



**THE WORK
FOUNDATION**
PART OF LANCASTER UNIVERSITY

Fit For Work?

Musculoskeletal Disorders and the Latvian Labour Market



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Karlis Shadurskis, MEP, Member of the Environment, Public Health and Food Safety Committee (ENVI) of the European Parliament, the Patron of the 'Fit for Work' project in Latvia

Any society and the country's greatest asset is its people whose health is the main indicator of the quality of their lives. Nobody can feel good without it, none can be helpful to the family and society as a whole. Health policy is one of the most important cornerstones to ensure a happy and prosperous life.

The 'Fit for Work' project encourages governments to do everything to protect people from health threats that can cause disability, incapacity and exclusion from society. Musculoskeletal disorders are the ones that most often cause working people's disabilities. Therefore, health policy must be aimed at the early diagnosis of this disease, its treatment, rehabilitation and opportunities for people to return to work sooner.

All the EU countries that have commenced participation in the project are thinking about what concrete decisions and actions to take for achieving this. It is my great honour to take part in the implementation of this project in Latvia because I am sure that it will help many people and will encourage politicians to look at human health care in a cross-sectorial manner, namely, seeing the need of investing in health care will to a great extent relieve the social budget of social benefits and disability costs.

'Fit for Work' makes us appreciate what is the most precious to us – the health. Its price is invaluable, though calculable. Everyone pays for it with their lives, but politicians are responsible for it through their decisions.

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1. Executive summary

As Latvia is still recovering from the social and economic ramifications of the recession, a reliable and healthy workforce is essential for its sustainable development. With insufficient support from employers and health care professionals in job retention, many Latvian employees are leaving the labour market due to poor health or full or partial disability. Not only does worklessness put those people at high risk of financial hardship, but it is also, in itself, bad for individuals' health. Job retention and return to work can positively affect physical health, psychological well-being and raise people out of poverty.

Of all the causes of ill health in Latvia, cardiac disease grabs the headlines because it accounts for high mortality rates and absenteeism. At the same time, it is rarely acknowledged that musculoskeletal disorders (MSDs) such as back pain, arm or neck strains or diseases of the joints account for up to half of all cases of occupational diseases among the Latvian workforce. Just in the manufacturing sector the average costs of lost working days to employers were estimated to be between 1.3 per cent and 4.7 per cent of total labour costs. Yet, the enormous impact of MSDs on Latvian organisations – in lost productivity and presenteeism – and the wider society – in health care and the costs of disability – is not recognised by key decision-makers.

Poor health amongst the Latvian workforce may hamper the country's economic recovery. When the up-turn comes a large proportion of the workforce may not be fit enough to drive the improvements in productivity which Latvia needs to compete in an increasingly globalised, knowledge-based economy. Instead ill health will be presenting the Latvian economy and society with an increasing societal burden. The forthcoming European Directive on MSDs will challenge Latvia to improve the mechanisms of timely diagnosis and management of disease, including vocational rehabilitation. This will have to be put in place in order to prevent and minimise the long-term impact of musculoskeletal conditions.

The 'Fit for Work?' project This project, part of a wider programme of work across European and other countries, has looked in some detail at the impact that MSDs have on the working lives of thousands of Latvian workers, the adequacy of the treatment and support they receive, their experiences at work, the effect of their condition on their family and colleagues, and the human and financial costs involved. Specifically, we have looked at back pain, work-related upper limb disorders (WRULDs) – two groups of conditions which are usually characterised by non-specific and short episodes of pain and incapacity – and rheumatoid arthritis (RA) and spondyloarthropathy (SpA), specific conditions that are often progressive and increasingly incapacitating. We conducted a review of the recent academic and practitioner research on the relationship between these MSDs and labour market participation, and conducted interviews with acknowledged experts in this field.

The Impact of MSDs on the Latvian workforce

MSDs have a significant impact on people's ability to work; not only on an individual but an aggregate basis. Together, they affect the productivity and labour market participation of thousands of Latvian workers. Evidence suggests that:

- MSDs affect more than forty million workers in the EU, representing an estimated cost to society of between 0.5 and 2.0 per cent of GDP. For Latvia that is between 63.6 mln lats and 254.5 mln lats each year. Total overall costs of rheumatoid arthritis alone add up to 27.7 million euros (19.4 mln lats) a year in Latvia.
- MSDs represent 46.1 per cent of all occupational diseases. The incidence of MSDs and carpal tunnel is growing: in 2009 there were 1,375 new cases of musculoskeletal conditions and 545 new cases of carpal tunnel syndrome, compared to 993 and 333 cases respectively just in 2008.
- European Commission estimates that MSDs account for 50 per cent of all absences from work lasting three days or longer and for 60 per cent of permanent work incapacity. For all cases of absence in 2008 sickness benefits were paid for 551,000 days a month, with an annual cost to employers of 65 million euros (45.5 million lats). In addition, expenditure on sickness benefits in 2010 was 512.5 million lats.
- The number of new disability cases resulting from MSDs increased from 935 persons in 2004 to 2,600 persons in 2010. At least 96.8 mln lats were spent on disability pensions in 2010 with additional 11.7 mln lats compensation for the lost capacity to work.
- Work capacity is restricted by two-thirds within one year and 40 per cent of those diagnosed with RA stop working after three years because of their condition. At 30 years from the onset of disease, the work disability rates reach up to 90 per cent.
- Work incapacity associated with rheumatic diseases is often a result of long waiting times to see a doctor. The number of rheumatologists in Latvia is among the lowest in Europe at 0.5 specialists per 100,000 people. At the same time, there is a 73 per cent risk of erosive joint damage among the patients with RA who wait over a year between symptom onset and referral to rheumatology clinics.
- Latvian organisations already employ a large proportion of older workers. Poor management of chronic conditions combined with the impact of ageing will challenge Latvian employers to maintain a healthy workforce.
- Only 16 per cent of those employed by micro-enterprises in Latvia had a health and safety representative at work as compared to up to half of employees of large organisations. Access to vocational rehabilitation in Latvia is insufficient.

The effects of incapacity and pain from these and other MSDs can impact on several aspects of an individual's performance at work, including:

- Stamina;
- Cognitive capacity or concentration;
- Rationality/mood;
- Mobility;
- Agility.

It is becoming clearer that many people with MSDs do not receive medical treatment and vocational rehabilitation when the disease can be managed most efficiently. Delays in treatment can affect the severity of the condition, the ability of the individual to remain in work, the length of time they spend away from work and the ease with which they can be rehabilitated. Research suggests that a significant proportion of general practitioners (GPs), employers and even individuals with MSDs do not fully appreciate the long-term impact of poor health on their performance and ability to stay in work. This is partially due to poor communication and lack of coordination between GPs and employers regarding occupational health issues.

Work can be both cause and cure. Whilst the physical conditions of work may cause or aggravate musculoskeletal symptoms, the impact or outcome on individuals (absence from work and disability) is strongly associated with psychosocial factors. Concerned with legal compliance, GPs and employers may mistakenly believe that employees have to be 100 per cent fit to perform their jobs. However, evidence suggests that phased return to work can help ameliorate the deterioration of many conditions and help recovery from MSDs. The **biopsychosocial model** of health emphasises the interplay between the **biological** (eg disease, strain, joint damage), the **psychological** (eg disposition, anxiety) and the **social** (eg work demands, family support) and represents a helpful way of assessing the causes of some MSDs, of planning treatment and management and of approaching rehabilitation into the workplace.

Looking to the future, with prospects for an ageing workforce, a growth in obesity and smoking rates, a reduction in exercise and physical activity and overall fitness in the general population, it is likely that the incidence and effects of MSDs will intensify and worsen rather than improve in the medium-to-long term. We are concerned that this will affect the quality of working life of many Latvian workers, and that the productive capacity of the Latvian workforce will be adversely affected at a time when we need it to be on top form.

What can be done? There are five main principles which clinicians, employers, employees and the government should focus on if we are to improve the working lives of workers with MSDs.

- **Early intervention is essential.** The overwhelming evidence is that MSD patients often neglect early symptoms of their condition, which leads to prolonged periods of sickness absence, or even permanent loss of workability. Early action, preferably in a partnership between GPs, the patient and their employer, can help those with MSDs to keep their jobs and to achieve a balance between the individual's need for respite and their need to work. For some MSD patients, early access to physiotherapy or to drug therapies can reduce the severity, impact or progression of the condition – a delay in diagnosis or treatment can make recovery, job retention or rehabilitation much more difficult. National awareness campaigns should foster the culture of open communication between employers and employees, educating them on how to prevent development of MSDs and exacerbation of existing cases at work. Seeing work as a valid outcome to treatment should be encouraged among all key stakeholders.
- **Educate health care professionals.** Clinicians should view a patient as a worker and recognise the role that a job might play in helping someone to stay active and avoid isolation. GPs are ideally placed to identify the early presentation of many MSDs and have to be able to identify specific conditions and refer patients to specialist teams without delays, to enable management of the condition to begin. If GPs were asked to issue more patients with a 'Fit Note' rather than a 'Sick Note' then it would be clearer what the worker was still able to do at work. This approach is being introduced in the UK, and should be considered in Latvia too.
- **Think beyond legal compliance.** Employers have to be aware of implications of ill health of employees on engagement and productivity. It is important to seek the advice of ergonomists and occupational health specialists to prevent new cases of occupational diseases at the workplace and to assist individuals affected by those diseases in job retention and re-entering the labour market. Managers should work together with employees in adjusting the ways work is organised, while preserving job quality, avoiding excessive or damaging job demands and taking heed of ergonomic good practice.
- **Prevention should be considered as an investment.** We need some better measures to assess the social, economic and work impact of MSDs to allow the Latvian Ministry of Health and State Labour Inspectorate to monitor both the clinical and labour market impact of MSDs in a more 'joined-up' way. Policy-makers should pre-empt the vast societal burden of MSDs on the Latvian economy and society by supporting early intervention, educating GPs and specialist nurses in recognising and managing MSDs,

as well as training more occupational health professionals. Access to clinical expertise between population groups needs to improve.

- **A national plan for MSDs.** Such is the impact of MSDs on the working age population of Latvia we suggest that a National Plan for the early diagnosis, treatment and rehabilitation of people with MSDs be established. This plan might establish national standards of diagnosis and treatment, support coordinated effort between government departments and agencies and establish mechanisms which help GPs and employers to support job retention and return to work among people of working age with MSDs. This would ensure that Latvia meets the requirements of the forthcoming European Directive on MSDs. It would also help foster a culture of focus on capacity, not incapacity, of individuals with MSDs among employers and health care professionals. Other countries (eg Ireland) have also appointed a National Clinical Director with oversight of such plans. We recommend that Latvia considers such an appointment.

The evidence presented in this report illustrates that a large proportion of working age people in Latvia are, or will be, directly affected by musculoskeletal conditions (MSDs) in the coming years. This can have very significant social and economic consequences for these individuals and their families, it can impede the productive capacity of the total workforce and parts of Latvian industry, and it can draw heavily on the resources of both the health system and the benefits regime.

We have found important clinical, epidemiological, psychological and economic evidence and expert opinion on the nature, extent and consequences of the MSD problem in Latvia. However, there still seems to be a lack of coherence or ‘joined-up’ thinking and action which focuses on the MSD **patient as worker**. While the number of advocates of the biopsychosocial model as it applies to all MSDs is growing, we noted that some of those who can have most impact on fulfilling the labour market participation of workers with MSDs have yet to embrace its principles as fully as they might.

2. Introduction

2.1 Prior to the recession the Latvian economy has been experiencing tremendous growth (Ministry of Economics, 2010), achieving a 10.2 per cent increase in gross domestic product (GDP) in 2007 (Woolfson, Calite and Kallaste, 2008). The economic downturn cut many jobs created during the decade of steady economic development. The employment rate decreased from 68.6 per cent in 2008 to 61.1 per cent in 2009, reaching its lowest point at 57 per cent in the first quarter of 2010 (Ministry of Economics, 2010). At the same time the unemployment rate reached 18 per cent for men and up to 20 per cent for women in the third quarter of 2010.¹

**Why is
workforce
health
in Latvia
important?**

As the economy is recovering from the recession, Latvia is understandably keen to place emphasis on the need to maximise the productivity of its workforce in order to extract the most economic benefit. Aiming to achieve the same-level or higher performance targets with a smaller workforce, organisations have presented employees with more demanding tasks. Almost 30 per cent of Latvian employees report an increase in work-related physical effort, while over 45 per cent experience growing mental pressure (Woolfson, Calite and Kallaste, 2008). Excessive workload may lead to poor health and exacerbate existing health conditions.

Few Latvian employers recognise that health and well-being is one of the most significant drivers of labour productivity along with skills, training and qualifications (Suchrcke, Rocco and McKee, 2007).² At the same time employees themselves fail to address their health conditions before they start impacting on performance and engagement. Early findings from the Fifth European Working Conditions Survey (EWCS)³ indicate that 53 per cent of Latvian respondents report that work affects their health; yet up to 40 per cent of people continue to work when ill. Instability of the labour market and fear of job loss contributes to high levels of presenteeism in Latvia. Similarly evidence from the State Labour Inspectorate (Curkina and Berdnikovs, 2010) hints at the high costs of presenteeism for the Latvian economy and society.

Ageing of the workforce presents further challenges for maintaining a healthy workforce in Latvia. Up to 53 per cent of 55-64 year-old Latvian employees stay in work, compared to the European average of 46 per cent.⁴ If increasingly more older people choose to stay in work longer, their deteriorating health status may significantly hinder performance of the Latvian workforce. In addition, scarcity of jobs may make it particularly difficult for people in poor health or with chronic health conditions to compete in the labour market, increasing the risk of financial hardship for those individuals.

¹ See Eurostat. Statistics Database <http://ec.europa.eu/eurostat>

² Expert interviews

³ See Fifth European Working Conditions Survey <http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm>

⁴ See Eurostat. Statistics Database <http://ec.europa.eu/eurostat>

Having a significant proportion of the working age population not performing to their full capacity due to ill-health – even in a favourable economic climate – can reduce the aggregate level of labour productivity in an economy and damage the competitiveness and effectiveness of private and public sector employing organisations. Furthermore, a significant burden of ill-health or chronic disease can also have a number of damaging social consequences. These arguments inform a number of important implications.

First, in the future the competitiveness of the Latvian economy will be substantially driven by the skills, experience and knowledge of its workforce. A 2006 report showed the number of knowledge workers in Latvia was significantly below the EU average (Technopolis, 2006). Investment in the health of the workforce is needed to retain much-needed skills and knowledge that Latvia requires to boost its economic growth.

Second, unemployment and job loss have serious financial and health consequences for individuals. Studies have shown widespread deterioration in aspects of physical and mental well-being among those who lose their jobs which can persist for many months (Armstrong, 2006; Brinkley, Clayton, Coats, Hutton, and Overell, 2008).

Third, it is essential that job loss is not concentrated in the most vulnerable parts of the workforce, especially among those with a disability or with a long-term or chronic health condition (Gulbe, 2010). Finding ways of improving job retention for these workers is vital as we know that, once they become detached from the labour market, their chances of finding meaningful work again are severely damaged. In the current economic climate it is important to ensure that those with illness or long-term conditions are not disproportionately affected.

Fourth, it is important that employers, health care professionals and policy-makers work together to prevent burnout of Latvian employees. Once the upturn arrives – which it assuredly will – the Latvian economy cannot afford for its recovery to be inhibited by a shortage of skilled, motivated and healthy workers. It is on this last point which much of this report focuses.

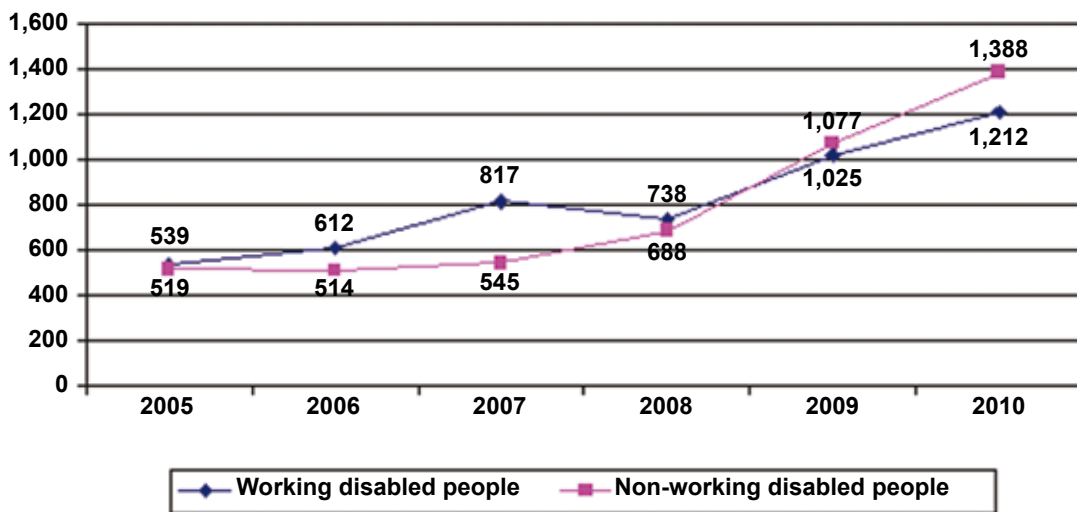
The following data points illustrate some of the highlighted concerns about the health of the Latvian workforce:

- Latvia ranks third among EU countries for employees' concerns about the negative impact of work on their health (64 per cent of employees, compared to a 33 per cent European average) (Parent-Thirion, Macías, Hurley and Vermeylen, 2007).
- MSDs are the leading group of occupational diseases at 46.1 per cent (Egliste, Vanadzins, Matisane, Bake, Sprudza et al., 2011).

- Up to 3.2 per cent of annual working time is lost due to sickness absence of three days or more (European Foundation for the Improvement of Living and Working Conditions (Eurofound), 2010).
- In 2008 sickness benefits were paid for 551,000 days a month, with annual cost to employers of 65 million euros (Curkina and Berdnikovs, 2010). Even more days of absence may have been unrecorded.
- In 2010 at least 9.3 per cent of the working age population were reported to be inactive because of illness or disability.⁵
- The employment rate of disabled people of working age was 13-14 per cent in 2006 (Calite, 2009).

The figure below reports the growing burden of MSDs, which affects both the working and the non-working population. It is particularly troubling that more people with MSDs are not working, which is partially due to population ageing, but may also point at poor accommodation of workplaces to the needs of disabled people.

Figure 2.1: New cases of disability due to MSDs



Source: Central Statistical Bureau of Latvia, see <http://www.csb.gov.lv/>

Despite the significant impact of health on the Latvian workforce, demonstrated above, tackling high rates of musculoskeletal conditions among Latvian employees has not yet become a priority for policy-makers and employers beyond the wider context of improving health and

⁵ See Central Statistical Bureau of Latvia (Latvijas Statistika) <http://www.csb.gov.lv/>

safety at work (AS Inspecta Latvia and RSU DVII, 2007).⁶ Some positive changes to improve occupational health and well-being have been suggested in the government's Health and Development Programme 2008-2013 (Karnite, 2009), however, closer monitoring of the prevalence of MSDs and assessment of interventions available have to become part of the strategic approach. As the health care budget shrinks in difficult economic times, Latvian employers and policy-makers need to become aware of the societal burden of MSDs and consider prevention of long-term consequences of ill health as an investment into robust economy and society.

2.2 In the European Union (EU) context, concern in the European Commission and among the social partners over the prevalence and impact of work-related MSDs has been growing for several years. Chronic musculoskeletal pain is estimated to affect 100 million people in Europe (Veale, Woolf and Carr, 2008), MSDs affect more than 40 million workers in the EU and account for about half of all work-related disorders in EU countries (European Trade Union Institute (ETUI), 2007), representing an estimated cost to society of between 0.5 and 2.0 per cent of GDP (Cammarota, 2005). For Latvia that is between 63.6 and 254.5 mln lats each year.⁷

The fourth EWCS published by the European Foundation (Parent-Thirion et al., 2007) has shown that 25 per cent of workers across the EU experience backache and 23 per cent report muscular pain. Indeed, the European Commission estimates that MSDs account for 50 per cent of all absences from work lasting three days or longer and for 60 per cent of permanent work incapacity. If the European, knowledge-based economy is to recover and compete against the US and the growing economies of Asia the health and productivity of the EU workforce must be a policy priority. This report looks at Latvia in this wider EU context and assesses where Latvia is doing well and where it has challenges to confront. In addition, Appendix 3 compares labour market, welfare and health care systems indicators across a number of European countries.

2.3 More specifically, this project has sought to address each of the following questions:

Objectives of the study

1. What is the impact of MSDs on employment and economic performance in Latvia? How is this likely to change in the context of future demographic, workforce and lifestyle changes?
2. What is the relationship between work and MSDs? What impact do biological, psychological and social factors, including workplace factors, have on MSDs?

⁶ Also reiterated in expert interviews

⁷ See Central Statistical Bureau of Latvia. <http://www.csb.gov.lv/en/statistikas-temas/gross-domestic-product-key-indicators-30517.html>

3. How well do employers, governmental bodies, general practitioners (GPs) and occupational health professionals understand and deal with MSDs as they relate to the workplace? How well equipped is the health sector to provide early intervention, rehabilitation and other support for people with these conditions?
4. What early interventions can policy-makers and employers deliver to ensure that those with MSDs a) retain their jobs b) maximise their quality of working life and their contribution to society and c) maintain access to (and routes back into) employment?

In addressing the objectives outlined above, we have used the following approaches:

1. Desk research: Here we have drawn on existing published research from the medical, occupational health and health economics literature. This has enabled us to draw together the evidence on the nature, extent, impact and costs of MSDs to the Latvian economy, to employers and to individuals. We have examined a range of MSDs to assess the extent to which their impact varies and where policy and practice has been both strong and weak in preventing and intervening.
2. Secondary data analysis: We have used data from domestic and European studies and surveys to examine the prevalence and costs of MSDs in the working age population in Latvia.
3. Expert interviews: We have conducted interviews with Latvian experts across a number of disciplines (including specialists in occupational health, ergonomics and rheumatic disease and government officials) to identify the main areas of policy and practice which need to be addressed by policy-makers, health professionals and by employers.

In addition to the wider picture, to focus the research, we have chosen to concentrate on four categories or groups of MSDs. These are:

- Back pain;
- Work-related upper-limb disorders (WRULDs);
- Rheumatoid arthritis (RA);
- Spondyloarthropathy (SpA).

Back pain and the majority of WRULDs are categorised as non-specific and episodic conditions which may frequently be caused by, or be made worse by, work. They manifest themselves in disparate ways and may cause periods of intense discomfort and incapacity which may affect the ability of the individual worker to carry out their work. They may also abate for long periods. Many people with these conditions, such as back pain, never seek treatment and most recover on their own but the conditions can cause significant absence from work or lost productivity.

Back pain and WRULDs are often included in the occupational health and safety guidelines and literature. Occupational health practitioners typically deal with these conditions.

On the other hand, RA and SpA are specific and progressive rheumatic diseases which are not caused by work, but may be made worse by work and are often handled by general practitioners and specialists, not within the occupational health arena. They are clinically diagnosed conditions that progress in a broadly predictable way, if untreated. They can have a significant impact on functional capacity at work and, in the long-term, participation in the labour market. Most people with these conditions require clinical interventions over a prolonged period of time and the management of these conditions for those of working age should involve the frequent and active participation of clinicians, employers and occupational health professionals.

Together, these MSDs illustrate the effects of conditions from which half of Latvian workers may report at any one time.⁸ Improving our understanding of the effects of these conditions, how staying in work can be beneficial, and what might be done to alleviate their impact, can yield significant social and economic benefits.

2.4
A note
on definition

In the absence of a consensus on a clinical definition of many MSDs, navigating the literature on their prevalence, incidence, diagnoses, epidemiology, treatment and cost to Latvian society is a difficult task. The lack of standardisation and validation of the terminology and classification of MSDs is one of the reasons for the contradictory findings in the literature regarding the diagnosis, epidemiology, treatment and rehabilitation of these conditions (World Health Organisation (WHO), 2003). Some clinicians differentiate between ‘musculoskeletal conditions’ and ‘musculoskeletal disorders’. The former refers to all clinical conditions affecting the musculoskeletal system and the latter, to borrow a definition from the ETUI (2007), meaning ‘any affliction of the musculoskeletal system that appears at work and causes discomfort, difficulty or pain when performing work’.

The 2006 regulation No. 908 of the Republic of Latvia Cabinet of Ministers (Latvijas Republikas Ministru Kabinets)⁹ includes the following diseases:

- General or local diseases caused by vibration;
- Occupational dyskinesia (coordination neurosis);
- Mono-neuropathy and poly-neuropathy, including compression and autonomic-sensory neuropathy and waist-sacrum radiculitis;

⁸ Expert interview

⁹ See Ministry of Welfare of the Republic of Latvia, ‘Arodslimību izmeklēšanas un uzskaites kārtība’ <http://www.lm.gov.lv/text/599>

- Chronic tendovaginitis, tendonitis, peri-tendinitis, epicondylitis;
- Stenotic ligamentosis, 'crackling finger', shoulder-blade periarthritis;
- Bursitis;
- Deforming osteoarthritis, including spondyloarthritis and aseptic osteonecrosis.

This list suggests that the existent definition of MSDs may be unhelpfully narrow as a reflection of MSD prevalence and impact specific to Latvian population, as it mainly lists conditions caused by physical overload, but does not account for diseases exacerbated by the work environment. Poorly drawn distinctions between work-related MSDs and MSDs as occupational diseases create further discrepancies in data.¹⁰ Production of a descriptive list of MSDs would be conducive to a consistent approach to prevention and management of occupational diseases in Latvia.

2.5 Structure of the report

This report is structured as follows:

- Section 3 examines the extent of MSDs in Latvia and the impact they have on productivity and attendance at work, on labour market participation and on the wider Latvian economy.
- Section 4 reviews the range of interventions, including vocational rehabilitation, which can improve job retention and labour market participation among those with MSDs.
- Section 5 sets out our recommendations for employers, employees, GPs, occupational health professionals and for the Latvian government.
- Appendix 3 provides a benchmarking grid in which a number of indicators covering the labour market, the welfare system and the health care system are presented for each of the countries involved in the Fit for Work project.

¹⁰ Expert interview

3. Work and MSDs in Latvia

This section sets out what we know about the impact of musculoskeletal disorders (MSDs) on people of working age in Latvia. It uses data, research and interview evidence from Latvian sources where this is available, and paints a picture of the challenges faced by both current and future Latvian workers, their families, their employers and, ultimately, state agencies. It looks at four main issues:

1. The inadequacy of the data on MSDs in Latvia and the consequences of this;
2. The impact that MSDs have on people's ability to work;
3. The impact that work can have on MSDs;
4. The wider economic and social impact of MSDs in Latvia.

We begin by looking at data quality.

3.1 **An unclear** **picture**

Although many have tried, it remains difficult to quantify precisely the extent of MSDs in the working age population of Latvia. The European Foundation for the Improvement of Living and Working Conditions (Eurofound, 2007a) has repeatedly found it difficult to build a reliable statistical portrait of MSDs in Latvia. Although the data is collected both through national registers and employee surveys (Eurofound, 2007a), many episodes of occupational diseases are unreported due to employee fears of losing their jobs.¹¹ Even the State Labour Inspectorate has only patchy data about the prevalence of a narrow range of MSDs. This is a troubling picture for a number of reasons:

- It is impossible to be accurate about the economic consequences of MSDs, their productivity impact or their social costs to the nation, to its workers and to their families.
- If, as is likely, the prevalence of MSDs increases as the average age of the Latvian workforce increases, the absence of good baseline data today makes forecasting the future impact of MSDs very difficult.
- Poor data make it difficult to make a compelling case for action to Latvian employers or to Latvian policy-makers.
- The benefits of clinical, labour market or workplace interventions are made all the more difficult to quantify (or justify) if there are no reliable or comprehensive data on the extent or impact of MSDs in the Latvian workforce.

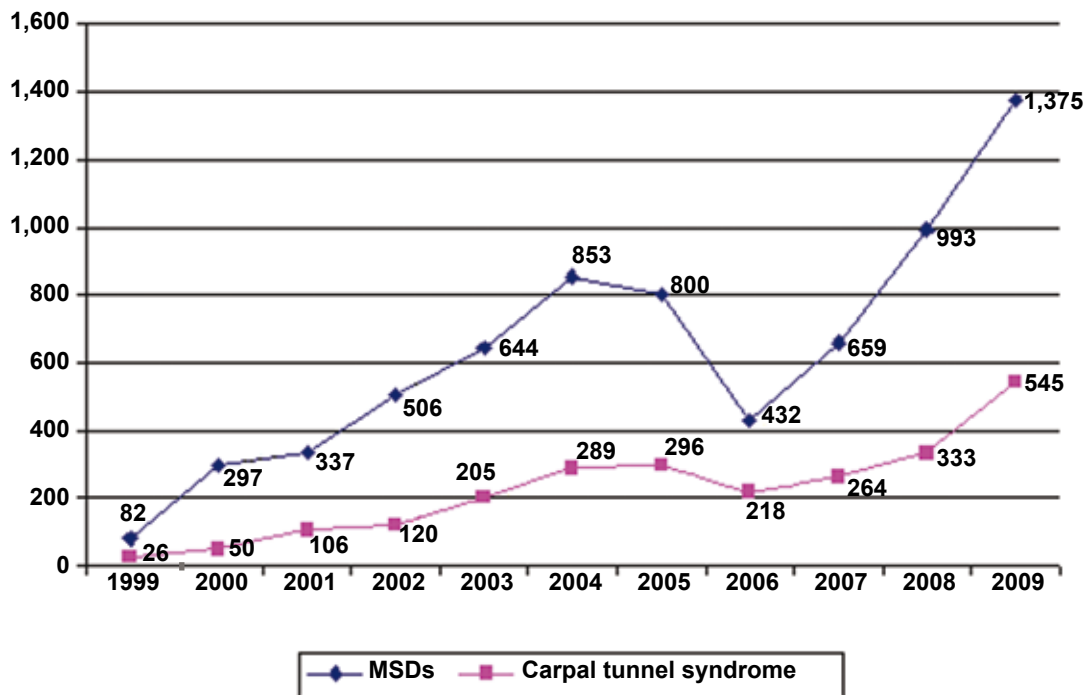
Despite this, The Work Foundation is confident that there is sufficient evidence in Latvia to argue strongly for MSDs to be a policy priority in the coming years.

¹¹ Expert interview

What we do know is that, compared with other EU member states, a significantly high proportion of the Latvian workforce currently reports having regular backache or muscular pain (Eurofound, 2007a).¹² Up to 64 per cent of general population report that their health is affected by musculoskeletal conditions.¹³ Spondylosis and radiculopathy were the top occupational diagnosis at a rate of 92.1 per 100,000 workers in 2009, compared to just 60.8 in 2008. The second most prevalent occupational disease was carpal tunnel syndrome at 55.2 cases per 100,000 workers in 2009 (SIA Inspecta Prevention and SIA TNS Latvia, 2010).

A recent survey of employers and employees reports on the dynamic of incidence rate of MSDs and carpal tunnel syndrome in Latvia, as the two most prevalent occupational diseases.¹⁴

Figure 3.1: Incidence rate of MSDs (M00 – M90) and carpal tunnel syndrome (G560)



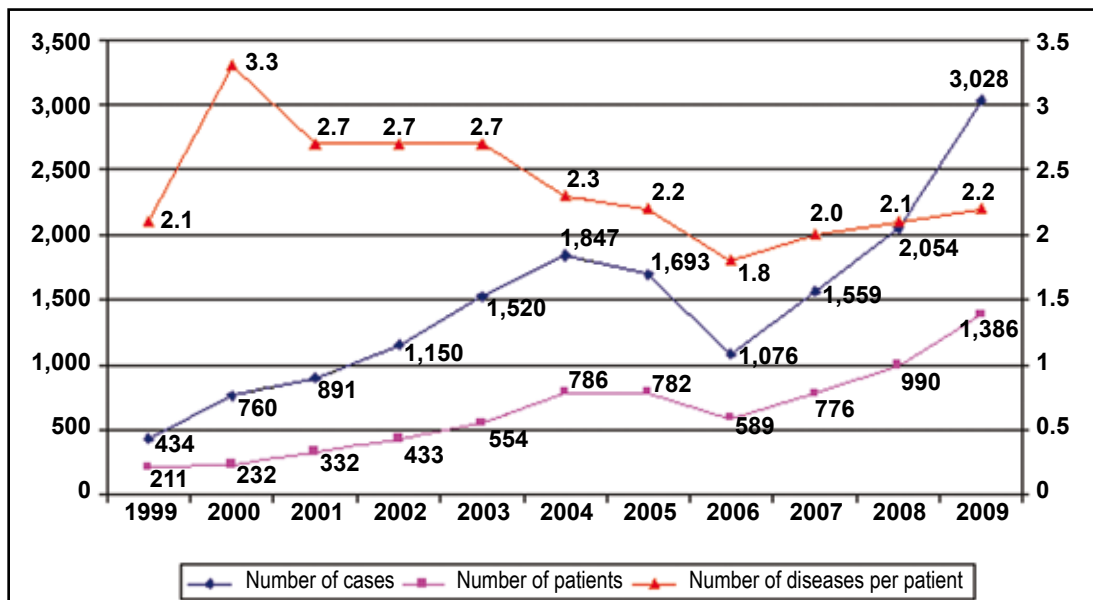
At the same time, an important distinction has to be made between collecting the data on the number of individuals affected and the overall number of occupational diseases. Figure 3.2 below highlights that one individual may be diagnosed with more than one condition, thus recording data on absolute number of diseases is more informative than data on the number of individuals whose health was affected.

¹² See Appendix 3 for cross-country comparison

¹³ Expert interview

¹⁴ Data provided by in-country expert

Figure 3.2: Number of people with a case of occupational disease and number of occupational diseases



Source: SIA Inspecta Prevention and SIA TNS Latvia, 2010

Experience from economies with older age distributions indicates that the burden of MSDs can have significant economic and social consequences. Latvia must stand ready to anticipate and manage the almost certain growth in the coming years of what some commentators have called ‘an ill-understood pandemic’ (ETUI, 2007).

3.2 The impact of MSDs on ability to work

The impact of MSDs on individuals and their ability to work varies significantly from person to person. Attempts to measure relative work disability differ according to methods of data collection, respondent selection and definitions of work disability. Work disability usually refers to cessation of employment, reduced working hours or claiming of disability benefits. These estimates rarely include estimations of lost productivity whilst at work.

MSDs can cause work-limiting pain and fatigue which many people feel unable to disclose at work. Research shows that up to 30 per cent of workers with conditions such as rheumatoid arthritis (RA) are reluctant to disclose their condition to their colleagues and managers out of a fear of discrimination (Gignac, Cao, Lacaille, Anis and Badley, 2008) and 22 per cent of workers do not tell their employers about their condition (Gignac, Badley, Lacaille, Cott, Adam et al., 2004). Experts interviewed for this report confirm that Latvian workers may neglect their

condition at early stages for fear of losing their jobs; medical help and vocational rehabilitation often come when an individual's workability is already jeopardised.¹⁵

MSDs, as outlined in Section 2, can be non-specific or specific. The effects of specific MSDs are discussed below with particular reference to RA and spondyloarthropathies (SpAs). Other, largely non-specific MSDs are described in relation to two main categories, back pain and work-related upper limb disorders (WRULDs). The effects of pain from MSDs can thus impact on the following aspects of one's performance at work:

- Stamina and resilience;
- Cognitive capacity or concentration;
- Rationality/mood;
- Fatigue;
- Mobility;
- Agility.

An MSD can also have effects on safety aspects of work. If concentration or movement is affected by the condition or associated pain then some aspects of work may become unsafe. It must also be noted that, following diagnosis, some treatments can have significant side effects which affect an individual's ability to perform. Where particular hazards such as heavy machinery or driving are involved then safety aspects of job performance will also be of concern.

3.2.1 Back pain

Back pain is a very common complaint in Latvia, though good data on prevalence are not collected systematically. The fourth EWCS (Parent-Thirion et al., 2007) shows that over 44 per cent of Latvian workers report work-related back pain. Country-specific studies also suggest an increase in the number of individuals with backache symptoms: 'FINBALT Health Monitor' reports that 42.4 per cent of workers reported back pain complaints in 2008, compared to 35.8 per cent in 2004.¹⁶ That increase could be partially linked to increased awareness of employers of the need to monitor the health of their workforce. In the vast majority of patients with back pain no specific diagnosis is given.

Back pain is common, episodic, often recurrent and generally self-limiting. It is defined as recurrent if several episodes occur in one year for a duration of less than six months, acute if an

¹⁵ Expert interview

¹⁶ Data provided by in-country expert

episode lasts for less than six weeks, sub-acute (7-12 weeks) and chronic if it endures for over 12 weeks. The Latvian Association of Occupational Physicians has developed diagnostic guidelines for back pain as an occupational disease.¹⁷

Back pain is a recurrent problem for many people, although this does not necessitate that symptoms will worsen. For the majority of people pain will disappear of its own accord within four to six weeks. In a European study of people visiting their family doctors because of back pain, 65 per cent were free of symptoms within 12 weeks (van der Hoogen et al., 1998 in Bekkering, Henriks, Koes, Oostendorp, Ostelo et al., 2003). Recorded absence is greatest amongst the minority of individuals whose condition is chronic or recurrent. Most people who are affected by back pain either remain in work or return to work promptly. About 85 per cent of people with back pain take less than seven days off, yet this accounts for only half of the number of working days lost. The rest is accounted for by the 15 per cent who are absent for over one month (Bekkering et al., 2003).

It is important to recognise that there is a difference between having symptoms, care seeking, lost productivity and disability, and the factors that contribute to them (Burton, 2005). This means that whilst individuals may experience musculoskeletal pain (in their back, for example), it is not possible to predict their strategies for dealing with illness or injury (seeking medical attention for example), how it will affect their work performance, whether they will take time off work and whether, ultimately, they will become one of the very small minority who become permanently disabled by their condition. The important question is therefore why, when so many people experience back pain, does it have such an adverse effect on some and not others? There is a growing consensus that psychological factors are the differentiating factor as they are strongly associated with the progression of back pain from an acute to a chronic condition that affects 2 to 7 per cent of people (Burton, 2005), and to disability (Burton, 2005; Bekkering et al., 2003).

3.2.2 Work-related upper limb disorders

According to the fourth EWCS (Parent-Thirion et al., 2007), up to 36 per cent of Latvian workers report that they have experienced muscular pain in their neck, shoulders and upper limbs.

WRULDs are MSDs affecting the upper part of the body caused or aggravated by work and the working environment. However, there is considerable debate about the definition and diagnostic criteria for WRULDs, which are also commonly referred to as 'sprains or strains', 'repetitive strain injuries or disorders', or 'cumulative trauma disorders'. Both specific and non-specific disorders and symptoms can be covered by this category. Van Eerd, Beaton, Cole,

¹⁷ See Latvian Association of Occupational Physicians, 'Vadlīnijas mugurkaula slimību saistīšanai ar arodu' <http://www.arodslimibas.lv/index.php?module=mod66>

Lucas, Hogg-Johnson et al. (2003) identified 27 different classification systems for work-related MSDs, of which no two were found to be alike. The fact that a single disorder is often described in different ways only amplifies the problem. Critically, van Eerd et al. (2003) found that the different classification systems did not agree on which disorders should be included. This definitional problem makes it difficult to calculate the number of people with WRULDs and to develop a common understanding of the associated risk factors.

Whilst no agreed classification exists there is a common consensus that symptoms of WRULDs can present in the tendons, muscles, joints, blood vessels and/or the nerves and may include pain, discomfort, numbness, and tingling sensations in the affected area. WRULDs can be specific and non-specific conditions (Aptel, Aublet-Cuvelier and Cnockaert 2002) and attempts at classification tend to focus either on the affected body area or on the cause. Examples of WRULDs by body part include the following:

- Elbow: Epicondylitis (tennis or golfer's elbow);
- Hand, wrist and forearm: Carpal tunnel syndrome; repetitive strain injury (RSI), de Quervain's syndrome;
- Shoulder: Tendinitis of the shoulder;
- Neck: Neck pain.

Classification by occupational causes refers to actions such as vibration of the hand and arm, which can result in Raynaud's syndrome, for example. The breadth of the category of WRULDs means that almost all symptoms and impacts on work associated with MSDs are associated with WRULDs. Specific symptoms and impacts of MSDs are therefore discussed in more detail below with reference to back pain, RA and SpA conditions.

3.2.3 Rheumatoid arthritis

Rheumatoid arthritis (RA) is an example of a specific MSD. This form of inflammatory arthritis affects people of any age, although peak incidence is in the mid age range of the working age population, between the ages of 25 and 55 years. Epidemiological studies have shown that RA shortens life expectancy by around 6-10 years.

Prevalence of RA is between 0.3 per cent and one per cent in most industrialised countries (WHO, 2003). Lundkvist, Kastäng and Kobelt (2008) report 15,000 RA patients in Latvia. Another recent estimate suggests that 8,771 Latvians over 19 years old have RA (Kobelt and Kastaeng, 2009).

The exact cause of RA is unknown. Evidence suggests that it is an immune disease, presenting as an inflammation affecting joints and other tissues. Risk factors include gender, family history of RA and specific leukocyte antigen (HLA) (WHO, 2003). Whilst at an individual level the clinical course of RA is extremely variable, its features include pain, stiffness in the joints and tiredness, particularly in the morning or after periods of inactivity, weight loss and fever or flu-like symptoms. It affects the synovial joints, producing pain and eventual deformity and disability. The disease can progress very rapidly, causing swelling and damaging cartilage and bone around the joints. It can affect any joint in the body, but it is often the hands, feet and wrists that are affected. RA can also affect the heart, eyes, lungs, blood and skin.

The course of RA varies, meaning that it can go from a mild and even self-limiting form of the disease, to being severe and destructive within a short time (Young, Dixey, Cox, Davis, Devlin et al., 2000). RA is usually chronic (persistent) and people with the condition often have 'flares' of intense pain frequently associated with fatigue, although the reason for these is not known. In effect, 'flares' mean that one day someone will be able to perform their duties and the next they cannot. This can be difficult for colleagues and managers to comprehend, and can make planning workloads challenging. Managing these 'flares' in employment requires close communication and understanding between employees and employers.

RA has a significant negative impact on individuals' quality of life (Paulovica, 1995). The effects of the disease can therefore make it difficult to complete every day tasks, often forcing many people to give up work (Verstappen, Bijlsma, Verkleij, Buskens, Blaauw et al., 2004). One study reports rates of work disability at between 32 to 50 per cent 10 years after onset of disease, and up to 50 to 90 per cent 30 years on (Sokka, 2003; Lacaille, 2005). Work capacity is restricted by two-thirds within one year and 40 per cent of those diagnosed with RA stop working after three years because of their RA (Bone and Joint Decade, 2005). Even among those employed the condition is suggested to inhibit educational and promotional opportunities (van Jaarsveld, Jacobs, Schrijvers, van Albada-Kuipers, Hofman et al., 1998).

However, a variety of financial and personal considerations may impact the decisions to leave work among individuals with chronic health conditions. Indeed Young, Dixey, Kulinskaya, Cox, Davies et al. (2002) found a group of respondents who stopped work due to a combination of RA and other personal factors, giving an estimate of 40 per cent of those with RA withdrawing from the workforce. It appears that, compared to other developed western economies, a relatively high proportion of RA patients in Latvia stay in work. The employment rates of RA patients are 73 per cent for women and 83 per cent for 20-44 year-old for men; and 68 per cent to 75 per cent for 45-64 year-old females and males respectively (Kobelt and Kastaeng, 2009). Sokka, Kautiainen, Pincus, Verstappen, Aggarwal et al. (2010) observe that it is typical

for individuals in 'low-GDP' countries, including Latvia, to continue working with greater degree of disease severity, compared to patients in 'high-GDP' countries. This evidence suggests that early diagnosis and treatment of RA may support people with this condition in employment for longer.

3.2.4 Spondyloarthropathies

Spondyloarthropathies (SpAs) represent a family of chronic inflammatory conditions which include:

- Ankylosing spondylitis (AS);
- Reactive arthritis (ReA)/ Reiter syndrome (RS);
- Psoriatic arthritis (PsA);
- Spondyloarthropathy associated with inflammatory bowel disease (IBD);
- Undifferentiated spondyloarthropathy (USpA).

Recent research on the frequency of SpAs across the European population concludes that the prevalence has long been underestimated, and SpAs may have a similar prevalence rate to RA (Akkoc, 2008).

Ankylosing spondylitis (AS) is a specific progressive and chronic rheumatic disorder that mainly affects the spine, but can also affect other joints, tendons and ligaments. Its prevalence in the general population is most commonly reported to be 0.1-0.2 per cent with a 3:1 to 2:1 male : female ratio (Dagfinrud, Mengshoel, Hagen, Loge and Kvien, 2004). The estimated number of AS patients in Latvia is around 8,000 (Andersone, 2011).

First diagnosis is often made when people are in their teens and early twenties (the mean age of onset is 26). Research suggests that there is a strong genetic component to the cause of AS. Although anyone can get AS, it affects men, women and children in slightly different ways (Dagfinrud et al., 2004). In men, the pelvis and spine are more commonly affected, as well as the chest wall, hips, shoulders and feet. Women are supposed to have a later age of onset, milder disease course, longer asymptomatic periods but more extraspinal involvement. Accurate diagnosis can often be delayed since the early symptoms are frequently mistaken for sports injuries; Sieper, Braun, Rudwaleit, Boonen and Zink (2002) suggest an average of seven years between disease onset and diagnosis. Typical AS symptoms include pain (particularly in the early morning); weight loss, particularly in the early stages; fatigue; fever and night sweats and improvement after exercise. Again, as with RA, the temporal aspects of the disease require good management to ensure that individuals can perform their job but do not make work impossible.

Approximately half are severely affected whilst others report very few symptoms. AS is generally considered to be a disease in which many individuals can maintain relatively good functional capacity (Chorus, Boonen, Miedema and van der Linden, 2002), yet reported unemployment rates are three times higher among people with AS than in the general population (Boonen, Chorus, Miedema, van der Heijde, Landewé et al., 2001).

Recent research has provided evidence that physical health related quality of life of people with RA (Chorus, Miedema, Boonen and van der Linden, 2003) and AS (Gordeev, Maksymowych, Evers, Ament, Schachna et al., 2010) was positively influenced by work. Chorus et al.'s conclusion was that work '*might be an important factor in positively influencing patients' perception of their physical performance*'. This finding concurs with Waddell and Burton (2006a) that overall, good quality work has health and recuperative benefits for workers. The extent to which the workplace can have a positive or negative effect on development of MSDs is discussed below.

Psoriatic arthritis (PsA) is a form of joint inflammation affecting between 0.2 and 1 per cent of the general population (Wallenius, Skomsvoll, Koldingsnes, Rødevand, Mikkelsen et al., 2008) and between 10 and 20 per cent of individuals with psoriasis. The estimated number of PsA patients in Latvia is around 8,000 (Andersone, 2011).

When joints are inflamed they become tender, swollen and painful on movement. The joints are typically stiff after resting, early in the morning or while resting in the evening. Tissues such as ligaments, tendons around the joints may also be affected. Inflammation of tendons or muscles (such as tennis elbow and pain around the heel) are also symptoms experienced by those with psoriatic arthropathy. In approximately 80 per cent of cases the arthritis develops after the appearance of psoriasis. Men and women are considered to be equally affected, and comparative studies have shown that patients with PsA have a burden of illness which is comparable to that of patients with RA or AS (Wallenius et al., 2008).

There are several features that distinguish PsA from other forms of arthritis: one pattern of inflammation is usually in the end of finger joints. Another pattern is involvement of the joints of the spine and sacroiliac joints which is called spondylitis (similar to ankylosing spondylitis). Neck pain and stiffness can occur or an entire toe or finger can become swollen or inflamed (dactylitis). There can also be a tendency for joints to stiffen up and sometimes to fuse together. Importantly the absence of rheumatoid factor in the blood helps distinguish PsA from RA. It is usual for the condition to develop in the teenage years. In women there may be an increased incidence following pregnancy or the menopause. As PsA affects both the skin and the joints, this has a negative impact on the quality of life of people with PsA; due to emotional problems,

in fact, they may experience more pain and role limitations than patients with RA (Husted, Gladman, Farewell and Cook, 2001). A higher level of mortality compared to the general population has also been reported among people with PsA (Wallenius et al., 2008).

3.3 Risk factors for MSDs The risk factors for MSDs are wide ranging. Whilst there is broad consensus among experts that work is a risk factor for MSDs, non-work activities such as sport and housework can contribute to musculoskeletal strain. To reduce risk factors for MSDs, it is important to pursue targets of the Latvian Public Health Strategy 2011-2017 (WHO, 2011) in changing unhealthy behaviours and lifestyles of the Latvian population.

3.3.1 Intrinsic factors and lifestyle choices

Progress of MSDs may be influenced by an array of factors. Some studies, for example, have noted that a higher prevalence of musculoskeletal pain among working women may be linked to the fact that women are responsible for doing the majority of housework (Punnett and Wegman, 2004). Intrinsic risk factors also have a part to play in the onset and deterioration of MSDs. Some intrinsic factors can be altered, others, such as genetic predisposition, cannot. WHO (2003) suggests several intrinsic risk factors for non-specific MSDs, including:

- Obesity, height;
- Spinal abnormalities;
- Genetic predisposition;
- Pregnancy;
- Psychosocial stress: self-perception;
- Health beliefs: locus of control, self-efficacy, perception of disability and expectation;
- Family stress;
- Psychological stress: somatisation, anxiety and depression;
- Ageing.

Latvia has an older population compared to other European States (Mandl, Dorr and Oberholzner, 2006). The Latvian National Lisbon Programme 2005-2008 emphasised that 55-64 year-olds are more likely to be unemployed than younger people, and are therefore a group of higher social risk (Ministry of Welfare, 2006). As part of its employment strategies the government has incentivised the inclusion of older people in the workforce beyond the EU Commission target.¹⁸ While the high inclusion rate of older people in the workforce is commendable; evidence from other countries (Eurofound, 2007b) suggests that there is a greater chance of deteriorating health, in particular, higher rates of MSD prevalence among the

¹⁸ See Eurostat. Statistics Database <http://ec.europa.eu/eurostat>

older workforce. Special attention should therefore be given to the job design and adjustments of work environment for older employees.

Another potential risk factor for MSDs is sedentary lifestyle. Evidence suggests that low levels of exercise may aggravate the severity of MSDs, in particular back pain (Viir, Virkus, Laiho, Rajaleid, Selart et al., 2007). At the same time, one in five Latvians report low levels of physical activity at work with sedentary occupations more common among women, and more than half Latvians are not active in their leisure time (Pomerleau, McKee, Robertson, Vaask, Kadziaukienne et al., 2000). The role of physical activity in promoting health is not considered to be important, with only 9 per cent of men and 7 per cent of women found to engage in regular physical activities of moderate intensity (Tragakes, Brigis, Karaskevica, Rurane, Stuburs et al., 2008).

Similarly, the awareness of effects of diet on health is low in Latvia (Pomerleau, McKee, Kadsaukiene, Abaravicius, Barkeviciute et al. 2001). Whilst poor diet by itself may not be a risk factor for MSDs, Pomerleau, McKee, Robertson, Kadziauskiene, Abaravicius et al. (2001) suggest that unhealthy behaviours have a tendency to co-occur. It is not surprising that, given the low rates of physical activity and prevalence of poor diet, obesity – which is a risk factor for bone and joint conditions (as well as cardio-vascular disease and diabetes) – is on the rise in Latvia. In 2008 approximately 45 per cent of males and 40 per cent of females were either overweight or obese (Tragakes et al., 2008). Although that prevalence is lower than in other European countries, growing rates of child obesity over the last decade are of great concern. For example, the number of obese 13 year-old boys grew by one per cent a year between 2001 and 2005 (WHO, 2009). Obesity in childhood has been found to be a predictor of obesity in adults, thus reducing the age at which obesity-related diseases, such as MSDs, may manifest themselves.

Finally, smoking has been found to have an impact on the progress of RA disease (Bone and Joint Decade, 2005). Latvia has the highest rate of male smokers in Europe at 51.1 per cent and the lowest rate of decline in smoking habit (Tragakes et al. 2008; WHO, 2011). There is also an increase in the numbers of women who are daily smokers (WHO, 2011).

3.3.2 The impact of the workplace on MSDs

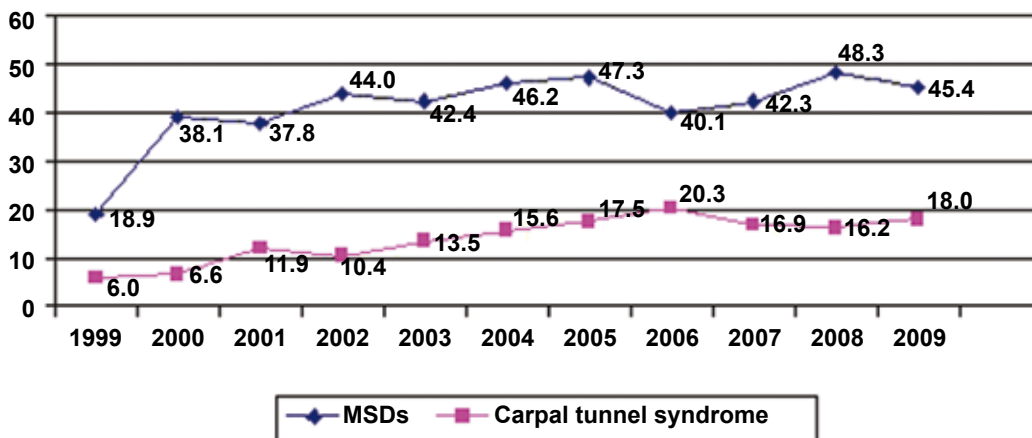
In terms of evidence and risk factors for the impact of work on MSDs a distinction needs to be made between 'work-related' disorders and 'occupational' disorders (Punnett and Wegman, 2004). Certain MSDs are recognised as occupational diseases by some European governments, such as wrist tenosynovitis, epicondylitis of the elbow, Raynaud's syndrome

or vibration white finger and carpal tunnel syndrome (Eurostat, 2004). As such, the fact that work can cause and contribute to these conditions is widely recognised in Latvia particularly in relation to physically-demanding jobs in heavy industry and agriculture.¹⁹ At the same time, the development of the knowledge economy sector leads to an emergence of new risks that exacerbate health conditions – poor ergonomic design and unfavourable psychosocial environment at work are now considered on a par with chemical, physical and biological risks (Eglite et al., 2011).

A few agencies collect data on the occupational diseases in Latvia, however, the quality of evidence varies and more coordination is needed in collecting and analysing the statistics. The Latvian State Register of Occupational disease patients and people exposed to ionising radiation due to the Chernobyl NPP accident collects data on occupational diseases; the State Labour Inspectorate holds statistics on workplace accidents, and the State Social Insurance Agency collects data on costs of workplace accidents or occupational diseases (AS Inspecta Latvia & RSU DVVI, 2007). Most records are based on the reports of workplace inspectors.²⁰ However, the findings of AS Inspecta Latvia and RSU DVVI (2007) suggest that a high number of workplace accidents are not registered by employers and individuals themselves.

Figure 3.3 below shows that MSDs and carpal tunnel syndrome constitute a significant proportion of all occupational diseases in Latvia.

Figure 3.3: MSDs as a proportion of all occupational diseases



Source: SIA Inspecta Prevention and SIA TNS Latvia, 2010

¹⁹ Expert interviews

²⁰ Expert interview

The most frequently cited risk factors for MSDs encountered in the workplace include the following:

- Rapid work pace and repetitive motion patterns;
- Heavy lifting and forceful manual exertions;
- Non-neutral body postures (dynamic or static), frequent bending and twisting;
- Mechanical pressure concentrations;
- Segmental or whole body vibrations;
- Local or whole-body exposure to cold;
- Insufficient recovery time (Punnett and Wegman, 2004).

MSDs affect employees in all kinds of industries and occupations, although some are more high risk than others, and certain occupations are associated with strain on specific parts of the musculoskeletal system. Over 48 per cent of Latvian employees work in awkward positions and almost 43 per cent of employees are involved in handling heavy loads (SIA Inspecta Prevention and SIA TNS Latvia, 2010). This is partially due to the distribution of occupational sectors in the Latvian economy: large proportions of the workforce are employed in physically-demanding industries such as manufacturing and agriculture. According to a recent survey conducted in Latvia physical demands of the job is the top reason for job dissatisfaction, named by at least 29 per cent of respondents (SIA Inspecta Prevention and SIA TNS Latvia, 2010).

It is estimated that at least a third of organisational environments may exceed recommended limits on a number of occupational risk factors, including both traditional work factors – chemical, physical and biological – and psychosocial risks (Eglite et al., 2011).

The evidence linking non-occupational MSDs and work is not conclusive and attributing cause and effect between specific aspects of work and particular parts of the body is difficult. It is clear that work is not the cause of rheumatic diseases such as RA and SpAs, though RA has been linked to occupational risks such as vibrations, repetitive trauma, knee bending and lifting heavy weights (Prüss-Üstün and Corvalán, 2006). However, many of the established risk factors that may contribute to the development of non-specific MSDs can be encountered at work; even if work does not cause a condition it may have an impact on it.

Much of the attention that employers pay to the issue of MSDs and the impact of the workplace on their onset or deterioration is driven by a concern to avoid or limit litigation and ensure that they are fulfilling their duty of care, for example, by performing workstation assessments and giving guidance on manual handling. However, this neglects a wider issue that other work

associated factors can also contribute to MSDs. These aspects are often missed out in the literature and advice on dealing with health and safety. Even where 'stress' is mentioned, the connection between psychosocial factors and physical conditions is omitted, reinforcing the primary focus on safety.

Psychological and organisational factors can also combine with physical factors to increase the risk of injury and the probability of an individual leaving work prematurely (Devereux, Rydstedt, Kelly, Weston and Buckle, 2004). Research on low back pain shows that an employee's belief that work itself produces pain precedes sickness behaviour and is a risk factor for chronic work disability (Werner, Lærum, Wormgoor, Lindh and Indhal, 2007). Sokka and Pincus (2001) reviewed 15 studies and showed that physically demanding work, a lack of autonomy, higher levels of pain, lower functional status and lower educational levels were predictors of someone with RA leaving work early. The evidence from Sokka and Pincus (2001) highlights that it is not only the physical elements of work that can influence someone's functional work capacity and likelihood of staying in the labour market. We must also consider the psychosocial and organisational factors of work.

Psychosocial and organisational factors associated with MSDs include:

- Rapid work pace or intensified workload;
- Perceived monotonous work;
- Low job satisfaction;
- Low decision latitude/low job control;
- Low social support;
- Job stress.

Job stress is a broad term and can result from a variety of sources such as high job demands or a mismatch between skills and job requirements. In addition stress can result from abuse or violence at work, as well as discrimination or fear of losing a job.

Berdnikovs (2010) finds that due to changing working conditions and industry composition in Latvia psychosocial factors have an increasingly more significant impact on health compared to the physical attributes of the work environment. Physical work demands, lack of support, self-stigma and lack of flexibility over working time can each make job retention or return to work more difficult for patients with specific MSDs (der Tempel and van der Linden, 2001; Gignac et al., 2004). Over 64 per cent of Latvian employees report that work is affecting their health, which

is the third highest rate in Europe (Parent-Thirion et al., 2007). According to the 2007 Labour Force Survey a work-related health problem affected the performance of at least 38 per cent of workers 'to some extent' and had a considerable impact on the work of just under 55 per cent of respondents. Up to 64 per cent of those took sick leave, with almost 47 per cent staying out of work for at least one month.²¹

It is important to recognise the connection between the psychological and the physical. While job stress, including violence and discrimination at work, might lead to lost productivity due to stress or common mental health problems, it may also lead to MSDs caused by tension or strain. An increased probability of experiencing a high level of pain has also been associated with low social support, low social anchorage or low social participation (Katz, 2002). 'Good work' and the provision of high quality jobs is therefore crucial (Coats and Max, 2005, Coats and Lehti, 2008).

3.4
The wider
economic and
social impact
of MSDs

The effect that MSDs can have on individuals' ability to work and the time they may require to be absent from work means that MSDs have significant associated costs to the individual, their family, the employer and the wider economy. Calculating the exact costs is not straightforward (Lundkvist, Kastäng and Kobelt, 2008). Several factors need to be considered, and obtaining accurate, reliable and consistent figures is almost impossible. However, existing figures on the economic impact of MSDs based on conservative approximations show that MSDs are a significant economic burden to Latvia.

To calculate the cost of MSDs (or any illness) the following factors must be estimated:

- **Direct costs** including medical expenditure, such as the cost of prevention, detection, treatment, rehabilitation, long-term care and ongoing medical and private expenditure. They are often further separated into medical costs occurring in the health care sector and non-medical costs occurring in other sectors (Lundkvist, Kastäng and Kobelt, 2008);
- **Indirect costs** including lost work output attributable to a reduced capacity for activity, such as lost productivity, lost earnings, lost opportunities for family members, lost earnings of family members and lost tax revenue;
- **Intangible costs** including psychosocial burden resulting in reduced quality of life, such as job stress, economic stress, family stress and suffering (WHO, 2003).

²¹ See Health and Safety Executive <http://www.hse.gov.uk>

These costs vary considerably depending on the condition, the severity of the symptoms and whether these cause short or long term absence or disability. Moreover, they vary depending on the particular methods used to calculate the costs. Some factors which affect the calculations include the following:

- Severity of patient's conditions;
- Mix of patient demographics in a study;
- Calculation method for productivity;
- Definitions of work disability;
- Treatment costs or outcomes due to treatments (the year costs were calculated which is also a factor not least because treatment processes can change);
- Change in health care financing systems;
- Incidence or prevalence based estimates of costs.

Intangible costs are rarely included in cost calculations as it is almost impossible to properly express the intangible costs in monetary terms (Sieper et al., 2002). However, the evaluation of intangible costs gives useful information regarding the price paid by people with MSDs in terms of quality of life (QoL) and these measures should be used as further indicators to measure the effectiveness of interventions (Leardini, Salaffi, Montanelli, Gerzeli and Canesi, 2002). Presently the two measures most widely used are:

1. **Disability adjusted life years (DALYs)**. This is a measure of the overall disease burden which attempts to tally the complete burden that a particular disease exacts. Key elements include the age at which disease or disability occurs, how long its effects linger, and its impact on quality of life. One DALY, therefore, is equal to one year of healthy life lost. For example, RA accounted for 0.71 per cent of all DALYs lost in Latvia, (Lundkvist, Kastäng and Kobelt, 2008).
2. **Quality adjusted life years (QALYs)**. The QALY is also a measure of disease burden, including both the quality and the quantity of life lived. It is used in assessing the value for money of medical interventions and is based on the number of years of life that would be added by these interventions. A QALY gives a measure of how many extra months or years of life of a reasonable quality a person might gain as a result of treatment and helps in the assessment of the cost-utility of this treatment.

Both measures are the subject of debate, but have become accepted as helpful in making comparative judgements across medical conditions and internationally.

3.4.1 Direct costs

As mentioned above, cost-of-illness estimates require input from a number of different factors, and great variation is found across different studies. For low back pain (LBP), the most significant direct costs are related to physical therapy, inpatient services, drugs, and primary care (Dagenais, Caro and Haldeman, 2008). Nachemson, Waddell and Norlund (2000) calculated that some 80 per cent of health care costs are generated by the 10 per cent of those with chronic back pain and disability. For RA, although direct health care costs have been relatively small in the past (Lundkvist, Kastäng and Kobelt, 2008), a number of studies indicate that direct costs increase as functional capacity decreases – making functional capacity a major cost driver (Huscher, Merkesdal, Thiele, Schneider and Zink, 2006; Kobelt, 2007; Leardini et al., 2002).

Direct costs, compared to indirect costs, usually represent a minority of the total costs (Dagenais, Caro and Haldeman, 2008; Kavanaugh, 2005; Kobelt, 2007; Lundkvist, Kastäng and Kobelt, 2008). Studies on the costs of RA have demonstrated that indirect costs associated with the condition may be up to two to four times greater than the direct costs of RA, which include hospitalisations, physician visits and prescription costs (Lacaille, 2005; Puolakka, Kautiainen, Möttönen, Hannonen, Korpela et al., 2005). At the same time, for RA, large cross-country variations of estimates of direct costs are found in the literature due to the different uptake of particular treatments in different countries (Lundkvist, Kastäng and Kobelt, 2008).

Table 3.1 shows some of the specific direct costs associated with musculoskeletal conditions (MSCs) in general, and RA and low back pain in particular, as found in the literature (Woolf, 2004 as cited in *The Bone and Joint Decade*, 2005; Kavanaugh, 2005; Dagenais et al., 2008).

From a patient perspective Suhrcke, Rocco and McKee (2007) estimate that being in poor health compared to good health resulted in 12 fewer working hours per week for men and 8 fewer hours for women, reducing monthly salaries by 30 and 20 per cent respectively.

One survey reports that total health care costs of all occupational diseases in Latvia added up to 216,181 euros in 2009, of which only 288 euros were spent on vocational rehabilitation.²² That suggests that GPs spend little time addressing the impact of health conditions on work.

²² Data provided by in-country expert

Table 3.1: Direct costs associated with MSCs, RA, and low back pain

	MSCs	RA	Low back pain
Health care costs	Physician visits	Physician visits Other health professional visits	Physician visits Chiropractic visits
	Outpatient surgery	Outpatient surgery	Outpatient surgery
	Emergency room	Emergency room	Emergency room
	Rehabilitation service utilisation (physiotherapist, occupational therapist, social worker)		Physical therapy and rehabilitation service utilisation Complimentary and alternative medicine
	Medications	Medications (including administration costs)	Medications
	Diagnostic / therapeutic procedures and tests	Imaging Laboratory monitoring Toxicity (diagnosis, treatment)	Imaging
	Devices and aids	Medical assist devices	
	Acute hospital facilities (with and without surgery)	Hospitalisations (related to RA or its treatment): orthopaedic surgery, extended care / rehabilitation facilities	
	Non acute hospital facilities		
Personal costs	Transportation		
	Patient time		
	Carer time		
Other disease related costs	Home health care services		Mental health services
	Environmental adaptations		
	Medical equipment		
	Non-medical practitioner, alternative therapy		

Source: Woolf, 2004 as cited in *The Bone and Joint Decade 2005*; Kavanaugh, 2005; Dagenais et al., 2008

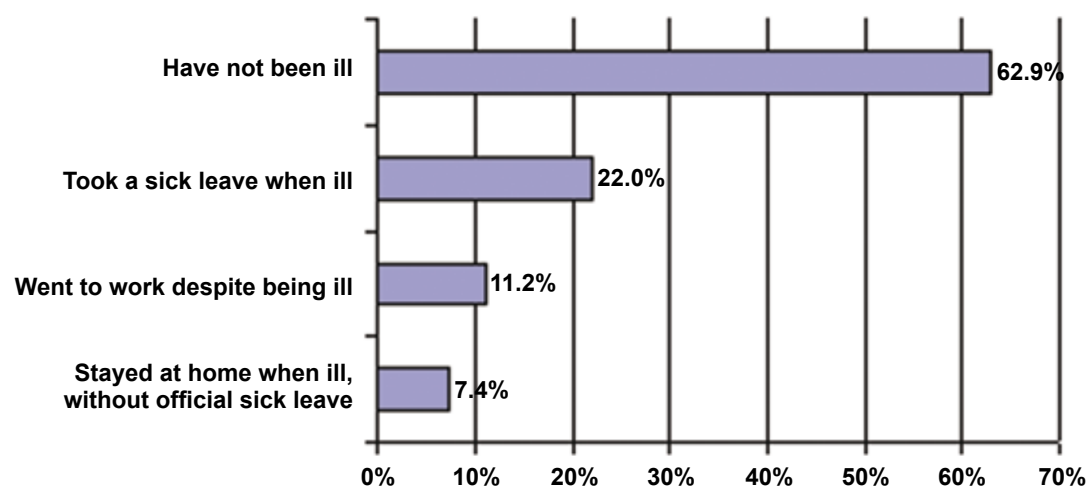
No comprehensive data is available on the direct costs of MSDs in Latvia. It is observed, however, that hospital discharge rates for skeletal, muscle and connective tissue diseases increased from 13.8 per 1000 in 2003 to 19.5 per 1000 in 2008, hinting at the increased burden of MSDs on the health care system.²³

Calculations of the costs of treatment tend to evaluate the clinical costs and benefits of treatments. The wider impact of people with MSDs remaining in work or returning to work early extends to the biopsychosocial and economic effects to the individual of being in work and to the reduced costs to the Health Insurance Fund and other government departments. Taking a wider joined-up approach to an analysis of costs of treatments for illness in general and MSDs in particular may provide a different and perhaps more realistic assessment of the costs and benefits of treatments.

3.4.2 Indirect costs

There are two main types of indirect costs most commonly measured in association with ill health in employees. These are absence from work and what is termed ‘presenteeism’, or loss of productivity in an employee while they are at work with an illness or incapacity. Presenteeism is extremely difficult to measure and although no data on the costs of MSD-related presenteeism in Latvia were found, results of one survey conducted in Latvia suggest that many Latvian employees may come to work when ill and, moreover, fear disclosing ill health to their employers (see Figure 3.4).

Figure 3.4: Ill health among Latvian employees



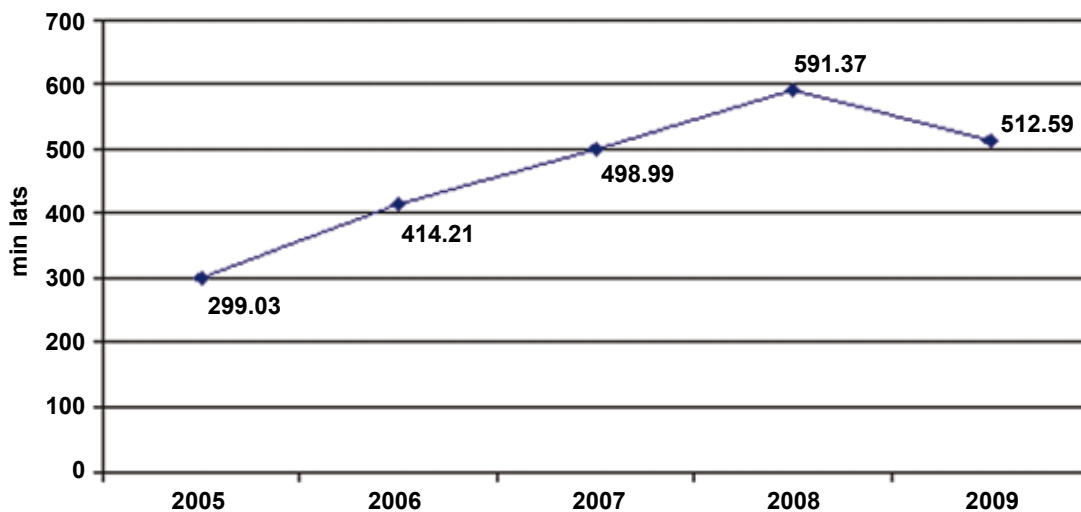
Source: SIA Inspecta Prevention and SIA TNS Latvia, 2010

²³ Data provided by in-country expert

Most estimates of indirect costs are therefore based on absence data, which is rarely accurate, although Latvian organisations are required by law to record sickness absence. For example with the self-reported surveys, employees might report sickness on days when they were not due to work anyway. With employer surveys the responses are limited by the quality of the absence records employers keep (for example, employees do not always record absence accurately or categories for recording causes are not adequate). In Latvia only 29.6 per cent of employers calculated the costs of work accidents (SIA Inspecta Prevention and SIA TNS Latvia, 2010). This is partially due to the low awareness of the impact of ill health on work. Employer surveys are also subject to response biases. Managers, for instance, tend to underreport their own absence.

In 2008 sickness benefits were paid for 551,000 days a month, with an annual cost to employers of 65 million euros (Curkina and Berdnikovs, 2010). In addition, the Figure 3.5 below illustrates the social expenditure on sickness benefits.

Figure 3.5: Social expenditure on sickness benefits



Source: Central Statistical Bureau of Latvia, see <http://www.csb.gov.lv/>

However, these evaluations still underestimate the true cost of conditions such as MSDs. Most people with MSDs (even those with diagnosed conditions) continue to work (Waddell and Burton, 2006a), experiencing the emotional distress of fearing the loss of wages and jobs. Additional costs are associated with the reduced ability of an individual to live independently. Such indirect costs may include hiring household help (Kavanaugh, 2005), as well as foregone income of family members who leave the labour market to provide informal care (Pugner, Scott, Holmes and Hieke, 2000). Although informal care is difficult to identify, quantify and value (what

is considered 'informal care' by some people may be considered 'normal' by others), Lundkvist, Kastäng and Kobelt (2008) reported that for RA the annual cost of informal care in Latvia was equal to 439 euros per patient. In a different study Kobelt and Kastaeng (2009) arrived at a lower estimation of 352 euros per patient, which was significantly below the European average of 2,012 euros, and even that for Eastern European countries (average 513 euros). of 2,012 euros, but slightly higher compared to other Eastern European countries (average 513 euros).

3.4.3 Total costs

Calculating the costs for specific MSDs is fraught with the same difficulties as for MSDs as a whole. The majority of studies estimating the economic burden of RA have provided cost estimates specific to the US population and health care system (Cooper, 2000). The cost of AS to society is less well established (Chorus et al., 2002). More research has been done on cost in the US, Canada and other European countries, particularly the Netherlands, France and Belgium, than in Latvia. However, findings across countries with respect to work disability rates are generally not directly comparable given the differences in working terms and conditions, such as the length and conditions of statutory sick pay (Sieper et al., 2002).

Lundkvist, Kastäng and Kobelt (2008) found that the total cost of treating RA patients in Latvia was 4,193 euros per patient per year resulting in 50 million euros overall costs. A later estimation by Kobelt and Kastaeng (2009) concluded lower RA costs of 3,159 euros per patient per year, or 27.7 million euros in total. These included medical costs, drug costs, non-medical costs, the costs of informal care and other indirect costs, but do not differentiate between those of working age and those above retirement age. These figures are significantly lower, per patient, than those for other Western European countries, but comparable to Eastern European average.

The limitations of data collection outlined above highlight some of the difficulties encountered in trying to cost the impact of MSDs for employers and society.

3.5 Summary

In this section we have considered the impact that MSDs have on a person's ability to work, both physically, as a result of the condition itself, and from the associated effects, such as loss of concentration from pain. We have also discussed the impact that the workplace can have on MSDs, both at onset and during the development of the conditions. Whilst there are many intrinsic risk factors for MSDs it is clear that the workplace has the potential to expose employees to other risk factors, both physical and psychosocial. Some of the well-established workplace risk factors such as vibrations and workstation ergonomics are already recognised by many employers and assessed in order to minimise their impact. However, the impact of

other workplace risk factors such as job quality and support of disclosure, are not as widely understood.

We have also highlighted that it is important to distinguish between risk factors for the onset of MSDs and risk factors for chronic illness and disability. Whilst the physical conditions of work may cause or aggravate musculoskeletal symptoms, the impact or outcome on individuals (absence from work and disability) is strongly associated with psychosocial factors (Waddell and Burton, 2006b).

Finally, we have looked at the economic and social impact of MSDs and have discussed the direct, indirect and total costs of MSDs. Unfortunately, total cost estimates as found in the literature do not take into account the enormous intangible costs borne by people with MSDs. This is due to the difficulty of expressing intangible costs in monetary terms. Total overall costs of RA were found to be 27.7 million euros for all patients over 19 years old. However, data for RA in particular, point out how direct and indirect costs increase with the progression of the disease. As a consequence, the development of strategies and interventions to stop this progression and ensure that those with MSDs are supported to enjoy full and productive working lives appears necessary. The next section will discuss for each condition the most common and appropriate interventions outside and within the workplace.

4. Interventions

The impact of MSDs, as we have seen, can be significant to the people living with them, to employers and to society as a whole. Their impact on the workforce has recently started to receive greater recognition. Whilst it is widely acknowledged that early intervention is an essential part of addressing the onset of MSDs and absence caused by these conditions, there is still some way to go before people with MSDs are given the best support possible to remain in work or return to work. Long waiting times for care, certain employer's lack of capacity to deal with sickness or disability, lack of employee awareness about conditions and their management, and mixed messages on the effectiveness of various methods of workplace interventions or return to work programmes are all barriers to making good and healthy work a reality for those with MSDs.

This section looks at the kinds of interventions which are most likely to help workers with MSDs to stay in work, to return to work, to remain productive, to derive health benefits from work and to continue to make a contribution to society. In addition, Appendix 3 provides a wide number of indicators that may help to identify both enablers and barriers to early intervention in Latvia, and to compare Latvia to countries with similar or different labour market, welfare and health care systems.

4.1 Ensuring that workers who have MSDs get access to the appropriate treatment and support as quickly as possible must be a top priority for employers and health care professionals.²⁴

The case for early intervention Epidemiological studies of employees whose absence is caused by low back pain have shown that the longer the sick leave, the more difficult it is to get the employee to return to work and the higher the economic cost (Frank, Sinclair, Hogg-Johnson, Shannon, Bombardier et al., 1998; Meijer, Sluiter, Heyma, Sadiraj, and Frings-Dresen, 2006). Sick leave has also been shown to have a negative psychological impact on employees (Meijer, Sluiter, and Frings-Dresen, 2005). Early intervention is therefore crucial to individual recovery and self-management, and may contribute to reducing the number of working days lost and reduced productivity caused by MSDs (although the evidence on the cost-effectiveness of specific return to work programmes is inconclusive).

It is also in employers' best interest to act early if they are to minimise the costs to the health of employees and to their business through absence. Based on a review of the available evidence Breen, Langworthy and Bagust (2005) recommend that employees and employers should discuss and adjust work within the first week to prevent sickness absence or long-term disability. Occupational health programmes could provide crucial interventions at an early stage of disease, however, those are not available through the Latvian state (Tragakes et al. 2008),

²⁴ Expert interviews

leaving the provision of occupational health services at the discretion of employers. At the same time, only few organisations recognise the value of employing occupational health specialists.²⁵ Mandl, Dorr and Oberholzner (2006) describe one example of good practice, where a Latvian manufacturing company²⁶ addressed high turnover rates and ageing of their staff by introducing a health and well-being policy. Benefits offered to all employees included free access to medical care, a company-owned hospital and an annual medical check up. Additional benefits were offered to older members of the workforce (Mandl, Dorr and Oberholzner, 2006). This example of an employer's investment in the health and well-being of their workforce is encouraging and should be emulated by other organisations.

Job retention and return to work programmes are contingent on patients receiving appropriate medical care as quickly as possible. If employees have concerns about their condition they should consult a health care professional and, following referral or diagnosis, advice and planned action, a review should be conducted within four weeks. Since GPs are the first point of call for most people with MSDs and the signatory of sick notes, they have a vital role to play in ensuring that patients are able to manage their conditions, and are pivotal in either obstructing or facilitating an individual's return to work.

At the same time, waiting times to see a specialist and access treatment, particularly for those with RA, are still long in Latvia (Tragakes et al. 2008). While the number of GPs at 54.7 per 100,000 population is comparable to the European average, the number of rheumatologists is among the lowest in Europe at 0.5 specialists per 100,000.²⁷ At the same time, GPs may fail to recognise MSDs early enough, especially due to the misconception that the conditions of that group do not affect young patients.²⁸ Early diagnosis leading to earlier intervention may also be inhibited by waiting times for procedures, for example, waiting times for MRI scans, often used to diagnose MSDs, may take up to 24 weeks (Tragakes et al. 2008). It is suggested that more specialist nurses should be trained to assist patients with managing their condition. Currently only a third of all GPs are supported by a specialist nurse.²⁹

In addition, there are concerns about how readily GPs refer patients to specialist care, even when it is needed.³⁰ The Latvian health care funding system incentivises GPs to retain money

²⁵ Expert interview

²⁶ See Eurofound. Riga Electric Machine Building Works (RER), Latvia: Comprehensive approach <http://www.eurofound.europa.eu/areas/populationandsociety/cases/lv001.htm>

²⁷ Eurostat Statistics Database <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/> See Appendix 3 for cross-country comparison

²⁸ Expert interview

²⁹ Expert interview

³⁰ Expert interview

that could be used to pay a consultant (Tragakes et al. 2008). As a result, patients may be denied access to adequate or appropriate specialist treatment.

The Health Payment Centre³¹ reports an improvement in waiting times to see a rheumatologist from 36 days in 2007 to 15 days in 2010, however there is large variation in access to health care services between urban and rural areas in Latvia. Often people do not have access to public transport to travel to health care facilities, and may not be able to complete the return journey on the same day (Tragakes et al. 2008). Local municipalities may provide either transportation to medical centres, or sponsor doctor visits to the area. However, such support is insufficient to guarantee timely access to the appropriate health service in some areas.

Poor access to health care may lead some individuals to seek private medical care.³² A high proportion of the Latvian population experience financial hardship and are unable to afford paid prescriptions and health care services (Krustins, 2005, cited in Tragakes et al., 2008). The populations of rural areas tend to have lower average income and therefore spend the least amount on health care per household (Tragakes et al., 2008). The Latvian government are aware of these variations in access.³³

The costs of accessing health care services and affordability of treatment may explain the high percentage of people who attend work when ill. Poor access to health care whether due to geographical or financial reasons could delay the diagnosis and treatment of MSDs, ultimately increasing the costs of sickness absence and disability. At the same time, some individuals, particularly those who are socially disadvantaged, do not seek professional medical help even when that is available.³⁴ Almost a third of workers in Latvia said they would not report their health problems during compulsory health check ups for the fear of losing their wages or even jobs (SIA Inspecta Prevention and SIA TNS Latvia, 2010). Moreover, some employees may be knowingly risking their health at workplaces of high occupational hazard, due to fears of not being able to find another job.³⁵ It is important that individuals take responsibility to seek help with their conditions early enough to manage disease most efficiently. Patient groups may be a source of such support.³⁶

Early intervention that involves a collaborative approach from employers, GPs and occupational health specialists is more likely to reduce long-term impact of MSDs and would support the

³¹ See <http://www.vnc.gov.lv/eng/>

³² Expert interviews

³³ Expert interview

³⁴ Expert interviews

³⁵ Expert interviews

³⁶ Expert interviews

retention of people with MSDs in the labour market.³⁷ However, there is still a stigma against employees with disabilities in Latvian society (Calite, 2007). Low priority of returning a patient to work as an outcome of clinical treatment and lack of relevant success stories in the media may make it more difficult for people with health conditions to stay in work.³⁸ Employers, health care professionals and even individuals themselves should focus on the capacity, not incapacity, of people with disabilities at work and in the society. They should acknowledge that rehabilitation is an important part of the recovery process, along with the treatment of occupational diseases (AS Inspecta Latvia and RSU DVVI, 2007). Adjusting jobs and work environments to individuals, while preserving job quality, will support efficient management of chronic health conditions, sustaining productivity and competitiveness of the Latvian workforce.

4.2
The social
security regime
for the work
disabled

It is clear that, in most EU member states, interventions made by the social security system can make a significant difference to citizens of working age with long-term, chronic or work-disabling conditions. Latvia, among other European countries, is aiming to incentivise and support return to work for disabled persons. However, the split in the provision of long-term care between the health and the welfare systems may compromise a systematic approach and discriminate against certain population groups (Gulbe, 2010).

The demand for social care services is increasing in Latvia, partially due to the ageing of the Latvian society (Gulbe, 2010). More people of pension age are and will be requiring social support, incurring reduction in the volume of Latvian labour force. Additionally, some younger people may be withdrawing from the labour market, having to care for family members who are unable to live independently due to old age or disability: at least 1,073 informal care providers were claiming cash benefits in Latvia in 2005 (Gulbe, 2010).

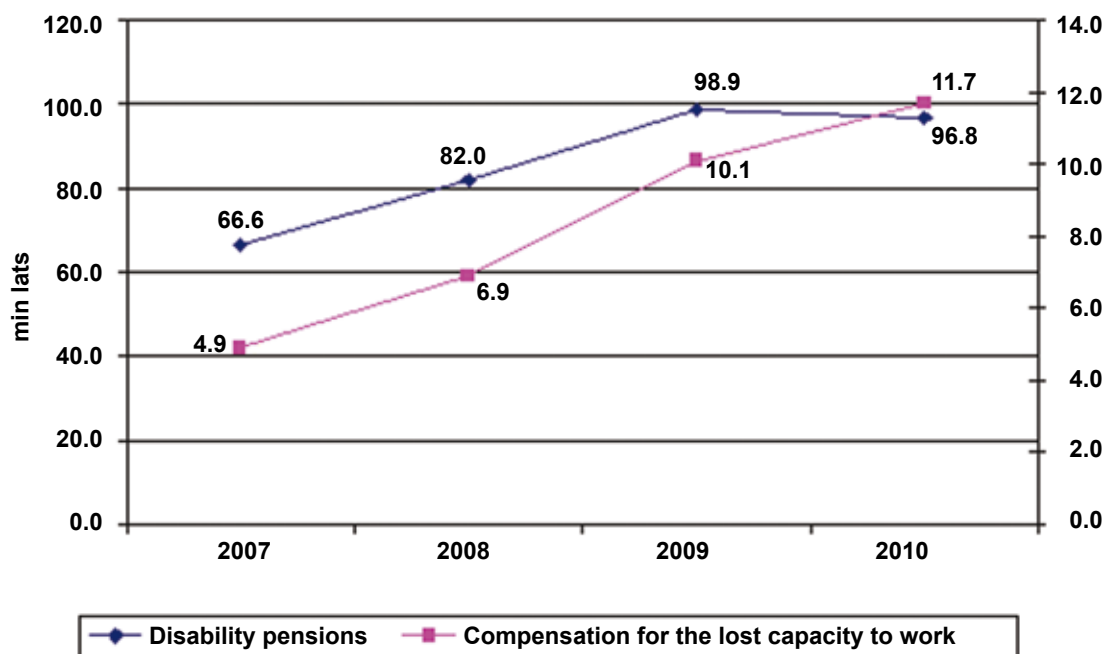
The number of people with disabilities is growing. In 2008 there were 121,494 disabled people, including those who were incapacitated by an accident at work or occupational disease, compared to 108,160 in 2007 (Ministry of Welfare, 2009). More than half of those disabled were of working age in 2007 (Ministry of Welfare, 2009). Total expenditure on social security associated with disability added up to 146.5 million lats in 2008 with an increase to 168.34 million lats in 2009.³⁹ Figure 4.1 below highlights the increasing state expenditure on disability benefits.

³⁷ Expert interview

³⁸ Expert interviews

³⁹ See Central Statistical Bureau of Latvia <http://www.csb.gov.lv/>

Figure 4.1: State expenditure on state benefits and pensions



Source: Central Statistical Bureau of Latvia, see <http://www.csb.gov.lv/>

A large proportion of all disability benefits is claimed by individuals with MSDs. Each year at least 768 DALYs are lost due to MSDs, and 143 DALYs are lost due to RA per 100,000 population in Latvia (WHO, 2009). Latvian Centre for Health Economics reports that MSDs is the third top reason for claiming disability status in Latvia. The incidence of these conditions is growing at one of the fastest rates: there is a significant year-on-year increase in new disability cases associated with MSDs, from 935 cases in 2004 to 2,600 cases in 2010.⁴⁰

Further indirect costs of disability result from the impact of long-term health conditions on an individual's ability to participate in the labour market. When some previously inactive people may choose to return to the labour market in the context of financial hardship, ill health may compromise their chances of finding work or affect their performance. In 2010 about 9.3 per cent of the Latvian population were inactive due to illness or disability, compared to 10.5 per cent in 2008 and 10.0 per cent in 2009.⁴¹ These figures may represent an effect of the introduction of the new sickness allowance system, which targeted the abuse of the sickness benefits. Sickness allowance is now paid from the 11th day in case of incapacity to work and

⁴⁰ See Centre for Health Economics. (Veselības Ekonomikas Centra) <http://vec.gov.lv/lv/33-statistika/statistikas-dati-par-2010-gadu>

⁴¹ See Central Statistical Bureau of Latvia <http://www.csb.gov.lv/>

from the first day for occupational disease.⁴² At the same time return of unhealthy individuals to the labour market may increase the levels of presenteeism.

Insufficient financial support and provision of vocational rehabilitation services for people with disabilities are of great concern in Latvia (Juocevičius, Vētra and Leisi, 2010). Disabled people in Latvia are still at risk of financial hardship and social exclusion. The state social security benefit is 50 lats (72 euros) per month and leaves the disabled people under the relative line of poverty (Academic Network of European Disability experts (ANED), 2009). The two priorities for the support available are both retaining workers in their original job and their re-entry to the labour market after a rehabilitation period, if needed. Yet, measures for professional rehabilitation are difficult to access and often come too late (Juocevičius, Vētra and Leisi, 2010).

Additionally, the government has introduced incentives to assist disabled people to return to work. In 2007 at least 3,370 disabled people received support for active employment measures, and up to 4,458 in 2008 (Ministry of Welfare, 2009). In 2008 690 people were found fit for work and vocational rehabilitation services were provided to 514 individuals. Despite the financial downturn over 30.8 million lats were allocated for social and vocational rehabilitation for disabled people in Latvia in 2009 (Calite, 2009).

Although policies, such as the 1992 Law on medical and social protection of disabled persons and 1998 Conception 'Equal Opportunities for All' protect the rights of the disabled people, there are practical difficulties in implementing the relevant legislation (Calite, 2009). First, there is a shortage of financial and technological opportunities to adjust the work environment to individual physical and mental capabilities of disabled employees (Calite, 2009). Furthermore, there is a lack of dialogue between the various stakeholders to recognise the needs of the disabled employees.

A focus on rehabilitation services will increase social inclusion of disabled people, as well as maintain the pool of skilled workers participating in the labour market. Coping with the impact of health conditions has to become a priority both at the state and organisational level.

4.3 For those with specific musculoskeletal conditions, speedy referral to the appropriate specialist for investigation and treatment is usually vital. Those with MSDs can experience numerous problems associated with long term care, including long waits, failure to undertake a multidisciplinary approach, poor advice on pain management, and a lack of clear integrated pathways. Notwithstanding this, there are a number of condition-specific interventions which have been shown to be effective in improving job retention and return to work.

⁴² Expert interview

4.3.1 Non-specific MSDs

The primary focus of this report has been to examine the interventions and other factors which affect job retention, labour market participation and job quality among those with MSDs. As we have seen, there is evidence that physical impairment can represent a barrier to each of these aspects, but that many people – even those with serious and chronic incapacity – can and do lead full and fulfilling working lives. Since back pain and the majority of work-related upper limb disorders are not diseases to be cured, and there is very limited evidence that prevention is possible, it has been argued that the focus of treatment should be on returning to the highest or desired level of activity and participation, and the prevention of chronic complaints and recurrences (Burton, 2005; Bekkering et al., 2003) rather than eradicating the cause of the problem or returning to normal function.

Whilst treatment to ease or relieve the symptoms of non-specific MSDs will always be a priority, medical intervention is not necessarily the only, or the best route to recovery or helping those with non-specific MSDs to manage their condition. In fact, for non-specific conditions, an individual's recovery and chances of returning to work can be adversely affected by 'over-medicalising' their condition. The limitations imposed by sick notes, statutory sick leave and formalised return to work programmes may serve to reinforce the 'illness' of the patient and can tie employers hands. Based on evidence that psychosocial factors are a determinant of chronicity and disability in those with back pain, there is a strong argument for re-conceptualising this condition and its treatment, which has important lessons for other types of non-specific musculoskeletal pain (Burton, 2005).

Waddell and Burton (2006b) summarise the challenge neatly in their work on vocational rehabilitation. They point out that, whilst many non-specific MSDs do not have clearly defined clinical features and have a high prevalence among the working age population, most episodes resolve themselves and most people with these conditions remain at work or return to work very quickly. In their view, a focus on incapacity alone can be unhelpful:

*'..the question is not what makes some people develop long-term incapacity, but **why do some people with common health problems not recover as expected?** It is now widely accepted that biopsychosocial factors contribute to the development and maintenance of chronic pain and disability. Crucially, they may also act as obstacles to recovery and return to work. The logic of rehabilitation then shifts from dealing with residual impairment to **addressing the biopsychosocial obstacles that delay or prevent expected recovery.**' (Waddell and Burton, 2006b, p.7) [bold in original text]*

The biopsychosocial model is an explanatory framework that recognises the importance of psychological and social factors in determining how those with MSDs cope with their conditions. The following section provides a brief overview of the biopsychosocial model and outlines the implications that it has for the workforce.

4.3.2 Rheumatoid arthritis

The importance of effective and early treatment of RA in reducing joint damage and disability is now widely acknowledged (Pugner, Scott, Holmes and Hieke, 2000). Since there is currently no 'cure' for RA, the focus of treatment is on controlling signs and symptoms, enabling the patient to manage their condition and improving quality of life. Medical treatments for RA are directed at suppressing one or other part of the joint damaging processes, the effectiveness of which has improved in recent years. Since it is well documented that the functional capabilities of RA patients will decline over time, it is critical that patients should be treated as quickly as possible with disease-modifying anti-rheumatic drugs (DMARDs) to control symptoms and disease progression (Scottish Intercollegiate Guidelines Network (SIGN), 2000). One study found that there is a 73 per cent risk of erosive damage in patients who wait over a year between symptom onset and referral to rheumatology clinics (Irvine, 1999 in Luqmani, Hennell, Estrach, Birrell, Bosworth et al., 2006).

Clinical evidence is also growing which demonstrates that in many cases anti-TNF drug therapies can have a more powerful effect on RA than DMARDs, especially in improving job retention and work participation (Halpern, Cifaldi and Kvien, 2008). However, due to restrictive treatment guidelines, only under 3 per cent of people with RA in Latvia receive biological treatment, which is one of the lowest rates of uptake in Europe (Kobelt and Kastaeng, 2009). One in-country review suggests even lower rate of less than 0.5 per cent, or just 110 patients receiving biological treatment in Latvia (Andersone, 2011). It seems that, due to long waiting lists and insufficient number of consultants in some regions in Latvia, treatment is delayed for some RA patients who can benefit from anti-TNF drug therapies.⁴³

Medical interventions in the form of drug therapy to control inflammation and disease progression, and surgery to redress structural damage are only part of managing the care of RA patients. Other important elements include patient education and empowerment, practical self-management to help deal with symptoms and specialist support to help live with the disease and its consequences. The effective management of RA has to involve not only the clinical team (including GPs, consultant rheumatologists, physiotherapists, occupational therapists, chiropodists, podiatrists, pharmacists, primary care nurses and orthopaedic surgeons), but the

⁴³ See Health Economics Centre <http://mail.vmnvd.gov.lv/nas/library.nsf>

participation of the patient and, ideally, their employers. Social workers also have their role to play. In-country evidence – and experts interviewed for this research – suggest, however, that access to rehabilitation is even worse than the availability of drug treatment. It appears that low number of occupational health specialists and incompetence of GPs in dealing with occupational health issues delays recovery and return to work for people with MSDs.⁴⁴

4.3.3 Spondyloarthropathies

Prompt referral to specialists for confirmation of a diagnosis and the start of treatment is also essential for those with AS and other rheumatic conditions. Since (similarly to RA) there is no cure for AS, the aim of therapeutic intervention is to reduce inflammation, control pain and stiffness, alleviate systemic symptoms such as fatigue, and to slow or stop the long-term progression of the disease. The prescription of non-steroidal anti-inflammatory (NSAIDs) or anti-TNF drugs coupled with regular physiotherapy forms the current basis for the treatment of AS.

As AS typically affects relatively young people, its potential to disrupt or even curtail an individual's labour market participation may be significant. As we have discussed, there are important clinical, social and economic benefits to keeping these patients in work as long and consistently as possible. Depending on the severity of their condition, AS patients can benefit from workplace adjustments, flexible working arrangements, exercise regimes and physiotherapy (Boonen et al., 2001).

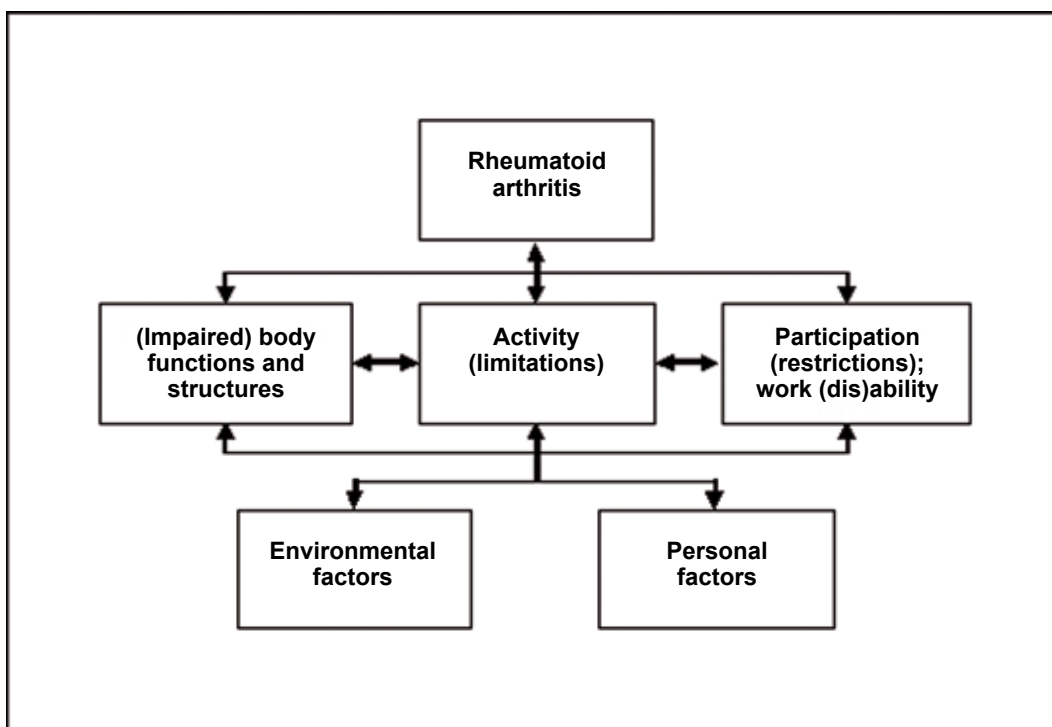
4.4 The biopsychosocial model advocates that clinicians, occupational health professionals and others should assess the interplay between the **biological** (eg disease, joint damage), the **psychological** (eg disposition, anxiety) and the **social** (eg work demands, family support). Clearly, the psychological disposition and behaviour of a patient can have a significant impact on the way a physical 'injury' (such as back pain) is approached by a patient. In some cases the patient risks entering a self-reinforcing cycle of incapacity, delayed recovery and even depression if their dominant response to pain is to 'catastrophise' it. Of course there may be many factors which affect an individual's disposition to 'catastrophise', including personality, previous medical history, levels of family support or job satisfaction (Sullivan and D'Eon, 1990). It is evident that the interaction of the biological, psychological and social dimensions can have a significant impact on the development, progression of, and rehabilitation from, a musculoskeletal condition.

⁴⁴ Expert interview

Since it was first proposed in the late 1970s, a growing body of evidence has developed to support the biopsychosocial model. For example, research has demonstrated that job dissatisfaction can be an important predictor of speedy and successful return to work (Bigos, Battie and Spengler, 1992). On the issue of social support, studies have shown that limitations in functioning attributable to MSDs can stress family systems and lead to family conflicts if the patient is unable to perform normal family duties (Hamberg, Johansson, Lindgren and Westman, 1997; MacGregor, Brandes, Eikermann and Giammarco, 2004; Kemler and Furnée, 2002). On the other hand, an overly solicitous family (or, by extension, manager or colleague) may reinforce MSD patient passivity and encourage the patient to adopt a 'disabled' role (Kerns, Haythornthwaite, Southwick and Giller, 1990; Block, Kremer and Gaylor, 1980).

de Croon, Sluiter, Nijssen, Dijkmans, Lankhorst et al. (2004) looked at the research on work disability among people with RA and concluded that psychosocial factors were often a better predictor of work disability than standard bio-medical factors. In Figure 4.2, below, the authors highlight how wider environmental and personal factors enhance the explanatory power of the *International Classification of Functioning, Disability and Health (ICF)* in the case of work disability and RA.

Figure 4.2: ICF model applied to work disability in RA



Source: de Croon et al., 2004

Some critics of the biopsychosocial model (McLaren, 2006) have focused on this last point, highlighting concerns that this approach may encourage or 'permit' helplessness in some patients or that, in other circumstances, it may alienate patients who feel that they are being told that their condition is 'all in the mind'. Clearly, care must be taken in the way that clinicians and others mitigate these risks, but the balance of the literature – and of the expert opinion offered during the course of our interviews – is strongly in support of the biopsychosocial model and its role in informing the management of MSDs in both clinical and occupational settings (Smyth, Stone, Hurewitz, and Kaell, 1999; Carter, McNeil and Vowles, 2002; Zampolini, Bernardinello, and Tesio, 2007). Indeed, it forms the basis of the World Health Organisation's *International Classification of Functioning, Disability and Health* (ICF) which has been widely embraced as an authoritative guide for vocational rehabilitation (WHO, 2001).

An example of successful intervention to reduce sickness absence based on the biopsychosocial model is provided by Ektor-Andersen, Ingvarsson, Kullendorff and Ørbæk (2008). In their study Ektor-Andersen et al. developed a tool based on the cognitive behavioural theory (CBT) method of functional behaviour analysis according to which risk factors for long-term sick leave due to musculoskeletal symptoms were identified in four different domains: the community, the workplace, the family/spare time and the health care system. Care-seekers were examined by each member of the interdisciplinary team and risk factors were identified and classified as stable or dynamic. Dynamic factors were the ones the care-seekers and the team agreed to intervene on. Some of these interventions involved CBT sessions and other focused more on physiotherapy which were then administered for a year. Results from the study show that this type of intervention is effective in significantly reduce sick leave and social security expenditure already four months after the intervention started. Although the cost-benefit analysis presented by Ektor-Andersen et al. (2008) underestimates the total savings by taking into account social security costs only, the costs of this type of intervention are balanced out by the reduced costs in sickness allowance during the first year.

As Waddell and Burton (2006b) have argued, the goals of the biomedical model are to relieve symptoms, whereas the goals of clinical management informed by the biopsychosocial model – especially in occupational settings – should be to control symptoms and to restore function. This suggests that employers contribute to the 'social' part of the biopsychosocial model and that their actions can make a difference to the outcome for individuals with MSDs.

4.5 4.5.1 Awareness of conditions and their management

The role of employers Many employers remain unaware of the nature of MSDs, both in terms of the immediate impact on functional capacity at work and, where relevant, the manifestations and progression of the conditions. For example, employees with RA or SpA may be susceptible to periodic 'flares'

of inflammation and severe pain followed by fatigue and possible depressed mood. Unless employers are aware that these symptoms are expected or 'typical', they can adopt an unhelpful or over-cautious approach to return to work.

Whilst the message about manual handling and work design may have got through to many employers, the fact that absence and even reduced work requirements can be counter-productive has yet to become common currency. Few Latvian employers prioritise employee health.⁴⁵ At least 24 per cent of workers surveyed in 2009-2010 were concerned that their employer did not provide sufficient support for their health and well-being (SIA Inspecta Prevention and SIA TNS Latvia, 2010).

Lack of financial and human resources means that micro-enterprises (with fewer than 10 employees) and SMEs (10-49 employees) are at risk of low compliance with occupational health and safety legislation (Eglite et al., 2011; SIA Inspecta Prevention and SIA TNS Latvia, 2010) and may not see improving health and safety of the work environment as a benefit to performance and productivity (Berdnikovs, 2010). Only 16 per cent of those employed by micro-enterprises in Latvia had a health and safety representative at work as compared to up to half of employees of large organisations (Woolfson, Calite and Kallaste, 2008). However, large employers are equally likely to overlook the impact of health on performance, especially due to financial constraints.⁴⁶ Even prior to the economic downturn, at least a third of the employers admitted that work safety regulations are difficult to observe (Karnite, 2006).

The situation is slightly different in international companies, where some organisations start to monitor sickness absence and incentivise healthy lifestyle choices for their employees.⁴⁷ Some employers would cover the costs of gym membership, promote cycling to work or have a masseuse on staff to prevent back and neck strains. At the same time, such good practice examples are rare.

Changing focus from managing occupational disease to prevention (Karnite, 2009) and raising awareness about the management of MSDs is an important part of reducing the burden of these conditions on Latvian employers and society. Compared to 80 per cent of health care professionals who view MSDs as an important issue in Latvia, only 15 per cent of employers agreed that they were impacting on workability and performance.⁴⁸ Low awareness of the burden of MSDs among employers may discourage individuals from disclosing their condition early.

⁴⁵ Expert interviews

⁴⁶ Expert interview

⁴⁷ Data provided by in-country expert

⁴⁸ Expert interviews

However, it is not just employers that need to know more about MSDs and their treatment. One of the most persistent (and pernicious) myths about back pain, for example, is that bed rest is the best solution. Health promotion campaigns, such as 'Lighten the Load' 2007⁴⁹ and 'Risk Assessment' 2009,⁵⁰ have been shown to be effective at getting the message across that experiencing pain does not necessarily mean that the condition has worsened or that being active is bad for you (Buchbinder, Jolley and Wyatt, 2001; Bone and Joint Decade, 2005) and have provided recommendations of how to prevent and manage pain in the workplace. This demonstrates that with sufficient commitment and investment from central government, campaigns of this scale can have an impact on public perceptions of common MSDs (Karnite, 2009).

Box 1: Lighten the Load – 2007

The importance of prevention of MSDs in Latvia was highlighted in the 2007 European Week for Safety and Health at Work 'Lighten the Load' awareness campaign. The programme targeted a range of stakeholders, including employers, workers, safety representatives, health care practitioners and policy makers. Through a series of events and competitions it rewarded examples of best practice in approach to tackling the burden of MSDs on Latvian organisations and wider society.

The three priorities emphasised in the campaign were:

- A joined-up approach among employers, employees and the government to tackle the burden of MSDs;
- A holistic approach to evaluating the factors impacting workability, including environmental and psychosocial risks;
- Focus on rehabilitation and return to work.

The campaign explained that although first symptoms of MSDs may manifest themselves within the first few months at work, serious chronic conditions are often not diagnosed or treated until years later, when the condition can not be managed as effectively as at early stages of the disease. Awareness of the importance of early disclosure and intervention is key to managing MSDs among Latvian employees.

Cont.

⁴⁹ See European Agency for Safety and Health at Work Latvia <http://osha.europa.eu/fop/latvia/en/ew2007>

⁵⁰ See European Agency for Safety and Health at Work Latvia http://osha.europa.eu/lv/campaigns/hw2008/about/index_html

Cont.

European Agency for Safety and Health at Work Latvia website is one resource of examples of practical workplace interventions.⁵¹ One of those having received 'Golden Helmet – 2007' Award is SIA 'Būvuzņēmums STATS', which implemented work safety measures at the construction sites. The interventions included:

- Introduction of an occupational health and safety service;
- Design of staff health and safety policy;
- Reflection of health and safety norms in the organisational structure;
- Outline of occupational health and safety procedures, including employment protection; risk assessment and management; training in work safety;
- Establishment of work environment monitoring system for construction sites, including potential environmental risk assessment; first-time evaluation of sites; training before the commencement of works on the site; a two-tier working monitoring of the work environment.

Results achieved:

- Adjustment of work demands to employees' age;
- Educating young workers on environmental risks of the job;
- Young and new workers are able to manage hazardous work;
- Improved employment protection for temporary workers;
- Clear responsibilities concerning health and safety at work;
- Employees and managers are trained in labour protection issues.

Employers have to acknowledge that MSDs are the leading cause of sickness absence in Latvia; high prevalence of MSDs contributes to the decline in workers' productivity and increased costs to organisations. Employers have to take responsibility over employees' health not just where the condition was caused by the work environment, but also where it is affecting job performance. Currently, it is only the employers who have experience in dealing with MSDs that are sympathetic and understanding of the needs of individuals with those conditions.⁵² Simple interventions, including appropriate work adjustments and exercise breaks, can make a great difference in preventing new cases of MSDs and managing existing cases of diseases.⁵³

⁵¹ See European Agency for Safety and Health at Work Latvia <http://osha.europa.eu/fop/latvia/en/ew2007>

⁵² Expert interview

⁵³ Expert interviews

The Latvian government incentivises employers' participation in improving the health status of the employees, relieving tax on health interventions at the workplace. However, cost concerns prevent many organisations from taking advantage of that incentive. The major reason for low awareness of employers is lack of communication between various stakeholders in tackling high prevalence of MSDs among employees. A national centre for occupational health – such as Institute of Occupational Safety and Environmental Health – would become one helpful institution to coordinate information and activities in improving health outcomes for Latvian workers.

4.5.2 Intervention and adjustment of work demands

Not only has evidence shown that work is good for you but returning to modified work can help recovery (Feuerstein, Shaw, Lincoln, Miller and Wood, 2003; van Duijn and Burdorf, 2008). Among occupational health specialists, the use of vocational rehabilitation has long been an accepted mechanism for ensuring that individuals with illness, injury or incapacity can return to work (even to perform adjusted work) as soon and as sustainably as possible. There have been concerns that rehabilitation is not well-integrated into mainstream clinical practice and that in Latvia return to work is not seen by a sufficient proportion of clinicians as a valued outcome for the patient (Juocevičius, Vētra and Leisi, 2010). It is also important to stress that vocational rehabilitation is not the preserve of professionals. In practice effective management is as, if not more, important than formal rehabilitation.

Yet, employers, if they think about this at all, invariably consider the physical job demands which need to be met by an employee with an MSD. The biopsychosocial model requires that the mental demands of the work are also considered as part of the return to work process. There is a growing body of work which shows that adjusting a variety of work demands can support successful return to work among those with a range of MSDs (Schultz, Stowell, Feuerstein and Gatchel, 2007; de Croon et al., 2004; Feuerstein, Shaw, Nicholas and Huang, 2004; Chorus, Miedema, Wevers and van der Linden, 2001). The success with which both employee and employer can manage the process of re-adjustment during return to work can also depend on the beliefs that both parties have about the extent to which the work itself is (at least in part) caused by or related to the incapacity.

There are numerous types of work-based intervention for assisting those with MSDs, ranging from ergonomic adjustments to providing access to physiotherapy, modifying work programmes to cognitive behavioural therapy, or a combination of various strategies. Evidence on the success of these interventions at tackling non-specific MSDs is mixed (Meijer et al., 2005).⁵⁴

⁵⁴ Findings from an evaluation of the effectiveness of return-to-work treatment programmes were inconsistent

A systematic review of multidisciplinary treatments of patients with low back pain, for example, demonstrated that whilst the treatment improved function and decreased pain in individuals, it could not be demonstrated that this was linked to employees returning to work earlier than those who had not received it (Guzman, Esmail, Karjalainen, Malmivaara, Irvin et al., 2001). Whilst biomechanical or ergonomic factors may be related to the onset of back pain, evidence that interventions based on these principals will prevent re-occurrence or progression to chronicity is thin on the ground (Burton, 1997). In fact, it has proved virtually impossible to determine whether one treatment is significantly more effective than another (Ekberg, 1995). Even for specific conditions such as RA, the evidence for the effectiveness of vocational rehabilitation is slim (Backman, 2004; de Buck, Schoones, Allaire and Vliet Vlieland, 2002).

There is nonetheless broad agreement on the principles for managing non-specific MSDs, particularly back pain, that are outlined in Box 2 below. This includes advice and a number of relatively simple measures for employees and employers to follow on how to deal with back pain.

Box 2: Principles of managing non-specific MSDs

- Early treatment should be sought for back pain.
- Most back pain is not due to a serious condition.
- Simple back pain should be treated with basic pain killers and mobilisation.
- It is important to keep active both to prevent and to treat back pain.
- Getting back to work quickly helps prevent chronic back pain.
- Adopt the correct posture while working.
- All workplace equipment should be adjustable.
- Take breaks from repetitive or prolonged tasks or postures.
- Avoid manual handling and use lifting equipment where possible.
- Clear information should be provided to employees about back care.
- Health and safety policies should be implemented to cover all aspects of day-to-day work and should be reviewed regularly.

Source: Health and Safety Executive (HSE), 2002

This requires employers to think beyond their statutory duty to address health and safety risks, and to recognise that sickness absence management, effective return to work programmes and rehabilitation are underlying principles for effective management (Waddell and Burton, 2006b). Much is dependent on raising awareness about how to manage the symptoms of MSDs amongst employees and their managers, and ensuring that the latter have the skills and confidence to support employees in work.

At the moment, Latvia lacks specialists who could advise employers on the implementation of good occupational health practices in organisations.⁵⁵ The rate at which the number of occupational physicians is increasing is not comparable to the rapid increase in numbers of occupational patients (AS Inspecta Latvia and RSU DVVI, 2007). For example, ergonomics is not part of taught university degrees; the 10-20 ergonomists in Latvia are mostly self-educated.⁵⁶ The government should consider prevention of health conditions as an investment and revise educational programmes to fit the demand for specialists in occupational health and ergonomics.

4.5.3 Line managers

What is clear is that the role of line managers in early intervention is crucial, both in work retention and rehabilitation. Yet many line managers feel ill-equipped to manage long-term absence and incapacity. They may find aspects of mental ill-health or chronic incapacity awkward and embarrassing to talk about or confront, and are therefore unable to manage disclosure of ill health appropriately. Additionally, managers may be concerned about challenging or asking for more information about GP sick notes, making home visits or telephoning staff at home for fear of being accused of harassment or falling foul of the law and landing themselves and their organisation in a tribunal. They are also ignorant of, or uncomfortable with, the idea of rehabilitation. Although the Latvian Labour Law requires employers to make adjustments to support employees with long-term illness or injury 'if necessary', regular inspections of workplaces find that few managers pro-actively think about changing job design and schedule to accommodate employee needs.

Given that MSDs are the most common work-related health problem, and there is a growing impact of psychosocial factors on employee health (Berdnikovs, 2010), their ability to remain in work or return to it as soon as they can, managers need to have the skills to deal with staff who suffer from them. Failure to do so could result in significant costs to their organisation particularly for small and medium enterprises. Small employers also have issues with employees with MSDs, as their absence from work can have, potentially, more impact on customer service, productivity and business performance.

4.5.4 Improved employer-clinician dialogue

On the face of it, many of the return to work challenges faced by employees with MSDs may be improved if there was an improved level of mutual understanding between employers and clinicians. As highlighted above, the clinical appreciation of most MSDs by employers can be

⁵⁵ Expert interviews

⁵⁶ Expert interview

cursory to say the least. It is often argued that most GPs, in their turn, have little or no appreciation of the vocational or occupational dimension of many MSDs. Medical students in Latvia spend a very small proportion of their time learning about occupational health and ergonomics (Kalkis, 2010). In addition, many GPs feel uncomfortable or incompetent when asked to assess 'workability' (Arrelov, Alexanderson, Hagberg, Lofgren, Nilsson, Ponzer, 2007; Swartling, Hagberg, Alexanderson and Wahlstrom, 2007), as they often have little understanding of specific tasks undertaken by employees and the work environment in general. As a result, GPs may feel that a return to work would exacerbate a condition unless an individual is 100 per cent fit.

For their part, employers will only very rarely challenge a GP's sick note, or ask for a second opinion on the potential for a beneficial return to work for a patient. The consequence of this mutual lack of understanding and resulting dearth of dialogue can often be that the MSD patient either continues to work without necessary adjustments to the health condition, or is stranded in unemployment, with no clear pathway back to work and, more importantly, no voice. A proactive, inclusive, multi-disciplinary, capability-focused approach to vocational rehabilitation, informed by the biopsychosocial model and delivered through case management is widely regarded as the most enlightened and effective approach to take in the majority of work-related MSD cases. Quite often both employers and GPs will focus on the aspects of the job which an MSD patient cannot currently perform, rather than on those which they can. More patients should be issued with a 'Fit' Note, which is proving to be a successful practice to help partially incapacitated people to return to work.⁵⁷

One of the attractions of the biopsychosocial model is that it 'joins up' the three core strands of the MSD patient's experience, and management of, their condition. It offers a comprehensive framework with which to look at the diagnosis and treatment of a range of MSDs, especially when an important outcome for the individual is to stay in, or to return swiftly to, work.

4.6 Summary

This section has outlined the case for early intervention, first and foremost to benefit the health of those with MSDs, but also to ensure that they remain productive members of the workforce. However, it also demonstrates that interventions should ideally begin before those experiencing musculoskeletal pain visit their GP, and extend beyond the signing of a sick note. The biopsychosocial model clearly illustrates the need for a more comprehensive understanding of the factors that contribute to the development of non-specific MSDs, taking into account individual or psychological factors as well as the social milieu in which individuals live their lives, in which work plays a large part. To achieve this, employers, employees and clinicians need to

⁵⁷ Suggested by an in-country expert

talk to one another more effectively. In addition, occupational health professionals should be involved in identifying and managing health conditions of employees. Whilst this is challenging, and undoubtedly not common practice today, the costs of not addressing this problem were highlighted in this chapter.

5. Conclusions and recommendations

Work is, unambiguously, good for our health. It provides us with income, generates social capital and gives us purpose and meaning. Even when unwell or injured, remaining in work – at least in some capacity – is often better for recovery than long periods away from work. If Latvia's workforce is to be productive and competitive in the global economy, and if the quality of their working lives is to be enhanced, it is important that a high proportion of the workforce is, as far as possible, fit for work.

The evidence presented in this report illustrates that a large proportion of working age people in Latvia are, or will be, directly affected by MSDs. This can have very significant social and economic consequences for these individuals and their families, it can impede the productive capacity of the total workforce and parts of Latvian industry and it can draw heavily on the resources of both the health service and the benefits regime.

As in many countries, there is a disappointing shortage of clinical, epidemiological, psychological and economic evidence on the nature, extent and consequences of the MSD problem in Latvia, but we know enough to be able to conclude that MSDs will affect a growing proportion of the working age population in the coming years. However, there seems to be a lack of coherence or 'joined-up' thinking and action by government, clinicians and employers which focuses on the MSD **patient as worker**. Latvia's Health and Development Plan is the first step towards application of the biopsychosocial model to occupational health, and MSDs in particular, however, its wider implementation in a 'joined-up' approach is yet to be realised.

The Work Foundation has a number of recommendations for several interested parties in this field. Our intention is to encourage some of the key players to recognise that more can be done to ensure that continued active participation in the labour market is almost always a strongly positive force for health, fulfilment and for prosperity.

5.1 Encourage disclosure and intervene early. Adjust work pressure to the health status of staff, encouraging phased return to work, to reduce costs of presenteeism and absenteeism. Recognise the value of retaining skilled workers in their jobs beyond legal compliance and make use of occupational health services and government incentives to support workers' recovery and rehabilitation.

- Support phased return to work. Employers can catastrophise too! Most workers with MSDs can continue to make a great contribution at work if they are allowed to. They do not need to be 100 per cent fit to return to work, and a little lateral thinking will allow you to give them useful work to do which will support them on their journey back to full productive capacity.

- Use occupational health advice. Vocational rehabilitation carefully organised and tailored to the individual, can make a real difference to return to work, productivity, morale and sustainability of performance. Involve occupational health professionals as early as possible. Long-term reduction in absenteeism and presenteeism are likely to outweigh immediate costs.
- Train managers to become more confident at discussing health at work and to broach the conversation early on as soon as symptoms arise or immediately when an employee goes off sick. Even with an occupational health specialist within an organisation, managers are in a better position to spot the early warning signs of a problem and to help rehabilitate employees after a period away from work.
- Foster a positive culture towards employing people with disabilities by identifying what they can do and providing adjustments to jobs to support people from unemployment back into work. Early diagnosis of occupational diseases will reduce permanent loss of workability. Focus on the capacity of workers with disabilities, not their incapacity.
- Consider the psychosocial aspects of work and foster quality jobs. Low quality jobs have been found to be worse for health and due to the economic situation in Latvia people are likely to just take any job rather than consider the impact of that job on their health. Changes in the ways work is organised (including simple changes to working time arrangements) will help prevent MSDs getting worse and help people with MSDs to return to work.

5.2 Talk early. Carrying on with a regular workload when unwell may lead to complications in the future. If your MSD is causing you difficulty or you anticipate a period when you will need to adjust your working time or environment, tell your manager early so that you can both plan what to do about it. Similarly it is important to discuss your symptoms with a doctor and receive appropriate medical help before the condition gets worse. Don't delay.

**Recommendations
for employees**

- Know your rights. As both a patient and as a worker you should know what support and advice you are entitled to if you are ill, without fear of losing your job. If you are a trade union member, your union should be able to guide you on much of this.
- Play an active part in the management of your condition. You shouldn't let your MSD control your life at home and at work. Find out more about your condition, watch for patterns in pain or fatigue and learn how you can minimise its impact on your functioning and your mood. This can sometimes be very hard to do, but persevere: people who play an active part in the management of their condition tend to get back to work more quickly. Patient groups may be a valuable source of support and information on dealing with health conditions.

- Focus on capacity not incapacity. It's natural to be anxious or even guilty about the parts of your job which you may find difficult to perform because of your MSD. But you still have much to contribute and you should play to your strengths. Your specialist knowledge and experience don't disappear just because you are in pain, discomfort or have mobility problems, you can still contribute in many ways. Work with your managers and your colleagues to find out how you can maximise your impact at work within the constraints of your condition. Make use of patient support groups.
- Family involvement in job retention and rehabilitation. Your family and friends are important sources of support. They may not realise that staying in or returning to work is both possible and desirable. You need to help them to help you by getting them involved in your rehabilitation at work. Even small adjustments to working time or travel to work arrangements can make the world of difference.

5.3 Recommendations for health care professionals **Become trained in occupational health issues and recommend phased return to work at early stages of disease. GPs are ideally placed to identify the early presentation of many MSDs. Where appropriate, you should seek to refer patients to specialist teams as early as is practicable, to enable management of the condition to begin. Advise policy-makers on best practice for early diagnosis and intervention for MSDs.**

- See the patient as a worker too. Work has to become a valued clinical outcome for treating patients with chronic health conditions to help them maintain financial sustainability and feelings of self-worth. At the same time gradual return to work is likely to assist recovery and prevent exacerbation of health conditions, disability and early retirement. As a GP you are ideally placed to identify the early presentation of many MSDs. Where appropriate, you should seek to refer patients to specialist teams as early as practicable, to enable management of the condition to begin.
- Avoid catastrophising. A patient can hold a very negative view of the impact and likely progression of their condition if the way that clinicians present it focuses on incapacity rather than capacity. Highlighting what patients can do in their jobs can help achieve a balance between the individual's need for respite and their need to work.
- Recognise psychosocial aspects of work. Identify where job retention or early return to work is good for the patient. It is easy to assume that work is unambiguously bad for your patients, especially if you suspect that aspects of their job make their symptoms worse. Consider carefully whether, with some adjustments, you can recommend staying

at work on lighter duties or with adjusted hours might still be a better option than a prolonged absence from work.

- Encourage self-management. Try to ensure that the patient can adopt strategies to manage aspects of their own condition, especially if they are staying in or returning to work. A feeling of empowerment and control will help their mood and ensure that they can keep on top of important aspects of their incapacity while at work. Direct individuals with MSDs to relevant patient support groups.

5.4 Recognise the need for vocational rehabilitation for individuals and raise awareness of available occupational health services. Consider the wider development of occupational health services to provide specialist advice to organisations of all sizes.

Recommendations for occupational health services

- Think beyond the physical symptoms. More importantly, ensure employers, employees and GPs fully appreciate how this multi-factor perspective can contribute to constructive, active, participative and sustainable rehabilitation. Shape your interventions and advice around the three domains of the biopsychosocial model and help employers see how small workplace adjustments can bring benefits for employee engagement and productivity.
- Professional occupational health advice on the use of phased return to work and other adjustments would allow for the re-entry into the workplace of employees after a period of sickness or unemployment. Where possible, provide interventions which prevent symptoms escalating and which prevent short-term absence becoming long-term absence or even permanent work disability. Occupational health specialists should complement the work of GPs and other health care professionals (eg physiotherapists), to facilitate early interventions which maximise job retention or facilitate successful rehabilitation and prompt return to work. Take a 'Treat to target'⁵⁸ approach adopting the attitude that work is a valid outcome to treatment.
- Consider physical, social and psychological aspects of work. Establish a dialogue between employer and employee, or employer and GP to ensure that the patient can use return to work as a positive way of managing their condition, on the one hand, but at the same time is not afraid to admit being unwell and take reasonable time off work.
- Encourage self-management. Working with the employee, their colleagues and their manager, help the individual to find strategies to manage their own condition. This will enable them to make their own decisions about their working arrangements.

⁵⁸ 'Treat to target' means to treat until a set objective is reached. For example, the target may be to put the disease in remission or to reach a level whereby work could be considered

5.5 **Prioritise reducing the costs of MSDs for individuals, employers and the labour market through prevention and then early intervention. Health and social policies should enshrine the principle that job retention or return to work are legitimate and desirable clinical outcomes and incentivise employers to support health of the employees. The government should consider a National Plan for people with MSDs – driven forward by a National Clinical Director for MSDs – which prioritises early intervention and occupational health services.**

**Recommendations
for government**

- Take seriously the existing evidence that the proportion of the Latvian workforce with MSDs is likely to grow over the next few decades, draining the economy from tax contributions and incurring an increasing burden of health care and disability costs. Having an already high prevalence of MSDs, Latvia has the benefit of learning from local good practices and the government should act now to implement effective measures on a wider scale. Prevention must be recognised as an investment in future savings on costs of long-term care.
- Monitor compliance with the occupational health and safety legislation. Support State Labour Inspectorate in improving their controlling and monitoring function. Improve the quality of compulsory health examinations of employees. At a time when the health care system is facing shortages of funding, prevention of long-term health conditions should become a priority and considered as an investment for a healthier workforce. Providing a scheme such as Access to Work⁵⁹ in the UK could help ease the burden of the costs of adjustments for SMEs but save the costs of social security due to sickness by supporting employees back to work sooner.
- Raise awareness of employers and employees of the importance of early diagnosis and intervention. Support the establishment of ergonomists as a recognised profession in Latvia through the creation of ergonomics as an academic discipline within academic institutions. Support national campaigns raising awareness about MSDs and encourage best practice to develop a culture of prevention through risk assessment in workplaces.
- Help make GPs more effective in handling occupational health issues. This will require an input into GP training, through postgraduate medical education and training, as well as training occupational health specialists. In fact, we believe that medical training at all levels, from undergraduate to continuing professional development would benefit from inclusion of health and work issues, especially if the health of the working age population is set to deteriorate.

⁵⁹ Access to Work is a scheme funded by The Department for Work and Pensions which provides employers and employees with advice and support with extra costs which may arise due to a disability or health condition. For further information see <http://www.dwp.gov.uk/supplying-dwp/what-we-buy/access-to-work/>

- Access to clinical expertise needs to improve. The apparent shortage of consultant rheumatologists and variation in access to them by some patients are affecting the ability of citizens of working age to get access to early interventions which may save their jobs. Similarly, the government should conduct some workforce planning in the medical profession to establish if it will have sufficient clinical staff (eg specialist nurses assisting GPs) to accommodate the projected growth in MSDs as the population, and the workforce, ages. Address the variation in access to health care services between population groups.
- Review the definitions of MSDs in the current classification of occupational diseases beyond their current narrow focus. In addition, formally acknowledge that many MSDs and other chronic conditions (such as rheumatic diseases, multiple sclerosis) are not caused by work, but may inhibit participation at work. The quality of data in Latvia on the health of its working age population is uniformly poor. The government should review the extent of collaborative working between Ministry of Health and State Labour Inspectorate to monitor and act on the health profile of Latvian workforce.
- Bring forward proposals to replace the current system of sickness certificates with a UK-style 'Fit Note' (sample presented in Appendix 2) which encourages GPs to indicate what a worker is still capable of performing. The system is already in place assisting partially disabled individuals to retain active employment status and should be applied to wider groups of patients. Focusing on capacity of the employee would help encourage a culture where the potential and possibilities of people with disabilities are recognised, valued and put to good use.
- Learn from the approaches to MSDs in other European countries so that Latvia can meet the objectives of the forthcoming European Directive on MSDs, and successfully compete in the global knowledge economy.

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Appendix 1: Interviews and consultation with experts

The following people shared their views and information with us during the course of our research and we are very grateful for the time each spent. We have taken their views into account in writing this report, though their participation in the study does not in any way imply endorsement of the report's conclusions.

Prof. Daina Andersone	President of Latvian Rheumatology association
Dr Jolanta Cīrule	Medical Centre of Occupational and Radiological Medicine Paul Stradins Clinical University
Dr Maija Eglite	Institute of Occupational and Environmental Health, Riga Stradins University
Eduards Filippovs	Employer's Confederation of Latvia
Marika Karlsone Signe Bicule	The Latvian Association of Bone and Connective Tissue Diseases
Linda Matisāne	Occupational Health and Safety Expert
Dr Ženiņa Roja	University of Latvia, President of Latvian Ergonomics Society
Inga Šmate	Department of Public Health, Ministry of Health
Dr Ivars Vanadziņš	Institute of Occupational and Environmental Health, Riga Stradins University

Appendix 2: Sample 'Fit' Note

Statement of Fitness for Work For social security or Statutory Sick Pay

Patient's name

I assessed your case on:

and, because of the following condition(s):

I advise you that:
 you are not fit for work.
 you may be fit for work taking account of the following advice:

If available, and with your employer's agreement, you may benefit from:

- | | |
|--|--|
| <input type="checkbox"/> a phased return to work | <input type="checkbox"/> amended duties |
| <input type="checkbox"/> altered hours | <input type="checkbox"/> workplace adaptations |

Comments, including functional effects of your condition(s):

Sample

This will be the case for

or from to

I will/will not need to assess your fitness for work again at the end of this period.
(Please delete as applicable)

Doctor's signature

Date of statement

Doctor's address

Med 3 04/10

Source: Department for Work and Pensions (2010).

Appendix 3: Benchmarking grid

The Fit for Work Europe study has looked across 27 European countries. This approach allows us to explore how far early intervention is implemented across Europe. It also enables us to see how far we may identify both enablers and barriers to early intervention given the different approaches to policies that affect the labour market, the welfare system and the health care system. To explore this we have looked widely at a number of indicators covering the:

- Labour market;
- Welfare system;
- Health care system.

The data presented below come from various international data sources. Where possible we used 2009 data to allow for comparisons across countries for a number of different indicators. The data mainly come from the Eurostat. We present a selection of indicators below.

Appendix 3: Benchmarking grid

	GDP per capita in PPP	% of the population of working age	% of the population aged ≥65	Unemployment rate (%)		Long term unemployment rate, % of active population	Prevalence of disability as a percentage of 20-64 population	Average age of withdrawal from the labour market		Labour productivity per hour, relative to EU-27 (=100)	Hourly labour costs
				M	F			M	F		
Austria	29,300	84.9	17.4	5.0	4.6	1.0	14.4	62.6	59.4	113.2	€26.33
Belgium	27,400	83.1	17.1	7.8	8.1	3.5	14.0	61.2	61.9	125.5	€32.56
Bulgaria	10,400	86.6	17.4	7.0	6.6	3.0	--	--	--	39.9	€1.89
Croatia	15,100	84.7	17.2	8.0	10.3	5.1	--	--	--	78.7*	--
Czech Republic	19,200	85.9	14.9	5.9	7.7	2.0	13.8	62.0	59.4	72.9	€7.88
Denmark	28,400	81.7	15.9	6.5	5.4	0.5	20.7	61.4	59.7	103.3	€34.74
Estonia	15,000	85.1	17.1	16.9	10.6	3.8	23.0	--	--	65.5	€6.60
Finland	26,600	83.3	16.7	8.9	7.6	1.4	20.5	62.0	61.3	108.9	€27.87
France	25,400	81.5	16.5	9.2	9.8	3.3	13.2	59.4	59.3	120.9	€31.06
Germany	27,400	86.4	20.4	8.1	7.3	3.4	17.5	62.6	61.5	105.1	€27.80
Greece	22,100	85.7	18.7	6.9	13.2	3.9	8.3	61.6	60.5	98.9	--
Hungary	15,300	85.1	16.4	10.3	9.7	4.2	22.1	--	--	53.5	€7.13
Ireland	29,800	79.1	11.0	14.9	8.0	3.4	13.3	--	--	130.5	--
Italy	24,400	86.0	20.1	6.8	9.3	3.5	9.0	61.0	59.8	111.7	--
Latvia	12,200	86.3	17.3	20.3	13.9	4.6	--	--	--	53.0	€4.41
Lithuania	12,900	84.9	16.0	17.1	10.4	3.2	--	--	--	57.3	€5.09
Netherlands	30,800	82.3	15.0	3.7	3.8	0.9	16.8	64.2	63.6	111.2	--
Norway	42,000	81.0	14.7	3.6	2.6	0.5	16.3	64.1	64.7	146.9	--
Poland	14,300	84.7	13.5	7.8	8.7	2.5	11.3	61.4	57.5	46.7	€6.78
Portugal	18,900	84.7	17.6	9.0	10.3	4.3	18.7	62.9	62.3	75.6	€11.32
Romania	10,900	84.8	14.9	7.7	5.8	2.2	--	--	--	47.9	€3.41
Slovakia	17,200	84.6	12.1	11.4	12.8	6.5	14.0	59.7	57.8	80.7	€6.41
Slovenia	20,700	86.0	16.4	5.9	5.8	1.8	15.0	--	--	82.4	€12.09
Spain	24,300	85.2	16.6	17.7	18.4	4.3	11.1	61.8	62.4	109.8	€16.39
Sweden	28,000	83.3	17.8	8.6	8.0	1.1	18.1	64.2	63.6	109.9	€33.30
Switzerland	34,000	84.7	16.6	--	--	--	10.4	64.6	62.5	108.1*	--
Turkey	10,700	73.7	6.8	12.5	12.6	2.8	--	--	--	61.6*	--
UK	26,500	82.5	16.3	8.6	6.4	1.9	17.6	63.6	61.7	106.6	€26.39
EU-27*	23,600	84.4	17.2	9.0	8.9	3.0	--	61.9*	60.5*	100.0	--

Sources: Eurostat Statistical Database; OECD 2009; *OECD Statistics

Appendix 3: Benchmarking grid

	GDP per inhabitant in PPS, 2008	Social benefits (% GDP)	Health expenditure (% GDP)	% spent of benefits spent on*:			Generosity of the welfare system
				Sickness/health care	Disability	Unemployment	
Austria	31,100	18.1	9.7	26.1	7.8	5.0	5.46
Belgium	28,800	16.0	9.8	28.4	7.1	12.5	4.38
Bulgaria	10,900	10.1	6.9	29.4	7.7	2.3	--
Croatia	15,900	--	--	--	--	--	--
Czech Republic	20,200	12.8	6.9	33.3	8.2	3.5	5.15
Denmark	30,800	14.8	9.3	23.3	15.2	4.8	5.40
Estonia	17,000	10.6	5.9	32.4	9.9	2.1	--
Finland	29,500	15.4	7.7	26.8	12.6	7.1	2.60
France	26,700	17.7	10.7	29.8	6.0	5.8	5.24
Germany	28,800	17.0	10.3	30.5	7.8	5.4	6.11
Greece	23,500	19.3	--	29.0	4.7	5.1	--
Hungary	16,200	15.8	7.1	25.0	9.4	3.7	4.75
Ireland	33,300	12.4	--	40.9	5.5	8.7	--
Italy	26,000	17.7	--	26.4	5.9	1.9	--
Latvia	14,100	8.1	6.2	29.5	7.3	4.1	--
Lithuania	15,300	11.0	6.3	29.4	10.4	2.5	--
Netherlands	33,500	10.3	8.9	32.8	8.8	3.8	3.40
Norway	47,300	6.1	8.1	32.7	17.6	1.9	--
Poland	14,100	14.0	6.6	24.4	8.8	1.9	4.58
Portugal	19,500	15.1	9.2	28.0	9.3	4.5	4.75
Romania	11,700	10.4	5.3	25.2	9.8	1.4	--
Slovakia	18,100	11.3	7.0	32.5	9.0	4.0	5.00
Slovenia	22,800	14.7	8.1	33.8	7.8	2.0	--
Spain	25,900	12.4	8.7	30.8	7.2	13.6	4.75
Sweden	30,800	14.8	8.8	26.0	15.1	3.0	6.73
Switzerland	35,800	10.5	10.6	26.4	12.5	2.6	5.09
Turkey	11,700	--	--	--	--	--	--
UK	28,700	13.1	--	33.3	11.0	2.5	3.87
EU-27	25,100	--	--	29.7	8.1	5.2	--

Sources: Eurostat Statistical Database; Osterkamp and Rohn, 2007

Appendix 3: Benchmarking grid

	Sickness absence due to health reasons (%)	Average days absent ¹	Present-eeism (%)	DALYs MSDs (% of total)	DALYs RA (% of total)	Prevalence work-related backache (working population)	Number of RA patients in the general population (prevalence)	Total annual cost of RA, mln. €	Physicians per 100,000 inhabitants	
									Rheumatologists**	GPs
Austria	20.9	3.4	34.5	4.34	0.85	24.0	30,536 (0.47)	420.67	--	153.3
Belgium	28.8	7.0	48.0	4.11	0.80	19.4	39,209 (0.48)	618.32	2.4	170.9
Bulgaria	20.2	4.3	22.6	4.31	0.76	29.2	29,711 (0.48)	61.30	1.4	66.8
Croatia	19.4	9.4	38.1	3.50	0.70	41.5	--	--	--	17.1
Czech Republic	28.6	5.5	36.7	3.54	0.70	22.9	37,037 (0.46)	223.95	1.3	51.2
Denmark	32.9	6.6	55.2	3.95	0.78	18.8	23,676 (0.58)	399.39	2.6	74.4
Estonia	27.5	4.6	43.5	4.07	0.79	40.2	5,124 (0.49)	20.13	3.0	105.3
Finland	44.7	8.5	50.7	4.07	0.84	26.2	24,279 (0.60)	339.07	1.9	40.6
France	19.4	5.5	47.9	4.23	0.81	21.6	226,750 (0.48)	4,653.45	4.2	164.1
Germany	28.2	3.5	38.8	4.41	0.83	18.8	328,844 (0.50)	6,179.46	0.8	99.2
Greece	14.1	2.8	29.9	4.56	0.86	47.0	42,574 (0.48)	487.91	2.3	35.5
Hungary	23.8	5.0	37.7	4.23	0.77	31.6	37,907 (0.48)	198.93	5.6	65.2
Ireland	21.4	3.9	41.8	3.84	0.79	14.5	15,035 (0.49)	253.25	0.5	69.9
Italy	25.2	3.8	23.5	4.97	0.96	24.3	235,898 (0.49)	2,723.69	--	--
Latvia	23.9	4.1	40.6	3.92	0.73	44.1	8,771 (0.49)	27.71	0.5	54.7
Lithuania	21.8	4.3	34.5	4.03	0.80	38.0	12,213 (0.47)	41.17	1.2	52.6
Netherlands	33.7	8.6	41.1	4.48	0.88	13.8	56,934 (0.46)	1,027.49	1.2	46.4
Norway	27.3	7.1	47.6	4.25	0.86	22.7	19,486 (0.56)	402.99	2.2	47.1
Poland	19.9	5.5	24.7	5.11	0.98	45.8	131,546 (0.45)	489.37	2.3	15.2
Portugal	13.5	8.6	24.5	3.92	0.77	30.7	39,379 (0.47)	295.03	1.0	45.6
Romania	11.4	2.0	39.0	4.29	0.79	42.4	74,832 (0.45)	162.39	1.2	80.9
Slovakia	22.8	5.2	44.4	4.91	0.93	38.9	17,567 (0.43)	74.88	1.8	36.3
Slovenia	28.3	8.7	59.2	3.84	0.76	45.9	7,461 (0.47)	58.85	--	26.0
Spain	14.2	3.6	37.8	4.66	0.89	29.1	159,535 (0.45)	1,586.36	--	--
Sweden	28.0	6.7	54.7	4.61	0.90	27.8	41,576 (0.60)	543.11	2.0	60.2
Switzerland	19.2	4.0	--	4.97	0.97	18.1	27,469 (0.47)	536.93	5.3	47.1
Turkey	18.7	4.8	49.8	4.09	0.90	34.7	137,905 (0.31)	320.92	--	--
UK	22.6	3.7	51.2	4.11	0.81	10.8	263,672 (0.57)	3,163.27	--	--
EU-27	22.9	4.6	39.2	--	--	24.7	(0.49 Europe excl. Turkey)	24,072.62	--	--

Sources: Parent-Thirion, Fernández Macías, Hurley and Vermeulen, 2007; European Working Condition Survey, 2010; WHO, 2006, 2007; Lundkvist, Kastäng and Kobelt, 2008; Lundkvist, Kastäng and Kobelt, 2008; Eurostat Statistical Database.

Variable	Definition – Provided by source	Source
<i>Labour indicators</i>		
GDP per inhabitant in PPS 2009	GDP (gross domestic product) is an indicator for a nation's economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly different in absolute size.	Eurostat (n.d.)
Working age population, % 2009	Share of total population of age of 15 and above.	Eurostat (n.d.)
Unemployment rate by gender 2009	Unemployment rates represent unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: a. without work during the reference week, b. currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week, c. actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of, at most, three months.	Eurostat (n.d.)
Long-term unemployment, % of total active population 2009	Long-term unemployed (12 months and more) persons are those aged at least 15 years not living in collective households who are without work within the next two weeks, are available to start work within the next two weeks and who are seeking work (have actively sought employment at some time during the previous four weeks or are not seeking a job because they have already found a job to start later). The total active population (labour force) is the total number of the employed and unemployed population. The duration of unemployment is defined as the duration of a search for a job or as the length of the period since the last job was held (if this period is shorter than the duration of the search for a job).	OECD, 2009

Variable	Definition – Provided by Source	Source
<i>Labour indicators, continued</i>		
Average age of withdrawal from the labour market – retirement 2007	The indicator gives the average age at which active persons definitely withdraw from the labour market. It is based on a probability model considering the relative changes of activity rates from one year to another at a specific age. The activity rate represents the labour force (employed and unemployed population) as a percentage of the total population for a given age. The indicator is based on the EU Labour Force Survey. The survey covers the entire population living in private households. The definitions used follow the guidelines of the International Labour Office.	Eurostat (n.d.); OECD (n.d.)
Labour productivity per person employed – GDP in PPS per person employed relative to EU-27 (EU-27 = 100), 2009	Gross domestic product (GDP) is a measure for the economic activity. It is defined as the value of all goods and services produced less the value of any goods or services used in their creation. GDP per person employed is intended to give an overall impression of the productivity of national economies expressed in relation to the European Union (EU-27) average. If the index of a country is higher than 100, this country's level of GDP per person employed is higher than the EU average and vice versa. Basic figures are expressed in PPS, i.e. a common currency that eliminates the differences in price levels between countries allowing meaningful volume comparisons of GDP between countries. Please note that 'persons employed' does not distinguish between full-time and part-time employment.	Eurostat (n.d.); OECD (n.d.)
Hourly labour costs 2007	Average hourly labour costs, defined as total labour costs divided by the corresponding number of hours worked.	Eurostat (n.d.)

Variable	Definition – Provided by Source	Source
<i>Welfare indicators</i>		
GDP per inhabitant in PPS 2008	GDP (gross domestic product) is an indicator for a nation's economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly different in absolute size.	Eurostat (n.d.)
Social benefits (% of GDP) 2008	Social benefits (other than social transfers in kind) paid by government (ESA95 code D.62) are transfers to households, in cash or in kind, intended to relieve them from the financial burden of a number of risks or needs (by convention: sickness, invalidity, disability, occupational accident or disease, old age, survivors, maternity, family, promotion of employment, unemployment, housing, education and general neediness), made through collectively schemes, or outside such schemes by government units.	Eurostat (n.d.)
Health care expenditure (% of GDP), 2008	Current expenditure on health measures the economic resources spent by a country on health care services and goods, including administration and insurance. Total expenditure on health care represents current expenditure on health enlarged by the expenditure on capital formation of health care providers.	Eurostat (n.d.)
Sickness/healthcare benefits – % of total benefits 2008	Social benefits consist of transfers, in cash or in kind, by social protection schemes to households and individuals to relieve them of the burden of a defined set of risks or needs. The functions (or risks) are: sickness/healthcare, disability, old age, survivors, family/children, unemployment, housing, social exclusion not elsewhere classified (n.e.c.).	Eurostat (n.d.)

Variable	Definition – Provided by Source	Source
<i>Welfare indicators continued</i>		
Disability – Social benefits by function – % of total benefits 2008	Same as above.	Eurostat (n.d.)
Unemployment – Social benefits by function – % of total benefits 2008	Same as above.	Eurostat (n.d.)
O&R generosity index	Seven different measures of generosity were combined to construct a single measure of generosity that ranges from between 0 and 7, where 7 indicates the highest level of generosity. The seven variables include waiting period, self-certification, total maximum duration of payment, employer maximum duration of payment, employer amount of payment, sickness fund amount of payment and external proof.	Osterkamp and Rohn (2007)
<i>Health outcomes</i>		
Average days absent due to health reasons 2005	The median number of days absent because of health.	Parent-Thirion, Fernández Macías, Hurley and Vermeylen, (2007)
% sickness absence due to health reasons 2005	% reporting absence caused by ill-health.	Parent-Thirion, Fernández Macías, Hurley and Vermeylen, (2007)

Variable	Definition – Provided by Source	Source
<i>Health outcomes continued</i>		
Presenteeism, %, 2010	Over past 12 months did you work when you were sick?	European Working Conditions Survey (2010)
DALYs – MSDs, male and female	Disability adjusted life years (DALYs) are frequently used to assess the burden of disease. The WHO's definition of DALY – 'combines in one measure the time lived with disability and the time lost owing to premature mortality. One DALY can be thought of as one lost year of healthy life.'	WHO, 2006, 2007)
DALYs – RA	DALYs are frequently used to assess the burden of disease. The WHO's definition of DALY – 'combines in one measure the time lived with disability and the time lost owing to premature mortality. One DALY can be thought of as one lost year of healthy life.'	Lundkvist, Kastång and Kobelt (2008)
Prevalence – Backache 2005	% reporting work-related backache in the EWCS.	Parent-Thirion, Ferrández Macías, Hurley and Vermeylen (2007)
Number of people with RA	Estimated number of people with RA. The percentage is calculated from the number of people with RA divided by the population numbers listed in the article.	Lundkvist, Kastång and Kobelt (2008)
Practising rheumatologists, density per 1,000 population	Number of practising rheumatologists per 1,000 population. The definition that was used to derive the ratio for rheumatologists may differ by country depending on the source, which makes comparability difficult.	Eurostat (n.d.)
Practising general practitioners (GPs), density per 1,000 population 2005	Number of practicing GPs per 1,000 population.	Eurostat (n.d.)

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