

# A decade on: successes and future directions for integrating physical activity into healthcare curricula in the UK and EU

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## BACKGROUND

In 2014, as part of the outcomes from the inaugural World Heart Federations Emerging Leaders' work,<sup>1</sup> a network of collaborators and change agents set about strengthening the capacity of healthcare professionals (HCPs) to support patients and communities to be more physically active. The intent was to influence the prevention, treatment and rehabilitation of noncommunicable diseases (NCDs) and poor health, in the context of research demonstrating that even brief physical activity advice during routine consultations can translate to significant clinical outcomes.<sup>2</sup> The community of practice<sup>3</sup> aim was simple: to upskill, through capacity building, key frontline professionals of any healthcare discipline to be more confident, capable and competent in implementing interventions to mitigate NCDs. This included enabling HCPs to promote greater physical activity by their patients and use their leadership influence to effect wide-scale change in society.<sup>4</sup>

Previous initiatives across UK medical and health schools to access free physical activity and health resources and implement them through curriculum change resulted in slow and inconsistent uptake. Similar suboptimal outcomes were reflected in other countries.<sup>5</sup> However, in 2019, the European Union (EU) ERASMUS+Virtual Advice, Nurturing, Guidance on Universal Action, Research and Development for physical activity and sport engagement (VANGUARD) project enabled five European schools of medicine (and one UK-based physiotherapy school) to embed bespoke resources,

secure academic support and empower future HCPs.

## THE VANGUARD PROJECT

The VANGUARD project objectives were to:

1. Embed physical activity in the EU undergraduate curricula of future frontline HCPs (medical doctors and subsequently allied health professions) in these six European countries to help promote and sustain health.
2. Foster meaningful collaborative partnerships in the implementation, methodology and evaluation of physical activity in the EU curricula of future frontline HCPs.
3. Develop an at-scale approach, led by future HCPs, in the critical role of physical activity/sport in the prevention and treatment of NCDs, including in pregnancy and perioperatively.
4. Develop a universal toolkit for EU countries on how to successfully develop and systematically implement bespoke physical activity knowledge and competencies.
5. Provide an EU-wide and international e-platform for nurturing clinical and strategic leadership across all partners. Full implementation details are obtainable from the project lead (senior author, GSM) and further information can be secured from the VANGUARD website: <https://vanguard-erasmus.eu/>.

Using recognised change implementation methodology,<sup>6</sup> the VANGUARD project partners have successfully transformed the paradigm of capacity building in student HCPs, by altering the curricula of different medical schools across Europe. The outcomes are in the process of being reported and disseminated across the EU.

The incorporation of physical activity as a module within 12 out of 16 medical schools in the UK was first attempted following a commission in 2017–2018 by Public Health England and Sport England. This followed significant interest shown to equip future frontline HCPs to be

knowledgeable about the beneficial effects of physical activity in NCDs and build their capacity to convey this to patients. The EU country partners in whom implementation of the VANGUARD project was successful were Lithuania, Estonia, France, Portugal and Greece. Each EU Higher Educational Institute engaged with their medical school in the co-development and implementation of physical activity in their undergraduate curricula. Methods to accomplish the project objectives were bespoke to each country and individual medical school constraints.

## CHANGE AGENCY AND IMPLEMENTATION SKILLS MATTER ACROSS ALL SECTORS!

One of the key observations across both the universities and local community sectors was the lack of experience in securing widespread change. One of the VANGUARD project's main outcomes was the development of a step-by-step implementation toolkit. The toolkit will be freely available and explains how implementation was achieved using practical examples and experiences from the VANGUARD processes ([figure 1](#)).

The VANGUARD project followed, in addition to other implementation frameworks, the NHS Change Agency Model<sup>6</sup> and the project was evaluated using this approach. This starts with a 'shared purpose' philosophy as shown in [figure 2](#).

This approach ensured that each university was able to identify the facilitators and barriers to implementation logically and systematically and co-create innovative solutions.<sup>7</sup> All stakeholders co-created each bespoke plan.<sup>6</sup>

## THE CONTINUING GLOBAL CHALLENGES

The question remains, why is curriculum change so slow and political, when millions of people living with NCDs worldwide, would benefit from physical activity support and environments that encourage equitable access? This is critical for all, especially certain populations such as those individuals living with cardiovascular disease, cancer and other long-term conditions. Physical inactivity may result in deconditioning, immobility, disability and premature death. The ripple effect is much wider than inactivity-related disease risk and contributes to an inability to manage an ever-growing demand on clinical services, amplified social inequity and further intangible costs to communities and society. Inadequate application of clinician knowledge and skill therefore

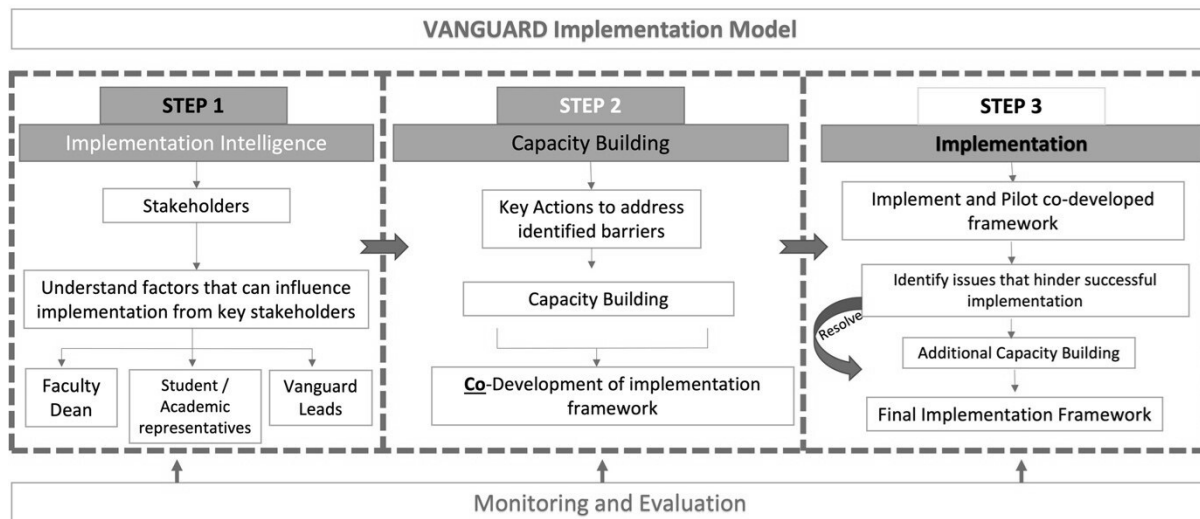
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**Figure 1** The VANGUARD project used implementation science methodologies and was specifically informed by the (a) WHO implementation guide and (b) the Reach Effectiveness Adoption Implementation Sustainability framework while the evaluation was based on the UK NHS Change Model. Specifically, step 1 of the VANGUARD methodology aimed to understand the barriers and facilitators for implementation from all key stakeholders (students, academic staff, university management). In step 2, the methodology addressed step 1 identified barriers and facilitators via targeted capacity-building actions and then codeveloped—with the contribution of all key stakeholders—the final framework of implementation of a physical activity module in the curriculum. The final step of the methodology (step 3) aimed to pilot the codeveloped implementation framework and develop its final form.

carries huge strategic responsibilities in these circumstances, and Higher Educational Institutes must recognise their responsibility to build curricula that meet these challenges.

**BUILDING ON 10 YEARS OF EXPERIENCE**

While the answers to this question are complex and ambiguous, it is clear across these 10 years that the understanding of change agency, civic accountability and urgency is extremely limited in academia, clinical practice and the wider system.



**Figure 2** NHS Change Model.<sup>6</sup>

This is worrying because we cannot afford to wait for 10-year implementation cycles given that NCDs are rapidly rising. Change agency itself agitates protracted academic processes by extolling the value of change in 30-day, 60-day and 90-day cycles. Change can be fast and sustainable using a shared purpose narrative and philosophy. So why aren't more universities embracing this compelling vision of a shared purpose to effect critical impact? Perhaps exercise prescription is not viewed as exciting enough cutting-edge technology. But it certainly fulfils the promise of addressing the wider issues in a way that pharmaceuticals and technology do not. In addition, physical activity is a cost-effective intervention accessible well beyond better-resourced countries in the UK and EU.

There remain unanswered questions in academia as to how to implement the World Health Organization's (WHO) vision and secure a reduction in the global prevalence of physical inactivity in children, young people, adults and special populations. The role of contemporary curricula in the EU and elsewhere must be to develop a workforce that fulfils the aspirations and ambitions of the WHO Sustainable Development Goals and evolves undergraduate healthcare students to lead on these pressing deliverables. A reform in contemporary curricula to embed physical activity knowledge should be relevant to both medical schools and HCPs, because an orchestrated and total

system change is more likely to achieve the necessary sustainable results.

## SO, WHAT NEXT?

The VANGUARD project has demonstrated the potential for curriculum change and there now needs to be an urgent rallying call to all stakeholders. Global advocates of physical activity now have a successful example of an effective implementation model which can be adopted as the best practice in other EU countries, and worldwide, to overcome implementation barriers and successfully deliver on the WHO physical activity goals and plan.

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