

material on sustainable trial designs. The majority of existing resources have an occasional character and provide useful introductions, but are insufficient given the scale, complexity, and multidisciplinary nature of the challenges of implementing sustainability principles into clinical research (20, 27, 28, 30, 32, 33).

In order to raise awareness of sustainability in clinical trials via education and to address this educational gap, the ERASMUS+ GREEN-TRIALS project had been proposed by the Masaryk University, the University College Cork, the NOVA University Lisbon, the University of Nicosia, and ECRIN and launched as part of the same consortium in November 2025. The GREEN-TRIALS project focuses on integrating sustainability principles into the trial methodology curriculum and creating highly innovative structured learning resources covering the

topic from broad perspectives. The GREEN-TRIALS project's primary target population is undergraduate healthcare students, but the curriculum will be adapted for clinical trialists and other professionals more or less directly involved in trial design and oversight. Moreover, the GREEN-TRIALS project places strong emphasis on reach and its own sustainability. The curriculum will be available in English and translated into four other languages. Additionally, each curriculum unit will be accompanied by a teacher's guide. A series of international, free training events will be conducted in 2027 and 2028 to support widespread capacity building.

Conclusion

The findings clearly indicate that both healthcare and clinical research are important contributors to global greenhouse gas emissions, making them priority areas for re-

source-efficiency and sustainability efforts. Progress in this domain depends on a precise understanding of the emissions associated with specific research processes and on the feasibility of optimizing these processes, too. Although sustainability considerations are only beginning to be systematically integrated into clinical trial methodology, increasing awareness and coordinated stakeholder engagement can significantly accelerate the development of effective solutions. Moreover, sustainable elements in clinical trial design may offer benefits that extend beyond environmental impact reduction – by reducing participant burden, enhancing inclusivity, and improving the feasibility of generating quality data. Integrating sustainability principles into clinical research thus represents an important step toward advancing both scientific rigor and environmental responsibility.

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