping drug mechanisms of action to identify possible new indications for an existing product portfolio.



The interrelation of indications to identify possible new indications for an existing product portfolio based on overlapping drug mechanisms of action.

Alt text: Spirograph-like figure depicting the interrelation of indications to identify possible new indications for an existing product portfolio. HRH1, histamine H₁ receptor.

Plain language summaries and accessibility

Our Open Pharma initiative aims to improve the publications model of research sponsored by pharmaceutical companies by connecting the pharmaceutical industry with innovations in publishing to increase the transparency of, and the access to, research outputs. One element of this initiative

When developing our learning materials, we ensure that all images and icons that need to be

Do they need alt text or closed captions enabled? Do they need additional time to participate in a meeting? Are there certain times of the day that are inconvenient, thereby reducing access to a meeting?

This can feel like considering everything, everywhere, all at once, but making the extra effort to understand the accessibility needs and solutions of your audience, as well as being open to improvements and feedback throughout a project, is of vital importance.



1. Incorporate accessibility principles within the culture of your organization and prioritize inclusive design. Ensure compatibility with assistive technologies such as screen readers and alternative-input devices.



2. Simplify language. Use clear and plain language techniques to simplify complex medical jargon and instructions. This benefits not only individuals with disabilities, but also those with low health literacy or limited English proficiency.



3. Provide multiple formats. Offer healthcare information in multiple formats, including text, audio and visual, to accommodate various accessibility needs. Incorporate captions, transcripts and audio descriptions to ensure accessibility for individuals with hearing or visual impairments.



4. Train communicators. Educate your peers on disability awareness, communication strategies and the use of assistive technologies.



5. Seek community feedback. Engage with individuals with disabilities and advocacy groups to seek their insights and feedback on healthcare communication materials. Their perspectives can help to identify barriers and to guide improvements to enhance accessibility.

By prioritizing accessibility – to provide equitable access to our materials for all individuals – we can contribute to more effective training and communications, alongside enhanced patient engagement, with the end goal to improve healthcare outcomes. Let's commit to breaking down barriers and ensuring everything we do is accessible to everyone, everywhere, all at once.

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