Making work count – how Health Technology Assessment can keep Europeans in work

A Fit for Work Europe paper
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The Fit for Work Europe Coalition is interested in additional external views on the themes identified in this paper. We welcome comments from all those able to inform our work. If you would like to contribute, please contact the Fit for Work Europe Secretariat (ffweurope@webershandwick.com).

About Fit for Work Europe

The Fit for Work Europe Coalition[1] brings together patients, physicians, policy-makers and social partners, all of whom believe in the importance of prevention, early intervention, and management of musculoskeletal disorders (MSDs) in the workplace. As MSDs result in more sickness absence than any other health condition, and cost European countries up to 240 billion Euros annually,[2] our vision is to shift the perception of MSDs from being disabling conditions to ones which can be managed. We want to ensure that more European citizens stay in work or return to work, while helping to improve the sustainability of Europe's health and social care systems.

The Coalition has three core workstreams, each dedicated to producing new and relevant research, recommendations and insight. These cover clinical practice, health economics and policy. Members of the Fit for Work Europe Coalition oversee the strategy and delivery of specific projects within a particular workstream. Our research is designed to inform evidenced-based practice and policy change, advocating the inclusion in the labour market of people living with long-term health conditions.

As part of the Health Economic workstream, we have undertaken research, including a round table, with experts from across the globe to explore evidence supportive of the inclusion of a wider societal perspective in health decision-making, with this paper being another tool to inform policy change.

[1] Fit for Work Europe website. Available here: www.fitforworkeurope.eu
[2] European Commission (2007). Together for Health: A Strategic Approach for the EU 2008-2013. Available here: http://ec.europa.eu/health-eu/doc/whitepaper_en.pdf

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FOREWORD

There is a virtuous circle linking health and work: 'good work' has been shown to improve health outcomes, while 'good health' enables people to be productive workers.

Yet, despite a growing body of evidence for the benefits to be derived from supporting 'good work', there remains a chronic lack of integration between European health systems and employment and welfare policy.

This lack of integration, resulting largely from 'silos' between government departments, is nothing new. But in these troubled economic times, with unemployment high on political agendas, ensuring that more people keep healthy and stay in or return to work following ill health, should be part of Europe's strategy for economic recovery. Now, more than ever before, health, labour and welfare policies are being framed in the context of ageing populations, diminishing social inclusion and increasing public spending cuts. Providing Europe's citizens with 'good work' is an objective all policy-makers should rally behind.

The example of MSDs is salutary. MSDs affect at least 100 million people in Europe, accounting for half of all European absences from work and for 60% of permanent work incapacity.[3] In some EU countries, MSDs account for 40% of the cost of workers' compensation, leading to a reduction of up to 1% in the gross domestic product (GDP) of individual Member States. MSDs,[3] if not managed well, represent a significant overall economic burden on European society, estimated to be up to 2% of GDP.[4] A recent study published in *The Lancet* shows that MSDs are extremely common in nearly all populations, with an urgent need to prioritise research on the most effective and affordable strategies.[5]

Research has shown that coordination among clinicians, employers and employees dramatically increases the ability of people living with MSDs to stay in or return to work.[3] The Fit for Work Europe Coalition believes that people who are able to work can experience significant health, social, psychological and economic benefits from remaining in work. As such, we regard the case for including work as an outcome in health investment decisions as being increasingly difficult to ignore.

The example of MSDs is consistent with the burden of other long-term health conditions, meaning that national health, welfare and employment systems need to act immediately, to ensure that no European citizen living with a long-term condition leaves the labour market unnecessarily as a result of poor care and support. After all, a healthy population is a prerequisite for economic productivity and prosperity.

The inclusion of work in health investment decisions is not without its challenges, and across Europe, it is difficult to find social, employment and health policy all working coherently to support and maximise labour market participation for people with long-term health conditions or disabilities. Even where the principle

[3] Bevan, S. et al (2009). Fit for Work? Musculoskeletal Disorders in the European Workforce
[4] Cammarota, A. (2005). The Commission's initiative on MSDs: Recent developments in social partner consultation at the European level. Presentation to Conference on MSDs – A Challenge for the Telecommunications Industry. Lisbon, 20–21 October
[5] The Lancet (2012). Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. Vol 380 December 15/22/29, 2012

that work is a desirable clinical outcome is accepted, there remain ethical issues and methodological constraints in factoring a wider societal perspective into what are traditionally health-focused decisions.

This White Paper explores current European approaches for including work, or not, in health investment decisions, using Health Technology Assessment (HTA) as an illustrative example of how this can be achieved. Drawing on our research, and contributions from a number of experts involved in producing this paper, we present here our recommendations for policy-makers interested in improving health outcomes and maximising employment.

A growing proportion of the EU workforce has a long-term health condition or disability, which affects their ability to work. Yet, those who stay in work have fewer health-related problems over the course of their lives, and are more able to contribute to their own and their families' financial well-being. We make the case in this paper for policy-makers to align health and work agendas more closely so that citizens retain their health, their jobs and their well-being, and as a means to improving social cohesion and stemming premature loss of skills from the workforce.

Our findings are for all of those who take an interest in this important area of social and economic debate.

Stephen Bevan
The Work Foundation & Lancaster University
Founding President, Fit for Work Europe Coalition

EXECUTIVE SUMMARY

Work provides health, social, psychological and economic benefits for European citizens. Yet, given that the prevalence of chronic conditions is on the rise, and the ageing workforce is at significant risk of poor health and premature withdrawal from the labour market, it remains a mystery why policy-makers do not consistently consider the important role of 'work' in their health investment decisions.

The situation

- Up to 3 out of every 10 Europeans suffer from a long-term illness or health problem that affects their ability to work
- After six weeks of sickness absence, individuals are more likely to switch onto welfare benefits than return to work
- With a significant proportion of Europe's working age population unable to work through ill-health, the collective level of labour productivity in the economy is reduced, and the competitiveness and effectiveness of European businesses is damaged
- Despite acknowledgement of the need to focus on workforce health, recognition of the value of work for individual health outcomes has yet to gain prominence on the European policy agenda

The example

- MSDs affect at least 100 million people in Europe, accounting for half of all European absences from work and for 60% of permanent work incapacity
- In some EU countries MSDs account for 40% of the cost of worker compensation, leading to a reduction of up to 1% in the gross domestic product (GDP) of individual Member States
- Research shows that coordination among clinicians, employers and employees dramatically increases the ability of people living with MSDs to stay in or return to work

Take Health Technology Assessment (HTA) – a process that informs decisions on allocation of money across health care systems. HTA is now widely practiced around the world, however, the approach taken, and the influence of HTA within policy-making differs both across and within countries. We are most concerned with the perspective taken in these decisions:

- In theory, Governments across Europe aim to take the **societal perspective** – which includes consideration of the impact of a healthcare intervention on the patient's ability to work and the economic effect
- In reality, we see that a **health care system perspective** is taken – covering only those costs and benefits of immediate relevance to the health care system.

Why is this? It often comes down to a simple, but stubborn, truth: the silo mentality – individual departments and agencies of government tend to focus on the specific areas for which they are directly responsible (and within which they are held to account).

Of course, there are wider issues around inclusion of work in health investment decisions, such as: ensuring there is no bias against people who cannot work, solving methodological issues, and ensuring that practice reflects policy. But, unless we take action now to prevent a growing proportion of the EU workforce

becoming too ill to be productive or remain active in the labour market, we will fall short of our goals of being a competitive and socially inclusive economy.

We know the following: our workforce will need to work for longer, but they face a greater burden from chronic conditions. This means that future health care policy will need to shift towards prevention, but can no longer continue to operate in isolation from welfare policy and employment policy. At the moment, however, work is not considered a desirable or attainable clinical outcome, despite the fact that the inclusion of such societal costs need not increase public spending on health services.

Recommendations

We call upon policy-makers to consider the following:

- **Taking a 'societal perspective' in HTA and health investment decisions, to contribute to higher rates of labour market participation among people of working age with long-term, chronic or fluctuating conditions, and their family/carers, as part of planning for demographic and epidemiological trends over the coming three decades**

- **When undertaking clinical trials and audits, routinely consider and record labour market outcomes (e.g. productivity and work ability measures)**

- **When developing health care quality systems, service frameworks, standards of care and care pathways, labour market outcomes should be routinely considered, and patients and professionals with an understanding of occupational medicine such as occupational therapists and physiotherapists should be involved**

- **Public bodies should improve data collection on the impact of public services on the employment outcomes of citizens, especially those with a chronic or musculoskeletal disorder: at the European level, EUROSTAT should include a question on work ability and musculoskeletal disorders in its labour force survey**

- **Policy-makers should ensure there is strategic leadership across ministries responsible for health, welfare, employment and productivity, so that departmental silos do not prevent development of interventions that require investment or behaviour change in one department, but result in 'benefit' to another. Investment could even be jointly owned by departments**

- **'Gain-sharing' or 'shared-savings' pilots should be set up, ensuring they operate between departments. Microsimulation could also be used pre-pilot, to model the potential benefits of such 'gain-sharing' or 'shared savings' schemes.**

INTRODUCTION

For almost five years we, as the Fit for Work Europe Coalition, have explored issues surrounding workforce health and well-being, focusing on labour market participation of those with long-term health conditions, especially MSDs. Our research has demonstrated that, in order to maximise the economic activity of working age people living with a long-term condition, national healthcare systems, welfare systems and employment policy should allocate investment for job retention measures and return to work initiatives.[3] In some countries this would be building on efforts already made.

By 2013, the average European workforce of 100 could include 48 employees with at least one long-term health condition. Put simply, given the burden of such conditions on individuals, employers, society and the economy, we must find ways to ensure that those living and working with a long-term condition are supported in playing a full part in the labour market – or we risk losing a significant proportion of the available workforce.

The development of this White Paper began with a discussion paper, published in 2011,[6] exploring work as a relevant component of the societal perspective that policy-makers should consider when making health investment decisions. The debate on including work extends beyond MSDs to all health investment decisions, especially as European healthcare systems seek to extract greater value from their budgets. From our liaison we found that many (but not all) health economists believe that, in theory, all health investment decisions should be informed by a wider societal perspective that naturally includes 'work'[7] and its role in contributing to healthy societies and healthy economies.

In June 2012 the Fit for Work Europe Coalition convened a roundtable meeting to develop understanding of the key issues and themes identified in the discussion paper. Attendees included senior health economists, researchers, policy-makers and clinicians from 13 different countries, representing a diversity of experience and cultural beliefs about work, health and health care. They enriched the dialogue, citing European and other international examples of how the inclusion of a wider societal perspective in health investment generated positive outcomes.[8]

Combining insights from the roundtable discussion with research on current practice in eight European countries[9], we have developed a number of recommendations for those making health investment decisions or decisions on investment to optimise labour market participation.

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[6] Barham, L. & Bevan, S. (2011). The place of work in healthcare decision making. Available here: http://www.fitforworkeurope.eu/Default.aspx.LocID-0afnew00z.RefLocID-0af002.Lang-EN.htm

[7] *We use a wide definition of 'Work' in this paper. It can include paid employment (full time, part time or temporary), self-employment, work in the home, volunteering or community work. For the purposes of this paper we also take into account that long-term ill health or work incapacity can affect labour market outcomes for both the individual and their family/carer.*

[8] Fit for Work Europe meeting report (2012). The place of work in healthcare decision making: insights from an expert roundtable. Available here: http://www.fitforworkeurope.eu/Default.aspx.LocID-0afnew011.RefLocID-0af002.Lang-EN.htm

[9] Fit for Work Europe (2012). Case studies. Available here: http://www.fitforworkeurope.eu/Default.aspx.LocID-0afnew01b.RefLocID-0af002.Lang-EN.htm

This research focuses upon Health Technology Assessment (HTA), the underpinning guidelines that inform a key part of HTA, economic evaluation and how those guidelines inform the analysis, and the methods to estimate productivity losses or gains. *Please note that every effort has been taken to ensure that our insights from research are current at the time of publication, however, some datedness is inevitable*.

HTA has been defined as '*a multidisciplinary activity that systematically examines the safety, clinical efficacy and effectiveness, cost, cost-effectiveness, organisational implications, social consequences, legal and ethical considerations of the application of a health technology – usually a drug, medical device or clinical / surgical procedure*.'[10]

We focus on HTA in this White Paper because it tends to be a more formal and transparent approach to decision-making than more general decisions made about funding health versus other areas of government expenditure (such as welfare payments). The HTA itself may not make the decision (in practice, it tends to be those who hold responsibility for spending limited health care funds). However, HTA is seen as a key tool with which to inform those decisions. This means that the way that HTA is approached may affect decision making.

Although HTA is now widely practiced across the globe, the precise approach and its influence differ both across and within countries. We focus in this paper on the perspective taken in the HTA analysis, and the approaches to treating productivity, given our interest in how work should feature in health decision-making.

Ultimately, governments, and those responsible for public services, need to establish whether and how work should be included in decisions that affect health and work outcomes as they affect different people in society. Over time, policies, methods and evidence can be developed to enable work to be a more formal part of health investment decisions. Current health investment decisions are being made with constrained budgets and resources, so any investment in health technologies and services must demonstrate value for public money, and even cost-savings if possible. Bringing work into the picture can make that decision-making all the more effective.

Our primary focus is on whether HTA considers labour market participation as an outcome. At a macro-level, the productivity of a nation's workforce can be enhanced if people with long-term or chronic health conditions can be helped – by a combination of healthcare interventions, active labour market policy and employment practices – to remain active participants in the workforce. In addition, work can also have therapeutic benefits for many. While there are also important, but more micro-level, measures of productivity (e.g. output per hour worked for individual workers, or productivity losses due to health-related reduced work capacity (so-called 'presenteeism')) – our focus here is on the macro picture.

In the next section we set out why there is an urgent need for action to improve labour market outcomes for people with long-term or chronic health conditions.

[10] Taylor, R. & Taylor, R. (2009). What is Health Technology Assessment. What is…? Series. Available here: from http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/What_is_health_tech.pdfTaylor

WORK AND HEALTH DECISION-MAKING IN EUROPE

4.1 Why is workforce health important?

Economic growth and social inclusion both rely on the ability of individuals of working age to remain connected to the labour market, to develop and contribute their skills and to sustain high levels of work productivity. In this context it is important that individuals remain healthy and active.[11] As the European Commission's Health Strategy argues:

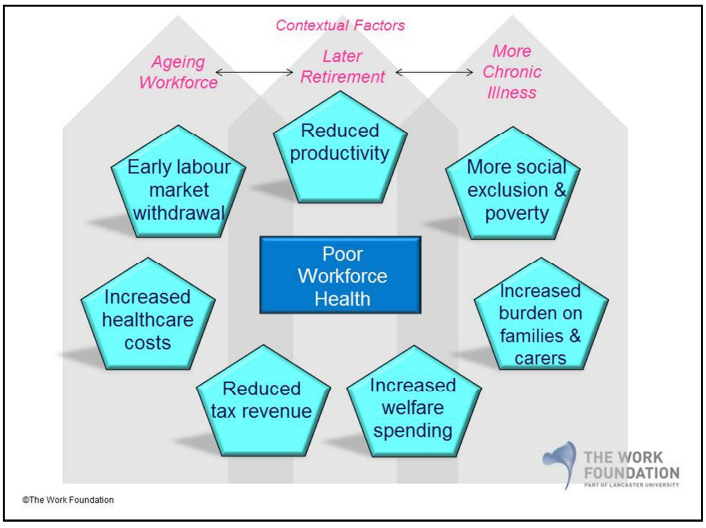
'Health is important for the well-being of individuals and society, but a healthy population is also a prerequisite for economic productivity and prosperity.'[12]

In the current economic environment, there are a number of factors that hinder having a healthy population. Some of these relate to problems in EU labour markets, some have their origins in declining public health, others focus on the behaviour of individuals and employers, and others focus on the way that health care priorities are set. This section examines some of these issues and highlights why better co-ordinated efforts to improve the health of the EU workforce are essential if we are to achieve the goals for economic prosperity and social inclusion, to which both the European Commission and National governments aspire.

4.2 Consequences of poor workforce health

Up to 3 out of every 10 Europeans are suffering from a long-standing illness or health problem that affects their ability to work.[12] There are a number of reasons why this should be a matter of concern to a variety of stakeholders. These are set out in **Figure 4.1**:

Figure 4.1 Consequences of poor workforce health



[11] European Commission (2005). The contribution of health to the economy in the European Union. Available here: http://ec.europa.eu/health/ph_overview/Documents/health_economy_en.pdf
[12] European Commission (2007). Health in the European Union. Available here: http://ec.europa.eu/health/ph_publication/eb_health_en.pdf

There are three contextual factors that frame the issue of workforce health in most EU Member States. The first is the ageing workforce. Across the EU there are twice as many workers aged 50 years or more than there are aged 25 years or younger. This is a disparity which is expected to worsen for several decades to come. With ageing comes a greater risk of poor health and premature withdrawal from the labour market. In some developed economies almost half of those aged between 45 and 65 years, who are no longer in the workforce, have become economically inactive as a result of poor health.[13]

Second, with a pension crisis in most Member States (difficulty in paying for pensions due to a difference between pension obligations and resources set aside to fund them), we know that a higher proportion of older workers will need to work longer than they do today and, increasingly, beyond the default retirement age. But, data from the Organisation for Economic Co-operation and Development (OECD) shows that the effective retirement age for men in 1968 was 68.6 years – whereas now it is 63.5.[14] In countries such as Belgium, France and Germany, earlier retirement has become common, with fewer than 10% of 65-69 year olds in each of these countries still in employment. Policy-makers know that, with dependency ratios (the number of economically active people supporting the economically inactive) becoming more stretched, this trend needs to be mitigated.

Third, the growing burden of chronic disease in the EU population will mean that (with an ageing workforce increasingly needing to retire later) the productive capacity of the workforce risks being compromised by ill-health. Cardiovascular disease has grown as the main cause of death in Europe, accounting for 37% of all deaths in the population aged 15-69, or almost 1.2 million deaths each year.[15] Almost 780,000 men and 400,000 women aged 35-69 die from smoking-related illnesses in Europe each year.[16] Forecasts tell us that the proportion of EU workers with long-term chronic conditions is on the rise – by 2030 over 20 million UK workers will have a long-term condition.[17] Chronic diseases with low mortality, but high morbidity, impact on the individuals' ability to participate in the labour market. For example, 100 million European citizens suffer from chronic musculoskeletal pain and MSDs,[18] including 40 million workers whose MSD was caused directly by their work.[19]

As Figure 4.1 illustrates, the consequences of poor workforce health are wide-ranging, resulting in a large and varied burden of costs. Chronic ill-health means that many workers are not available to work or are not working productively on a daily basis. According to the latest European Working Conditions Survey (EWCS), 35.6% of European workers missed between 1 and 15 days of work through ill-health in 2010, with a further

[13] Schofield, D. Shrestha, R. Passey, M. Earnest, A. Fletcher, S. (2008). Chronic disease and labour force participation among older Australians. MJA 2008; 189 (8): 447-450.
[14] The Organisation for Economic Co-operation and Development. Last accessed December 2012. Available here: http://www.oecd.org/statistics/
[15] WHO (2008). Cardiovascular diseases: Media Centre. Available here: http://www.who.int/mediacentre/factsheets/fs317/en/index.html
[16] European Commission: Eurostat. Last accessed December 2012. Available here: http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do
[17] Vaughan-Jones H. & Barham, L. (2009) Healthy Work: Challenges and Opportunities to 2030. BUPA
[18] Veale, A. Woolf, A. & Carr, A. (2008). Chronic Musculoskeletal Pain and Arthritis: Impact, Attitudes and Perceptions. Irish Medical Journal, July/August, 101 (7), 208-210
[19] European Trade Union Institute (2007). Musculoskeletal disorders. An ill-understood pandemic. Available here : http://www.etui.org/Publications2/Guides/Musculoskeletal-disorders.-An-ill-understood-pandemic

7.5% staying away from work longer than 15 days.[20] In addition, even when individuals are at work they may not be performing to their full capacity. EWCS finds that 39.2% of Europeans went to work despite being unwell enough to take sickness absence (so-called 'presenteeism').

Reduced work productivity associated with mental health-related presenteeism costs employers about 1.5 times more than sickness absence.[21] In addition, high absenteeism causes indirect costs related to employees who must undertake the work of the absent, thus undermining the productivity of those present, as well as potential payments to replacement workers.[22]

Having a significant proportion of Europe's working age population unable to work through 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 European businesses.

In addition to the losses in the labour market, European health care and welfare systems are facing an increasing burden from supporting individuals with chronic disease who are out of work. We know that early onset of chronic conditions, coupled with unemployment and job loss, has serious financial and health consequences for individuals.[23] Australian data among 45-65 year olds shows that, collectively, those leaving work prematurely owing to ill-health lost up to A$18 billion in income each year, increasing the risk of falling into poverty and social exclusion.[24] Studies have also shown widespread deterioration in aspects of physical and mental well-being amongst those who lose their jobs, which can persist for many months.[25,26]

Another area of concern, if people leave the labour market prematurely owing to ill-health, is the impact on their families and carers. Not only does informal care for those with long-term, chronic or fluctuating health conditions incur intangible costs, it is often the case that the working lives and productivity of family members with caring responsibilities are disrupted and compromised.[27] This compounds the impact of premature labour market exit.

A major fiscal consequence of poor workforce health is an increase in welfare payments. We know, for example, that after six weeks of sickness absence individuals are more likely to switch onto welfare benefits than return to work,[28] particularly in the countries with more generous welfare systems.[29] With unemployment on the rise, there is a heightened risk that those with long-term or chronic health conditions will find themselves detached from the workplace for long periods, with little prospect of returning to work quickly, if at all.[6]

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[20] Eurofound : How many days were you absent from work for health reasons in the past year? Last accessed December 2012. Available here : http://www.eurofound.europa.eu/surveys/smt/ewcs/ewcs2010_07_05.htm
[21] Sainsbury Centre for Mental Health (2008). Mental Health at Work: Developing the Business Case
[22] Bevan, S. & Hayday, S. (2001). Costing Sickness Absence in the UK. Institute for Employment Studies, Brighton
[23] The Marmot Review (2010). Fair society, healthy lives. London: The Marmot Review. Available here: http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review
[24] Schofield, D. Shrestha, R. Percival, R. Passey, M. Kelly, S. Callander, E. (2011). Economic Impacts of Illness in Older Workers: Quantifying the impact of illness on income, tax revenue and government spending. BMC Public Health 2011, 11:418.
[25] Armstrong, K. (2006) Life After Rover. The Work Foundation,
[26] Brinkley, I. Clayton, N. Coats, D. Hutton, W. Overell, S. (2008). Hard Labour: Jobs, Unemployment and the Recession, London. The Work Foundation
[27] WHO Scientific Group (2003). The burden of musculoskeletal conditions at the start of the new millennium. WHO
[28] Waddell, G. & Burton, K. (2006). Is Work Good for Your Health and Wellbeing? Department for Work and Pensions: TSO
[29] Lusinyan, L. & Bonato, L. (2007). Work Absence in Europe. IMF Staff Papers 543

In the UK, for example, people who have been on out-of-work benefits for more than a year are more likely to die or retire than return to work.[30] From the macro perspective, this means that the competitiveness of the economy will be further challenged by the knowledge and skill gaps left by retiring people in older age groups, especially where long-term conditions are more prevalent. Of course, if people of working age are leaving the workforce early, they are not only more likely to be in receipt of out-of-work welfare payments, but they are also less likely to be paying income tax back into the system. Again, analysis of Australian data among 45-65 year olds who have left the labour market as a result of ill-health shows that the annual increase in welfare payments is A$2.1 billion and lost income tax receipts stands at A$1.5 billion each year.[24]

To an extent, the health of the European workforce is already being recognised as crucial in some National and EU policy arenas. The framework outlined in the European Commission's Health Strategy[13] focuses on the link between health and economic prosperity, and the need for an approach that takes into account values such as universality and equity and citizens' empowerment.

More recently, the European Commission has suggested exploring whether GDP is the best or only measure of progress or whether 'well-being' should also play a part.[31] In addition, a report into health and the economy in the EU produced by the Health and Consumer Protection Directorate-General underlines the '*existence of feedback loops offering the scope for mutually reinforcing improvements in health and wealth*'.[32] It also reinforces the need for greater investment in 'human capital' as a necessary condition for ensuring that the European economy is more competitive.

Despite this acknowledgement of the need to focus on workforce health, the recognition of the value of work for individual health outcomes is yet to gain prominence in the European policy agenda. At the same time, evidence suggests that being in work – especially if it is good work[33] – supports individual health,[34] thus partially relieving the burden of ill-health on the economies through preventing mental health co-morbidities and early retirement.[28]

With this therapeutic evidence of good work in mind, it is essential that the European policy-makers grasp the opportunity to reduce the health care and welfare burden, while boosting the competitiveness of the European economy, by prioritising job retention and return-to-work outcomes in delivery of health care.

In the past, policy has focused upon economic incentives to defer retirement. However, as ill-health is likely to remain the primary barrier to workforce participation in older EU workers, economic incentives alone may not be able to increase participation if the underlying health conditions in the working age population are not addressed. Investment in improvements in workforce health remains an important way of improving national living standards. **A prerequisite for progress here, therefore, is an acceptance among health care**

[30] Department of Work and Pensions (2006). A new deal for welfare: Empowering people to work. Available here: http://www.official-documents.gov.uk/document/cm67/6730/6730.pdf
[31] Commission of the European Communities (2009)
[32] Suhrcke, M. McKee, D. Sauto Arce, R. Tsolva, S. Mortensen, J. (2005). The contribution of health to the economy in the European Union. European Commission
[33] Bevan, S. (2012). Good Work, High Performance and Productivity. The Work Foundation
[34] Waddell, G. and Burton, A. K. (2006). Is work good for your health and well-being? Department for Work and Pensions

decision-makers that health interventions should be assessed for their potential to support job retention and return to work, as one of the cost-effectiveness criteria.

4.3 Work ability as an HTA and a Clinical Outcome – experiences across the world

The recognition of the impact of poor health on the economy varies across the Member States. The reasons for these disparities lie, in part, in the historical variation in clinical practice and the centrality of 'work' in welfare and active labour market policy. The link between history and culture is also significant, influencing the operating procedures of modern institutions related to both health and work. For example, Germany has a health care system co-funded by employers. This provides incentives for a joint interest in the link between health and work, including the benefits of a quick return to work and avoiding the premature exit of workers from the labour force altogether.[35] In addition, the recent benefit evaluation of The Institute for Quality and Efficiency in Healthcare (IQWIG) in Germany, for biologics in rheumatoid arthritis, included the ability to work ('work ability') as a patient relevant outcome.[36]

Meanwhile, Brazil's HTA organisation, the National Commission for the Incorporation of Technologies in the Unified Healthcare System (CONITEC), also considers work ability as a relevant outcome for the assessment of health technologies. By contrast, in countries like Austria, England & Wales and New Zealand, job retention and return-to-work are not viewed as target outcomes of the health care system or of HTA itself.[37]

In Sweden, there is an explicit recognition that health care interventions, which are both clinically effective and support job retention or return to work for the individual, should be considered. Guidelines for health economic evaluations to support submissions for treatments or medical devices to be reimbursed by the public health care system state that: *'The health economic analysis should be done from a social-economic perspective. Among other things, this means that all relevant costs and revenues for treatment and ill health, irrespective of the payee (county council, local authority, state, patient, relation) should be considered.'*[38]

In Italy, based upon the high social costs associated with rheumatic diseases and the impact in terms of disability and early retirement, the Health Committee of the Senate recommended a cooperation and information sharing among regions and the Ministry of Health within a burden of illness vision. It seems that the National Drug Agency is going to include societal costs in the new algorithm to assess drug innovation but a full change to the approach is yet to come.

4.4 Spanning the silos

Policy decisions should, in theory, be informed by a wider societal perspective that naturally includes 'work ability and productivity' and their role in contributing to healthy societies and healthy economies. Recent

[35] McGee, R. Bevan, S. Quadrello, T. (2010). Fit for Work? Musculoskeletal Disorders and the German Labour Market. The Work Foundation
[36] The draft report of the benefit evaluation is available on the website of www.iqwig.de
[37] Ladurner, J. et al (2011). Public health in Austria. An analysis of the status of public health. European Observatory on Health Systems and Policies
[38] LFN (2003). General guidelines for economic evaluations from the Pharmaceutical Benefits Board. Available here: http://www.ispor.org/PEguidelines/source/Guidelines_in_Sweden.pdf

policy proposals in the UK[39] introduce a proposal for 'shared savings' whereby a department incurring costs to make improvements, which would reduce costs in another, would share any savings.

And it is also in the UK that the National Audit Office has calculated that improved clinical outcomes for people with rheumatoid arthritis could be achieved if early intervention was increased by 10 per cent. However, these gains would be need to be achieved by first increasing expenditure in the health care system (NHS) by **£11 million** over 5 years. A productivity 'payoff' – estimated to be **£31million** from reduced sick leave and lower lost employment – would accrue to individuals, employers and to the Department of Work and Pensions. However, the incentive for a 'spend to save' approach within the NHS, especially in a time of austerity, is currently not palpable.[40]

In practice, individual departments and agencies of government tend to focus on the specific areas for which they are directly responsible (and are held to account). For example, those concerned with welfare payments may have less interest in the running of the health care system, and how far it can act as a barrier to getting individuals back to work, or even help avoid exit from the labour market in the first place. Equally, this may also mean that those departments responsible for health and health care will not necessarily focus on the potential for health investments to reduce the costs of those unable to work due to ill-health. This 'silo' mentality remains unchallenged in systems where health care decisions do not take a wider societal perspective.

Although the focus on specific areas of responsibility is pragmatic, it is intrinsically linked to the incentives and rewards for those acting on behalf of government as a whole, in a multi-agency way. The importance of budget holder goals and rewards being aligned with higher level policies is, therefore, key for focusing future attention on work in the practice of health decision-making.

In Japan, although welfare and labour issues both fall under the remit of the Ministry of Health, Labour and Welfare, there is little cooperation between internal departments to move people off benefits and back into work. Special committees are being established to tackle the burden of specific conditions more holistically, but overall coordination between the departments is still lacking.[41]

There are exceptions in current practice, however: for example, CRS Australia[42] is part of the Australian Department of Human Services and provides employment and assessment services to people with a disability, injury or health condition. This includes assessment of rehabilitation and employment assistance needs, individually tailored rehabilitation programmes, and work with clients to maximise their participation and employability.

[39] Department of Health (2011). Innovation, Health & Wealth. Available here: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_131299
[40] National Audit Office (2009). Services for People with Rheumatoid Arthritis. Available here: http://www.nao.org.uk/publications/0809/rheumatoid_arthritis.aspx
[41] Zheltoukhova, K. et al (2012) Fit for Work? Musculoskeletal Disorders and the Japanese Labour Market, The Work Foundation
[42] CRS Australia: Australian Government, Department of Human Services. Available here: http://www.crsaustralia.gov.au/

4.5 Urgency required

There is considerable scope to develop methods that would collect evidence on the value of work for individual health outcomes and to include appropriate policies to better manage the burden of ill-health on the health care and welfare systems in a more joined-up way. The missing ingredients are a lack of urgency and, in some cases, a lack of political 'will'.

Yet the urgency of the situation is clear. Unless we take action now to help prevent a growing proportion of the EU workforce becoming too ill to be productive or remain active in the labour market, we will fall short of our goals of being a competitive and socially inclusive economy. The solutions are less about technical approaches to evaluating the economic and clinical benefits of clinical and welfare interventions, but more to be found in the framing of arguments, which place a healthy and productive workforce at the centre of policy-making.

The next section will examine the approaches being taken to this problem internationally.

THE GROWTH OF HEALTH TECHNOLOGY ASSESSMENT IN EUROPE & INTERNATIONALLY

5.1 The role of HTA within the policy armoury

HTA has been a key tool for informing decisions on investment in health care for decades; in some countries this dates back to the 1970s.[43] It initially spread from the US to selected countries in Europe, and now has moved on to become a globally adopted approach. It has also become more institutionalised.[44]

HTA is increasingly being used to inform decisions about how to allocate money across the health care system.[45] HTA's influence on the adoption and diffusion of new technologies is widely recognised.[46] We also recognise, however, that this influence is likely to vary across and within countries, according to the specific context of decision-making. It is perhaps of increasing relevance in these times of austerity, which has led to many countries focusing on limiting the growth of spending on health care.[47] In some countries, efforts are going further than slowing growth in spending, moving towards trying to identify those activities which do not offer value for money. [48, 49]

However, HTA is but one part of the policy 'mix' that needs to be considered for both health and wealth, as it tends to focus in practice on individual choices between competing drugs and devices[8] and not often on programmes and interventions at cross-government or inter-departmental level. Our roundtable report suggests that many experts believe a greater impact may well result from these macro decisions and this is likely to be a fruitful area of future research. For example, decisions on broader programmes such as Fit Notes, as part of encouraging a focus on work capacity in the UK.[50] General Practitioners can now use 'Fit Notes', allowing them to advise people who are on sick leave for over seven days whether, with extra support from their employer, they could return to work earlier.

Building on work from previous reviews,[51] we looked at a number of countries' approaches to HTA, to compare and contrast and, hopefully, learn lessons about how work and the wider societal perspective is (or is not) included in HTA.

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[43] Banta, D. (2003). The development of health technology assessment. Health Policy 63, 121/132

[44] Brouselle, A. & Lessard, C. (2011). Economic evaluation to inform health care decision-making: Promise, pitfalls and a proposal for an alternative path. Social Science & Medicine 72, 832e839

[45] Garrido, M.V. et al (2008). Health Technology Assessment and Health Policy Making in Europe, Current Status, Challenges and Potential. Available here: http://www.euro.who.int/__data/assets/pdf_file/0003/90426/E91922.pdf

[46] Kavanos, P. et al (2011). Differences in the cost of and access to pharmaceutical products in the EU, a report for Directorate General for Internal Policies. European Parliament. Available here: http://www2.lse.ac.uk/businessAndConsultancy/LSEConsulting/pdf/pharmaceuticals.pdf

[47] The European Institute. Austerity Measures in the EU. Available here: http://www.europeaninstitute.org/Special-G-20-Issue-on-Financial-Reform/austerity-measures-in-the-eu.html,

[48] Audit Commission, Reducing spending on low clinical value treatments, April 2011 http://www.audit-commission.gov.uk/sitecollectiondocuments/downloads/20110414reducingexpenditure.pdf

[49] Rumbold, B. et al (2012) Rationing health care. Nuffield Trust

[50] Lalani, M. Meadows, P. Metcalf, H. Rolfe, H. (2012). Evaluation of the Statement of Fitness for Work: qualitative research with employers and employees. Research Report 797, Department of Work and Pensions

[51] For example, see O'Donnell, J.C. et al (2009). Health Technology Assessment: Lessons Learned from Around the World. An Overview Value in Health, Vol 12 Supplement 2 S1- S5

5.2 Variation in practice

Although HTA is now widely practiced across the globe, the precise approach and its influence differ both across and within countries. We focus here on the perspective taken by the analysis, and the approaches to work productivity, given our interest in how work features in health decision-making. What 'work' as part of a 'societal perspective' really means in practice, however, is not clear based on the literature.[52]

If policy-makers were to advocate a broader 'societal perspective', wider effects impacting on other areas of the public sector and the wider economy would be formally incorporated into analyses and decisions.[53] In the face of budgets legitimately set by government, however, it is not yet clear how or whether a societal perspective can be implemented, particularly if transfers between sectors are not possible.[53]

The perspective is important not only to the analysis, but also to the way in which results can inform decisions. A narrow perspective will simply 'miss' wider considerations and not present these to decision-makers. Productivity and work ability are often wider considerations. This is because they are beyond the immediate scope of health care systems, which focus predominantly on prevention and treatment of ill health, and not typically on getting people either into work, or staying in work.

According to National guidelines, there is widespread variation of the recommended perspective to be taken, including: requiring a health system perspective, requiring a broader societal perspective, requiring a health and societal perspectives as separate analyses, and requiring no preference. [53] In theory, the majority of the countries we looked at take the societal perspective, however, this finding masks the nuances applied both in policy documents and in practice.[8]

For example, in England & Wales, although work productivity is essentially excluded, it can be considered under exceptional circumstances. The framework document for the National Institute for Health and Clinical Excellence (NICE) states that: '*The wider benefits of treatment (such as a reduction in disability which allows continuation of employment) can be taken into account on the benefit side of the equation.*'[54] NICE has also taken into account productivity in specific cases: in the public health guidance for unintentional injuries for the under 15's, in the public health guidance on managing sickness absence and incapacity for work, and in the clinical guideline for antisocial personality disorder.

In contrast, guidance for health economic submissions in Finland highlight that productivity loss could be one of the most important expense items.[55] This places a high priority on their consideration, ranging from: losses of productivity due to the patient's disability for work or reduced work ability, losses of time and/or

[52] Sculpher, M. & Claxton, K. (2012). Real Economics Needs to Reflect Real Decisions. Pharmacoeconomics 2012; 30 (2): 133-136
[53] Claxton, K. Walker, S. Palmer, S. et al. (2010). Appropriate perspectives for health care decisions [research paper no. 54]. York: Centre for Health Economics
[54] The National Institute for Clinical Excellence. Framework Document (Undated). Available here: http://www.nice.org.uk/niceMedia/pdf/appendixB_framework.pdf
[55] Laakkeiden Hintalautakunta Lakemedelsprisnamnden (2011). APPLICATION INSTRUCTIONS HEALTH ECONOMIC EVALUATION PREPARING A HEALTH ECONOMIC EVALUATION TO BE ATTACHED TO THE APPLICATION FOR REIMBURSEMENT STATUS AND WHOLESALE PRICE FOR A MEDICINAL PRODUCT. Available here: http://www.stm.fi/c/document_library/get_file?folderId=71837&name=DLFE-15658.pdf

productivity of a family member or other informal care-giver, and losses of productivity caused by premature death.

In some circumstances, there can be a gap between theory and practice: for example, productivity costs are often not considered in HTA submissions, according to experts in the Netherlands and Spain. This accords with other work, which has also found variability in the adoption of the societal perspective.[56,57,58, 59] There is additional research, which suggests that savings in productivity costs were not crucial to decision making (in 2010 in the Netherlands), with other factors being seen as more compelling decision criteria.[60]

Our case studies also highlight implicitly a sense of **proportionality** taken to HTA and the analysis of productivity. For example:

- In the Netherlands a new medicine does not need a HTA where there is evidence that its therapeutic effect is equivalent to an existing reimbursed medicine. In such cases, reimbursement is set equal to the equivalent drug;
- NICE in England & Wales can consider exceptional cases but, unless there are exceptional grounds for a wider perspective, a narrow health care system perspective will be taken.

In addition, as Culyer (2010) notes, there could be substantial costs to trying to take a complete societal approach and that a narrower perspective may still provide sufficient insights to inform a decision.[61]

Rheumatology serves as an example for the inclusion of economical perspectives in clinical decision. Since the introduction of new biological treatments over a decade ago, positive changes have been seen on levels of sick leave,[62,63,64] along with a significant decrease in health care needs for RA patients have been seen, compared to the general population.[65] Further economic evaluation has been suggested as a part of evaluation of new treatments for patients with rheumatological diseases.[66]

[56] CRA (2011). A comparative analysis of the role and impact of Health Technology Assessment. Final report prepared for: EFPIA, PhRMA, Medicines Australia and EuropaBio
[57] The International Working Group for HTA Advancement (2010). Are key principles for improved health technology assessment supported and used by health technology assessment organisations? International Journal of Technology Assessment in Health Care 2010, 26: pp71-178
[58] Stafinski, T. et al (2011). Health Technology Funding Decision-Making Processes Around the World The Same, Yet Different. Pharmacoeconomics 2011; 29 (6): 475-495
[59] Krol, M. et al (2011). Do Productivity Costs Matter? The Impact of Including Productivity Costs on the Incremental Costs of Interventions Targeted at Depressive Disorders. Pharmacoeconomics 2011; 29 (7): 601-619
[60] Marc, A. et al (2010). Dear policy maker: Have you made up your mind? A discrete choice experiment among policy makers and other health professionals. International Journal of Technology Assessment in Health Care, 26, pp 198-204
[61] Culyer, A.J. (2010). Perspective and Desire in Comparative Effectiveness Research The Relative Unimportance of Mere Preferences, the Central Importance of Context. Pharmacoeconomics 2010; 28 (10): 889-897
[62] Olofsson, T. Englund, M. Saxne, T. Jöud, A. Jacobsson, LT H. Geborek, P. Allaire, S. Petersson, I.F. (2010). Decrease in sick leave among patients with rheumatoid arthritis in the first 12 months after start of treatment with tumour necrosis factor antagonists: a population-based controlled cohort study. Ann Rheum Dis. 2010 Dec;69(12):2131-6. Epub 2010 Aug 6
[63] Kristensen, L.E. Petersson, I.F. Geborek, P. Jöud, A. Saxne, T. Jacobsson, L.T.H. Englund, M. (2012). Sick leave in patients with ankylosing spondylitis before and after anti-TNF therapy: a population-based cohort study. Rheumatology (Oxford). Feb;51(2):243-9. Epub 2011 May 12.
[64] Kristensen, L.E. et al (2012). Long term work disability in anti-TNF treated patients with psoriatic arthritis: a population-based regional Swedish cohort study. Annals Rheum Dis 2012: accepted for publication
[65] Hagel, S. et al (2012), Trends in 21st century health care utilization in a rheumatoid arthritis cohort compared to the general population. Annals Rheum Dis 2012: accepted for publication
[66] Kobelt, G. (2012). Editorial. Rheumatology (Oxford)

Similarly, our case studies also highlight a need for **transparency** to the approach to analysing productivity:

- In the Netherlands, guidelines state that productivity costs should be presented separately and analysis conducted both with and without productivity included
- In Poland, guidelines state that separate categories of costs (direct medical and non-medical costs, indirect costs (such as productivity) and intangible costs) should be presented separately. Analysis should present the costs exclusively to the public payer separately
- In Spain, guidelines state that the National Health System perspectives and societal perspectives should be presented separately. They also note that productivity analysis should separately identify paid employment losses and unpaid work (e.g. housework).

Precision, therefore, is a more general principle that can be accommodated within the societal perspective, separately presenting the analysis and allowing all interested parties to see the impact of a decision.[61]

Our eight European case studies also found that:

- The **scope of HTA agencies differ**: from a wide scope encompassing public health interventions through to individual technologies such as drugs and devices (as seen in England & Wales through the work of NICE and in Sweden through the work of SBU, to a narrow scope focused on new medicines, as seen in Poland). There is already a debate about widening the scope of HTA to encompass many more interventions.[67]
- The **incentives to adopt the results of HTA differ**: from commitments for funding HTAs, which suggest that investment is cost effective (as seen with Technology Appraisals from NICE), to no commitments at all (as seen with Clinical Guidelines from NICE).

This means that the ability of HTA to consider a wide range of investments (such as new services and techniques) can be limited, as is ensuring implementation of the recommendations informed by HTA. If, as we hope, productivity and work ability become core considerations in HTA, then we would also hope to see HTA itself applied broadly and the resulting recommendations implemented. That is because our wider programme of work, looking at interventions across countries, which are successful in getting people with an MSD back to work, has shown that it is not just the drugs and devices that can play a role, but the broader efforts at delivering earlier interventions – such as physiotherapy – from a range of health care professionals.[68]

5.3 The internationalisation of HTA

As the adoption of HTA has increased, so too has the interest and scope to learn from the experience of others, as well as exploring opportunities to harmonise evidence requirements.[69] There are a number of organisations and individuals involved in networks linked to and/or focused on HTA, including Health

[67] Palat, M. (2010). Is HTA going to save health care budgets or are its premises inherently flawed? Eurohealth 2010 Vol 16 No 4 8-10

[68] For an example of a physiotherapy-based early intervention for people with chronic low back pain, see the description of the Renaissance Project in the Republic of Ireland, available here: http://www.fitforworkeurope.eu/Default.aspx.LocID-0afnew004.RefLocID-0af002.Lang-EN.htm

[69] Hutton, J. et al (2008). Harmonization of evidence requirements for health technology assessment in reimbursement decision making. International Journal of Technology Assessment in Health Care,24, pp 511-517 doi

Technology Assessment International (HTAi) and the International Society for Pharmaco-economic and Outcomes Research (ISPOR). A key network across Europe is EUnetHTA.[70]

EUnetHTA is a European network of 34 government appointed organisations, brought together to work on scientific aspects of HTA. The network is now part of a Joint Action with the European Commission to develop a general strategy, principles and an implementation proposal for a sustainable European HTA collaboration. Globalisation of healthcare interventions challenges HTA institutions to share their assessment work, and EUnetHTA is working on tools to facilitate sharing of high-quality information and methodological frameworks in and across national or regional systems.[71]

We believe that these networks are an important part of the on-going efforts not only to improve the quality of HTA, but also to explore and develop consensus on some of the more controversial elements of HTA. Taking the societal perspective, and within that the role of productivity (including related issues such as work ability) are some of these controversial elements.[72]

Consensus is cited as the rationale in some countries for detailed guidance on HTA. For example Dutch guidelines take the societal perspective because "*this reflects a broad consensus, nationally and internationally that the societal perspective is the appropriate perspective to take*". [73] ISPOR also set out guidelines for the approach taken to HTA in Poland. [74]

There is also interest in, as far as appropriate, conducting analysis that could apply across jurisdictions.[75]

5.4 Can inclusion of work in HTA change investment decisions that improve societal outcomes?

Our eight European case studies suggest that there is considerable scope to consider productivity in HTA in theory, but there are limits in how well this is implemented in practice. With limits on spending on health care a reality for most countries (for example, the NHS in England & Wales has the lowest growth in funding over its history planned from 2011/12 to 2014/15)[76] and a return to sustained economic growth a wider objective of all governments, we believe the inclusion of productivity and work ability in HTA becomes more compelling. The same arguments apply to consideration of work across government departments, and not just at the level of individual interventions, such as drugs and devices.

Given that HTA is aimed to slow the increase of health care expenditure, including work in HTA could be part of moving investment towards those interventions that lead both to improved health, and, as a

[70] EUnetHTA website. Available here: www.eunethta.eu
[71] Kristensen, F. et al (2009). Practical tools and methods for health technology assessment in Europe: Structures, methodologies, and tools developed by the European network for Health Technology Assessment, EUnetHTA. International Journal of Technology Assessment in Health Care, 25:Supplement 2
[72] Davidson, T. (2009). How to include relatives and productivity loss in a cost-effectiveness analysis- theoretical and empirical studies. Linköping University Medical Dissertations No. 1101 2009
[73] College voor zorgverzekeringen, Diemen (2006). Guidelines for pharmacoeconomic research, updated version. Available here: http://www.cvz.nl/binaries/content/documents/cvzinternet/en/documents/procedures/guidelines-pharmacoeconomic-research.pdf
[74] PPRI, Poland (2007). Available here: http://ppri.goeg.at/Downloads/Results/Poland_PPRI_2007.pdf
[75] Simeons, S. (2010). Health Technology Assessment and Economic Evaluation across Jurisdictions. Value in Health 2010 Vol 13 Number 6 857-859
[76] Harker, S. (2012). NHS Funding and Expenditure. House of Commons Library, Standard Note: SN/SG/724

consequence, also to improved work outcomes – such as getting people back into employment, improving productivity or avoiding early retirement and social exclusion. However, we know that more needs to be done to make this case; further work needs to collate case studies and examples which compare and contrast the results when the societal perspective (including productivity and work ability) is undertaken versus just the payer perspective.

The next section explores how some of the main concerns about taking a 'societal' perspective might be allayed or overcome.

ADDRESSING THE KEY CHALLENGES

6.1 Ethics and equity

Our earlier paper[6] highlighted that the inclusion of work or labour market outcomes in HTA raises concerns about ethics and equity.[8] There are some individuals who suffer from health conditions which may limit their participation in formal employment at al (although that is by no means always the case). There are concerns that if work were included more systematically in HTA, it could lead to equity concerns over investment towards those who are in work, or could work, and away from others. Similarly, if there is a narrow definition of work itself, which could also lead to a biased investment, such as away from those who provide informal care or other forms of unpaid work (e.g. volunteering or providing care).

A route to consider here might be the use of a wide definition of work, including paid and unpaid labour. This could include the patient and also their carers, as carers play an important role in health outcomes of those they care for, and their caring role can also affect their own health and their ability to work.[77, 78]

We also note that there is some evidence that, in practice, local decisions are linked to work outcomes; local commissioners (e.g. Clinical Commissioning Groups of GP consortia) in England may well consider whether a patient will be able to return to work, though they are not currently required to do so. With the extent to which this plays a role in decisions, it is difficult to know whether more formally and systematically including productivity and work ability in HTA would either increase or decrease equity concerns in the current allocation of finance within a health care system overall.

Finally, there is also a broader effort required to build on the consensus that ethical and social issues should be addressed in HTA, and methods are being developed to allow this.[79] We believe that such work could potentially consider the role of work in HTA on a more widespread or systematic basis.

6.2 Who pays? Who is accountable for the outcomes?

Our roundtable report highlights that there can sometimes be a mismatch between the goals of government as a whole (for a prosperous and healthy country) and the goals of individual government departments and other agencies.[8] In essence, individual Government departments should all be working towards the same goal but are often charged with more narrow and specific goals: health care systems are often geared towards prevention, management of ill health and cure. Those departments concerned with employment are often geared towards maximising employment and minimising claimants to unemployment benefits. They are often not concerned with both objectives at the same time, despite increasing evidence of the links between good work and health. This can mean that the pay-off from interventions, which do not directly

[77] Brouwer, W.B.F. (2006). Too Important to Ignore Informal Caregivers and Other Significant Others. Pharmacoeconomics 2006; 24 (1): 39-41

[78] Tranmer, J.E. et al (2005). Valuing Patient and Caregiver Time A Review of the Literature. Pharmacoeconomics 2005; 23 (5): 449-459

[79] Bombard, Y, et al (2011). Eliciting ethical and social values in health technology assessment: A participatory approach. Social Science & Medicine 73 135e144

benefit the department/agency paying for the intervention, may not be prioritised, especially if the likely return on the 'investment' is not realised within, for example, the time-span of an electoral cycle.

One of our case study countries, however, highlights specific new approaches to help bring together the dual objectives of health and employment. The UK is pursuing a reform agenda that will bring in societal perspective into the pricing and reimbursement of medicines, through so-called Value Based Pricing (VBP).

This new pricing structure will apply to new medicines on the market from 1 Jan 2014, allowing the Government to set out a range of thresholds or maximum prices reflecting different values that medicines offer. Higher price thresholds will exist for medicines that: tackle disease of high unmet need or severity, demonstrate greater therapeutic improvement, and innovation and that can demonstrate wider societal benefits.[80]

The UK Government notes that there is support for adjustments in pricing and reimbursement for new medicines that can allow patients to return to work.[80] In England specifically, reforms to the health systems have also set out objectives for the NHS, which are linked to work. The new NHS Outcomes Framework includes employment of people with long-term conditions, and employment of people with mental illnesses.[81] These reforms sit alongside broader efforts to promote cross-departmental work, which include the 'Fit Note'.

Although it is too early to determine the success or otherwise of VBP and the new NHS Outcomes Framework, it may prove useful to evaluate and learn from these approaches in the future – as well as identifying similar examples from other countries.

6.3 Budgetary pressure, or relief?

Our roundtable report[8] highlighted that some people may be concerned that, allowing for a wider perspective, such as including work as a cost saving in HTA, could result in more interventions being recommended for adoption in health care systems. This could lead to an increase in spending overall in the system (although not always, as some interventions could also lead to health care cost offsets too or, alternatively, other changes could affect decisions such as the threshold for value for money). That concern is material in the current climate.

There are examples of where spending more on health could offer benefits overall; our previous paper cited an example of cost savings from early intervention for Rheumatoid Arthritis when the societal perspective was taken.[6]

[80] Department of Health (2010). A new value-based approach to the pricing of branded medicines – A consultation. Available here: http://www.dh.gov.uk/en/Consultations/Responsestoconsultations/DH_128226

[81] Department of Health (2012). Setting Levels of Ambition for the NHS Outcomes Framework – A technical annex to support delivering our NHS care objectives: a consultation on the draft mandate to the NHS Commissioning Board Chapter 4: Enhancing quality of life for people with long-term conditions. Available here: http://www.dh.gov.uk/health/files/2012/07/Chapter-4-Enhancing-quality-of-life-for-people-with-long-term-conditions.pdf

6.4 Incentivising adoption of the societal perspective within public services

We have noted the concern of those managing health care system budgets that allowing for productivity cost savings – specifically the potential to lead to an increase in the health care budget overall. This is a risk and there is a need to think through ways of aligning incentives, so that society as a whole benefits: not least because taxpayers typically fund much of both health and unemployment and welfare related benefits.

One option is to set up 'gain-sharing' agreements between two or more parties; where benefits accrue to one party, without them bearing the corresponding costs, they could agree to pay from savings towards the costs of the other party. Some countries, such as the UK, are exploring these ideas and developing approaches for shared savings.[8] An initial step may well be to explore the costs of different policy options on different departments, through techniques such as micro-simulation.[82] This can help to set out clearly the implications of different options, including doing nothing.

The scope for gain-sharing should be explored further, including those interventions where the costs and benefits (i.e. lower benefit payments) accrue quickly and those where the benefits may take years to be realised. The latter are more likely to be challenging to design and implement.

6.5 Methodological challenges and solutions

Our case studies have highlighted diversity in the approach taken mainly to productivity inclusion in HTA. In some countries there is no specific valuation methodology chosen, in recognition of a lack of consensus on which of the two main methodologies for valuing work productivity losses/gains (human capital approach and friction cost approach) to adopt. The two approaches can lead to different results,[83] as can using different measurement instruments.[84] The human capital approach sees lost earnings as the productivity cost. This compares to the friction cost approach, which allows for some period of lost productivity, but acknowledges that employees can be replaced over time when an employee leaves.

There may also be some productivity effects captured in analysis from questions about health status, because those responding to such surveys may consider the impact of their health status on their income. [85,]

[82] See, for example, the work of Professor Deborah Schofield and colleagues in Australia: Schofield, D. Shrestha, R. Percival, R. Passey, M. Kelly, S. Callander, E. (2011). Economic Impacts of Illness in Older Workers: Quantifying the impact of illness on income, tax revenue and government spending. BMC Public Health 2011, 11:418.

[83] See Birnbaum, B. Friction-Cost Method as an Alternative to the Human-Capital Approach in Calculating Indirect Costs, Pharmacoeconomics 2005; 23 (2): 103-104 and Liljas, B How to Calculate Indirect Costs in Economic Evaluations, Pharmacoeconomics 1998 Jan; 13 (1 Pt 1): 1-7 and Brouwer, WBF and Koopmanschap , MA How to Calculate Indirect Costs in Economic Evaluations ,Pharmacoeconomics 1998 May; 13 (5 Pt 1): 563-566 and Brouwer, WBF and Koopmanschap , MA The Friction-Cost Method Replacement for Nothing and Leisure for Free? Pharmacoeconomics 2005; 23 (2): 105-111 and Brouwer , WBF et al The Relationship between Productivity and Health-Related QOL An Exploration, Pharmacoeconomics 2005; 23 (3): 209-218 and Koopmanschap , M Measuring Productivity Changes in Economic Evaluation Setting the Research Agenda Pharmacoeconomics 2005; 23 (1): 47-54 and Krol , M Productivity Costs in Health-State Valuations Does Explicit Instruction Matter? Pharmacoeconomics 2006; 24 (4): 401-414

[84] Zhang, W. et al (2011). Measuring and valuing productivity loss due to poor health: A critical review. Social Science & Medicine 72 2011 185e192

[85] Tilling, C. et al (2010). In or Out? Income Losses in Health State Valuations: A Review. Value in Health 2010 Vol 13 Number 2 298-305

[86, 87, 88] If so, this could mean that adding in a further estimate of productivity costs could double count their impact. This too remains controversial.

Many guidelines recognise the pros and cons of each of the two main approaches: the human capital approach is relatively simple to apply but can overstate the productivity costs; the friction cost approach requires more data and assumptions, which may not always be available.

A route to consider is requiring both approaches to be adopted on a pragmatic basis: where both approaches suggest productivity is materially relevant, it should be considered within the HTA and in investment decisions. Over time, a consensus may emerge which will help decide which of the two approaches should be used, and that will help inform decisions between competing interventions. There are also refinements being explored to improve the approach towards more micro-level work productivity analysis,[89] including work on presenteeism[89] (where an individual is at work, but not fully productive). Similarly, there are new approaches to practical tools to measure work productivity impacts that can be used alongside clinical studies.[90]

In summary, we acknowledge that there are important ethical and methodological challenges to the wider, more systematic, routine and standardised adoption of the 'societal perspective' in HTA. However, if there are competing interventions that offer the same cost and same health benefits, but greater improvements in productivity and/or work ability, this would be the best use of limited resources. That will not always be the case, but we believe that it may be important enough to warrant an assessment of work to be considered for material relevance.

[86] Richardson, J. et al (2009) Do quality-adjusted life years take account of lost income? Evidence from an Australian survey. Eur J Health Econ 10:103–109

[87] Krol, M. et al (2009). Breaking the Silence: Exploring the Potential Effects of Explicit Instructions on Incorporating Income and Leisure in TTO Exercises. Value in Health 2009 Vol 12 Number 1 172-180

[88] Krol, M. (2006). Productivity Costs in Health-State Valuations Does Explicit Instruction Matter? Pharmacoeconomics 2006; 24 (4): 401-414

[89] Zhang, W. et al (2012). Development of a Composite Questionnaire, the Valuation of Lost Productivity, to Value Productivity Losses: Application in Rheumatoid Arthritis Value in Health 15 46-54

[90] Strand, V. & Singh, J.A. Newer Biological Agents in Rheumatoid Arthritis Impact on Health-Related Quality of Life and Productivity Drugs 2010; 70 (2): 121-145

CONCLUSION: HOW POLICY-MAKERS CAN IMPROVE EMPLOYMENT OUTCOMES

In this paper, we have marshalled a number or arguments which, we believe, add up to a compelling case for more formally including consideration of work – and labour market participation in particular – as an economic and societal outcome in health care decision-making in EU member states. There are several reasons why, for policy-makers, this should be more of a priority:

1. Demographic trends tell us that **incidence of chronic conditions in the workforce is increasing, and furthermore our workforce is ageing and will need to work longer**. If preventable poor health in the working age population impedes productivity growth and the re-balancing of dependency ratios in the EU workforce, it will be more difficult to achieve economic growth and avoid increases in social exclusion among the chronically ill.

2. The evidence tells us that early and appropriate clinical interventions, which prevent premature job loss or support return to work, can be both cost-effective and have a significant impact on workforce productivity and quality of life. At the moment, for too many people of working age, **work is not considered a desirable or attainable clinical outcome** by many healthcare professionals. This narrow perspective is reinforced by many HTA regimes which do not, or are not permitted to, consider work.

3. The global **emphasis of health care policy will need to shift towards prevention**. The allocation of more health care resources to interventions which support continued labour market participation will help prevent the exacerbation of existing conditions and allow more people with long-term and chronic conditions to enjoy the therapeutic, psychological and social inclusivity benefits of fulfilling working lives, whether through employment, self-employment, work in the home or voluntary work.

4. **Health care policy cannot continue to operate in isolation from welfare policy and employment policy**. 'Joined up' approaches to solving social and economic problems will be crucial in economies in which the scrutiny of public expenditure and value for money in social investments will remain intense.

5. **The inclusion of societal cost in HTA need not increase public spending on health services.** In a climate of restricted public expenditure, there is a pressing desire to slow or halt growth in health spending. By mandating that health interventions consider and promote 'return to work' and 'job retention', policy-makers can extract more value from health expenditure and demonstrate savings to welfare spend. Policy-makers can require that health technologies and treatments demonstrate an improvement in functional ability, including impact upon patients' ability to work, within an unchanged budget envelope.

In view of these factors, and drawing together evidence from our own research and from the testimony and advice from an array of expert stakeholders, we call upon health care policy-makers to consider the following actions:

- **Taking a 'societal perspective' in HTA and health investment decisions, to contribute to higher rates of labour market participation among people of working age with long-term, chronic or fluctuating conditions, and their family/carers, as part of planning for demographic and epidemiological trends over the coming three decades**

- **When undertaking clinical trials and audits, routinely consider and record labour market outcomes (e.g. productivity and work ability measures)**

- **When developing health care quality systems, service frameworks, standards of care and care pathways, labour market outcomes should be routinely considered, and patients and professionals with an understanding of occupational medicine such as occupational therapists and physiotherapists should be involved**

- **Public bodies should improve data collection on the impact of public services on the employment outcomes of citizens, especially those with a chronic or musculoskeletal disorder: at the European level, EUROSTAT should include a question on work ability and musculoskeletal disorders in its labour force survey**

- **Policy-makers should ensure there is strategic leadership across ministries responsible for health, welfare, employment and productivity, so that departmental silos do not prevent development of interventions that require investment or behaviour change in one department, but result in 'benefit' to another. Investment could even be jointly owned by departments**

- **'Gain-sharing' or 'shared-savings' pilots should be set up, ensuring they operate between departments. Microsimulation could also be used pre-pilot, to model the potential benefits of such 'gain-sharing' or 'shared savings' schemes.**