

## EDITORIAL

# SUSTAINABILITY: A NEW PARADIGM IN HEALTHCARE EDUCATION

### HIGHLIGHTS

1. The SDGs provide an alternative approach to evidence-based medicine.
2. Sustainability in the context of higher education in health requires a paradigm shift.
3. Healthcare professionals should be trained to operate within the healthcare system as a complex system.

Carolina Rau Steuernagel<sup>1</sup> 



**KEYWORDS:** Health Education, Evidence-Based Medicine, Sustainable Development.

### HOW TO REFERENCE THIS ARTICLE:

Steuernagel CR. Sustainability: a new paradigm in healthcare education. *Cogitare Enferm.* [Internet]. 2024 [cited "insert year, month and day"]; 29. Available from: <https://dx.doi.org/10.1590/ce.v29i0.92908>.

Introduced as a new paradigm for healthcare education, evidence-based medicine has been the main framework guiding professional education for at least thirty decades. As such, the main goal in higher education has been to teach future professionals to adapt and apply scientific evidence to the specific needs and demands of each patient and clinical encounter.<sup>1</sup> In daily healthcare practice, which includes diagnostic, preventive and treatment practices, sociocultural influences, global perspectives and future concerns are often disregarded as a basis for decision-making. However, current complex economic, social, climate and political crises that impact the whole planet challenge this approach centered on the patient as isolated from wider contexts.

The Sustainable Development Goals (SDGs) offer an alternative framework, which come to expand the evidence based paradigm by including future and global perspectives in decision-making processes.<sup>2</sup> Antimicrobial resistance offers an illustrative example of this approach in practice. Regarding the SDGs, recommendations for using an antibiotic transcends arguments of efficacy for the condition affecting a specific patient. When global and future perspectives are taken into account, the prescription of an antibiotic represents at the same time a possible cure for the patient and a risk to the environment and human health in the future, if the prescription is unnecessary. It thus becomes crucial to evaluate the availability of laboratorial tests to confirm a bacterial infection, if they are accessible to patients in terms of costs and distance, and if they provide trustworthy results. Moreover, the educational status of the patient, their capability to recognize risk signs and ability to return for reevaluation weigh in the decision. Patient's expectations and local sociocultural norms related to medicine use are also significant variables. Public policies that regulate prescription patterns play a role as well.

Despite these practical complexities, healthcare education often focuses on teaching technical evidence, leaving students and professionals to balance present and future uncertainties alone. Therefore, complementing the evidence-based approach with the SDGs framework holds the potential to offer a wider and more balanced view in health decision-making, which accounts for both, urgent needs of patients and global/future concerns. The challenge facing healthcare education is how to implement an educational model able to educate professionals to critically evaluate and act in complex, diverse and dynamic systems.<sup>3</sup> UNESCO promotes a pedagogical model that depicts eight key competencies<sup>4</sup> for education within a sustainability paradigm:

1. Systems Thinking: capacity to identify connections in complex systems, in which uncertainties are inherent.
2. Anticipatory Competency: ability to contemplate diverse scenarios – possible, probable, desirable – and to conceive prospective views.
3. Normative Competency: capacity to negotiate values and conflicts of interest.
4. Strategic Competency: ability to conceive and develop innovative strategies.
5. Collaboration: capacity to respect and collaborate with other despite diverse opinions.
6. Critical thinking: ability to challenge norms, concepts and established practices.
7. Self-awareness: knowledge of its own role in the context and capacity to evaluate its actions.
8. Integrated problem-solving: ability to develop viable solutions to complex challenges.

Implementing this pedagogical model in universities demands an understanding of sustainable health beyond conventional measures to separate waste and recycle, or conscious use of resources in healthcare institutions. Sustainability in healthcare education requires a paradigm shift beyond the traditional concept of health centered in the

relationship between patient, provider and scientific evidence. Instead health has to be understood and taught as dynamic system in which patients and providers participate while influencing the system, generating present and future effects.

Educating professionals able to work and thrive within this system depends on revisions of curricula and pedagogical tools in order to promote engagement with complexities and uncertainties instead of avoiding them. In order to do so, a parallel move for interdisciplinary collaboration is crucial. Complex problems with uncertain feedbacks are better addressed in collaboration across different domains beyond health, such as technology, humanities and social sciences. This collaboration is made necessary particularly when addressing community problems. As such, sustainable healthcare education aims a profound and holistic transformation of the paradigm in which health providers are educated, preparing them to act on health as a complex system, thus positively influencing present and future generations.

## REFERENCES

1. Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't? BMJ [Internet] 1996 [cited 2022 June 23];312(7023):71. Available from: <https://doi.org/10.1136/bmj.312.7023.71>
2. Berg H, Askheim C, Heggen KM, Sandset TJ, Engebretsen E. From evidence-based to sustainable healthcare: cochrane revisited. J Eval Clin Pract. [Internet] 2022 [cited 2022 June 23]; 28(5):741-4. Available from: <https://doi.org/10.1111/jep.13698>
3. Heggen KM, Vøllestad N, Engebretsen E. Fremtidens medisinerer må rustes til å håndtere klimakrisen. Tidsskrift for den Norske Lægeforening [Internet] 2022 [cited 2022 June 20];142(5). Available from: <https://doi.org/10.4045/tidsskr.21.0907>
4. Unesco. Education for Sustainable Development and the SDGs: learning to Act, Learning to Achieve. Policy Brief, 2018.

**Received:** 05/10/2023

**Approved:** 10/11/2023

**Associate editor:** Dra. Luciana Kalinke

**Corresponding author:**

Carolina Rau Steuernagel

University of Oslo

Problemveien 11, Blindern0371 Oslo

E-mail: c.b.r.steuernagel@medisin.uio.no

**Role of Authors:**

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - . Drafting the work or revising it critically for important intellectual content - **Steuernagel CR**. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Steuernagel CR**. All authors approved the final version of the text.

ISSN 2176-9133



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).