PROGRAMME REPORT

Musculoskeletal health risk management: WorkSafe 2021–2024

ACTIVITIES OF WORKSAFE'S HUMAN FACTORS/ ERGONOMICS TEAM FOR MUSCULOSKELETAL HEALTH RISK MANAGEMENT

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Te Kāwanatanga o Aotearoa
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WORKSAFE
Mahi Haumaru Aotearoa

AUTHORSHIP

Marion Edwin CNZHFE, Manager Human Factors/Ergonomics and Leanne Hunter CNZHFE, Principal Advisor HFE, WorkSafe New Zealand

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EXECUTIVE SUMMARY

WorkSafe New Zealand's musculoskeletal programme activity, as discussed in this report, has established a 'call to action' for New Zealand businesses regarding the hazardous manual tasks that expose workers to known musculoskeletal health risks.

WorkSafe data analysis in 2019 identified that 27% of the burden of work-related health harm in New Zealand was from musculoskeletal disorders. Serious musculoskeletal injuries associated with work have high prevalence across sectors, and injury rates continue to grow.

With ACC funding from 2021 to 2024, WorkSafe delivered a musculoskeletal programme. This work was carried out by the human factors/ergonomics (HFE) team, part of the Health Team.

A barrier to addressing musculoskeletal health risks in the health and safety regulator is that it is persistently down-played next to fatalities and serious non-fatal injuries. There is also a common (and incorrect) belief that ACC deals with all aspects of injury prevention. But the Health and Safety at Work Act (2015) applies – businesses having a primary duty of care to ensure, so far as is reasonably practicable, the health and safety of workers and others. This includes physical health and musculoskeletal health risks, placing this area of risk within WorkSafe's jurisdiction.

At programme start WorkSafe's musculoskeletal risk management guidance was outdated, sparse, and misleading. It focused on low order administrative controls such as manual handling training, referenced only the previous health and safety legislation, and had limited risk assessment detail. It was insufficient for WorkSafe's role in both educating businesses, and for holding them to account under HSWA (2015). Inspectorate had little knowledge and an outdated approach to musculoskeletal health risks and had no tools enabling them to focus on this area of risk.

A work programme was drawn up and commenced. Utilising contemporary science in the field, the HFE team first worked to create definitions and to specify the relevant injury and harm data. This enabled the creation of guidance on musculoskeletal conditions and risks, and completion of WorkSafe's position on musculoskeletal health. This identified that businesses should eliminate musculoskeletal health risks from work so far as is reasonably practicable; and if risks can't be eliminated, they must be minimised.

An additional position document was completed in collaboration with Australian regulatory counterparts. This outlines that 'how to lift' training is not a prescribed requirement under New Zealand legislation and does not alter hazardous manual task risk exposures. This position reinforces the need for businesses to manage hazardous manual task risks via risk management and the use of high order risk controls.

Attention then turned to the development of a set of guidance for musculoskeletal risk screening and risk assessment. Tools were selected that enable hazardous manual tasks to be identified, and for contributing musculoskeletal risks to be assessed and managed. These were adapted for New Zealand use from the health and safety regulator in the United Kingdom. This suite of new guidance was a key first step to influence businesses to identify and manage the risk of harm from hazardous manual tasks. Key stakeholders in the development and use of this new guidance were professionals from the health and safety specialist disciplines. Further training rollout is recommended for the health and safety professions, including generalists.

Inspectorate's cohort training material has been updated to reflect contemporary musculoskeletal risk management knowledge and the new guidance. However, the tools and resources for use by inspectors for enforcing regarding musculoskeletal health risks are not yet developed, and inspector training for these aspects is not yet embedded.

Musculoskeletal programme plans were created with recognition that a 7–10-year campaign duration would be necessary. The first 3–5 years would allow a build of foundational resources and internal capacity, and following years would focus on continued capacity building (both internal and external) and targeted enforcement across key industries.

However, the HFE-led musculoskeletal programme has halted following WorkSafe's 2024 strategic reset and end-2024 restructure. This sees the disestablishment of all HFE roles and discontinuation of musculoskeletal-harm focused priorities.

A review of the ROI calculations for costs and programme completion was done to 31 March 2024, based on the original processes from Sapere. This showed a conservative calculation of costs for the combined HFE programme activities of $2.5 million in present-day dollars and a present benefit of $76 million for an ROI to date of 30.54. Considering the costs-to-date, and the benefits already achieved, the ROI on future funding would be 10.08 ($10 million Net Present Value of costs and $108 million Net Present Value of benefits). These calculations demonstrate significant programme benefit that will continue beyond programme completion.

This report outlines the musculoskeletal programme's health and safety system context, the activities and outputs of the programme, and recommended musculoskeletal work plans for WorkSafe for future years. It will be of value for future work in musculoskeletal health risk management for WorkSafe, ACC, other health and safety regulators, industry groups, businesses, and work health and safety professionals.

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1.0
Introduction and purpose of this report

IN THIS SECTION:

1.1 Introductory statement

As the lead work health and safety regulator, WorkSafe has an important role within the health and safety system. To reduce the frequency and severity of work-related musculoskeletal disorders (WRMSDs) prevalent across all sectors, it is necessary to understand the workplace risks that lead to musculoskeletal harm, and for businesses to control those risks.

WorkSafe influences improved health and safety outcomes by engaging with businesses, providing clear guidance, and holding businesses to account for how risks are managed.

With ACC funding, from 2021–2024 WorkSafe led work to improve how musculoskeletal health risks are understood and managed in New Zealand workplaces.

1.2 Background

WorkSafe's 2021–2024 implementation of a musculoskeletal programme commenced in February 2021 with the employment of a Human Factors/Ergonomics (HFE) lead. The first few months were dedicated to building the HFE team. Startup was slowed by COVID, but most of the team was in place by September 2021, and March 2022 saw the team of five in position. The HFE team and the musculoskeletal programme formed part of the health team, delivering to WorkSafe's health strategy. Thus, HFE sat with the occupational hygiene and mentally healthy work teams, and with Kaimahi Hauora, the team of specialist health inspectors.

The HFE team consisted of qualified and experienced specialists who have many years, and in some cases decades, of musculoskeletal risk management experience across New Zealand industries, along with international experience.

The musculoskeletal programme was designed in phases. The first phase provided contemporary information to update the significantly outdated and scarce WorkSafe resources. Subsequent resource and capability development phases would then enable inspectorate to hold businesses to account for musculoskeletal health risk management. In February 2021 analysis of the size/scope of the problem for MSD risk management found that New Zealand was at least 15 to 20 years behind other countries in terms of the guidance available for businesses on musculoskeletal risk management, and matching regulator capability. Upgraded resources and continued internal capability build are necessary for work-related musculoskeletal harm reduction in New Zealand into the future.

1.3 Purpose of this report

The main objectives of this report are to:

- provide an overview of New Zealand's health and safety landscape regarding musculoskeletal risk management prior to February 2021
- summarise WorkSafe's musculoskeletal programme activities and outputs as delivered by the HFE team from 2021 through 2024
- outline a recommended musculoskeletal work plan for WorkSafe for future years.

2.0 Human factors/ ergonomics within a health and safety regulator

IN THIS SECTION:

2.1 The discipline of human factors/ergonomics (HFE)

HFE science and practice 'seeks to understand what constrains or promotes optimal human performance – it relates to the abilities, characteristics, and limitations of being human, and the design of equipment, environments and tasks people interact or engage with'. (Human Factors and Ergonomics Society of New Zealand, 2024). So, while the HFE team has led musculoskeletal health risk management within WorkSafe, the discipline of HFE is considerably broader than this one field of application.

Some may view 'human factors' and 'ergonomics' as different fields, but from within the discipline, they are the same, with the terms used interchangeably. The New Zealand and international HFE bodies provide more information on the scope of the discipline. The HFE Society of New Zealand (HFESNZ) credentials appropriately skilled professionals, using an internationally recognised process. HFE professionals can be HASANZ Registered with Health and Safety Association of New Zealand (HASANZ), and the HFE team was committed to attaining and maintaining professional certifications and to raising the standards of HFE practice in New Zealand.

HFE is a field with recognised shortages in New Zealand, with a WorkSafe-funded (via ACC funding, through HASANZ) workforce development programme running over several years and concluding in June 2024. This programme has seen the refresh of dwindling HFE education options in New Zealand, with a unique multi-university award winning programme now established.

2.2 HFE within other health and safety jurisdictions

As a discipline HFE makes significant contribution to the work of health and safety regulators world-wide. This includes investigations, analysis of incident causation, systems analysis work, human performance measurement, risk assessment, health and safety research, work and workplace design, human-centred design processes, usability, and a host of other work health and safety related applications. This sees HFE teams typically embedded within health and safety regulators commonly in roles within intervention design, research, investigations, as expert witnesses, as part of high-hazard teams, and in the inspectorate.

Work health and safety (WHS) topics commonly addressed with HFE inputs include fatigue; slips, trips, and falls at same level; musculoskeletal and psychosocial risks and risk assessments; task and process analysis; thermal comfort; workplace design; equipment design; human-machine interface design; computer workstation/seating design and use; control centre and cockpit design; cognitive demand analysis, systems analysis, and more. This breadth of HFE application is visible in the team's contribution to frontline inspectorate activity and investigations, guidance development, intervention design, research and evaluation, and education and training. The lead regulator having in-house HFE capability is important because these subject matter experts (SMEs) can be deployed when and where required in the organisation to meet regulatory needs.

Additionally, teams of inspectors and investigators can receive training from these SMEs in using human factors perspectives and approaches in their own work – with this already happening in WorkSafe's major hazard facilities team via external providers. And forward-thinking health and safety regulators are now integrating systems analysis methods from HFE into planning for targeted interventions. An example is WorkSafe Victoria's (Australia) Systems Thinking Analysis Response (STAR) programme, looking for better integration of interventions across complex work systems to address long-standing and complex health and safety issues.

Many of our Australian counterparts have 'Ergonomics Inspectors' who carry out targeted musculoskeletal workplace visits and address psychosocial risks. A useful comparison can be made with the state of Victoria, that has a similar population to New Zealand. Speaking with the Senior Manager Programs – Prevention, Strategy and Planning, and the Director of Specialist Services at WorkSafe Victoria found that they have 10 full time employed HFE professionals working as inspectors. They are technical subject matter experts in the HFE Unit, part of a Specialist Services group alongside occupational hygienists, engineers and psychologists. There are a further 6 full time employed HFE in Manual Handling programmes who carry out a range of project management, communications, and research work. Funding is via 'business as usual' for 80% of the roles, with some of the project roles as fixed term, associated with specific prevention projects funded via submitted business cases for each financial year. Additional project funds of around $50,000 – $100,000 are available per financial year, allocated on submission of a budget. Further funds are available to access HFE external expertise for investigations.

Prior to the HFE team's startup, WorkSafe New Zealand was a notable exception. There was no regulator-based HFE expertise addressing musculoskeletal health (and other) risks and supporting inspectorate and investigations activities. The Health and Safety by Design team (2020–2023) had a strong cohort of HFE professionals during its ACC-funded existence, but the 2023 restructure saw the demise of this programme of work and the team disestablished.

Some HFE expertise has existed within earlier iterations of WorkSafe, but with low numbers (we understand just one person) and not continuously. When required, some external HFE capability is contracted to support investigations, but with some lack of awareness of personnel qualified in the field. Contracting HFE expertise also carries considerable risks in availability, quality, consistency, and effective application.

2.3 The WorkSafe HFE team, competencies and pay ranges

Through ACC funding allocation in 2020, the HFE team lead role was advertised in late 2020. The role was filled in February 2021, with this job title later changed to Manager HFE. Following the creation of HFE-specific position descriptions, team roles were advertised. From July – September 2021 the Advisor HFE, Senior Advisor HFE, and Principal Advisor HFE started work. Another Senior Advisor HFE began in March 2022, with their arrival into the country slowed by international COVID travel restrictions.

All roles were placed in the Public Sector A pay ranges, at PS 16 for Advisor, PS 17 for Senior Advisor, PS 18 for Principal Advisor and PS 19 for Manager. As the roles were planned, the Human Resources team were asked if these positions should be more appropriately recognised as 'Technical Specialists' with a higher pay range. This would have recognised the specialist nature of the HFE field, and the considerable educational and practice achievement that is required for credentialled HFE professionals. This request was declined, and positions were placed in the Public Sector A pay range. The issue was revisited with Human Resources in 2023, recognising the lack of equivalence between HFE and other SME advisors who are 'Technical Specialists' on a higher pay rate. This was an active query when the 2023 organisational restructure commenced. Consequently, no review of the pay rates for the HFE team occurred, so the inequity between health/technical advisory personnel pay rates continued.

All HFE roles were full time ‘national roles’ so could be worked from any WorkSafe office, with COVID highlighting the essential need to be able to work flexibly and from home. Team members were based in Auckland, Tauranga, Wellington, Nelson, and Christchurch. Vacant positions were unable to be filled from the 2023 restructure, so HFE personnel are now in only Tauranga, Nelson, and Christchurch.

There was recognition of the need to recruit HFE professionals with diverse backgrounds to address the inequity in health and safety outcomes in New Zealand, particularly for Māori and Pasifika. We recruited a Senior Advisor who was a qualified HFE professional with Samoan heritage, and an Advisor with an occupational health physiotherapy background and completing HFE studies, with Māori whakapapa. Given the equity outcomes sought for health and safety in New Zealand and the shortage of HFE professionals, these hires and their addition to the small number of HFE professionals in New Zealand were notable. Other hires included an HFE research and education specialist, and two experienced Certified HFE professionals – one with decades of New Zealand HFE consulting experience including musculoskeletal harm reduction work with ACC, and another with considerable experience with the UK health and safety regulator and New Zealand health and safety experience.

The combined, diverse, and considerable expertise of the HFE team provided a sound basis for commencing a musculoskeletal work programme within WorkSafe.

3.0 The need for WorkSafe to address musculoskeletal risks

IN THIS SECTION:

3.1 Work-related musculoskeletal disorders data

WorkSafe's work-related health estimates data (August 2019) identified musculoskeletal disorders as accounting for 27% of the burden of harm, with an additional portion of musculoskeletal harm in acute injuries (shown in Figure 1). Together this sees musculoskeletal harm as over 30% of health harm, measured in 'disability adjusted life years' with all sectors being affected (WorkSafe New Zealand, 2019).

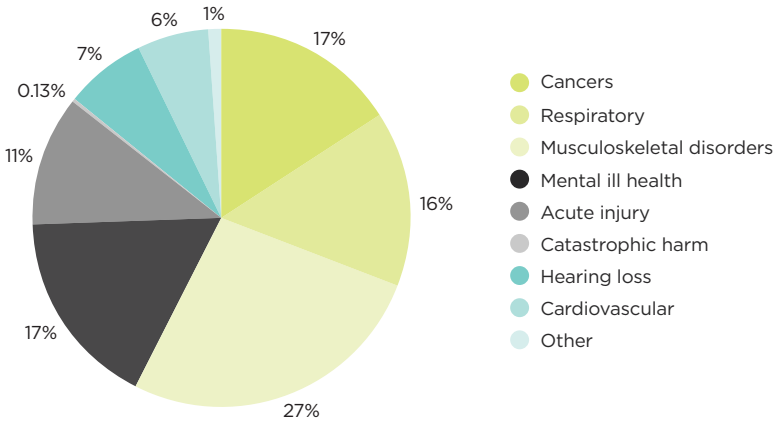

FIGURE 1: WorkSafe burden of harm estimates from work-related injury and ill-health (August 2019)

Work-related musculoskeletal disorders (WRMSDs) are a common problem worldwide, as in New Zealand. For example, the European Agency for Safety and Health at Work (EU-OSHA) identifies them as the most common work-related health problem in the European Union - with 60% of all workers with a work-related health problem identifying musculoskeletal disorders as their most serious issue (European Agency for Health and Safety at Work (EU-OSHA), 2019). Addressing workplace musculoskeletal health risks have been part of targeted strategies in Europe since the early 2000's, and this continues today.

In New Zealand, WorkSafe internal data identifies work-related musculoskeletal injury as the most significant work-related health problem across our current 'top 4' target sectors – construction, forestry, agriculture, and manufacturing. In these sectors 31–37% of workers report work-related musculoskeletal issues in the last 12 months. With similar musculoskeletal harm rates in other sectors such as healthcare they are a significant New Zealand workplace health and safety issue.

Serious work-related injury claims resulting in more than a week away from work are highest in manufacturing (7,200) followed by construction (6,318); healthcare and social assistance (3,438); agriculture (2,688); transport, postal and warehousing (2,568); and retail (2,325). At 65% of total claims, soft tissue injuries (which capture many, but not all types of musculoskeletal harm) are the largest portion of injuries, with 146,100 claims (Statistics New Zealand, 2022). Some additional gradual process claims may also fall under our work-related musculoskeletal disorders definition (WorkSafe New Zealand, 2022a).

WorkSafe data shows the rate of work-related injury claims (per 1,000 FTE's) for week away from work declined overall by 5% from 2002 to 2021. Rates declined from 2002 until 2011, but then increased 31% from 2012 to 2021 (WorkSafe New Zealand, 2024k). Whilst the decline is attributed to the 2008/09 global financial crisis (with recession tending to see decline in injury rates) it is notable that the ACC discomfort, pain, and injury prevention and management programme was active during this time, with programme efforts reducing from 2011. This suggests an alternative reason for the reduction in injury rate from 2008–2011.

From the same data dashboard, *The Workforce Segmentation and Insights Programme Survey 2021* identified a high proportion of musculoskeletal harm and risk exposure:

- one in three workers reported experiencing a work-related musculoskeletal problem, with 11% experiencing a musculoskeletal problem that began in the last year
- lifting at work was reported by 50% of workers at least some of the time, with 1 in 8 exposed to lifting most of the time
- across industries, musculoskeletal injuries accounted for 45% of week away from work claims, an increase of 10% from the 2012 data
- and within manufacturing, the increase was 140% from the 2012 data.

Overall, this injury data paints a concerning picture of high harm rates, and frequent worker exposure to known injury risks such as awkward positions; and lifting, carrying, and moving loads.

A recent manufacturing industry collaboration, (Project Whakahaumaru, driven by the Employers and Manufacturers Association, EMA), estimates a $1.23 billion burden on the New Zealand economy from manufacturing sector work injuries. (Employers and Manufacturers Association, 2024). Of this, ACC claims total over $165 million per year, a full 19% of ACC's total weekly compensation costs. These figures have continued to rise over recent years, and WRMSDs are a significant portion.

3.2 Applying the Health and Safety at Work Act (2015) and the WorkSafe Act (2013) to musculoskeletal risks

Section 36 of the Health and Safety at Work Act 2015 states that businesses have a primary duty of care to ensure, so far as is reasonably practicable, the health and safety of workers. Health is defined as 'physical and mental health.' HSWA requires businesses to manage the health and safety risks they create, where risks should be managed by elimination or minimisation of risks. This includes the musculoskeletal health risks associated with work. This is relevant to all workers, as both manual and sedentary activities present musculoskeletal health risks.

The WorkSafe Act 2013 Section 9 (1) identifies that 'WorkSafe New Zealand's main objective is to promote and contribute to a balanced framework for securing the health and safety of workers and workplaces.' Section 10 (a-m) goes on to identify the functions of WorkSafe. These include a) advising on the operation of the work health and safety system, c) monitoring and enforcing compliance, f) providing guidance, advice and information on work health and safety to the public and to those who have duties under legislation, g) promoting and supporting research, education and training, i) sharing information with other agencies and interested persons contributing to work health and safety, and k) promoting and coordinating the implementation of work health and safety initiatives by establishing partnerships or collaborating with other agencies or interested persons in a coherent, efficient, and effective way.

The HFE team started work recognising that current musculoskeletal guidance was outdated, with website key messaging no longer fit for the contemporary management of musculoskeletal health risks, per our legislation. This means that businesses are unclear about expectations, and inspectors are unable to effectively enforce where musculoskeletal health risks are not managed. Addressing these issues is a clear fit with the WorkSafe Act 2013.

Therefore, there was a clear need to address WorkSafe's sparse and outdated musculoskeletal health risk management guidance, and WorkSafe's associated limited capacity to enforce regarding musculoskeletal health risk management.

3.3 Previous resources – the ACC Discomfort, Pain, and Injury (DPI) Programme

New Zealand's most recent targeted programme of work addressing work-related musculoskeletal injuries was the *Discomfort, pain and injury (DPI) prevention and management programme*, led by ACC, New Zealand's accident compensation and rehabilitation agency. Work for the DPI Programme was active from 2005–2011, with some additional resources and limited support occurring until 2014.

From 2014 resourcing slowed – print versions were no longer supported, and e-resources were not digitally updated. Tools and resources were gradually made unavailable or were no longer digitally accessible from around 2019. This was a significant loss for businesses who had the use of these high-quality resources embedded in induction programmes and risk management processes. Additionally, ACC poorly advised this, so many businesses were no longer aware that the resources they continued to reference were unavailable.

As a case in point, in our own WorkSafe health and safety risk register for risks associated with computer use, our own internal document still references use of ACC's HabitAtWork online tool. This tool has been unavailable for several years, though some businesses had it embedded as part of intranet systems that may have continued to function for a time. The tool ran on Adobe Flash Player – that was not supported from end 2020, with Flash content blocked from running in Flash Player from January 2021.

The DPI programme was popular with businesses and professionals. Resources were relevant to the challenges faced in workplaces, useable, and readily available. Industry-targeted resources such as 'HabitAtWork' and 'WorkSmart Tips' were developed with industry and then shared for all to use and improved on over time. Resources were developed with the capacity to become embedded in business processes and used on a day-to-day basis.

3.4 The need for clarity between ACC and WorkSafe roles

Contributing to the historical lack of WorkSafe focus on musculoskeletal health risks, is that ACC is tasked broadly with 'injury prevention'. This detracts from businesses recognising their responsibility for musculoskeletal health risk management under HSWA (2015). Missing from the previous DPI programme was strong connection with WHS regulation. Whilst this was referenced in DPI programme materials, under New Zealand's legislative framework the ability to enforce WHS regulation is not ACC's role. So, whilst the DPI programme promoted a range of practical approaches to injury prevention, and utilised injury insurer levies as a lever for change, it lacked the capacity for enforcement where businesses poorly managed these health risks.

Previous ACC activities have included in-house 'injury prevention' officers, targeting those businesses with high injury rates, and encouraging them to do better. These roles duplicated aspects of the WHS regulator's inspectors, via a separate system of work. Interventions were around levy rates rather than enforcement under WHS legislation. This separate system allowed musculoskeletal health risks to be treated differently to other workplace health and safety risks that are addressed via WHS legislation and enforced by the regulator.

This ACC (insurers') response to musculoskeletal injury, is a lighter and more reactive response than the equivalent WorkSafe (regulators') response. The regulator works both proactively and reactively to ensure that workers are not exposed to these risks, and influences businesses to manage the risks appropriately – with enforcement levers to support this.

The historical difference in how musculoskeletal health risks have been managed has set today's health and safety professionals up to have poor knowledge of how to identify, assess, and control musculoskeletal health risks. This results in a lower standard of application of HSWA to these risks, a significant contributor to the still-climbing rates of musculoskeletal injury across industry sectors.

3.5 Risks associated with a lack of role clarity between ACC and WorkSafe

Role confusion between ACC and WorkSafe continues to confound the necessary continuity of effort required for musculoskeletal harm reduction. Current efforts could be guided by the delineation of roles and functions such as that given in the 2013 Operational Agreement between ACC and MBIE, the health and safety regulator at that time (discussed in 4.2), and to a lesser extent in the iterations of the Harm Reduction Action Plans.

Musculoskeletal health risks will remain 'in the gap' if ACC and WorkSafe cannot agree on their roles or if ownership continues to go back-and-forth between the two agencies. There is a need for effective collaboration with shared planning and decision-making to leverage each agency's strengths. As a system partner, WorkSafe's role requires clear and consistently articulated regulatory interventions. For example, the development of musculoskeletal risk management resources that allow the inspectorate to hold businesses to account for controllable musculoskeletal risk exposures. This will decrease the burden on our ACC system, New Zealand workers, and their whānau (families) and communities.

3.6 The need for regulatory musculoskeletal interventions

Safe Work Australia examined the effectiveness of work health and safety interventions by regulators (Safe Work Australia, 2013). Key findings were that new regulations led to changes in safety practice/outcomes for larger businesses that perceive themselves to have elevated risk and understand the regulations. Inspections that include penalties are more likely to be effective for medium and large businesses, and smaller businesses are more likely to make positive changes if they have engagement and education via inspections. Concern for reputation, and perception of level of risk were important aspects linked to improved outcomes.

Suggested regulator interventions aimed at targeting musculoskeletal harm included:

- provision of understandable data about musculoskeletal harm that is accessible to businesses
- guidance that makes expectations for compliance clear and helps businesses know what to do to comply
- clarity about the consequences of non-compliance
- and consistently applied enforcement (Safe Work Australia, 2013).

The report also identified that campaigns may include inspections, media releases, guidance distribution, and industry workshops. These may be most effective if they combine education and enforcement and have messages for segmented target audiences. The period for campaigns to show positive change suggest that 3–5 years may be needed to improve safety outcomes, with longer campaigns (7–10 years) and more sustained funding being key to outcomes and sustained change (Safe Work Australia, 2013). There was also considerable support in an EU-OSHA report for the strong role an adequately resourced inspectorate can make when undertaking targeted inspections for musculoskeletal risk management (Crawford et al., 2020).

The work plans for the musculoskeletal harm reduction programme created by the HFE team included an initial period of about 3 years building relevant foundational resources. These needed to be relevant for both businesses and the inspectorate to build internal capability. In the teams' 3–6 year plan a targeted campaign combining education and enforcement was considered as an appropriate next step. This would see the continued development of resources, internal capability building, and to target enforcement across key industries. This would realistically give a total work programme of 7–10 years in duration.

Given New Zealand's prevalence of musculoskeletal harm across sectors and this harm impacting Māori and Pasifika workers at a higher rate than others, WorkSafe's responsibility to address this area of harm was clear.

4.0 Strategies, action plans and relationships in place pre-2021

IN THIS SECTION:

4.1 Harm reduction action plans (HRAP)

Activities under WorkSafe's ACC-funded programmes target the reduction of health harms as per ACC and WorkSafe agreed *Harm Reduction Action Plans* (HRAPs). These plans identify the contributions of both WorkSafe and ACC and the need for a system-level approach to reduce work-related harm in New Zealand.

For the HRAP covering the period 2019-2021, body stressing (a sub-section of WRMSDs, and the term used by ACC) was in the top three prevention priorities for manufacturing, and healthcare and social assistance sectors. Additionally, across all sectors musculoskeletal health risks and 'body stressing' accounted for 33% of harm. At this time ACC was recognised as the lead agency for 'body stressing', but WorkSafe was the lead agency for work-related health, which included musculoskeletal health (WorkSafe New Zealand and Accident Compensation Corporation, 2019).

During this period ACC set out to address injury management practices and trialled PErforM (Participative Ergonomics for Manual tasks), an intervention tool. However, the HASANZ professionals that supported this work gave feedback that such health risk management activities sat most appropriately with the work health and safety regulator. They identified that foundational guidance for musculoskeletal health risk management should come under the Health and Safety at Work Act 2015. Once established within the regulator a wider and contemporary range of assessment tools might be required for businesses and professionals for more routine use.

A review of the 2019–2021 HRAP was published in July 2022 (Accident Compensation Corporation and WorkSafe New Zealand, 2022) and outlined the 2022–2023 plans as a continuation from the earlier work, along with the associated 2023–2026 HRAP (Accident Compensation Corporation and WorkSafe New Zealand, 2023). The maintenance of a collaborative and connected approach was acknowledged as an ongoing challenge between the agencies. Work-related health, including musculoskeletal risks were reported as a WorkSafe ongoing focus area across all sectors. The latest HRAP identifies WorkSafe led commitments to promoting good work design, supporting worker voice, reducing harmful exposures, and protecting people from machines, with other joint and ACC led commitments to system growth, enablers, and high risk areas (Accident Compensation Corporation and WorkSafe New Zealand, 2023).

While it was helpful having musculoskeletal risks identified in HRAPs as a WorkSafe responsibility, confusion continued with 'body stressing' placed under ACC's leadership, where 'body stressing' injuries are simply part of WRMSDs. These mixed/confusing responsibilities between ACC and WorkSafe continue.

The various work system goals and focus areas from Harm Reduction Action Plans, and the Health and Safety at Work Strategy were integrated within HFE's musculoskeletal programme goals and activities 2021-2024.

4.2 ACC and WorkSafe partnership agreements

Historical partnership agreements have been in place between WorkSafe (and its predecessors) and ACC. HRAP documents reference an ACC and WorkSafe Partnership Agreement for funding ($150 million over 10 years, from 2018) and the associated transfer of funds to support the HRAP work plans. WorkSafe engagement, education and enforcement activities were funded from this allocation.

In 2013 ACC and MBIE had an operational partnership agreement in place (now unavailable online). It was a point of reference in the cross-agency response to health and safety and included some useful role clarifications between the agencies. The purpose was to ensure a 'strong operational partnership' existed so that the agencies worked together for 'safer and healthier people and workplaces in New Zealand'.

The agreement aimed to maximise the impact of joint efforts and outlined data sharing and joint work programmes. It demonstrated the contributions that both agencies could make to the larger 'health and safety system'. In April 2024 a newer ACC/WorkSafe memorandum of understanding (MoU) was established but it only focused on sharing information.

The 2013 agreement identified WHS regulator functions that included health and safety leadership, setting clear expectations with duty holders, providing access to health and safety information, developing guidance, inspecting workplaces, responding to harm notifications, investigating serious incidents, and undertaking enforcement.

ACC's role was given as providing comprehensive, no-fault personal injury cover for all residents and visitors to New Zealand. It focused on injury prevention, rehabilitation, and compensation of all injuries by accident, regardless of where they occur and causality. ACC's role in workplace injury prevention was via pricing signals through industry risk rates and experience adjustments, incentive programmes, and provision of advice and programme delivery.

The 2013 operational partnership agreement stated that ACC's primary outcome was to minimise the incidence and impact of injury in terms of economic, social, and personal costs. The regulator's role was to reduce harm to all people at work or in the vicinity of work.

A refresh of the 2013 document's clear identification of the roles and responsibilities of both agencies would support improved collaboration in the future. Current messaging around the 2024 revised WorkSafe strategy, where workplans specifically exclude a focus on musculoskeletal health risks, are on the basis that ACC is responsible for musculoskeletal injury prevention. A full review of this position with ACC is indicated to ensure that both parties are acting within their areas of responsibility.

5.0 Addressing musculoskeletal risks – WorkSafe's 2021 start point

IN THIS SECTION:

5.1 Musculoskeletal programme funding

An ACC funding provision enabled the HFE team to commence from February 2021. This funding saw a return on investment (ROI) requirement for the work programme outlined in Table 1 (see section 7.6 for more information on the calculations). In the four years to 2024, including actual and overhead costs, the total cost of the programme was $2,334,818. Costs from the 2024/2025 financial year have not yet been attributed.

	FY20/21	FY21/22	FY22/23	FY23/24	TOTAL $
Actual $	82,683	531,093	664,021	495,130	1,772,927
Overhead $	37,037	118,737	235,694	170,023	561,491
Total $	119,720	649,830	899,715	665,153	2,334,418

TABLE 1: Musculoskeletal programme costs 2020–2024

5.2 HFE in the organisational structure

The HFE team initially sat in the Health Team, under a tier two manager within the Health and Technical Services (later Health and Technical Delivery) group. This was alongside three other health teams, and other technical specialists. In Health was the also the new Mentally Healthy Work team, addressing psychosocial risks; the Exposure Risk Management (ERM) team of occupational hygienists, addressing carcinogens and airborne risks, and other chemical, biological, and physical risks; and Kaimahi Hauora, the health inspector team; with additional health and Māori health advisory personnel. The only one of the health teams with longevity in WorkSafe is ERM, previously known as Work-Related Health.

Late 2023 changes saw HFE (as part of the Health Team) moved to within Authorisations and Advisory, within the Operations group. This unfortunately saw the health and other specialist advisory teams pushed further down into the organisation, under a tier three manager and with increased distance from senior leadership. For team members, this created a perception of less visibility and understanding of their work roles by senior managers with undervaluing of their contribution to organisational goals.

5.3 Musculoskeletal risks programme reporting

ACC-funded programmes have had various management processes. Initially via the Governance Leadership for ACC Delivery (GLAD) process, then following the 2023 restructure, via the Equity, Partnerships, and Intervention Design (EPID) group. Routine written reporting on HFE programme achievements has occurred through these structures.

However, this reporting structure has created barriers for direct HFE and ACC meetings. It has limited the opportunity for direct collaboration with ACC as a key stakeholder for musculoskeletal harm reduction work, negatively impacting our capacity to create system change by working collaboratively. The ongoing 2024 organisational restructure activities have continued to limit opportunity for direct ACC and WorkSafe internal reporting and collaboration regarding musculoskeletal harm reduction activities.

5.4 Guidance on musculoskeletal health risks

WorkSafe and its predecessors had made little effort regarding musculoskeletal health risk management in the previous two decades.

At programme startup in 2021, WorkSafe guidance was sparse and pre-dated the Health and Safety at Work Act 2015. It did not provide clarity for how businesses should manage musculoskeletal health risks, what the risks were, how to assess them, or what controls to apply. The language used was over-generalised (for example, using the term 'ergonomic risk') and the approach to risk management was unskilled (for example, recommending manual handling training as a suitable control, and a lack of knowledge of skilled professional expertise). It was apparent there was a lack of maturity, and these risks were not integrated with other risk management processes, were often only considered late in design processes, and lacked worker engagement.

In 2021, the core musculoskeletal risk guidance materials were:

- the 2001 *Code of practice for manual handling* (Department of Labour et al., 2001) is nearing a quarter century old, with outdated risk assessment methods
- the 1991 manufacturing guidance document *Manual handling in the manufacturing industry* (Department of Labour, 1991) is over 30-years-old and overlooks modern advances in materials handling such as robotics, cobots, and artificial intelligence (AI) supported technologies
- the slightly newer 2010 guidance document *Guidelines for using computers* (ACC and Department of Labour, 2010) came out of the DPI programme of work and is due for a refresh to incorporate remote working and other trends and technology changes
- the 2018 healthcare guidance document *Moving and handling people in the healthcare industry – good practice guidelines* (WorkSafe New Zealand, 2018), is the only one of these four guidance documents that is based on the HSWA 2015
- WorkSafe website – for example, the 'manual handling' and 'ergonomics' pages. These were outdated and provided inaccurate messaging particularly around 'manual handling training' and 'lifting correctly' – a commonly cited, but ineffective control measure.

So, at programme start WorkSafe's musculoskeletal risk management guidance was outdated, sparse, and misleading. It was insufficient for WorkSafe's role in both educating businesses, and for holding them to account under HSWA.

5.5 How the Inspectorate dealt with musculoskeletal health risks

Inspectorate activity targeting musculoskeletal health risk management appeared limited. It was not part of targeted interventions in WorkSafe's early years where fatalities and serious non-fatal harm were prioritised. A barrier to addressing musculoskeletal health risks is that it is persistently down-played next to fatalities and serious non-fatal injuries, and there is common (but incorrect) belief that it is entirely addressed by ACC.

Discussions with inspectors suggested a lack of resources and tools to address this area of risk. This is documented in an April 2023 internal *Needs and gaps analysis report*. Without clear externally facing guidance, particularly an updated code of practice, there has been little to support inspectors to act on musculoskeletal health risks. This means that it is difficult to consider enforcement action, or even to engage with and educate businesses with reference to clear and helpful guidance. The previous lack of in-house HFE professionals meant there was also no option to engage with suitably qualified advisors to support inspectorate activity.

Overall, engaging with, educating, and holding businesses to account for musculoskeletal health risk management was not enabled by the sparse and outdated guidance resources available, and the lack of in-house expertise.

Importantly, in addition to externally facing musculoskeletal risk management guidance, the inspectorate requires a range of associated tools and resources that support the Enforcement Decision Making (EDM) model for musculoskeletal risks, along with knowledge about their use and application. On-the-ground inspectors were aware that they had limited and outdated knowledge, so capability build would be necessary.

5.6 Summary of context at startup

So, at programme outset, there was a need to fill the significant musculoskeletal knowledge gap left by 20 years of relative inactivity by New Zealand's lead WHS regulator.

This meant that the first tasks would be a significant and careful build of new guidance. Needed was a common language for New Zealand businesses and WHS professionals to be able to discuss the types of tasks and risks of concern, based on current international knowledge. This would include defining 'work-related musculoskeletal disorders,' and the associated data capture. Resources must create a call to action around musculoskeletal health risk management, and educate New Zealand industries, health and safety professionals, and the inspectorate. Tools would support businesses to identify and assess manual task risks, apply effective controls, and monitor to ensure that controls remain effective.

Only following establishment of a suite of core resources could the focus turn to using these for enforcement activities and providing support for the inspectorate. HFE team members could also complete cohort training and become inspectors specialising in musculoskeletal health risk management, as a part of the frontline.

In addition, the HFE team's work programme would require navigating the 'shared responsibilities' between ACC and WorkSafe, and the challenge of meeting return on investment requirements associated with funding.

Further, the health and safety landscape at startup was shaped by post-Pike River changes. These included having new health and safety legislation and WorkSafe as a still-new stand-alone regulator, charged with delivering a step change in health and safety practice and outcomes. Recognition of the important contributions of health and safety professionals from across the disciplines was a new concept and HFE was a little-known discipline with small numbers. It was recognised that there were significant gaps in our New Zealand health and safety practice and expertise, and in the education of the various professional groups.

As part of this change new attention was placed on all the 'health' fields within health and safety, from criticism that activity in previous years was 'only safety' in practice. Government agencies were learning from developments in health and safety science and beginning to embrace notions of work system interaction, the challenges of 'wicked problems,' and the complexities of using connected system partners working together for more effective outcomes. At this time, WorkSafe was endeavouring to work in brave new ways to achieve the desired outcomes, with a view to becoming an insights-led, world leading regulator.

6.0 The work plan 2021–2024

IN THIS SECTION:

6.1 Developing a work plan

The HFE team used their extensive knowledge and experience regarding musculoskeletal health risks and risk management within the New Zealand WHS system, to create a detailed work programme. Well-connected within their fields, they utilised knowledge from relationships with key groups such as ACC, work health and safety professionals and professional member organisations, HFE professionals working with health and safety regulators in the UK and Australia, education bodies, and industry sector organisations.

The initial HFE work plan consisted of three areas with multiple workstreams and projects. 'Musculoskeletal disorders,' and good work design' were the programme titles identified by strategy teams at HFE startup, and 'HFE' covered the other internal and external advisory activities, and profession-specific aspects. Thus, the three main work areas were:

- **Work-related musculoskeletal disorders** – five workstreams:
  - data and foundational work (5 projects)
  - development of accessible WRMSDs resources (3 projects)
  - risk assessment tools and guidance (3 projects)
  - regulatory response and health pathway (4 projects)
  - WRMSDs training (3 projects).
- **Good work design** – two workstreams:
  - development of a framework and guidance (4 projects)
  - GWD training (2 projects).
- **HFE** – two workstreams:
  - internal and external engagement and education (4 projects)
  - workforce development programme (3 projects).

The focus was on work-related musculoskeletal disorders, but with some cross over with other plans, particularly the HFE plan focusing on internal and external engagements.

The HFE team was allocated the 'good work design' programme, where 'good work design' processes apply to designing out workplace health and safety risks of all types and the use of high order controls to eliminate risk. Within WorkSafe at this time, there were the 'Health and Safety by Design' and 'Innovation' teams also addressing work design issues. So, to reduce duplication, the HFE team focused first and primarily on musculoskeletal risk management. The logic was that until there was clarity about what constitutes a musculoskeletal health risk, that it would not be possible to use good work design approaches to design out that risk. Additionally, 'good work design' in the WHS context, implies that multiple disciplines may be engaged, with each discipline having an important contribution regarding differing risk types. Thus, it is more applicable to a mature health and safety system, where there is good base knowledge about all risk types. But we first had to focus on the development of basic musculoskeletal risk expertise, that was currently missing.

The projects in the work plan were divided among the team, with a lead assigned to each project and supporting team members identified. Plans estimating timeframes, key activities, organisational interdependencies, and deliverables were outlined.

Team members tracked project progress in weekly virtual meetings and identified issues likely to impact timelines and outputs. With the team being based across the country 'team away days' allowed more in-depth reviews of progress and to update and progress the workplan. Due to Covid travel restrictions, these in-person meetings were few. They were May 2022 in Nelson, August 2022 in Auckland, and February 2023 in Tauranga. Due to the loss of staff from Wellington (March 2023) and Auckland (July 2023) and the organisational cost-saving mandate for reduced travel, no physical planning meetings have occurred since February 2023.

6.2 Time on key activities

Following startup, the Business Alignment and Delivery team required recording and submission of monthly time reports against an established list of activities. The initial generic and 'across teams' process was not very helpful for our purposes and was not long-lasting in the organisation. However, the spreadsheets were altered to capture specific HFE work, and this data has been recorded consistently from September 2022. The resulting dataset gives understanding of time use per programme and overall productivity and is helpful for future planning.

Initial projects took longer as the new team established new ways of largely virtual working, and learned how to access resources, how the organisation and systems worked, and who to collaborate and consult with.

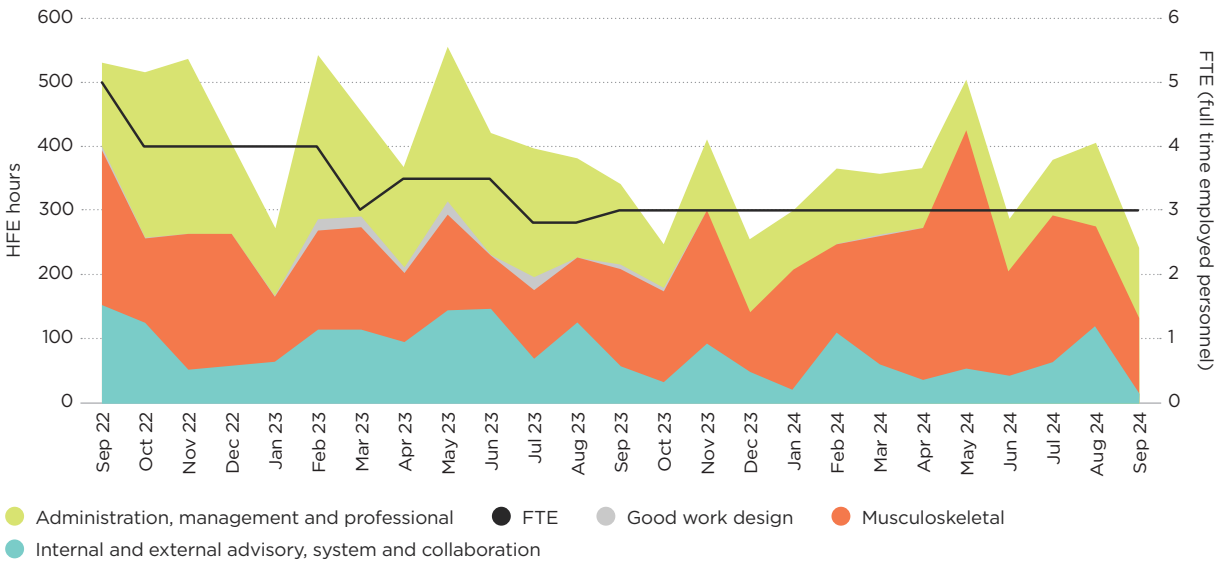

FIGURE 2: This stacked graph identifies total HFE hours per month (left axis) with the contribution of the primary workstreams, with FTE (numbers of full time employed personnel) on right axis. (Not accounting for sick and annual leave)

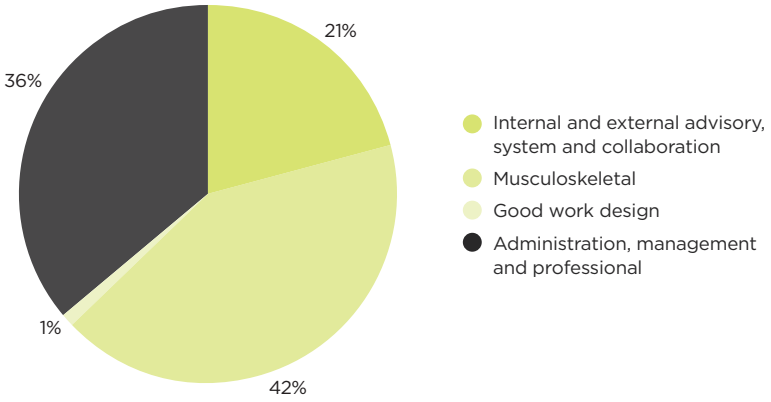

FIGURE 3:
Percentage of HFE work time per workstream September 2022 to September 2024

Figure 3 shows time spent on primary work programmes (musculoskeletal, good work design, internal and external engagements), with time in support activities (admin, HFE professional leadership). The bulk of HFE work time has been spent in the musculoskeletal programme of work, and in the provision of internal and external advisory services. From end 2023 we were advised that WorkSafe was no longer addressing 'good work design' as a focus.

FTE varied between 5 and 2.8. One of the team was on parental leave from September 2022, returning to full time in June 2023, and two staff left during 2023. There was no backfill for the parental leave, and the two vacancies (both Senior Advisor HFE) were not filled, consequent to organisational change processes in late 2023.

6.3 Advisory support

As relationships across the organisation and with new or existing external stakeholders developed, increasing numbers of queries were received.

Technicall administrators were initially unaware that HFE could support musculoskeletal and other queries such as design, or fatigue. Continued communication with administrators saw increasing numbers of appropriate queries forwarded to HFE. However, while Technicall helps to manage and record interactions, other direct external queries were received that were not being recorded. These are now directed back for capture within Technicall. Overall, there remains some confusion about the function and use of Technicall, and whether it adequately captures all internal and external interactions for all advisory teams. As a result, the HFE team created their own recording system to capture all the engagements undertaken and significant advisory services provided. This enabled a more efficient response to queries when we had already made a similar response. Over time this enabled us to address 'frequently asked questions' with more targeted guidance. The numbers of engagements and significant advice provided are shown in Figure 4 and Figure 5 and included:

- direct Teams messages and emails from internal parties
- direct phone calls and emails from external parties
- enquiries via the WorkSafe 'enquiry' email
- enquiries via Technicall, 'report a health or safety concern' and other Notifications and Triage teams
- Health Pathway cases.

As part of WorkSafe's digital upgrade the use of an 'engagement record app' as part of Atlas was trialled. This may be able to meet future organisational recording needs if it is fully integrated.

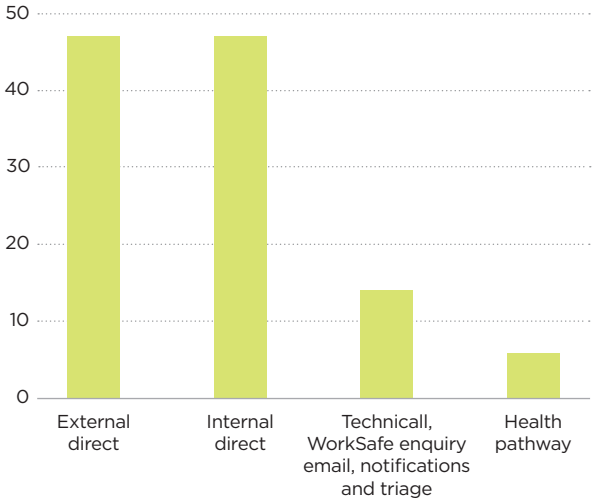

FIGURE 4:
HFE number and type of engagements February 2021 to November 2024

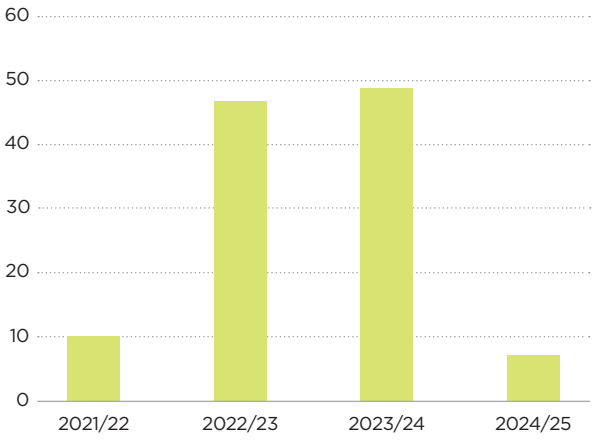

FIGURE 5:
HFE number of engagements per financial year, from February 2021 to November 2024

6.4 Nature of advisory engagements

Internal advisory support has been provided for multiple teams, including:

- Inspectorate (including Investigations and Kaimahi Hauora)
- Engagement teams (regarding workforce development programmes, horticulture, agriculture, forestry, healthcare, manufacturing, Te Pou Ora and Pasifika networks, and ACC linked work – supporting funding grant assessment processes)
- Guidance and Comms teams (supporting Covid work from home guidance, Maritime NZ and ports guidance, road workers guidance, sex workers guidance, post-cyclone guidance, psychosocial risk guidance)
- Education team (SafePlus content, trades education products)
- Internal Health and Safety team (work from home guidance, training and support for their team, input into procurement decisions for office furniture and accessories).
- Learning and Development (cohort training content and delivery, Health Assessment Resource Portal information).

External advisory support has been provided for:

- new stakeholder groups for WorkSafe such as injury treatment providers (physiotherapists, occupational therapists, and exercise physiologists providing rehab and return to work support)
- health and safety advisors, health specialists such as occupational health nurses and occupational physicians, and health and safety specialist disciplines such as occupational hygienists, and human factors/ergonomics professionals
- engagements prioritise ‘one-to-many’ opportunities, where the ‘many’ also influence multiple businesses across the high-risk sectors (including conference presentations and expo presence, postgraduate education via universities, webinars, seminars, and training workshops)
- businesses and industry groups with specific queries about interpretation of guidance, intervention design, review of interventions, review of industry guidance materials, and discussions around good practice
- other agencies and system partners (such as Standards NZ, Heads of Workplace Safety Authorities Australia/New Zealand Musculoskeletal Disorders Working Group, researchers, universities, product developers, ACC, Maritime NZ).

7.0
Work plan achievements 2021–2024

IN THIS SECTION:

This section contains tables of the workstreams, projects, and outputs of the HFE team. It provides a summary of achievements 2021–2024.

The summary tables show that most original programme goals have been achieved. Where projects haven't fully been achieved, this is due to organisational direction change, or key collaborating parties without capacity.

7.1 Workstream 1: Data and foundational work (MSD 1)

The logic of this workstream was:

> Improve specificity of data and knowledge of what this means to different industry and work sector groups, for more nuanced and targeted risk reduction efforts. Decouple WRMSD risk reduction from the ACC/insurer focus which is confused by claims acceptance processes and a focus on rehabilitation actions – at the expense of knowledge of risk factors and the application of high order controls.

PROJECT	OUTPUTS	COMMENTS
M1.1 Conduct a literature review for a New Zealand WRMSDs definition	1. Literature review report 2. New Zealand WRMSDs definition	Both the literature review report (WorkSafe New Zealand, 2022c) and definition (WorkSafe New Zealand, 2022a) were completed and published on the WorkSafe website in November 2022.
M1.2 Review New Zealand and international data categorisations and develop a New Zealand dataset	1. Data classification review report 2. Develop New Zealand codes and conditions list	This work has taken longer than expected. Dependency with data teams who were without capacity, and the team member was on parental leave. The report (WorkSafe New Zealand, 2025a) and the codes and conditions list was published in February 2025.
M1.3 Develop a WorkSafe WRMSDs position statement	1. WRMSDs fact sheet 2. WRMSDs position statement	1. HFE and Guidance teams worked together to develop and publish the WRMSDs quick guide in March 2023 (WorkSafe New Zealand, 2023d). 2. HFE and Operational Policy teams worked together to develop and publish the WorkSafe WRMSDs position statement in May 2023 (WorkSafe New Zealand, 2023c).
M1.4 Review terminology used in New Zealand	Develop a New Zealand glossary of terms and abbreviations	Completed in March 2023. It was for the HFE team to use to change the language used related to musculoskeletal risk management in New Zealand.
M1.5 Work with industry groups to improve data, for targeted interventions	Create a data dashboard	This work has not started due to the data teams' lack of capacity; waiting for the codes and conditions list to be finalised; the loss of 2 HFE team members; and the recent change in strategic direction.

TABLE 2: Workstream 1: Data and foundational work projects, outputs, and achievements

7.2 Workstream 2: Accessible WRMSDs resources (MSD 2)

The logic of this workstream was:

> Provide up-to-date, consistent and effective resources, with an equity lens and cultural focus, for all stakeholder groups. And to target those professionals with high level of knowledge to be champions of good practice for WRMSDs risk assessment and control. Facilitate workers/HSRs, and health and safety professionals having access to helpful and clear advice. (Give power to the people).

PROJECT	OUTPUT	COMMENTS
M2.1 **Review and refresh old HabitAtWork resources**	1. Published resource material 2. Publication of additional web resources	Reviewed ACC HabitAtWork resources, harvested content, identified where updates could occur and began updating the content. This project was stopped in December 2022 due to no Comms capacity; need for budget for technical support to develop an online platform; and the decision by WorkSafe that it was best not to progress this work. Some harvested content was shared with industry. Focus shifted onto other resource development such as the Quick Guide, (outlined in M1.3) part of the foundation guidance suite for PCBUs. In August 2023 an internal report was completed (Progress report on refreshing the ACC Habit At Work and discomfort, pain, and injury (DPI) programme) that recorded the project plan, the progress and the revised plan to develop standalone resources. This provided a needs and gaps analysis for resource development and a plan for 2023 and beyond.
M2.2 **Review and update WRMSDs guidance**	1. Work from home guidance document 2. Review and prioritise existing guidance for update 3. Update existing guidance	1. Setting up a healthy workstation when working from home quick guide was published on the WorkSafe website September 2022 (WorkSafe New Zealand, 2022b). This was needed due to COVID-19 and the large number of workers working from home. This was updated in January 2024 to redirect users to the new WRMSDs quick guide instead of a deleted webpage. 2. The review of guidance that related to WRMSDs, Good Work Design, or human factors, or ergonomics was completed in January 2023. Items needing HFE support to the Guidance team were identified and prioritised by the HFE team. 3. Unable to start updating existing guidance due to Guidance capacity limitations.
M2.3 **Review and update WRMSDs web resources.**	1. Review and update WRMSDs and HFE website content 2. Develop PCBU resources 3. Promote WRMSDs resources	1+2. Work began in November 2022 to identify all webpages with outdated information about WRMSDs, ergonomics, and human factors. We worked with the Comms and Guidance teams to update. The first round of easy to make changes was completed by end March 2023. One of the reasons the web information needed to be updated was so that we could publish the HWSA (Australia/NZ) position statement on 'how to lift training' and why it is ineffective. Prior to this WorkSafe guidance was recommending manual handling training as an effective control. Additional work with the Guidance and Education development teams, as the 'content owners' to make some of the larger changes was needed. These changes were completed May 2024: - The musculoskeletal disorders page being used as the 'home page' for all updated WRMSDs content, with reorganisation and some relabelling of the tiles. For example, the poorly labelled 'Ergonomics' tile did not reflect what the risk was. The tile and content were relabelled as 'working with computers'.

PROJECT	OUTPUT	COMMENTS
		- A simplified manual handling page with most of the outdated information removed. This page needs more work. Outdated content remains that should be removed or updated, particularly the agriculture and manufacturing guidance. - On the manual handling page the content in the lifting, carrying, pushing, and pulling – what's the problem? page was updated in collaboration with the Guidance team. - Significant changes to content of the 13 industries in the What risk looks like in your industry page was made. These were under the headings, 'lifting, carrying, pushing, and pulling,' 'workplace layout,' and 'working with computers' (changed from 'Ergonomics' which was a poor reflection of what the risk was). - Updates to the 'musculoskeletal disorders' homepage to include manual handling training not an effective control The position statement was published on the website in July 2024 (Heads of Workplace Safety Authorities, 2022). 3. The updated resources were publicised through the bi-monthly WorkSafe work-related health newsletters.

TABLE 3: Workstream 2: Accessible WRSMDs resources – work projects, outputs, and achievements

7.3 Workstream 3: Risk assessment tools and guidance (MSD 3)

The logic of this workstream was:

> Improve knowledge of more specific screening and risk assessment methods and tools that more health and safety professionals (all disciplines) and inspectors understand and know how to use, and develop better knowledge of controls.

PROJECT	OUTPUTS	COMMENTS
M3.1 Research and select risk assessment tools for WRMSDs	1. Risk assessment research report 2. Selection and trial of tools 3. Public launch of the risk assessment tools 4. Report outlining the development process	1+2. Report published on the WorkSafe website in January 2024: Review of hazardous manual task risk assessments The review of tools available, and the selection process were combined (WorkSafe New Zealand, 2024h). An internal trial with Kaimahi Hauora inspectors and an external trial with the Canterbury branch of the New Zealand Occupational Health Nurses Association (NZOHNA) was completed in November 2023. The project was divided into three stages: manual handling tools, upper limb tools, pushing and pulling tools. The draft screening tools and risk assessment tools were developed by the HFE team in consultation with the Guidance team. The tools were trialled at 6 workshops reaching 203 participants. These were held in Auckland, Wellington, New Plymouth, Christchurch, and Dunedin in May/June 2024. Following the workshops the HFE team considered the feedback, and further refined and then finalised the tools, working closely with the Design (Comms) and Guidance teams.

PROJECT	OUTPUTS	COMMENTS
		3. HFE team drafted messaging for the website and worked with Comms on the location, content and layout of this. In total four screening tools were developed, plus an introductory guide, the risk assessment (NZMAC), and a contributing factors checklist were developed and published in August 2024. Two additional placeholder webpages were set up in preparation for the additional upper limb and pushing and pulling risk assessment tools (Stages 2 and 3). 4. The report outlining the development process was completed by mid-October 2024 and was published in February 2025 (WorkSafe New Zealand, 2025c). It outlines the development process and reasons for making changes to the HSE tools. We worked with Comms to develop messaging for 10 key stakeholder groups (health and WHS disciplines) to inform them of the publication of the tools. The work-related health newsletter was also used to inform of resource publication. Continued linking with ACC to explore further messaging and comms through their channels.
M3.2 **Update the Code of practice for manual handling (2001)**	1. Review existing COP and plan the refresh/new guidance document 2. Publish the new guidance document	Work started in December 2022 to review international codes of practice for manual handling and hazardous manual tasks. We drafted an outline of our perspective of what should be included in the new guidance document. However, discussions with Guidance determined that they were unable to start this work due to capacity issues. From mid-2023 it remains on hold awaiting guidance capacity.
M3.3 **Review other participatory risk assessment and intervention approaches**	Report the review, trial and selection of participatory assessment methods	This work has not yet started. It is due to start after stages 2 and 3 of the initial risk assessments have been completed as outlined in M3.1.

TABLE 4: Workstream 3: Risk assessment tools and guidance – projects, outputs, and achievements

7.4 Workstream 4: Regulatory response/health pathway (MSD 4)

The logic of this workstream was to:

> Apply consistent and proportionate regulatory responses to support the application of improved musculoskeletal risk management within PCBUs, to reduce the burden of harm.

PROJECT	OUTPUTS	COMMENTS
M4.1 **Develop enforcement decision making processes for musculoskeletal risks**	1. Develop a list of tools and processes to support the inspectorate 2. Develop health assessment focus tools	1. A draft list of tools to support the inspectorate has been completed. 2. A draft version of a WRMSDs focus tool has been developed. This still needs to be considered in greater detail with Regulatory Assurance team. Due to a diminished HFE team, ongoing organisational restructuring, and the need to complete foundation documents first, this work has been delayed.
M4.2 **HFE team to receive relevant parts of inspector training, undertake site visits with inspectors**	1. Complete inspector fundamentals training 2. Undertake site visits with inspectors	1. All HFE have completed the week-long 'inspector fundamentals' training, but did not sit the exam or complete other aspects of inspector training. 2. All HFE have undertaken several visits with inspectors to better understand what they do and how they work.

PROJECT	OUTPUTS	COMMENTS
M4.3 Collaborate with Australian HFE colleagues and other international regulatory bodies	1. Participate in bi-monthly meetings with HWSA group 2. Learn from and collaborate with other regulators (for example, HSE, UK)	1. The Manager HFE and Principal Advisor HFE attend the Heads of Workplace Safety Authorities (HWSA) Musculoskeletal Disorders Working Group bimonthly meeting. This is a meeting with other HFE professionals working in the WHS regulators across all the Australian states (including NZ). We have been involved in contributing to the HWSA position on why manual handling training is ineffective The current project the group are involved in is looking at slips, trips, and falls on the same level. 2. Have regular contact with HFE professionals from the HSE (UK). This has informed the development of the risk assessment tools.
M4.4 BAU – internal and external advisory to support the inspectorate, investigations, businesses and others	Answering queries and providing support where needed	Responses to all queries were captured in our records, to make answering similar queries more efficient. The recording system was extended to capture all engagements. – Records started part way into the 2021/22 financial year. For this year there were 10 significant recorded queries (1 email support, 2 verbal advice, 1 review of an internal document, 1 full report written to support a fatal agriculture investigation, and 6 presentations). – In the 2022/23 financial year there were 47 significant queries recorded with some of these having several engagement avenues (for example a site visit and a report). There were 22 email support queries answered, 4 cases where verbal advice was given, 15 presentations, 6 site visits (although the number is probably closer to 15 as some were grouped together), 1 internal summary report for the health and safety team, 1 video created, 2 instances where feedback was given on WorkSafe documents, and 1 report contribution to support an inspector. – In the 2023/24 financial year we recorded 49 significant queries or engagements. We provided email support to at least 31 requests for information, 12 requests where verbal advice were given, 10 presentations were delivered (excluding the risk assessment workshops which were considered as part of a project), undertook 3 site visits and provided written support for those, provided feedback on 2 internal documents, delivered 1 internal training session, and participated in 2 guidance document reviews. – These numbers don't include specific engagements that were project related. – Note that for the 2023/24 financial year, there was only 3 HFE team members, who were also undertaking significant projects.

TABLE 5: Workstream 4: Regulatory response/health pathway – projects, outputs, and achievements

7.5 Workstream 5: WRMSD training (MSD 5)

The logic of this workstream was to:

> Support inspectors and others with new learning and approaches, to enable them to effectively understand and carry out regulatory actions for this largely new scope of practice.

PROJECT	OUTPUTS	COMMENTS
M5.1 Review existing cohort training and develop new WRMSDs content	1. Needs and gaps analysis to understand inspector needs 2. Develop new content for cohort training 3. Deliver new content for cohort training 4. Develop new content for experienced and advanced inspector groups	1. Workshops were held with a group of inspectors (Palmerston North) and the Kaimahi Hauora team to understand what supports they had and what they needed to assist their work. The findings and recommendations to address the gaps were reported in the April 2023 internal report: Work-related musculoskeletal disorders: needs, gaps, and future actions to support the WorkSafe Inspectorate. 2+3. Developing and being able to deliver updated musculoskeletal risk management content as part of cohort training took a long time to be approved. Requests were made from January 2022, but internal roadblocks including other teams' unwillingness to update associated content, and not allowing the HFE team to be involved in training delivery occurred. This allowed extremely poor quality and quantity of musculoskeletal content (just 1 hour out of a one-week health module), to be delivered to inspectors. Persistent efforts and the realisation from other teams that the entire health module needed updating, saw more effective communication start in February 2024. A draft update to the Work-related health framework training document was completed, but only minor changes to cohort 27 delivery content were made. HFE were finally able to deliver the first updated musculoskeletal content in a 2-hour session to cohort 27 on the 30 July 2024. Changes to the 'health module' of future cohort training still need to be finalised and embedded in inspector cohort training. 4. We have been unable to develop and deliver new content to update existing inspectors. This was due to the length of time it took to make the initial changes to cohort training and the ongoing organisational restructure creating roadblocks.
M5.2 Develop specific risk assessment training for PCBUs, professionals, and Inspectorate	Develop and deliver risk assessment training	Specific risk assessment training for Stage 1 (manual handling screening and risk assessment tools) was developed and delivered in the 6 initial workshops where the tools were also trialled. Now the tools have been published the training needs to be modified slightly to reflect the New Zealand versions. External delivery opportunities remain to be set-up, and the Inspectorate have not yet been made aware of the tools and how to use them. These activities were put on hold due to the organisational restructure.
M5.3 Develop and maintain the HFE pages on the Health Assessment Resources Portal (HARP)	Develop WRMSDs content for HARP – ongoing (internal resource only)	The first HARP page was published in March 2023. This was a 'landing page' advising users of the type of content that was being developed. The first pages introducing musculoskeletal health and health risks was published in August 2023. Minor updates to the pages were made throughout 2023/24. Following the publication of the Stage 1 screening and risk assessment tools the 'manual task risk assessment tools' page was developed and published in October 2024.

TABLE 6: Workstream 5: WRMSDs training – projects, outputs, and achievements

7.6 Return on investment calculations

WorkSafe and ACC agreements required return on investment (ROI) for WorkSafe programmes of at least 1: 1.1, with the expectation of ROI build as programmes progress. That is, for every $1 spent on the programme, that there is a $1.10 return. The calculations account for the cost of relevant ACC claims, and assumptions on the efficacy and reach of interventions. Full benefit realisation is calculated across the programme timeframe.

In 2022, WorkSafe contracted Sapere to complete estimates for the HFE programme ROI. In a November 2022 report, Sapere considered the combined HFE programme as it was at startup. This included 8 workstreams from across musculoskeletal, good work design, and HFE programme elements. Sapere developed the model and used our initial estimates of inputs and outputs for calculations. The results give an indication of the magnitude of the ROI that might be expected from programme completion.

2019 ACC claim costs and number of claims for 'Body Stressing' were used, and the programme considered to ramp up over 3 years for interventions. Reach was determined from WorkSafe sources, where HFE and other collaborators used a scale from very low (1%), to very high reach (100%). Injury reduction (efficacy) was similarly determined from HFE estimates, using a scale from very low (0.01%), to very high efficacy (15%).

Claims data was divided into two 'layers' with Layer 1 being a narrow dataset excluding high-cost individual claims and Accredited Employer Programme (AEP) claims, and Layer 2 broader, including all work account claims. There were several caveats.

Sapere's 2022 report concluded an estimated ROI of 15.3 for the narrow dataset, and an ROI of 18.6 for the broader dataset, for the HFE work programmes.

A review of the ROI calculations for costs and programme completion was done to 31 March 2024, based on the original processes from Sapere. This showed a conservative calculation of costs for the combined HFE programme activities of $2,479,894 in present-day dollars and a present benefit of $75,748,276 for an ROI to date of 30.54. Considering the costs-to-date, and the benefits already achieved, the ROI on future funding would be 10.08 ($10,006,682 Net Present Value of costs and $108,084,010 Net Present Value of benefits).

For these calculations, some programme elements had been stopped with only partial completion (for example, 25% for some of the earlier 'good work design' elements), while others were 30% - 80% complete (for example, data and foundational work, guidance resources, regulatory response, inspector and external training). Some programme elements were planned to ramp up in future years, such as the proposed inspector and external parties training. Discontinuing programme elements before delivery campaigns are complete and new work processes are embedded will reduce the potential impact of the ACC investment.

7.7 Core stakeholder segmentation

Each area of health and safety risk has differing sets of stakeholders that have nuanced communication needs based on their differing roles. For musculoskeletal health risks, stakeholders include:

- **Injury treatment and rehabilitation providers** – typically knowledgeable about injury impacts and rehabilitation, but most not skilled or knowledgeable in musculoskeletal risk management as is required under HSWA. These groups require targeted knowledge, tools, and messaging about health and safety responsibilities relevant to their roles in the work rehabilitation system. Efforts for this broad group focus on creating resources and pathways to access knowledge, to drive to improved musculoskeletal health risk management.

- **Businesses, industry health and safety sector groups, health and safety advisors (generalists)** – are the other core stakeholder group, with needs that differ from the injury treatment and rehab providers. These stakeholders need to know how to address musculoskeletal health risks by applying risk management approaches, and how to use risk screening and assessment tools and apply controls – or who to work with that know how to do such assessments.

  Some disciplines bridge both these stakeholder groups – with some ergonomists, occupational health nurses, occupational health physiotherapists and workplace specialised occupational therapists in this category.

- **Other treatment providers** such as rongoa medicine practitioners, osteopaths, chiropractors, and other therapists – are candidates for improved sets of knowledge about musculoskeletal health risk management expectations. Messaging would be via ACC/other insurance providers about musculoskeletal health risk management, and the role of WorkSafe and HSWA.

For all stakeholder groups, targeted communications are required that meet their interests and needs. This will ideally require WorkSafe's engagement and collaboration with ACC, for considered messaging that meets both organisations' goals.

During 2024, as we prepared to deliver our first workshops to injury treatment and rehabilitation stakeholders, we communicated with 8 different professional disciplines, from 10 different professional bodies:

- occupational health physiotherapists (PNZ)
- occupational health nurses (NZOHNA)
- workplace specialised occupational therapists (OTNZWNA)
- ergonomists/human factors professionals (HFESNZ)
- occupational hygienists (NZOHS)
- moving and handling specialists (healthcare) (MHANZ)
- occupational medicine specialists (AFOEM, ANZSOM)
- health and safety generalists (NZISM, NZSC).

Additionally, a new professional group was discovered for future communications – this was Clinical Exercise Physiologists New Zealand (CEPNZ).

The professional bodies supported the uptake of new musculoskeletal risk management knowledge and tools via their newsletters, member mail-outs, and our presentation of member webinars. The large group of health and safety generalists, and industry/sector bodies we planned to reach in future workshops and via other modalities.

In the first half of 2024 we delivered introductory webinars and updates to 7 professional bodies, with the overall reach for these groups in the region of 4000 people. The first workshops in May/June 2024 targeted approximately 500 professionals from the injury treatment/rehabilitation stakeholder group. Most of these people work across many different businesses and sectors where the injuries are occurring. Six workshops in 5 centres offered 300 places for these professionals. The 203 attendees were trained to use these new (to New Zealand) tools to better assess, and therefore to control, musculoskeletal health risks.

Participant feedback was positive about WorkSafe's recently published musculoskeletal guidance, such as "I've used the MAC tool from the HSE for years now so good to see the NZ regulator providing tools and guidance that is a value add". And regarding the 'how to lift training' position: "for years I've used training as a control so good to know that is no longer valid and good to get some solid guidance from the regulator".

8.0
Meeting health and safety system obligations into the future

IN THIS SECTION:

8.1 Current Harm Reduction Action Plan (HRAP)

The current HRAP, 2023–2026 plan (Accident Compensation Corporation and WorkSafe New Zealand, 2023) aligns with the goals and priorities of the Health and Safety at Work Strategy 2018–2028 (Ministry of Business Innovation and Employment, 2018).

This HRAP identifies the need for system-level approaches to drive to harm reduction recognising the complementary roles of ACC and WorkSafe. Both the HRAP and the strategy identify that this requires clear vision and direction, good legislation and regulations, and an effective and capable regulator. Businesses require information and guidance from the regulator and access to quality health and safety advice. They also need engaged workers, knowledge of health and safety risks and what works to manage them, applied through the supply chain and supported by sector and industry bodies. The plan commits to engagement and partnership with Māori.

The current HRAP (Accident Compensation Corporation and WorkSafe New Zealand, 2023) identifies the need to address how 'work is done' to realise our long-term health and safety goals. WorkSafe's role in enforcement, publishing guidance, and influencing in the health and safety system, along with leveraging partnerships, partnering with Māori, and the benefits of collaboration are highlighted. WorkSafe has lead roles including promoting good work design and reducing harmful exposures.

The broader health and safety strategy (2018–2028) (Ministry of Business Innovation and Employment, 2018) has two primary goals: 1) focusing where we make the highest impact and 2) building everyone's capability to do this well. Priorities in the strategy include addressing work related health risks; targeting businesses with greater need (sectors, small businesses); targeting workers with greater need (Māori, Pacifica, migrant/seasonal workers, younger and older workers); and ensuring improved capability from leaders, workers, health and safety professionals, and data and insights.

8.2 Funding issues, and WorkSafe's 2024 updated strategy and restructure

ACC funding and the governance processes around this have created additional pressures for the HFE team. HFE and Health Managers were increasingly disconnected from budgeting and decision-making discussions.

In 2023 WorkSafe became aware of a funding shortfall and acted quickly to reduce spending to operate within the fiscal envelope. This saw a late 2023 organisational downsize with the loss of over a hundred roles and a revised organisational structure, where health teams were placed into Operations.

The new (2023) Operations Group management seemed unclear about or engaged with ACC funding management processes, where another group was holding the ACC relationship. Despite requests, this resulted in little information filtering through to HFE. Following months of uncertainty, we eventually learned (from media) that ACC funding would cease from March 2025.

The lengthy period of funding uncertainty was distressing, with the lack of information and funds making it difficult to deliver programme activities and engagements. We focused on what could realistically be achieved with low to no cost.

A strategy review occurred in early 2024, with ongoing organisational restructure and downsizing. At end 2024 this sees all HFE roles disestablished (along with other health team roles), and the stopping of the musculoskeletal work programme from early 2025.

WorkSafe's revised strategy focuses on fatalities and serious non-fatal injuries (acute, chronic, and catastrophic harm) in manufacturing, construction, agriculture, and forestry, and on permitting activities (WorkSafe New Zealand, 2024l). Serious harm (week away from work injuries) including musculoskeletal harm is excluded from current work priorities.

8.3 Updated data – the problem has not gone away

WorkSafe data (from Data Centre 8 October 2024) gives injury data by mechanism of injury (WorkSafe New Zealand, 2021a). Whilst not capturing all musculoskeletal injuries, the three categories associated with 'muscular stress' and one with 'repetitive movement' (see Table 7 following) are used to understand musculoskeletal harm, as these injuries occur where musculoskeletal health risks are poorly managed. Other injuries may also be captured under gradual process conditions, not captured here.

MECHANISM OF INJURY	AGRICULTURE	CONSTRUCTION	HEALTHCARE AND SOCIAL ASSISTANCE	MANUFACTURING	TRANSPORT, POSTAL AND WAREHOUSING	RETAIL TRADE
Muscular stress while lifting, carrying, or putting down objects	291	1,590	567	1,437	651	921
Muscular stress while handling objects other than lifting, carrying or putting down objects	87	510	189	495	219	180
Muscular stress with no objects being handled	96	486	447	576	273	270
Repetitive movement, low muscle loading	6	21	3	42	12	12
Falls on the same level	309	807	522	606	384	306

TABLE 7: Injuries resulting in more than a week away from work June 2022 – May 2023 data (WorkSafe)

Concerning musculoskeletal harm findings also came from the *2023 WorkSafe segmentation and insights programme: employers and workers* (WorkSafe New Zealand, 2021b). Musculoskeletal harm continued to have high prevalence and impact across sectors, suggesting ongoing need for attention:

- 56% of workers reported experiencing a physical injury requiring medical attention or time off work or a work-related health problem in the last 12 months (up 2% from the 2021 survey)
- 32% of workers reported musculoskeletal problems in the last 12 months, with this highest among agriculture (39%) and healthcare and social assistance (41%)
- around 1 in 10 workers reported experiencing new musculoskeletal problems in the last 12 months.

However, measures to control musculoskeletal risks have room to improve:

- only two thirds of workers across all sectors felt that measures to prevent harm from awkward or repetitive body movement, or long periods of standing/sitting occurred in their workplace
- while just over three quarters of employers do something to identify and control worker harm from performing manual tasks, usually lower order admin controls such as varying work tasks (41%) and task training (34%) were used, with higher order controls such as task automation (6%) occurring less frequently.

HFE work plans acknowledge that musculoskeletal harm is not new and that injury rates continue to grow. This is problematic across multiple industry sectors, and there is a continued need to build resources relevant to all sectors.

WorkSafe has an important and unique role to draw PCBUs' attention to identifying hazardous manual task risks and applying effective high order risk management processes to those, as is required under HSWA. Where businesses don't do this, WorkSafe can engage with and educate businesses and workers, along with an important enforcement role. The new guidance and in-build processes will enable WorkSafe's inspectorate to be able to hold businesses to account where workers are exposed to high-risk hazardous manual tasks, as with other health and safety risks. But a new code of practice or good practice guide is urgently needed to support this.

8.4 Slips, trips, and falls at level

Of interest to HFE for future work is data around slips, trips, and falls at same level, using the 'falls on the same level' mechanism to capture many of these.

This mechanism of harm is a current focus of attention for HFE teams in the Heads of Workplace Safety Authorities Australia and New Zealand Musculoskeletal Disorders Working Group, that WorkSafe's HFE team members belonged too. This group is in the process of recommending to SafeWork Australia that specific good practice guidance is necessary in this field, to improve health and safety practices and the ability for inspectors to enforce for slips, trips and falls at same level workplace risks. Our New Zealand guidance in this area is sparse, and we believe our needs are like our Australian regulatory counterparts.

The data in Table 7 reinforces that this proposed 'slips, trips, and falls at level' guidance is needed in New Zealand – where we see 'falls on the same level' as a significant contributor to week away from work injuries in high harm sectors. This topic was a logical next step for HFE team attention once the foundational material for general musculoskeletal risk management was in place.

8.5 The musculoskeletal programme for 2024/2025

Musculoskeletal programme activity, as discussed in this report, has established a 'call to action' for New Zealand businesses regarding the hazardous manual tasks that expose workers to known musculoskeletal health risks.

New WorkSafe guidance now defines work related musculoskeletal disorders, clarifies the multiple factors that contribute to injury risks, and outlines the need to use high order risk controls to protect workers. Importantly, WorkSafe's new position statement regarding 'manual handling training' refutes the outdated idea that this training is a suitable risk control (it isn't). A suite of new hazardous manual task screening and risk assessment tools is nearing completion – adapted from the UK health and safety regulator for New Zealand application. This new guidance highlights that businesses are expected to manage (identify, assess, control, and review) musculoskeletal health risks and can be held to account for these risks under HSWA (2015).

The new guidance and knowledge of musculoskeletal health risk management provides a sound basis for WorkSafe to influence businesses by engaging, educating, and enforcing regarding musculoskeletal health risk management.

More work is required to improve the management of musculoskeletal risks within New Zealand businesses, and to increase inspectorate capability to hold businesses to account. This can be visualised as a programme of activity with three broad and overlapping elements, as in Figure 6 below. WorkSafe is currently near the end of the first element, moving into the second and third elements. They are not strictly 'stages' as aspects from each can be addressed simultaneously.

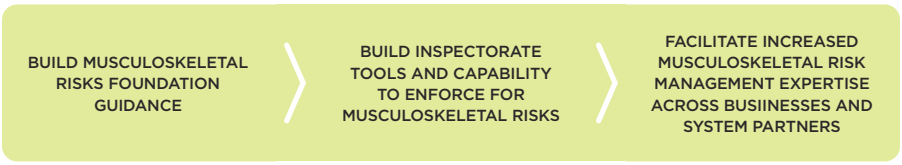

FIGURE 6: The musculoskeletal programme's three broad and overlapping elements

The development of focus tools, and testing of processes effective for addressing hazardous manual task risks with businesses is still needed. This could be done by working alongside operational teams such as Kaimahi Hauora (health inspectors) to develop tools, processes and practice expertise. Musculoskeletal risk management modules embedded in inspector cohort training and delivered routinely would enable new inspectors to identify and address the hazardous manual task risks that are present across many sectors, along with the many other hazard/risk types present in workplaces.

Musculoskeletal health risk management update training is also required for existing inspectors, to lift their capability to address these too-common risks – bearing in mind that they have not yet been educated on the new tools and guidance available. These elements should be integrated within new processes for lifting the capability of inspectors, as proposed in the in-progress organisational restructure.

And, to see a step-change in how businesses control musculoskeletal health risks, it is important that we engage with and educate others. Industry sector groups and businesses, and the professionals from many health, and health and safety disciplines would benefit from applying the new approaches, tools and resources. Importantly, addressing musculoskeletal health risks requires collaborative working with ACC and other insurance providers and partners, to see an improvement in the type of work that businesses require their workers to perform.

Prior to the disestablishment of the HFE team an ongoing musculoskeletal work programme was proposed, to target the increasing injury rates across many industry sectors. The programme would have built upon previous versions of HFE work plans, with five primary workstreams. The recommended priorities to the end of the 2024/2025 financial year (30 June 2025) are summarised in Table 8.

WORKSTREAM 1	OUTPUTS	PROGRESS UPDATE
HFE 1 **Revised WRMSDs data and slips, trips, and falls (STFs) data used for research, insights, measurement, and intervention planning**	1. Publish the data report and codes and conditions list 2. Collaborate to improve musculoskeletal data dashboards for understanding of where risk exposures occur 3. Contribute to the Heads of Workplace Safety Authorities (HWSA) Australia and New Zealand musculoskeletal group on the slips, trips, and falls at level project, and other future work	1. Report and list published in February 2025 2. Data team will use revised WRMSDs data set for future dashboards, but without HFE support due to team disestablishment 3. This work was underway with the HWSA group, but has ceased due to HFE team disestablishment
HFE 2 **Resources and guidance to support musculoskeletal risk management and harm reduction**	1. Complete and publish Stage 2 (repetitive upper limb) and 3 (pushing and pulling) manual task screening and risk assessment tools 2. Complete and publish development reports for the stage 1, 2 and 3 tools 3. Collaborate with CHASNZ and other parties for a New Zealand Cost Benefit Calculator that supports health and safety interventions 4. Contribute to Guidance team's review of Manual Handling Code of Practice – outdated guidance	1. Stage 2 and 3 tools published on the website in February 2025 2. The Stage 1, 2, and 3 development reports were published on the website in February 2025 3. Was in strategy/priority plan and work started, but it was later removed, so activity for this output has been stopped. However, there is interest in this from stakeholders, and good logic for restarting this activity 4. Awaiting Guidance prioritisation of this task, though HFE team disestablishment means that internal subject matter expertise cannot be provided
HFE 3 **Internal advisory/regulatory response/inspector training**	1. Finalise cohort training work-related health framework document, and HFE contribution to cohort training, and specialist inspector training modules 2. Create HARP pages for Stage 2 and 3 risk assessment tools 3. Provide HFE expertise to internal parties to support WorkSafe's regulatory role	1. Work was started with Learning and Development and health teams, but the HFE team will no longer be involved in due to disestablishment 2. May be completed prior to March 2025 disestablishment 3. Reactive support only until March 2025 disestablishment
HFE 4 **External advisory/ musculoskeletal risk management training for work health and safety professionals, businesses, industry groups, workers**	1. Develop specific risk assessment training for the new manual task risk assessment tools. 2. Make training available for businesses and professionals, considering media campaigns, collaboration with ACC for delivery modes, collaboration with other regulators such as Maritime NZ for crossover, initial face-face delivery to speed uptake, ongoing recorded/ self-help options, and modules/content within existing education programmes or tools (such as SafePlus), new micro-credentials, and other training providers 3. Provide HFE expertise for external parties to engage and educate for WorkSafe goals	1+2. Not started or continued due to HFE disestablishment March 2025 3. Discontinued due to HFE disestablishment March 2025
HFE 5 **Maintain HFE expertise across relevant fields and domains, connection with international regulators, agencies, and scientific bodies, to maintain professional certifications and memberships to support WorkSafe activities**	1. Engage in national and international networking and scientific activities, and professional development opportunities, to support WorkSafe goals	1. Discontinued due to HFE disestablishment March 2025

TABLE 8: June 2024 – HFE work plan to end June 2025 (2024/2025 financial year end)

8.6 The musculoskeletal and HFE programme for 2025/2026 and beyond

Beyond the end of the 2024/2025 financial year, musculoskeletal risk management intervention opportunities are many. However, WorkSafe's strategic reset that sees discontinuation of musculoskeletal harm reduction targets and HFE team disestablishment means this is unlikely to occur in the foreseeable future.

Even with musculoskeletal programme discontinuation, we recommend that improved inspector training for musculoskeletal health risk management should not be abandoned. We recommend that this training should continue to be developed and embedded, along with the further development of enforcement decision-making processes for musculoskeletal health risks. These activities are needed to lift inspector knowledge from the current insufficient state, where out-dated training and resources have ill-prepared them to hold businesses to account for musculoskeletal health risks. However, the current plans to not include any appropriate subject matter experts such as qualified HFE professionals on staff do not enable this.

When serious harm (week away from work) from WRMSDs is once again a part of WorkSafe priorities, we recommend the following 'business as usual' activities, delivered via appropriately qualified personnel, such as HFE professionals:

- **Targeted enforcement**: With a new focus on musculoskeletal risk assessment, PCBUs that are not managing musculoskeletal risks appropriately will be able to be held to account via enforcement, when these WorkSafe processes are developed. This would enable targeted interventions that may initially focus on education and engagement, leading to enforcement interventions for PCBUs that fail to make changes. Importantly, with effective musculoskeletal risk assessment more Prohibition Notices, Improvement Notices, and other enforcement tools will be able to be utilised. Opportunity to link musculoskeletal risk management with other inspector focus areas should be taken. For example: hazardous substances reviews should include how containers of the substances are moved/manually handled; workshop inspections would include hazardous manual task aspects such as tyre handling, equipment change-outs, and materials handling.
- **Data-identified targeting**: Further investigation of improved WRMSDs data would identify opportunities for targeted industry interventions (focusing on engagement and education), for different types of hazardous manual tasks. For example: fruit packing activities in horticulture, heavy materials handling and work methods in manufacturing and agriculture, handling kegs in hospitality, work methods and equipment in construction, people handling in health and social care.
- **Better reporting to WorkSafe**: With current very low frequency of reporting of musculoskeletal risks/incidents to WorkSafe, there is opportunity to consider linking with ACC for identification of businesses that may require targeted inspection visits. Education of treatment providers about WorkSafe's role should also see an increase in reported concerns for musculoskeletal health or safety risks through the WorkSafe website, where this potential avenue to reduce risks to workers is not well known or utilised.
- **Treatment provider knowledge of HSWA application to injury risks**: There is also opportunity to link with ACC for education of the treatment providers who support injured workers. This would promote better application of high-order risk elimination and minimisation controls per HSWA, rather than the too-common administrative approaches in current use.

- **Improve musculoskeletal content in health and safety education**: Many opportunities exist to improve the content of current education offerings covering musculoskeletal risk management – from universities to private providers and including SafePlus content and associated resources. Currently, many of these sources are out of date, with poor grounding in risk management. This leaves many health and safety practitioners poorly informed and lacking in the necessary skills to identify and address musculoskeletal health risks, including lack of knowledge of the professions most skilled to carry out this work.
- **Improve health and safety management systems**: Similarly, the content of health and safety management systems regarding musculoskeletal health risk management should be reviewed, to raise the standards applied within these off-the shelf systems.
- **Investigate musculoskeletal health monitoring**: Exploring appropriate musculoskeletal health monitoring activities and needs, with consideration for guidance, may assist businesses to better manage musculoskeletal health risks.
- **Improve health and safety professional's expertise across the disciplines**: The above activities should link with work across New Zealand's health and safety disciplines (such as the HASANZ member organisations) to raise the level of knowledge and applied expertise of WHS professionals. This will require good partnerships and engagement across the WHS sector.
- **Consider participative musculoskeletal risk management methods**: Approaches such as APHIRM (A Participative Hazard Identification and Risk Management toolkit out of La Trobe University, Australia) should be considered and trialled in New Zealand businesses. This method appears to have high applicability to equitable outcomes, focuses on worker engagement, and incorporates contemporary knowledge of the contribution of psychosocial risk to WRMSDs. Guidance development could support New Zealand businesses and WHS professionals to apply these newer approaches.
- **System engagement and partnership**: Sharing knowledge with other regulators (such as Maritime New Zealand), industry groups, and system partners such as ACC will support overall system capacity to effectively address musculoskeletal health risks.
- **Explore application of new technologies**: New artificial intelligence-supported wearables are being developed and utilised in research and industry applications to improve the management of musculoskeletal (and other) risks. These should be reviewed and explored with consideration for guidance to support businesses in effective selection and use of these technologies.
- **People handling risk assessment and guidance**: Review risks associated with the moving and handling of people, with a view to review the associated guidance and develop targeted enforcement programmes for the high harm healthcare and social assistance industry.

Appendices

IN THIS SECTION:

Appendix 1: HFE outputs since startup

COMPLETED OR PUBLISHED DATE	NAME OF REPORT OR GUIDANCE DOCUMENT	TYPE OF OUTPUT AND HFE INPUT
24.2.22	Human factors assessment of a fatal farm incident (agriculture sector)	Internal report written for an Investigations inspector to support their investigation
21.9.22	Human Factors subject matter expert opinion following a fatigue complaint and assessment at X Ltd (agriculture sector)	Internal report to support a General Inspector with enforcement action
30.9.22	Setting up a healthy workstation when working from home (all sectors)	Guidance published on website. Technical content written by HFE team in collaboration with the Guidance team (WorkSafe New Zealand, 2022b)
11.11.22	Inspector Facilitator Guide	Internal guide to support facilitation of needs and gaps, focus groups
31.01.23	MSD document Improving work-related musculoskeletal health risks	Website content. HFE contribution to Improving work-related health website (WorkSafe New Zealand, 2023a)
14.03.23	Defining musculoskeletal disorders (MSDs) and work-related musculoskeletal disorders (WRMSDs) Annex 1	Guidance published on website. Definition researched and written by the HFE team, in collaboration with Operational Policy and Guidance teams, published on website (WorkSafe New Zealand, 2022a)
14.03.23	Work-related musculoskeletal disorders – definitions review	External report published on the website written by HFE team (WorkSafe New Zealand, 2022c)
17.03.23	Cyclone Gabrielle – Managing strain and sprain risks	Guidance written by HFE team published on the website in response to cyclone Gabrielle (WorkSafe New Zealand, 2023b)
15.03.23	Search conference facilitator guide: GWD. Internal discussion workshop guide for the HFE team	Internal guide to support facilitation of needs and gaps, focus groups
31.03.23 and 31.08.23	HARP page published as internal inspector resources: – Musculoskeletal risks – Introduction to work-related musculoskeletal disorders – Risk factors for work-related musculoskeletal disorders – Managing the risks from hazardous manual tasks – Working with computers – Resources	Internal resources first published in March 2023 and August 2023
31.03.23	Quick guide: Work-related musculoskeletal disorders and risk factors	External guidance published on the website. HFE team wrote the technical content and worked with the Guidance team, in collaboration with Operational Policy team (WorkSafe New Zealand, 2023d)
11.05.23	Work-related musculoskeletal disorders: needs, gaps, and future actions to support the WorkSafe Inspectorate	Internal needs and gaps analysis report written by the HFE team following inspector focus groups
11.05.23	Summary of Good Work Design discussion with selected WorkSafe leaders	Internal needs and gaps analysis report written by the HFE team following a focus group with some WorkSafe leaders (mostly health leaders)

COMPLETED OR PUBLISHED DATE	NAME OF REPORT OR GUIDANCE DOCUMENT	TYPE OF OUTPUT AND HFE INPUT
11.05.23	WorkSafe position statement: Our approach to musculoskeletal health	Position statement published on the website. Outlines WorkSafe's position on musculoskeletal health. HFE team wrote the technical aspects of the position and worked with the Operational Policy team to develop (WorkSafe New Zealand, 2023c)
16.08.23	Progress report on refreshing the ACC Habit At Work and discomfort, pain, and injury programme	Internal report written by the HFE team outlining the project's progress, and recommending an alternative plan to develop guidance resources
30.01.24	Published report: Review of hazardous manual task risk assessments – the selection process and recommended tools for use in Aotearoa New Zealand	External report published on the website, written by HFE team (WorkSafe New Zealand, 2024h)
09.05.24	Website updates: – Musculoskeletal disorders – Lifting, carrying, pushing, and pulling – what's the problem? – What risk looks like in your industry	External website updates. HFE wrote the updates and reorganised the information on the musculoskeletal pages in collaboration with the Communications, Guidance and Learning and Development teams (WorkSafe New Zealand, 2024i)
05.07.24	Website publication of the HWSA Australia and New Zealand position statement and FAQs on the webpage: Manual handling training not an effective control	External publication on the website of the HWSA position on why manual handling training is not an effective control. HFE team worked with Australian colleagues as part of the HWSA working group, and with our Operational Policy team, to create this position (Heads of Workplace Safety Authorities, 2022)
15.08.24	Screening tools, risk assessment tool, and checklist developed and published on the following webpages: – Manual tasks screening tools and risk assessments – Screening tools for manual handling tasks – Risk assessments for manual tasks – NZ manual handling assessment charts (NZMAC) – Risk assessment of pushing and pulling (RAPP) – Assessment of repetitive tasks (ART) – Contributing factors for musculoskeletal risks checklist	External publication of five documents for manual task screening, and two for risk assessment – NZMAC and the 'Contributory factors for musculoskeletal risks checklist'. (WorkSafe New Zealand, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f, 2024g) Adapted from the suite of resources from the Health and Safety Executive, UK, the HFE team led development and trialling of the NZ versions of the tools. They consulted with the Regulatory Practice team and worked with the Guidance and Communications teams to write the web content and publish these documents on the website
21.10.24	New HARP page developed: – Manual task risk assessment tools	HARP internal publication of manual task risk assessment tools developed by HFE team
26.02.25	Published report: Development of hazardous manual task risk assessments	Report written by the HFE team to support the development of the manual handling screening tools and NZMAC risk assessment tool. Published in February 2025. (WorkSafe New Zealand, 2025c)
22.03.25	Website updates: – Upper limb screening tool – New Zealand assessment of repetitive tasks (NZART) – New Zealand risk assessment of pushing and pulling (NZRAPP)	External publication of the upper limb (NZART) and pushing and pulling (NZRAPP) risk assessments. Adapted from the Health and Safety Executive (UK). The HFE team led the development of the tools collaborating with others to publish these on the WorkSafe website.

COMPLETED OR PUBLISHED DATE	NAME OF REPORT OR GUIDANCE DOCUMENT	TYPE OF OUTPUT AND HFE INPUT
28.3.25	Published report: Development of an upper limb screening tool and the New Zealand assessment of repetitive tasks (NZART)	Report written by the HFE team to support the development of the upper limb screening tool and NZART risk assessment tool. Published in March 2025 (WorkSafe New Zealand, 2025b)
28.3.25	Published report: Development of the New Zealand risk assessment of pushing and pulling (NZRAPP)	Report written by the HFE team to support the development of the pushing and pulling risk assessment, NZRAPP. Published in March 2025 (WorkSafe New Zealand, 2025d)
28.3.25	Published: – Development of a work-related musculoskeletal disorders codes and conditions list – Codes and conditions list (Excel document)	Report written by the HFE team to support the development of the codes and conditions list for WRMSDs. Published in March 2025 (WorkSafe New Zealand, 2025a)

Appendix 2: References

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WORKSAFE
Mahi Haumaru Aotearoa

PO Box 165, Wellington 6140
0800 030 040 worksafe.govt.nz