

Work-related cardiovascular disease prevention: regulations, policies, strategies and initiatives

Summary

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Background and objectives

Cardiovascular diseases (CVDs) remain the leading cause of mortality in the European Union (EU), where they account for approximately 1.7 million deaths each year. While CVDs have traditionally been attributed to behavioural and clinical risk factors, emerging research highlights the significant role of occupational determinants. This study builds on a growing body of evidence demonstrating that:

- occupational risk factors such as stress, long working hours, shift work, sedentary work and exposure to noise and chemicals can all contribute to cardiovascular morbidity and mortality;
- occupational risk factors often interact with lifestyle and socioeconomic determinants, which can exacerbate health inequalities among workers and sectors;
- recognition of these interdependencies has led to efforts to integrate cardiovascular health into European and national occupational safety and health (OSH) strategies, as reflected in the EU Strategic Framework on Health and Safety at Work 2021-2027 (European Commission [EC], 2021), the Healthier Together initiative (EC, 2022) and the Council Conclusions on non-communicable diseases (NCDs) (Council of the EU, 2024).

The study contributes to a major research project currently being carried out by the European Agency for Safety and Health at Work (EU-OSHA) on CVDs and OSH, and aims to:

- assess how EU Member States (MSs) and selected international initiatives have integrated cardiovascular risk prevention and return-to-work (RTW) and retention-at-work (RAW) measures into OSH and public health frameworks;
- identify success factors and good practices for the successful prevention of work-related CVDs (WR-CVDs) and the promotion of RTW and RAW measures;
- identify gaps and unmet needs in existing initiatives to provide policy pointers and enhance strategies for the prevention of WR-CVDs, support RTW for workers after CVDs and promote RAW for workers with chronic CVDs.

In addition to the report¹, five case studies have been prepared to serve as relevant examples of initiatives that integrate CVD prevention and RTW and RAW practices.²

Policy context

The review identified three overarching policy trends shaping the current European landscape with regard to the prevention of CVDs and the promotion of RTW for workers after CVDs or RAW for workers with chronic CVDs.

Integrated and collaborative approaches

Policy frameworks are increasingly recognising the complexity of health challenges and the need for collaboration across sectors, disciplines and national systems, including partnerships between OSH authorities, public health agencies, employers, social partners and community organisations.

Growing focus on climate-related occupational risks

Climate change has increased exposure to environmental hazards such as extreme heat and air pollution, which are increasingly understood as contributing to cardiovascular strain.

Prevention through lifestyle interventions

Many interventions, often referred to as workplace health promotion (WHP) initiatives, focus on encouraging lifestyle modifications, reducing tobacco and alcohol consumption, and promoting healthier diets and physical activity. While these approaches are beneficial, they often overlook the role of workplace exposures and organisational determinants, as well as employers' obligations under the EU OSH Framework Directive (Council Directive 89/391/EEC) to prevent work-related risks to workers' safety and health, including CVD risks (Council of the European Communities, 1989).

¹ See full report at: <https://osha.europa.eu/en/publications/work-related-cardiovascular-disease-prevention-regulations-policies-strategies-and-initiatives>

² See *Case studies* subsection below.

Key findings

While recent European strategies have addressed cardiovascular health in the workplace, their implementation through national programmes and practical interventions remains limited. A comparative analysis of 20 initiatives identified the following trends:

Objectives and scope

- Increased awareness of cardiovascular risk within the workplace was the most common objective among the reviewed initiatives.
- Awareness was promoted primarily through lifestyle-focused interventions to encourage healthier behaviours among workers.
- Limited attention was given to the role of workplace prevention, risk assessment, occupational exposures and socioeconomic determinants of health in the development of CVDs.

Target groups and effectiveness

- Most initiatives targeted broad worker populations rather than specific sectors, occupations or risk groups. Although this approach maximised reach, it often resulted in lower specificity and reduced effectiveness, as interventions were not tailored to the needs or risk profiles of particular occupational groups.

Engagement strategies and behavioural change

- Initiatives that reported the strongest behavioural impact used a combination of engagement methods such as individual support and workplace adjustments.
- Personalised support such as counselling and tailored advice, alongside changes to the work environment, contributed to positive and sustained behavioural change.

Evaluation and outcomes

- Many initiatives included evaluation mechanisms to assess implementation and outcomes.
- However, follow-up periods were often too short to observe long-term health impacts, which limited the evidence on sustained effectiveness.

Success factors

- Successful initiatives demonstrated early stakeholder commitment and cross-sector collaboration.
- Effective interventions provided tailored support based on the workplace context, clearly defined objectives and indicators, involvement of health professionals and targeted assistance for small and medium-sized enterprises (SMEs).

Assessment of transferability

Transferability was strongest where initiatives were:

- evidence-based in terms of their design;
- adaptable to different workplace environments and sectoral contexts;
- supported by scalable implementation structures;
- underpinned by robust monitoring and evaluation frameworks.

Initiatives lacking stable funding, cross-sector coordination or formalised monitoring systems demonstrated reduced potential for successful transfer.

Methodology

The methodology followed in this study was implemented in several stages:

- A primary review of literature and policy covering 83 initiatives launched between 2019 and 2025, including academic and grey literature, was conducted. In parallel, 81 references cited in EU-OSHA's Focal Point (FoP) survey were reviewed.
- From this body of evidence, 20 initiatives addressing WR-CVD prevention and RTW and RAW strategies were selected based on predefined criteria and subjected to a preliminary analysis.
- Of these, five initiatives were identified as examples of holistic approaches and developed as case studies, informed by fieldwork and a total of eight stakeholder interviews.

Case studies

To complement the comparative review and illustrate how occupational health policies are being translated into practice, a set of detailed case studies was selected. These examples provide insight into how different national systems operationalise CVD prevention, WHP, and RTW and RAW support in real organisational and sectoral contexts. By examining a range of approaches, from community-based outreach and structured professional guidelines to enterprise-level programmes, they highlight both promising practices and persistent implementation gaps across Europe. The following five case studies were developed:

1. **Farmers Have Hearts** (Ireland): a community-based CVD prevention programme for farmers delivered through direct outreach at farmers' markets.³
2. **fit2work** (Austria): a national programme that provides counselling and comprehensive support to workers with chronic illnesses, as well as to companies to enhance prevention and reintegration capacity.⁴
3. **WHP programmes** (Italy/Spain): public accreditation systems incentivising companies to implement comprehensive health promotion programmes.⁵
4. **STAR-VITAL – Joint Measures for the Vitality of Older Workers** (Slovenia): a workplace health initiative that supports SMEs in implementing health prevention initiatives.⁶
5. **NVAB Guideline on Ischaemic Heart Disease** (Netherlands): professional standards and recommendations for occupational physicians to support secondary prevention and the RTW and RAW of workers after cardiac events.⁷

Conclusions

The analysis of EU and national initiatives demonstrates that successful interventions are achievable when they are well designed, context-sensitive and adequately supported. However, their long-term impact continues to be limited by gaps in funding, work-related cardiovascular risk assessment protocols and the integration of broader socioeconomic determinants of health, including education, income, working conditions and access to healthcare. The conclusions below reflect both the strengths identified and the areas where targeted improvements are needed:

- The review identified several promising practices across Europe, thus demonstrating that well-designed workplace initiatives can effectively support CVD prevention and management, as well

³ See: *Cardiovascular disease prevention for farmers through workplace health checks*

<https://osha.europa.eu/en/publications/cardiovascular-disease-prevention-farmers-through-workplace-health-checks>

⁴ See: *Fit2work in Austria: supporting return to work after illness*

<https://osha.europa.eu/en/publications/fit2work-austria-supporting-return-work-after-illness>

⁵ See: *Accreditation scheme promotes workplace health to prevent cardiovascular disease*

<https://osha.europa.eu/en/publications/accreditation-scheme-promotes-workplace-health-prevent-cardiovascular-disease>

⁶ See: *Supporting workplace health promotion for workers in Slovenian small businesses*

<https://osha.europa.eu/en/publications/supporting-workplace-health-promotion-workers-slovenian-small-businesses>

⁷ See: *Work-related cardiovascular disease: Dutch guidance on prevention and return to work*

<https://osha.europa.eu/en/publications/work-related-cardiovascular-disease-dutch-guidance-prevention-and-return-work>

as RTW and RAW measures, when they are appropriately resourced and tailored to workers' needs.

- Successful initiatives consistently secured strong commitment from funders, managers and workers, which shows that early buy-in and the presence of programme 'champions' can significantly enhance implementation and uptake.
- Dialogue between stakeholders should form the foundation for successful initiatives. Multidisciplinary collaboration and worker involvement should be fostered when developing OSH initiatives and providing holistic support to workers and companies.
- A comprehensive approach is needed to understand the factors underlying CVD risk and to design interventions that are relevant, feasible and capable of achieving sustainable behavioural change while addressing occupational factors, including work-related psychosocial and organisational risks, as well as environmental and wider socioeconomic determinants.
- Non-financial mechanisms such as certification and award programmes could be considered for companies that have gone above and beyond the minimum regulatory requirements and implemented good OSH practices.
- Effective programmes considered the broader socioeconomic, cultural and organisational context, thereby demonstrating that embedding interventions in local communities or adapting to organisational constraints (e.g. during Covid-19) increases accessibility and relevance.
- Involving dedicated health professionals emerged as a core strength of successful initiatives, since this helps ensure continuity of care and strong coordination between workers, employers and healthcare providers.
- Initiatives specifically supporting SMEs through organisational guidance, training or reintegration support highlight the importance and feasibility of helping smaller companies overcome resource and capacity barriers.
- The identified initiatives lacked sustained funding, which limited their potential impact. To ensure interventions translate into lasting health outcomes, financial frameworks should be integrated into national OSH budgets to secure the long-term continuity of initiatives for the prevention of WR-CVDs.
- The programmes did not adequately address how workplace risk factors can exacerbate CVDs. Sector-specific guidance is needed to guide and inform a holistic framework that recognises the workplace as a modifiable factor, where WR-CVD risks can be effectively prevented and managed in line with the EU OSH Framework Directive, rather than simply as a setting for health promotion interventions.
- Particular attention should be given to high-risk sectors such as construction and workers subject to specific working conditions, including night or irregular shift work and prolonged exposure to noise and chemicals.
- Socioeconomic determinants of health are currently insufficiently integrated into OSH policies, despite the complex contexts in which workers operate. These include sociodemographic and clinical characteristics, working conditions and lifestyle factors.

Key policy pointers

To strengthen the integration of cardiovascular health into OSH policy and practice, the following key policy pointers are proposed, developed and published in a standalone document⁸:

1. Mandated institutions and authorities should introduce and implement sector-specific risk assessment guidance and protocols for assessing and managing WR-CVD risks. These should aim to identify, assess and eliminate or minimise occupational risk factors in line with the EU

⁸ See policy brief *Work-related cardiovascular diseases: policies for prevention, return to work and retention at work* at: <https://osha.europa.eu/en/publications/work-related-cardiovascular-diseases-policies-prevention-return-work-and-retention-work>

OSH Framework Directive, while providing recommendations for prevention, monitoring frameworks, training and job-related controls.

2. Multidisciplinary collaboration and worker involvement should be fostered in the development of OSH initiatives to facilitate implementation and ensure risks are identified from multiple perspectives, thus providing workers with holistic prevention and support.
3. Greater efforts should be made to promote awareness of and training on WR-CVD risk factors within organisations to drive stronger commitment to occupational health initiatives and increase momentum for interventions that address CVDs within the workplace.
4. The role of occupational health practitioners in supporting RTW and RAW programmes should be evaluated to identify cost-effective ways of involving them in different national and sectoral contexts.
5. Policies that incentivise sustainable funding mechanisms such as grants and tax breaks should be designed to encourage organisations to go beyond the minimum regulatory national standards and actively promote good practices for the prevention of WR-CVDs.

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