

# Supporting patients with musculoskeletal conditions to remain in work

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# Acknowledgements

- The work described today was undertaken as part of the Versus Arthritis/MRC Centre for Musculoskeletal Health and Work
  - Karen Walker-Bone (Univ. Southampton)
  - Gareth T Jones, Rosemary J Hollick, Linda Dean, Joanna Shim, Kevin Stelfox (Univ. Aberdeen), Ejaz Pathan (Aberdeen Royal Infirmary)
- The work includes data from the British Society for Rheumatology Biologics Register in Ankylosing Spondylitis

# Background

- The presentation will consider and use data in relation to a broad spectrum of musculoskeletal disorders
- Some of the studies presented relate to rheumatoid arthritis and axial spondyloarthritis (axSpA), inflammatory conditions affecting the joints (and specifically the spine in relation to axSpA)
- The clinical management of both conditions has been transformed with the introduction of biologic therapies targeting the inflammation in these and other arthritides

# Presentation Outline

- Predicting response to treatment amongst patients with axial spondyloarthritis
- What we know about outcomes for musculoskeletal disorders in people in rural (compared to urban) settings
- Outcomes and treatment responses (including work outcomes) amongst people with axial spondyloarthritis
- Making It Work™ - a programme to help people with inflammatory arthritis remain in work

# Predicting response to anti-TNF $\alpha$ therapy among patients with axial spondyloarthritis (axSpA): results from BSRBR-AS

Gary J. Macfarlane <sup>1</sup>, Ejaz Pathan<sup>2</sup>, Gareth T. Jones <sup>1</sup> and Linda E. Dean<sup>1</sup>

- According to specific criteria used, between 1 in 3 and 1 in 2 people with axSpA will have “responded” by the time of the first follow-up visit at around 3 months
- The factors which predict non-response were:
  - *Low socio-economic status; fewer years in education; not working full-time*
  - *Co-morbidities*
  - *Poor mental health*

# Predicting response to anti-TNF $\alpha$ therapy among patients with axial spondyloarthritis (axSpA): results from BSRBR-AS

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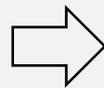
- The prediction models developed had good performance with Negative Predictive Value around 77%

# Identifying Persons with Axial Spondyloarthritis At Risk of Poor Work Outcome: Results from the British Society for Rheumatology Biologics Register

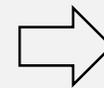
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- Of the 1188 included in the analysis, who were in paid work, during the past week 19% reported some absenteeism due to their axSpA while 79% reported an effect on their productivity (presenteeism)

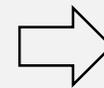
**High disease activity; Fatigue**  
**Labour-intensive job; Poor physical function**



**Presenteeism**



**Absenteeism**



**Leaving employment**

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# Do patients with musculoskeletal conditions living in rural settings have poorer outcomes?

- We conducted a systematic review to determine whether clinical and/or patient reported outcomes were poorer for people living in rural settings?
- Eight eligible publications, including 753 rural and 929 urban patients, evaluated outcomes in rheumatoid arthritis (5 studies) and osteoarthritis (3 studies). Studies were small, single centre, and rarely provided a definition of rurality.

# Do patients with musculoskeletal conditions living in rural settings have poorer outcomes?

- In RA some studies suggested greater functional disability and disease activity in rural dwellers.
- In OA, there was some evidence to suggest that rural dwellers presented with more advanced degenerative hip changes, and that illness perceptions and coping differed between rural and urban dwellers.
- No studies examined work outcomes.
- Potentially important confounding factors such as socio-economic status were rarely considered.

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- Making It Work™ - a programme to help people with inflammatory arthritis remain in work

## EPIDEMIOLOGICAL SCIENCE

# Outcomes and treatment responses, including work productivity, among people with axial spondyloarthritis living in urban and rural areas: a mixed-methods study within a national register

Rosemary J Hollick <sup>1,2,3</sup> Kevin Stelfox,<sup>1,2,3</sup> Linda E Dean,<sup>1,2,3</sup> Joanna Shim,<sup>1,2,3</sup> Karen Walker-Bone,<sup>4</sup> Gary J Macfarlane <sup>1,2,3</sup>

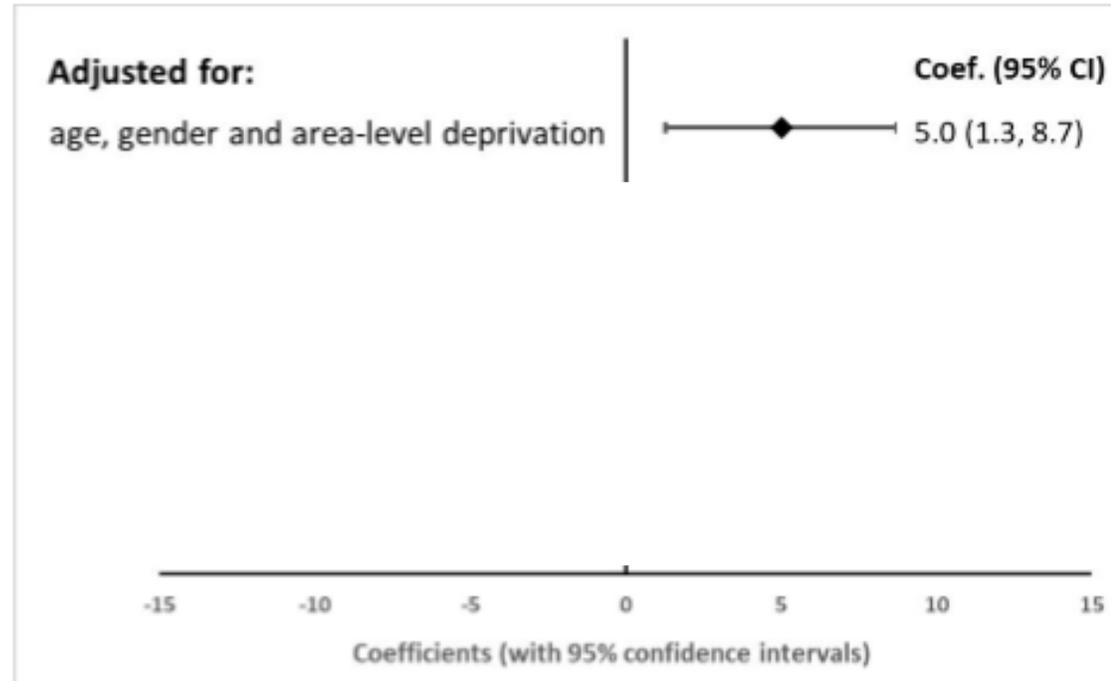
2390 BSRBR- AS participants eligible, of which 24% lived in a rural area.

Rural dwellers were:

- older (50.5 vs 47.4 years)
- less likely to be current smokers (15% vs 21%)
- more likely to be in a labour-intense job (54% vs 44%)

Overall 7% of people reported absenteeism in past week which did not vary according to residence

# Work outcomes in patients with axSpA living in rural areas: presenteeism



**Figure 1** Relationship between presenteeism and living in a rural area, adjusted for increasing number of factors. BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index.

# Work outcomes in patients with axSpA living in rural areas: interviews 1

- Nearly three-quarters of people interviewed recognised that axSpA caused them challenges at work. In particular, reduced mobility, pain and fatigue impacted physical and mental function at work.
- The impacts were sufficiently important that they influenced decisions about type of work, choice of career and working hours
- No matter what the physical demands, those who reported autonomy and control on how and when to perform specific tasks were able to cope better at work and more likely to stay in that job.

# Work outcomes in patients with axSpA living in rural areas: interviews 2

*“They’ve been really good...they got me a more ergonomic chair and I’m allowed to get up if...when I need to, sort of every half an hour I’ll get up and have a little stretch and walk down the corridor and then come back to my desk”*

*“The management within the company is very old- school and they’re not very flexible at all. They don’t promote working from home, they don’t like people coming in late, they don’t like people coming in early...the management have got clean bills of health, so they expect everyone else to”*

- Some participants reflected that their experiences with Human Resources seemed punitive, rather than supportive, with a lack of understanding of the difference between minor illnesses and a long- term condition like arthritis

# Work outcomes in patients with axSpA living in rural areas: interviews 3

- Disclosure to employers
- Commuting to and from work
- Effects of medication on work
- Role of the rheumatology team

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# Making It Work™



A 5-week on-line educational program designed to help people with inflammatory arthritis stay employed for as long as they wish to work.

- self-learning modules aimed at enhancing self-management of work-related problems,
- includes group sessions
- individualised assessments by employment-related health professionals aimed at job retention: an ergonomic assessment by an occupational therapist and job retention vocational rehabilitation counselling.



*Dr. Diane Lacaille, CI*

# Making It Work™



**STUDY PROTOCOL**

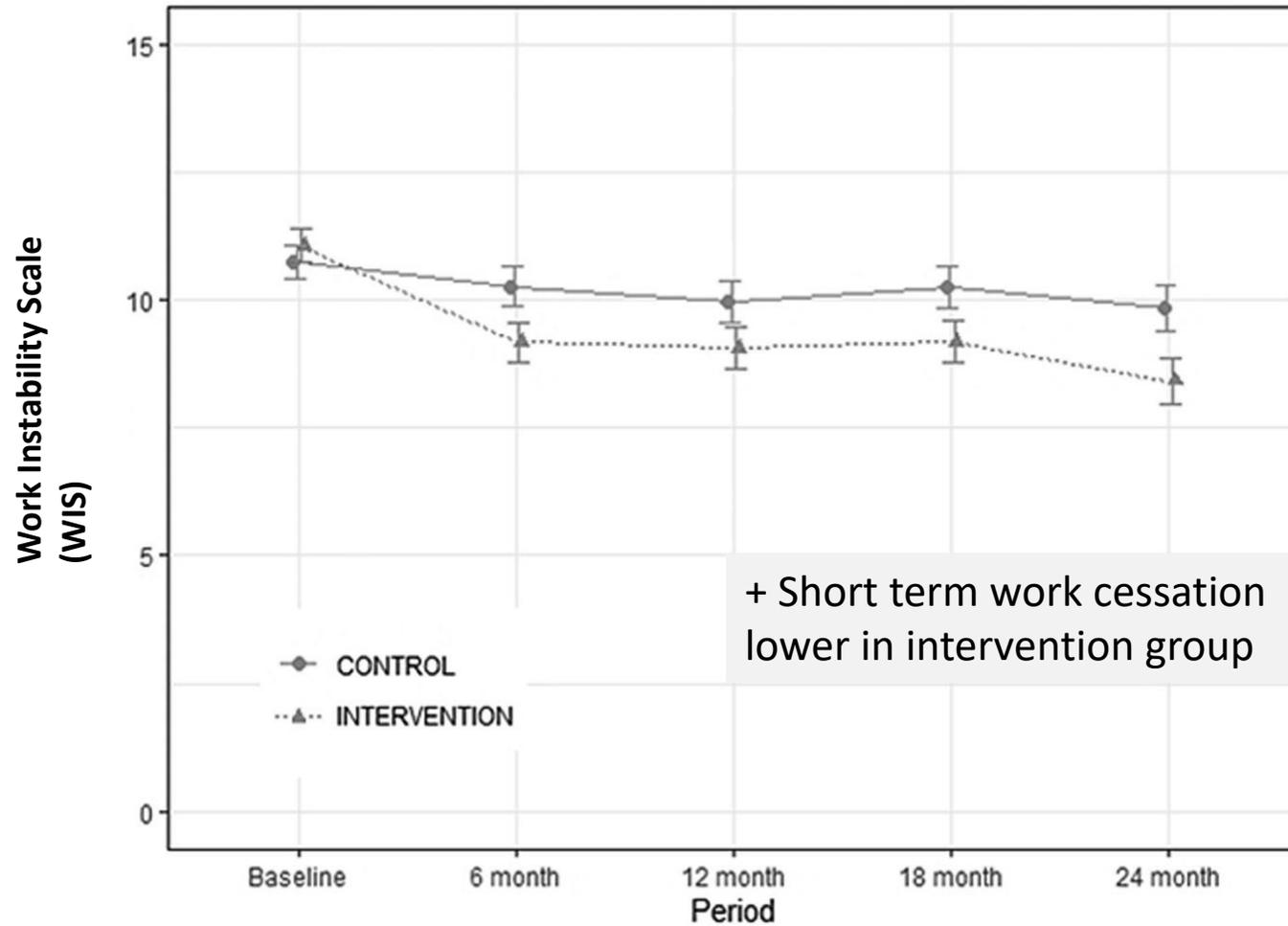
**Open Access**

“Employment and arthritis: making it work” a randomized controlled trial evaluating an online program to help people with inflammatory arthritis maintain employment (study protocol)

Erin C Carruthers<sup>1</sup>, Pamela Rogers<sup>1</sup>, Catherine L Backman<sup>1,2</sup>, Charles H Goldsmith<sup>1,3</sup>, Monique A Gignac<sup>4</sup>, Carlo Marra<sup>5</sup>, Judy Village<sup>6</sup>, Linda C Li<sup>1,7</sup>, John M Esdaile<sup>1,8</sup> and Diane Lacaille<sup>1,8\*</sup>

# Making It Work™

Mean (with standard error) Work Instability Score  
in allocated groups throughout trial



# Summary

- Overall there has been very little research examining outcomes of care for people with musculoskeletal health conditions in rural settings
- We have provided evidence that there may be a greater impact on work productivity for persons living in rural areas
- Flexibility appears to be a key issue in relation to staying in work
- There is an opportunity to design programmes to support people with musculoskeletal conditions, who wish to do so, to remain in work.