

Transparency and public disclosure:

What climate research can learn from clinical research – and vice versa



The healthcare industry is spearheading initiatives for public disclosure, open access, and plain language summaries in biomedical research. These initiatives are being mirrored in other fields of research as well, including climate research. Below we list some parallelisms between biomedical research and environmental research.

Transparency and disclosure

The Carbon Disclosure Project (CDP) is a not-for-profit organisation that runs the global disclosure system for greenhouse gas emissions. CDP drives companies and governments to manage their environmental impacts. “The world’s economy looks to CDP as the gold standard of environmental reporting with the richest and most comprehensive dataset on corporate and city action.”¹

Based on self-reported data, CDP scores companies and cities based on public disclosure and inventory of emissions, reduction targets, and climate action plans, and comes up with the so-called A list. The City A List 2021 included

95 cities from all continents.

More than 270 made it to the Company A List 2021, but only a disappointing handful of pharmaceutical companies are listed. The CDP A List may be compared to the Good Pharma ScoreCard, which ranks companies on their clinical trial transparency and data-sharing performance.² Pharmaceutical companies should proactively participate in CDP as part their corporate sustainability goals.

Open access

Open access in biomedical research is making headway³ whereas climate research is lagging behind. There is an urgent call for open access to environmental research papers as health and environmental crises converge. “Research that is published open access has a greater impact than research that is locked behind a paywall. It is read more and cited more, and it can be built upon, reproduced, validated, or refuted by other researchers much more easily. It can also be used by members of the public, educators, clinicians, journalists, and policy makers to spread

awareness of pressing issues.”⁴

The Electronic Information for Libraries (EIFL), the Scholarly Publishing and Academic Resources Coalition (SPARC), and Creative Commons started a campaign to increase open access to research on climate science and biodiversity. The project goal is to “create a truly global campaign to promote open access, open science and open data as effective enabling strategies to accelerate progress towards solving the climate crisis and preserving global biodiversity.”⁵

Lay summaries

Plain language is vital to communicating with the public, and the healthcare industry is leading the pack.⁶ The 2021 United Nations Intergovernmental Panel on Climate Change (IPCC) report⁷ has been criticised for using complex and highly technical terminologies. A recent study⁸ looked at effectiveness of IPCC communications by conducting interviews among members of the general public. The results indicate that use of common climate change terms as listed in the

Table 1. Communicating climate change with plain language

Term	Definition	Suggested improvement
Mitigation	A human intervention to reduce emissions or enhance the sinks of greenhouse gases	"Policies that reduce emissions to stop climate change (from getting worse)." References to specific climate change actions or climate change policies should reduce confusion with other contexts, in which mitigation may have a different meaning.
Carbon neutral	Carbon neutrality is achieved when anthropogenic CO ₂ emissions are balanced globally by anthropogenic CO ₂ removals over a specified period. Carbon neutrality is also referred to as net-zero CO ₂ emission.	Spelling out "carbon dioxide" may avoid any confusion about the type of carbon involved. Referring to "no net increases in carbon dioxide in the air", or to "balance out the carbon dioxide we put into the air" may help to avoid confusion with "zero carbon". To clarify the process, these descriptions may need to include examples of carbon dioxide removal (see below).
Unprecedented transition	Transition: the process of changing from one state to another in a given period of time. Transition can be individuals, firms, cities, regions and nations and can be based on incremental or transformative change. (No definition for 'unprecedented' transition available.)	"Making big changes together to stop climate change." Examples should specify which big changes are required.
Tipping point	A level of change in system properties beyond which a system reorganises, often abruptly, and does not return to the initial state even if the drivers of the change are abated. For the climate system, it refers to a critical threshold when global or regional climate changes from one stable state to another stable state.	Findings suggest a need for descriptions of tipping point that highlights the connection with climate change, the seriousness of the issue at hand, and the role of cascading effects in the climate system. For example, this may include a phrase such as "point at which we can no longer undo climate change (and its effects on...)" or "when it is too late to stop climate change (and its effects on...)", with specific examples.

IPCC glossary was actually fraught with confusion and misinterpretation. This held true for the climate-concerned, the ambivalence, and climate change doubters. The study proposed some strategies on how to communicate climate change in plain language. Some examples are provided in Table 1,⁹ reused with permission from *The Anthropocene*.

Conclusions

Knowledge not communicated is knowledge wasted. Regardless of the field of research you are in, transparent communication is of prime importance and clinical research is paving the way. Climate research is playing catch up but seems to be headed in the right direction. Both fields of research can learn from each other.

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