Arthritis and Musculoskeletal Alliance (ARMA)

Annual Lecture

London, 29 January 2018

Musculoskeletal conditions, disability and employment

Dame Carol Black

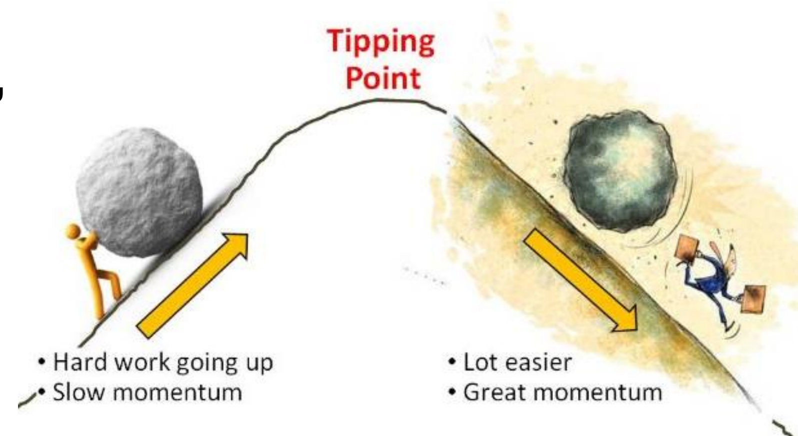
Expert Adviser on Health and Work
Public Health England and NHSE

Principal, Newnham College Cambridge

Where are we ?

- … on a journey, accelerating.
- We need to capitalise on interest currently shown by stakeholders and government, and work with them all.

- Perhaps we're at a "tipping point"
- Much of this is in our own hands, to influence and change



Work

“ Work is central to human existence and the motive force for all economies.

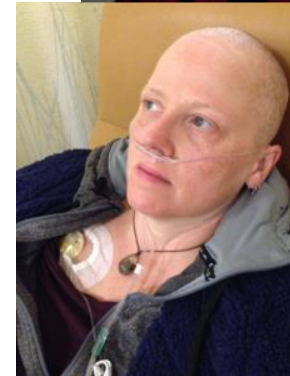
For individuals it provides structure and meaning, and it is good for people’s health and wellbeing, as well as their financial health and prosperity.

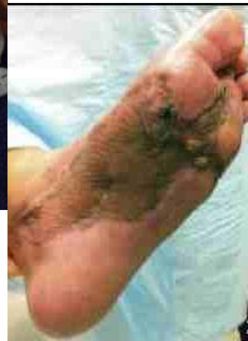
Moreover, work benefits families and is socially inclusive.”

CB *Working for a healthier tomorrow* 2008

For those with chronic conditions or disability, Good Work ...

- ... is (generally) therapeutic and can lead to better health outcomes
- can help to promote recovery and rehabilitation
- minimises the unwanted and harmful effects of long-term sickness absence
- reduces the risk of chronic disability and long-term incapacity
- reduces poverty and social exclusion
- ... improves quality of life and well-being.





You do not have to be 100% fit to be in work!

Chronic conditions – and reduced ability to work

- Once a worker – especially a worker with a long-term or chronic health condition – loses their place in the labour market, it is very difficult for them to return.
- The gap in employment rate, between **47%** for people with a disability and **80%** for the rest of the population, is wider in UK than in most other European countries (2015).
- This is an avoidable waste of human capital and productive capacity which affects competitiveness, social and community cohesion, and family stability.
- The UK needs a workforce which is *Fit for Work* – ill-health in the working-age population is economically inefficient and socially corrosive.

MSKs in England

- Lower back & neck pain: leading disability cause1990 to 2016, 2,221 years lived with disability (YLD) per 100,000 people.
- Estimated MSK levels showed, of people aged 45+, 18% with knee OA and 11% hip OA; back pain in 17% of all ages.
- Risk factors heightening susceptibility to MSK : age, overweight, low physical activity, poor health habits such as smoking.
- Age and reduced physical activity often coincide. Aged19 to 24 years, 77% of people are physically active compared to **25 %** of individuals aged over 85 years.

PHE 2017

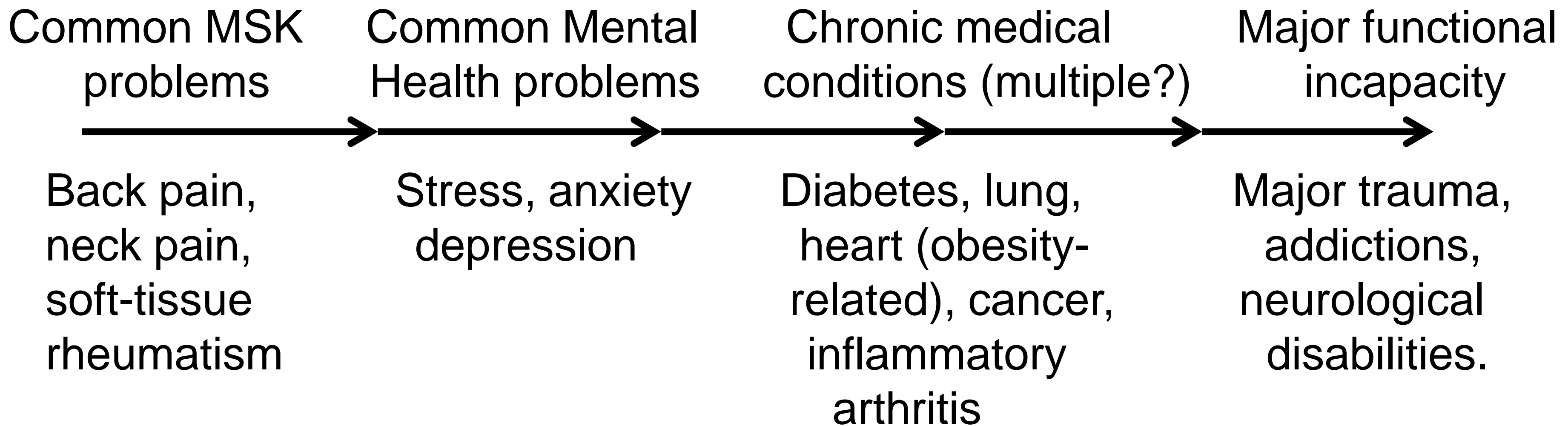
Work and MSKs

- **After coughs and colds, MSKs were in 2016 the major cause of UK days lost from work, 23% of the total.**

- MSKs are very important to the labour market and productivity.

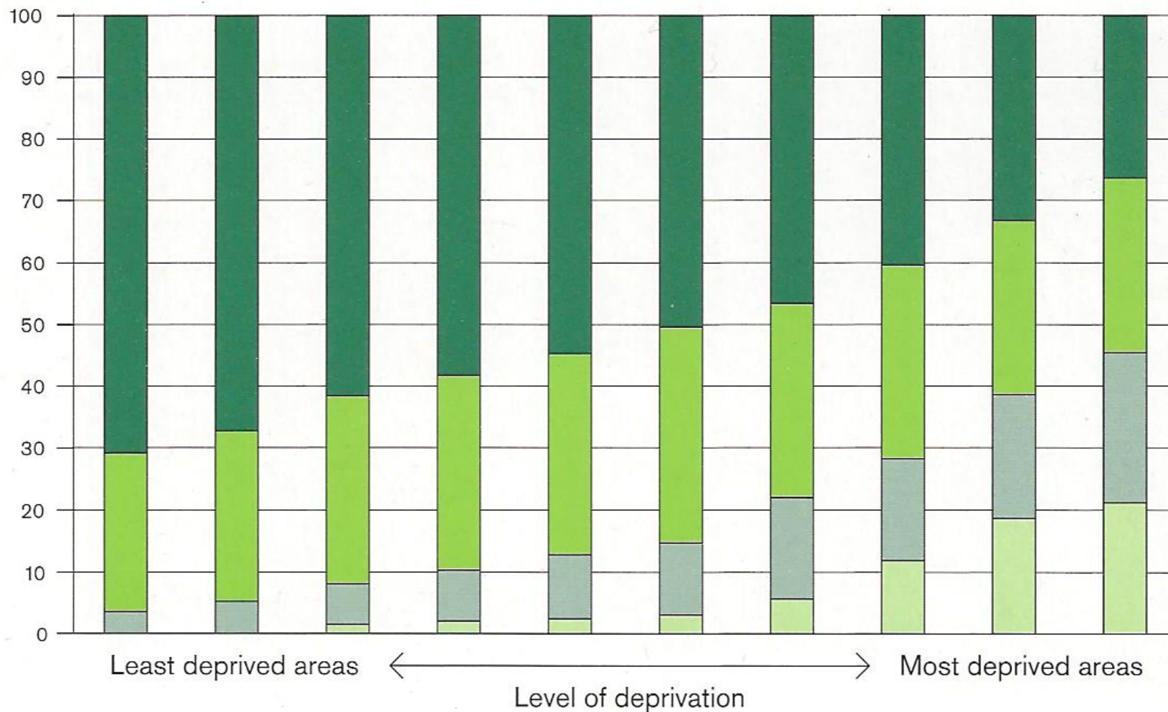
Preventing people from working or from working well

Social determinants of health



Poor workplaces, poor work, poor managers

Health conditions and deprivation



People living in the least deprived areas tend to have fewer, or no, health conditions –

- whereas **those living in the most deprived areas often have several health conditions.**

From Marmot, Fair Society, Healthy Lives, 2010

Absence : Historical Perspective

Clinical Aspects of Absenteeism, R.S.H 10, **1957**, p.681

Paper by **Sir Walter Chiesman**, Treasury Medical Adviser,

"Absenteeism is a much more complex problem, mainly because, although disease initiates absence, the time taken to return to work is influenced by a multitude of social factors little to do with medicine, and the pathological diagnosis of the disease is often in doubt."

"Absence from work is an inaccurate measure of morbidity – 90% of minor illness does not lead to incapacity. Absence often depends, not on a particular disease process, but … dissatisfaction with working conditions encouraging escape to outside interests, including ill-health and absence. "

Predictors of back pain may not be 'medical'

After adjustment for age, sex, skill level, back pain severity and other potential confounders, the most consistent **predictors of back pain** were:

- **decision control at work**
  (lowest Odds Ratio 0.68;
  99% confidence interval (CI): 0.49 - 0.95),
- **empowering leadership at work**
  (lowest OR 0.59; 99% CI: 0.38-0.91)
- **fair leadership at work**
  (lowest OR 0.54; 99% CI: 0.34-0.87)

Christensen JO, Knardahl S. 2012

Do not forget leadership and other psycho-social factors

BUSINESS IN THE COMMUNITY

ARMA

Musculoskeletal health in the workplace

The scale of the problem for employers

1 in 8 of the working population **report having a MSK**

23% of all **working days lost** are attributable to MSK

Employment rate for people who report MSK as their main health condition is **59.7%**

33% of **long-term sickness absence** is attributed to MSK in England

MSK disorders **cost the UK** an estimated **£7 billion** a year

The scale of the problem for employees

1 in 5 **(20%)** of people are worried they **won't be fit enough to continue working** in the next year

A third of people **(33%)** with a longterm condition felt their colleagues **don't understand the impact** of their condition

39%

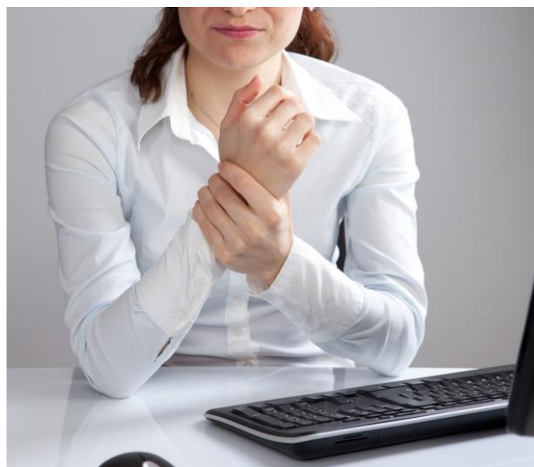
39% don't feel confident discussing their workplace health with their employer

Over 1 in 7 **(15%) wouldn't disclose a long-term health condition** such as arthritis or recurrent joint pain to their employer

Public Health England

BUT MSK problems are manageable, and can be prevented

The MSK challenge in 167 workplaces, 2016-17



Britain's Healthiest Workplace

- devised by Vitality Health, the health insurer
- produced in association with RAND Europe, the FT, the University of Cambridge, and Mercer HR consultants.
- The free survey seeks to **create awareness** among employers and employees of the importance of workplace health and wellbeing, ….
- … and to **build an evidence base** for :
  - employers to make improvements, and
  - employees to engage with their modifiable risks.

In 2016-17, **32,000 employees in 167 organisations** took part.

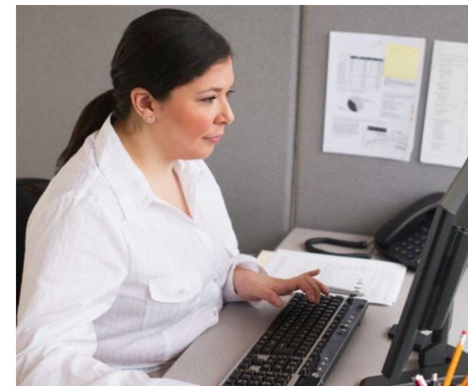
Open to small, medium and large employers

The BHW survey process

- online **organisational health assessment** completed by a **representative** of the organisation
- **voluntary online health assessment** completed by **employees**, who each receive a personal report
- leading to a **comprehensive report on the health of the organisation and its employees**, benchmarked against others, with suggestions for interventions.

Ordinary people at work, not “patients”.

Serial data over 4 years shows continuous improvement in many organisations.



BHW Results : Insights re MSKs

- 81% of employees cited having pain related to an MSK issue (top prevalence in older females), 6% took leave
- Males take more leave related to MSK than females, though highest incidence is for females aged 45 to 55.
- Prevalence: lower back 44%, neck 32%, shoulder 32%.
- Little variation of overall MSK incidence with income, but lower-back, knee, hip more prevalent at lower incomes.
- Higher incidence among older managers and lower-paid professionals, and in clerical and service jobs.

BHW: Typical survey analysis

		Overall MSK			any pain at particular sites					
		members	any pain	took leave	neck	shoulder	elbow	wrist	upper back	lower back
			80.9	6.4	32.5	32.1	6.8	16.4	15.1	44.4
gender	age									
male	< 25	1,220	74.2	2.1	23.6	21.4	5.7	14.3	15.5	36.2
male	25-29	2,273	76.5	4.4	27.5	26.2	5.3	14.7	17.9	40.0
male	30-34	2,128	76.9	6.1	26.4	28.1	5.2	14.4	15.6	42.3
male	35-39	1,858	80.2	7.9	31.4	30.2	5.8	16.3	14.2	44.8
male	40-44	2,214	81.4	8.3	28.9	30.3	8.5	16.6	11.9	45.7
male	45-49	2,157	82.6	7.7	29.6	29.2	11.1	16.0	11.2	45.3
male	50-54	2,230	81.5	7.9	27.6	29.6	11.6	16.5	8.9	45.2
male	55 +	2,052	82.8	7.8	28.2	30.2	9.4	18.7	6.5	41.8
female	< 25	1,563	77.9	3.0	31.2	33.2	2.3	12.5	23.9	37.7
female	25-29	2,372	77.6	5.2	34.8	34.7	2.8	12.7	23.0	41.7
female	30-34	1,958	80.1	6.3	37.8	37.4	3.7	14.9	22.6	44.6
female	35-39	1,648	81.0	7.2	38.0	37.4	5.1	15.7	18.0	45.4
female	40-44	1,811	83.6	5.6	38.1	36.6	6.3	18.7	14.6	47.9
female	45-49	2,761	85.5	8.7	39.6	38.9	9.9	19.8	13.1	47.4
female	50-54	2,243	86.6	8.2	40.0	38.6	11.4	22.8	10.9	44.8
female	55 +	1,440	86.1	6.7	39.1	36.1	9.3	25.0	10.9	46.5

Green = Good (compared with column average), Yellow = Middling, Red = Bad

Courtesy Shaun Subel, Vitality Health.

BHW : Multiple MSK conditions

Employees with more than one MSK issue more likely to:

- have significantly higher work impairment
- make poorer lifestyle choices, less active, smoke

- be overweight or obese, or have clinical measures (e.g. blood pressure) out of range
- not get adequate sleep

- suffer from chronic lifestyle conditions
- take time off work for health issues

- have depression or work stress
- be less engaged with their job (“Presenteeism”).

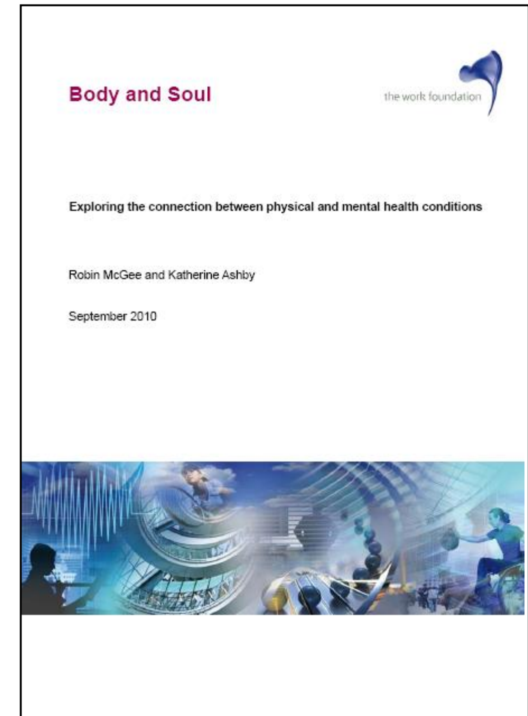
MSKs and poor Mental Health

‘Body and Soul’ report (2010) explored connection between physical and mental health conditions, and impact on productivity and work participation.

Findings included :

- Rate of mental health conditions higher among those with a chronic physical health condition.

MSKs : about 25% of people with arthritis report a co-morbid mental health condition.



The Work Foundation 2010

Mental Health and MSKs are often inter-woven

Obesity and consequent disease in the UK

Likely that by 2025 **40% of adults** will be **obese**, and the number living and working with chronic conditions will rise steadily, affecting morale, competitiveness, and profitability.

Predicted rates per 100,000	2006	2030	2050
Arthritis	603	649	695
Breast cancer	792	827	823
Colorectal cancer	275	349	375
Diabetes	2869	4908	7072
Coronary heart disease	1944	2471	3139
Hypertension	5510	6851	7877
Stroke	792	887	1050

Obesity is now a rheumatological problem.

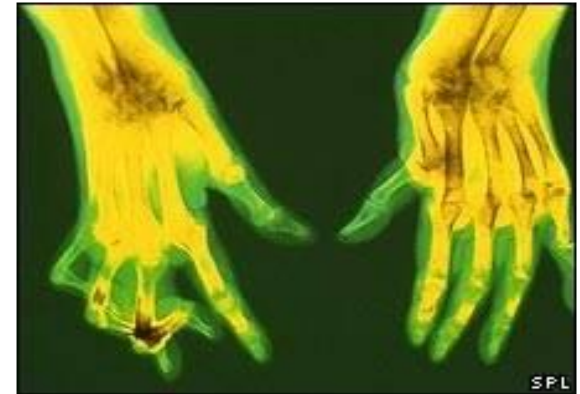
Occupational activities and knee OA

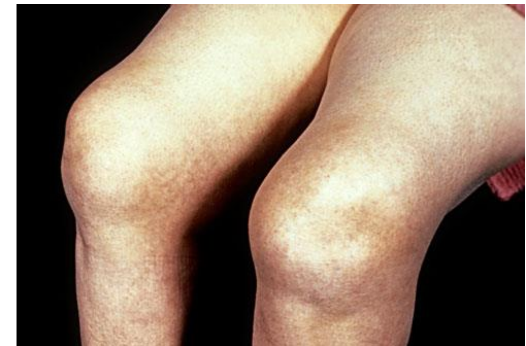
Keith T Palmer, British Medical Bulletin 2012; 1-24 using systematic searches Embase and Medline 1996-2011.

- Prevalence of knee osteoarthritis is rising.
- Obese workers have additional OA risk, weight loss needed.
- Physical work activities (kneeling, squatting, lifting, climbing) can cause and/or aggravate knee OA.
- Workplace interventions/policies to prevent knee OA have seldom been evaluated.
- Trends towards extended working life make research crucial.

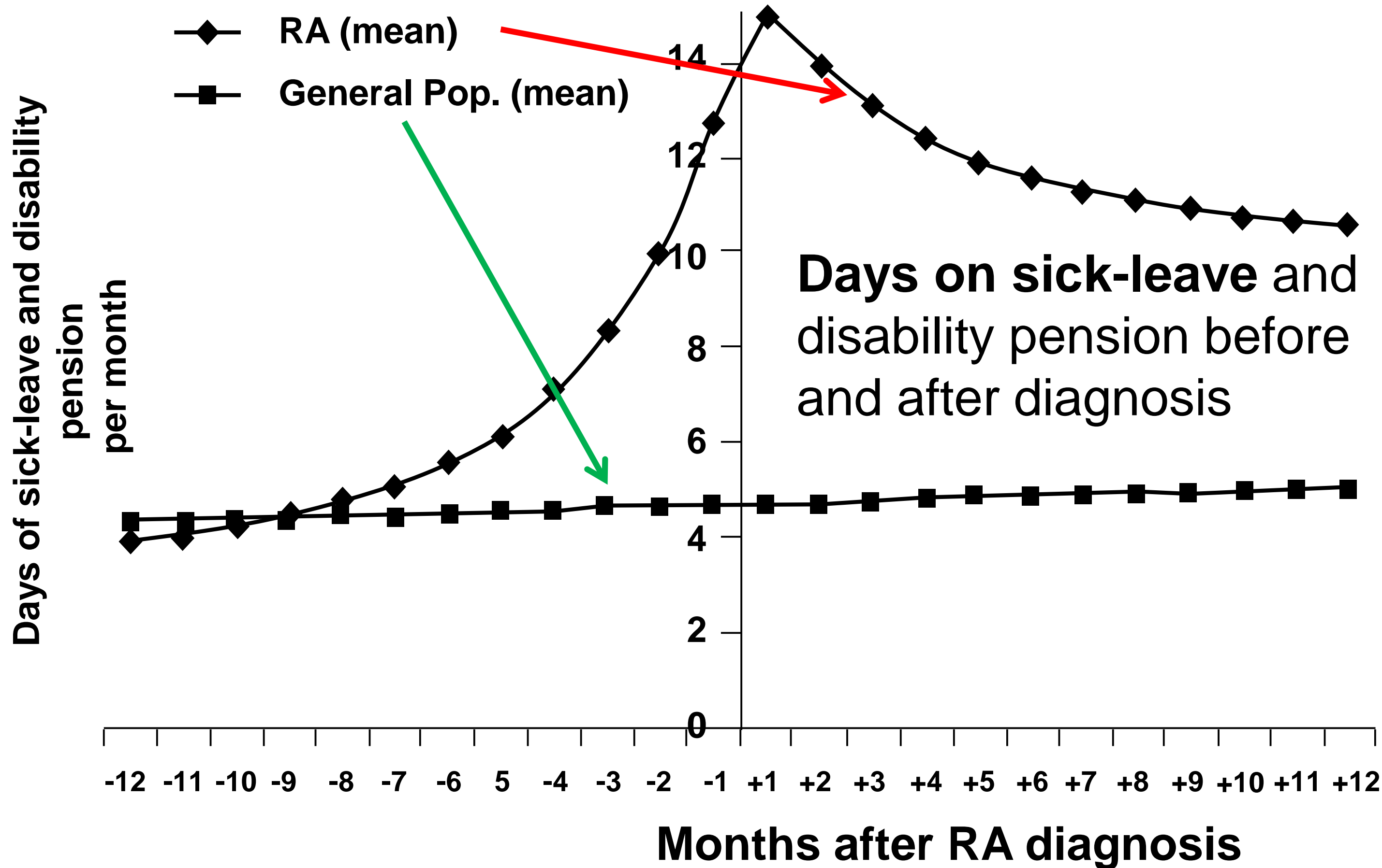
Rheumatoid Arthritis and Work

- 50% of UK adults with RA are of working age.
- 75% are diagnosed when of working age
- Work disability occurs rapidly among people with RA
- 33% of people with RA will have stopped working within 2 years, and 40 to 45% by five years.
- Bigger impact on people doing manual work





Impact on Work : Rheumatoid Arthritis



- Late diagnosis ?
- Treatment inc. pain control ?
- Employer response ?
- Patients' response to disease ?

Patients diagnosed 1999-2007; n=3029. General population comparators matched 5:1 on age (±1 year), sex, education level and country. RA, rheumatoid arthritis.

Neovius M, et al. *Ann Rheum Dis* 2011;70:1010-15.

eumusc.net

Work disability and benefit claims in early RA

- **Study aimed** to identify predictive factors for work disability and state benefit claims in cohort with early RA

  (Early RA Network, ERAN: 22 centres in UK and Ireland)

- 1,235 participants reported yearly, work status/benefit claims.
- At baseline, 47% employed and 17% on benefits due to RA.
- Within 3 years, 6% lost their job, 33% were claiming benefits.
- Work disability was predicted by pain and low vitality
- New benefits claims were predicted by baseline disability, extra-articular disease, and disease activity.

D.F. McWilliams et al, *Rheumatology,* 2014;53:473-481

What is needed ?

An ideal system would …. :

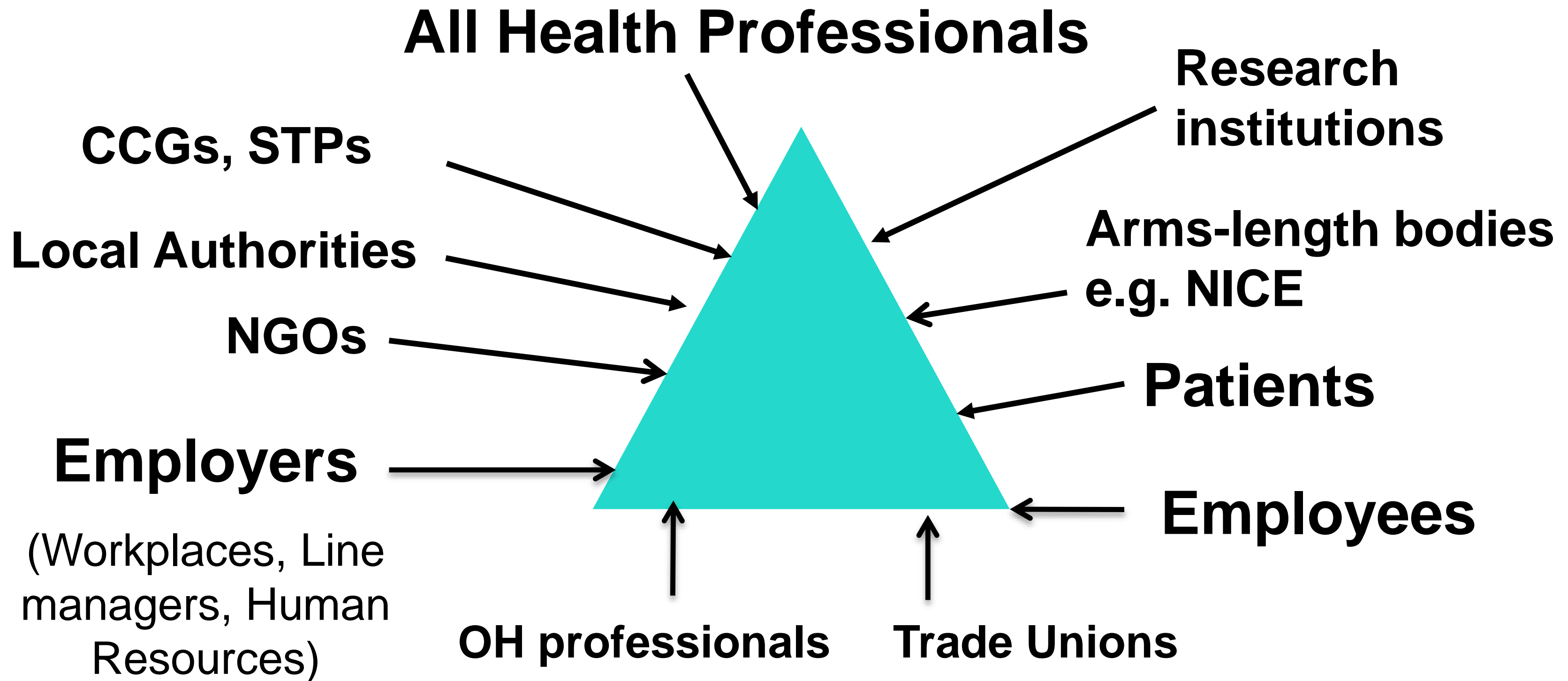
- quickly identify people unable to work
- offer advice early, and enable problem-solving.

…. and ensure that :

- those with conditions compatible with current work receive interventions to support retention in or return to that work

- those needing a job-change are helped into new work
- as few as possible enter the benefits system.

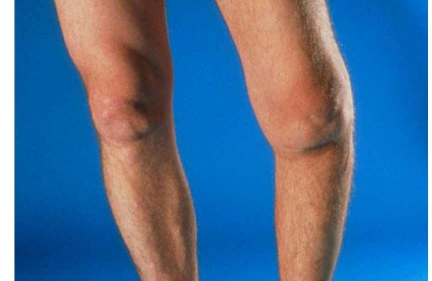
Necessary players



Cross-government action after the command paper.

Immediate essential players

- good clinical care, Vocational Rehabilitation, well-informed work-conscious healthcare professionals



- employers' : flexibility and adaptation in the workplace

- fully-informed patients, in control, motivated to co-create health

- engaged Clinical Commissioners and Local Authorities

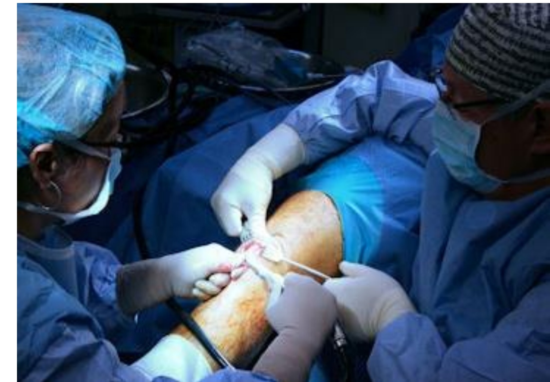
Principles for health professionals

Understand :

- Work is a determinant of health
- Work may aid recovery
- Vocational rehabilitation

Consider :

- Capacity not incapacity
- Function not disease
- Early intervention
- Psycho-social problems
- Work environment.
- Adaptation and flexibility at work



WORK should be a CLINICAL OUTCOME

‘Fit Note’ - Back pain

New Fit Note, April 2010

Statement of fitness for work
For social security or Statutory Sick Pay

Patient's name: Mr, Mrs, Miss, Ms

I assessed your case on: / /

and, because of the following condition(s): BACK PAIN

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:
- [ ] a phased return to work
- [ ] amended duties
- [ ] altered hours
- [ ] 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

Med3 04/10

- **Is this the real problem ?**
- Is it poor work or workplace ?
- A poorly-aware line manager ?
- The wrong job ?
- Social determinants of health ?
- The patient's expectation ?
- Is there a Mental Health problem ?

'Fit Note' - Rheumatoid Arthritis

New Fit Note, April 2010

Statement of fitness for work
For social security or Statutory Sick Pay

Patient's name: Mr, Mrs, Miss, Ms

I assessed your case on: / /

and, because of the following condition(s): R A

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:
- [ ] a phased return to work
- [ ] amended duties
- [ ] altered hours
- [ ] 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

Med3 04/10

Is this because of :

- the disease not being controlled ?
- the messages given to patients by their doctors and nurses ?
- an idea that work is bad for you ?
- culture/expectation not to work ?
- lack of flexibility in employment ?

You must always ask : 'What is the problem ?'

Rheumatoid Arthritis and Work in UK

Hospitals and GPs

56% of hospitals were aware of Gov't's Access to Work scheme, but :

- 33% of these did not give information to RA patients
- only12% of GPs gave information about continuing in employment to those newly diagnosed
- only 20% of those with RA considered they received sufficient information from their Rheumatology clinic about employment issues.

National Audit Office. *Services for People with Rheumatoid Arthritis,* July 2009

Training of Health Professionals

- Much needs to be done, in all professions.
- Recent example of progress :
  GMC revising its document *Outcomes for …Graduates.*
- Suggested new wording :

  "Recognise that work is a clinical outcome, and undertake a Fitness for Work conversation with patients of working age including social, personal and biological factors, incorporating their findings into their management plan."
- Work in progress.

Prevention and Treatment of MSKs : PHE Toolkit on ROI

Aim : to develop easy-to-use, interactive tool for stakeholders, **NHS Clinical Commissioning Groups, Local Authorities and Sustainability & Transformation Partnerships (STPs)**, to assess return on investment (ROI) for programmes to prevent/treat MSK conditions.

Two key objectives (2017) :

- literature review to identify which interventions are cost effective in reducing complications associated with **OA of hip or knee, neck pain or back pain**;
- develop an ROI tool that predicts the resource and financial consequences of implementing these cost-effective interventions nationally and locally.

Public Health England

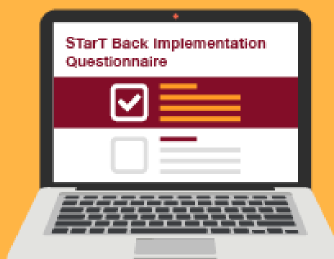
Healthmatters

Interventions of value

Effective interventions for MSK prevention

PHE's ROI tool shows that for every £1 invested in...

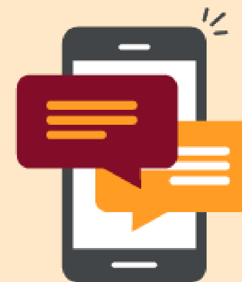
STarT Back (Stratified Risk Assessment and Care), saves £226 in healthcare savings, quality of life year & productivity gains



Self-referral to physiotherapy, saves £99 in healthcare

ESCAPE-pain, saves £5 in healthcare savings

PhysioDirect, saves £47 in healthcare savings & quality of life year gains



Greatest impact on work-days saved : STarT Back, Yoga for Healthy Lower Backs, and vocational advice.

Summary of Recommendations

- Usefulness of the tool needs evaluation in everyday practice, and users should be invited to give feedback.
- Information should be shared to add to the evidence base, and evidence on outcomes should be collected beyond 12 months, to extend the time horizon of the tool.
- For self-management programmes, interventions in their own right, evidence is lacking on effectiveness for MSKs.
- More research into prevention of neck pain, for which there is poor prevalence data and poor evidence on interventions.

Employers

Line Management

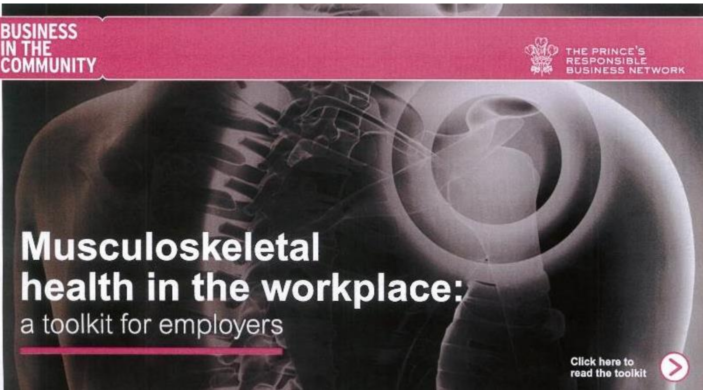
Vocational Rehabilitation

Job Design

Workplaces that promote health, support employees who are not wholly fit, and encourage early intervention to restore health and wellbeing, are crucial.

Over 90% of all UK private-sector businesses are SMEs.

Make it easy : Toolkit for MSKs



- Produced by Business in the Community (BITC) and PHE, supported by ARMA
- Designed with and for business
- The toolkit is freely available and relevant to all employers, whatever their size or sector.
- It gives prime emphasis to, but goes beyond, MSK health ..
- .. as part of a wider initiative designed to help employers take positive action to build a culture that champions good mental and physical health, and improve understanding of how to help those who need more support.

Make it worth it - ROI

How effective are interventions, commonly used to manage MSDs, in reducing sickness absence or health-related job loss?

- Research, Southampton University, D.Coggon

Vocational impact of MSDs

Reports from employers and other organisations :

Source	Index	Finding
LFS	% of all sick leave, past 7d, all MSDs	31%
SWI	Lost days, 2008/9, work-related back pain	3.51 M
ThorGP	Days certified sick leave, past yr, all MSDs	2.26 M
DWP	On IB >5 yrs, all MSDs	0.24 M
Cabinet Office	% of lost days, past yr, all MSDs	12%
LGE	% of lost days, past yr, all MSDs	21-23%
CBI/AXA	% employers citing back pain as important	45-67%
CIPD	% employers citing back pain as important	36-55%
EEF	% of employers citing MSDs as important	22%

Some findings by type of intervention

	RR (IQR), return to work	Mean days/month sick leave avoided
Workplace intervention	1.26 (1.00 – 1.63)	1.11 (0.38 – 2.66)
Extra services	1.25 (1.00 – 1.60)	1.67 (0.31 – 2.85)
Exercise therapy	1.20 (1.00 – 1.60)	1.01 (0.24 – 1.37)
CBT	1.10 (1.00 – 1.40)	1.25 (0.35 – 2.44)
Relaxation therapy	1.15 (1.00 – 1.30)	1.18 (0.33 – 2.41)
All	1.21 (1.00 – 1.60)	1.11 (0.32 – 3.20)

No obvious ‘best buy’ : more research needed

Conclusions from this review

- Literature relatively large, but with notable gaps
- Studies mostly small, with methodological weaknesses
- Most interventions beneficial
- Modest effects & likely publication bias
- Median benefit: ~10% better chance of RTW or 0.5 day/month avoided sickness leave
- No interventions clearly superior, some less expensive
- Few economic evaluations; little evidence of net cost benefit

Arthritis Research UK

MRC Medical Research Council

centre for musculoskeletal health & work

We need more research and evidence.

The Patients: their voice

- The report *Self-management of chronic musculo-skeletal disorders and employment* captured the barriers to work.

- Employers should consider workplace adjustments and career development for people with MSKs.

- Government should :
  - promote "Access to Work", and give extra assistance to employees in SMEs
  - ensure that work is viewed by healthcare professionals as a clinical outcome
  - invest in more 'Specialist Nurse' roles.

Fit for Work UK and the Work Foundation

Work Matters : UK survey on RA Barriers against working

Table 1: Barriers to remaining in current or most recent job

2017

	Very serious		Serious		Neither serious nor non-serious		Not very serious	
	not working	working	not working	working	not working	working	not working	working
Getting to and from work	10.4	5.0	24.4	16.7	19.5	20.1	18.9	17.9
Lack of understanding from colleagues	15.9	6.5	20.2	19.2	23.1	19.1	12.7	19.1
Health and Safety issues	10.7	4.1	22.8	13.8	20.5	25.2	17.5	17.9
Time off for medical appointments	10.7	6.9	21.8	15.8	19.5	16.0	16.2	20.0
Lack of family support/understanding	4.8	4.9	9.4	14.0	14.0	16.4	11.4	16.7
Time off when having a flare or unwell	25.4 *	14.0	31.6 *	23.1	10.4	15.8	9.7	15.8
Employer reluctant to make changes	17.9	6.0	18.8	12.0	19.5	19.8	8.1	11.7
Lack of support from employer or line manager	28.3 *	10.8	18.8	14.9	14.0	17.5	9.1	13.0

% of all 1,222 respondents, all with RA: 'Not serious', 'Don't know' not given here

NRAS & CfMR 2017

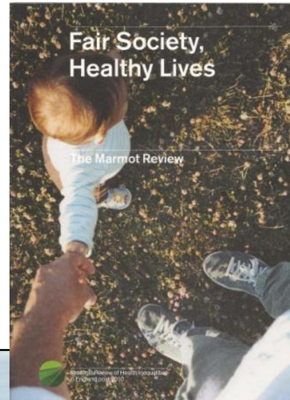
- Majority female – over 3 to 1
- Mean symptom duration 12.7 yrs, 10.5 since diagnosis
- Drugs: 63% on anti-pain, 81% DMARDS.

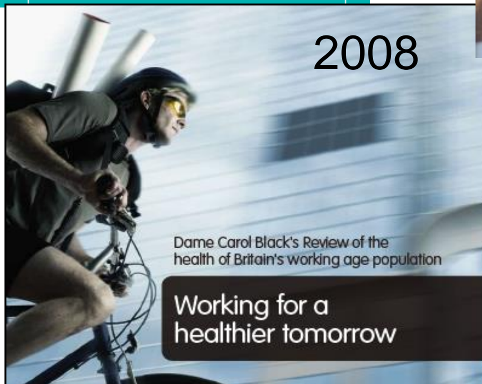
Government

2006

IS WORK GOOD FOR YOUR HEALTH AND WELL-BEING?

Gordon Waddell, A Kim Burton



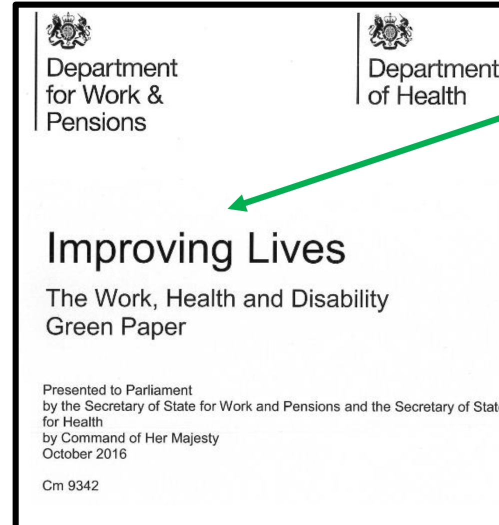


Health at work – an independent review of sickness absence

Dame Carol Black and David Frost CBE

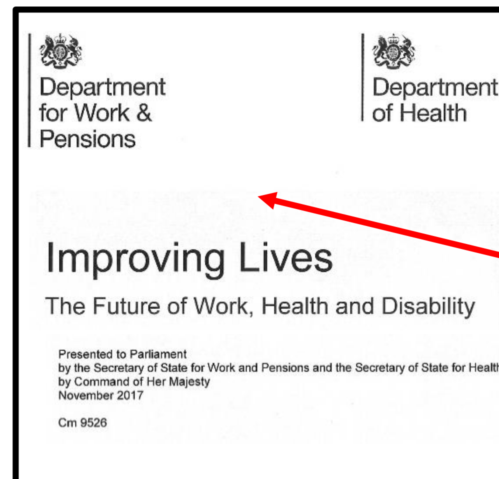
November 2011

Numerous reports prior to 2016



Green Paper October 2016 – for consultation.

Joint Work and Health Unit received 6,000 responses.



Government response, November 2017

Green Paper Nov 2016

In summary, the Government wants to :

- ensure that people with disabilities and/or long-term conditions have full access to labour market, plus support
- help employers take action to manage ageing workforce with increased chronic conditions, to keep people in work
- ensure personalised access to the right employment and health services, at the right time
- integrate more effectively health, social care and welfare
- put mental and physical health on an equal footing
- invest in innovation
- change cultures and mind-sets across all of society.

Gov't Response to Consultation on Green Paper

Improving lives: the future of work, health and disability

Some relevant themes in the strategy (which commits to 1 m more disabled people in work within ten years)

- **Raising the profile of work as a health outcome** with all healthcare professionals to recognise that good work improves good health and embed this practice better.
- **Reforming the Fit Note** so it is seen as an enabler for conversations about health and work, focusing on what people can do, not what they cannot do.

Gov't Response (cont'd) to Consultation on Green Paper

Improving lives: the future of work, health and disability

Further relevant themes in the strategy :

- **Developing the role of Occupational Health** to ensure effective OH services within and beyond the NHS, providing access for everyone including small businesses and the self-employed.

- **Improving provision and testing new models for MSK services,** the Government having recognised a particular focus on mental health and MSK conditions, the most common conditions affecting ability to work.

Gov't Response: Research Investment

- Continuing to invest in research to build understanding of existing provision across health and employment support.
- Also collaborating with MSK research centres to support thinking on potential research and intervention studies.
- Building on commitment in the Green Paper to identify routine data collection about MSK incidence, prevalence, clinical activity and outcomes.
- A Data Advisory Group led by Arthritis Research UK has been examining the issue.
- NHS England are currently facilitating transfer of the knowledge hub to ARMA in 2018/19.

Collaboration and progress

- ARMA : Tony Wolff
- Fit for Work Coalition
- Public Health England
- Business in the Community
- MRC & Arthritis Research UK
- Southampton University
- Arthritis Action
- Joint Work and Health Unit
  (DWP/DH)
- Council for Health and Work
- NHSE
- British Society of Rheumatology

  - and more….

Final thought ....

"If you keep on doing the same things, and expect things to change, that's insanity."

Albert Einstein