Mining Forum

David Brentnall

Specialist Musculoskeletal Physiotherapist

[*David Brentnall, Specialist Musculoskeletal Physiotherapist presenting with a PowerPoint presentation to an audience from front of stage*]

David Brentnall, Specialist Musculoskeletal Physiotherapist speaking:

Thanks everyone for inviting me. I'm David Brentnall. I'm a specialist musculoskeletal physio and I work with Axis Rehab.

Today, my topic is good practice in acute injury management of work related MSD's and I'll make special reference to shoulders and neck and back as requested.

[*Slide saying "Good practice in acute Injury management of common and complex work related MSDs – Shoulders and neck/back problems."*]

There's time for questions at the end and you might have some specific cases that we can bring up that are related to those areas of the body.

[*Slide saying:*

"1. Early intervention and RTW.

2. Consistent message essential.

3. Predictors of poor recovery from acute injury are non-physical.

4. Unnecessary investigations associated with poorer outcomes."]

Along the way I want to argue four central propositions. The first is that early intervention is the key. That's early access to rehabilitation if required and early return to work.

The second point is that good practice needs a team of people with a consistent message.

The third is that predictors of poor outcomes are psychosocial rather than being physical. So physical capacity at the beginning of an injury, ability to bend forward and backwards and things like that, are not predictive of good return to work and it's the psychosocial factors that are most important.

And the fourth is that unnecessary early investigations are not helpful and they're associated with poorer outcomes.

[*Slide saying "Good practice in acute Injury management of common and complex work related MSDs – Shoulders and neck/back problems."*]

For the purpose of today, good practice is evidence based practice and it's that sort of practice that gets the best return to work outcome.

[*Slide saying "An Acute Injury is one that:*

A It a very painful – generally greater than 5/10 pain.

B An injury that occurred 0 to 6 weeks ago."]

An acute injury, and I need your help here. An acute injury is one that A, is very painful and in general greater than 5/10 pain or is it B, an injury that occurred between zero and six weeks ago?

Bs? Okay. That's right. So acute injury refers to a timeframe and that's an injury that occurred within the last six weeks.

[*Slide saying "An Acute Injury is one that:*

B An injury that occurred 0 to 6 weeks ago"]

The next period immediately after that is a subacute injury – six weeks to 12 weeks – and then beyond 12 weeks is considered chronic and this corresponds somewhat to a tissue healing model wherein that first zero to 12 weeks tissues should have healed and in a chronic phase persistent pain problems can be from other factors.

But what I'm talking about primarily today is that very early period, zero to six weeks.

[*Slide saying "Good practice in acute Injury management of common and complex work related MSDs – Shoulders and neck/back problems."*]

What's an MSD? It's a musculoskeletal disorder and for the purpose of today's discussion I'll be talking about soft tissue injury, so I'm excluding bony injuries and fractures.

And when we're considering soft tissue injuries, it's an injury to muscle, joint, ligament, cartilage, disc, tendons or connective tissues.

[*Slide saying "Soft Tissues:*

- *muscle;*
- *joint;*
- *ligament;*
- *cartilage;*
- *disc;*
- *tendon; or*
- *connective tissues."*]

Any good practice in acute medical and acute rehabilitation management begins with excluding red flags.

[*Slide saying:*

"Red Flags for potentially serious conditions:

- *Bilateral neurological symptoms and signs;*

- *Significant trauma;*
- *Weight loss;*
- *History of cancer;*
- *Fever;*
- *Steroid use;*
- *Severe, unremitting night-time pain; and*
- *Sympathetic changes."*]

[*Image of a red flag*]

Has anyone heard of red flags before? So this is excluding illness that's not musculoskeletal in origin and that can be that the source of the problem is an underlying infection or that it's a cancer or that it's some other systemic illness and there's questions and there's examinations that medical people perform to exclude that, but first and foremost as part of good practice that would be done right from the beginning.

[*Slide saying:*

"Causes of soft tissue injuries:

- *Single quick or intense event.*
- *Multiple event injury-overuse.*

Wear and tear injury, minor injuries that build-up over time."]

[*Image of a lady on crutches and of a man holding his wrist while using a laptop*]

Okay. Soft tissue injuries are caused by two types of events. One is a single quick or intense event and one is a multiple injury event. We might call that an overuse injury or wear and tear type injury where minor injuries build up over time.

[*Slide saying:*

"Overuse:

Initially might feel like an ache, hot, tired, sore, crampy. What is actually happening?

- *Excessive awkward positions, loading or stretching.*
- *Strained and not allowed time to recover.*
- *Fatigue/Inflammation/micro-tears."*]

[*Images of a strained muscle and normal muscle tissue*]

Those sorts of injuries that build up over time have early warning signs. These are the early warning signs that many of us ignore and that can be a feeling of ache, hot, tired, sore, crampy feeling. I'll add the word fatigued feeling – and you may feel this in the shoulder or you may feel it in the back and that's a precursor of these cases that can go on and be an actual injury or in your case an actual claim.

So what's happening? Excessive awkward positions or excessive loading or stretching causes strain to soft tissues and there's not enough time for those soft tissues to recover. We get a process of fatigue and inflammation and micro-tears and then that process goes on to be an actual injury and a claim that we're dealing with.

[*Slide saying:*

"Causes of soft tissue injuries:

- *Single quick or intense event;*
- *Multiple event injury-overuse; and*
- *Wear and tear injury, minor injuries that build-up over time."*

[*Images of a lady on crutches and of a man holding sore wrist whilst using a laptop*"]

Interestingly if I go back a slide, within the workers' compensation environment we're looking to put things in that are quick intense single environment, where we're looking for a single lift or a single activity that people were doing, when in fact possibly that multiple things had occurred prior to that one event and a quick example is lifting a box. You can lift a box that's five kilograms and you've been doing it all day and then you get a strain, as opposed to lifting a 30 kilogram box where the load moves and that would be a single event and the others not.

[*Slide saying:*

"Early physiotherapy. Compare 3867 Acute LBP:

1. *Early intervention: 48 hours (n = 1379)*;
2. *Intervention delivered 2-7 days following injury (n = 2005); and*
3. *Delayed intervention of >8 days following injury (n – 483).*

Zigenfus, G.C., et al., Effectiveness of early physical therapy in the treatment of acute low back musculoskeletal disorders. J Occup Environ Med, 2000. 42(1): p. 35-9."]

Alright. So early intervention. My first proposition was that early intervention was the key, but does the evidence support this? Let's begin with physiotherapy and there will be discussion around, particularly at mine sites in terms of access to things like early physiotherapy that are challenges, but this is what the evidence suggests.

In a study that looked at nearly 4,000 cases of acute lower back pain, they broke them up into three groups, depending on how quickly they had access to physio.

The first group had early intervention and they had access to physio within the first 48 hours, the second group was zero to seven days and the third group was after eight days and you can see the numbers there. You can see that in the first group there are around 1,300. The second group 2,000 for that first week and the last group was nearly 500 injuries.

[*Slide saying "Early physiotherapy. Compare:*

1. Early intervention: 48 hours (n = 1379)

Zigenfus, G.C., et al., Effectiveness of early physical therapy in the treatment of acute low back musculoskeletal disorders. J Occup Environ Med, 2000. 42(1): p. 35-9."]

And what they found was that the early intervention group, the group that was seen within the first 48 hours was superior to the other two groups. Superior to the seen within two to seven days and superior to those seen after eight days, in terms of they had fewer doctors visits, they had fewer restricted work days – fewer restricted work days, as well as fewer lost days and they had shorter case duration.

[*Slide saying "Early physiotherapy. Compare LBP cases:*

1. Early physiotherapy interventions < 3 days.

2. Minimum of 7 days prior to commencement of physiotherapy.

Results:

Early intervention: Significantly decreased not only the incidence of chronic pain, from 15% down to 2% but also reduced the amount of lost time from work.

Linton, S.J., A.L. Hellsing and D. Andersson, A controlled study of the effects of an early intervention on acute musculoskeletal pain problems. Pain, 1993. 54(3): p. 353-9."]

In another study performed by Linton, in this particular case they broke them up into two groups. Those seen within three days and those seen after seven days and there was obviously a gap, a period where they didn't consider those. So it was either early intervention or it was considered somewhat later intervention and what they found was that those that were seen within the first three days had about a 2% chance of having persistent symptoms when – at a chronic phase which we all now know is at 12 weeks. So there was 2% when they were seen earlier and when it was seen after seven days it was much higher at 15% went on to the chronic phase.

They also noted that it was a decrease in the amount of lost time in the early intervention group as well.

So early physiotherapy is good, but what's the physiotherapy look like?

[*Slide saying:*

"What Physiotherapy?

1. Active rehabilitation – not just symptomatic relief was an effective way of speeding up RTW and reducing work loss in the long term (Karjalainen 2001).

2. Combined manual therapy and exercise produce greater short-term pain relief than exercise or manual therapy alone.

3. *Early and continued contact between health care provider and the workplace reduces duration of lost time (Franche et al 2005)."*]

It's active rehabilitation, it's not just symptom relief. So it's not going into physio and lying on a bed, starting with a hot pack, having a bit of a massage. Physio is getting a bit fitter doing the exercise and the

patient's lying there – there needs to be an active phase of rehabilitation and that starts off small, the active component and gets bigger very early on.

But when there's active rehab we know that that speeds up return to work and it reduces lost time.

In terms of should we be doing hands on physio at all? Combined hands on physio or manual therapy plus exercise therapy has been shown to be more effective than hands on therapy alone or exercise therapy alone.

And we now know and all you guys know this, that early contact with the health professional and the workplace results in better outcomes.

[*Slide saying:*

"Early RTW:

Clear evidence that early RTW on suitable duties is the part of good acute injury management. Ideally the worker would REMAIN AT WORK"]

This is one slide in my whole talk but basically early return to work is the beginning and end of things. If you're able to achieve this, lots of other things are going right that I'll talk about today in the background – doctors are on the right page, the physios are on the right page, supervisors and the actual worker themselves.

But this is the single most – singular most important factor to get a good outcome and ideally the worker will remain at work as Matthew alluded to before.

[*Slide saying:*

"Consistent Message. Some people involved in the message:

- *Worker;*
- *Supervisor;*
- *Doctor;*
- *Physiotherapist;*
- *Family members;*
- *Neighbours; and*
- *Aunty Shirley"*]

Alright. My second proposition was that we need a consistent message, we need a team of people with a consistent message and in terms of the people that are involved, we have the worker. and the top three are the first most important. The most important person, the person who is most likely to influence a good return to – a good outcome and return to work, that's the worker. They're number one. The second most important person is the supervisor and the third most important person is the doctor.

If we begin with the worker, they bring with them their previous history of experience with injuries. Injuries at work. How quickly they returned to work. Their view on injuries and return to work and their view of work and how happy they are with work.

Supervisors bring either a positive or negative experience – addition to the situation, depending on whether they're supportive and accommodating or whether they're not being helpful.

And the doctor does the same thing. They bring – it's well known and there's been lots of studies to show that doctors' beliefs about return to work and doctors' beliefs about injuries and how injuries recover are passed on to their patients. So hence they're the third most important person. and look the same applies from physiotherapists.

And then there's everyone else. There's family members, neighbours and Aunt Shirley who strained her back and was told she'd never walk again.

I had a bit of fun with this next section looking at some things that come up in terms of this consistent message and so we're going to go through some true or false questions here.

[Slide saying:

"True or False….

Soft tissue injuries can initially be quite painful and debilitating?"]

And okay, so we're focusing on the acute phase of things. True or false? Soft tissue injuries can initially be quite painful and debilitating?

Audience Member:

True.

[*Slide saying:*

"True or False….

The amount of pain associated with these injuries is a good indicator of the severity of the condition?"]

David Brentnall:

True or false? The amount of pain associated with these injuries is a good indicator of the severity of the condition?

Audience Member:

False.

David Brentnall:

False.

[*Slide saying:*

"True or False….

Waiting for all pain to completely go away before resuming usual activities can improve recovery?"]

True or false? Waiting for all the pain to completely go away before resuming usual activities can improve recovery?

Audience Member:

False.

David Brentnall:

False. We now know that's absolutely not right.

[*Slide saying:*

"True or False….

Identifying the specific tissue which is causing symptoms (for example through scans or x-rays) is not always necessary to effectively treat the injury?"]

True or false? Identifying a specific tissue which is causing symptoms (for example through scans or x-rays) is not always necessary to effectively treat an injury?

Audience Member:

True.

David Brentnall:

True.

[*Slide saying:*

"True or False….

Research shows that resting in bed for about a week can assist with recovery from acute back pain?"]

True or false? Research shows that resting in bed for about a week can assist with your recovery of acute back pain?

Audience Member:

False. We now know that actually slows down your recovery.

[*Slide saying:*

"True or False….

Studies in back pain have shown that bed rest beyond 48 hours can negatively affect recovery?"]

David Brentnall:

True or false? Studies in back pain have shown that bed rest beyond 48 hours can negatively affect recovery?

Audience Member:

True.

David Brentnall:

That is true. So 48 hours in big studies is the number. We don't want people to rest in bed for 48 hours, we want them to try and resume normal activity when they can. But that's the tipping point of bad.

[*Slide saying:*

"True or False….

Early return to work on suitable duties doubles the chance of a successful return to work?"]

True or false? Early return to work on suitable duties doubles the chance of successful return to work?

That is an old study now, but it was a review of many studies and it's still often quoted.

[*Slide saying:*

"True or False….

You can diagnose a disc injury from a physical examination?"]

True or false? You can diagnose a disc injury from a physical examination?

Now this is a harder one. We're getting into the harder ones. So this is an examination a doctor would do or an examination a physiotherapist would do and the answer is false. You can't diagnose a disc injury by doing a physical examination, but we hear of it all the time. We hear physios saying "you've injured your disc". You also have physios saying "you've injured your facet joint," okay?

[*Slide saying:*

"True or False….

Audience Member:

You cannot RTW till we have a diagnosis?"]

Alright, true or false? You cannot return to work until you have a diagnosis?

False.

[*Slide saying:*

"True or False….

You cannot start physiotherapy until you have a diagnosis?"]

David Brentnall:

True or false? You cannot start physiotherapy until you have a diagnosis?

Audience Member:

False.

[*Slide saying:*

"Other comments that don't help:

- *The radiographer said it was the worst rotator cuff tear he had seen.*
- *The physio said I cannot lift more than 5kg until my core is strong.*
- *The physio said I will not get better while I remain at work.*
- *The physio said it is my disc.*
- *Worker: I had a lot of disc pain yesterday.*
- *Don't come back to work till you can do the full job.*
- *Worker: I am not better because I returned to work too early.*
- *It's a whiplash!!"*]

David Brentnall:

Now this mishmash of other comments. The radiographer said it was the worst rotator cuff tear he'd seen. The physiotherapist said I cannot lift five kilograms until my core is strong. I'm going to bash physios for the next two. The physio said I will not get better while I remain at work.

And look, I've been there. When I was a young physio and people weren't getting better, I said to them "Look…" – because you know, you try and half own their problem as a young physio and you're trying to do the right thing and get people better and when they're not getting better you start telling them how bad they are as to why it's not your fault that they're not getting better and if it's a work related injury and you start dreaming up all this stuff about discs, you start negatively worrying them and I did it as a young physio and it still happens.

So the physiotherapist said it's my disc and then the worker, "I had a lot of pain in my disc yesterday," – I get that – or "I had a lot of pain in my facet". And so these are all terms that have been told to them and negatively influencing their belief about what's going on.

A supervisor saying don't come back to work until you can do the full job, the worker saying – I do lots of independent case reviews, so I'm reviewing cases that aren't going well. Rob called it the other day, an assessment call – why is it taking so long assessment – and one of the questions I ask them is "Why do you think it's taking so long and why don't you think you're getting better," and one of the – 30% of people will say "I'm not better because I returned to work too early". Now that's part of their belief system, but they're looking for other people like the physios to jump on board with those sorts of thoughts.

And, "It's a whiplash". Now studies are being done in motor vehicle accidents and if people get told that they've got a whiplash versus they've got a neck strain, they do more poorly. They have greater periods of disability and their outcome is more poor and the reason I bring that up is I've seen injuries in workplaces where one is from a mining site and a guy was sitting in a truck and a loader was – a digger was loading dirt into the back and it was dropped from a larger height and they got a fright and someone along the line told this person that it actually was more than a neck strain, it was a whiplash and this was a case that they didn't return to work for six months – a real, real disaster.

And the same when people slip over and someone inadvertently says along the pathway that "You did slip over, but you're not getting better because it's a whiplash".

[*Slide saying:*

"Psychosocial Factors predictive of RTW:

- *Physical factors alone are not predictive of RTW.*
- *Psychosocial factors can be assessed eg Acute LBP screening Tool.*
- *80% accurate for predicting RTW at the end of physio treatment when utilised before physiotherapy commenced.*
- *With 74% accuracy it can identify those that would require more > 7 sessions of physio.*
- *High risk workers can be targeted with more intense interventions."*]

Alright. So my third premise was that psychosocial factors predict poor return to work outcomes and in fact physical factors alone are not predictive of return to work and there's been some study into this area and I thought this might be interesting for those of you in remote areas and areas with less access to medical care and physiotherapy.

But there's some biopsychosocial screening tools that can be used to help predict those cases that aren't going to go so well and one of those is the acute lower back pain screening tool. It's been shown to be 80% accurate when used before physio started – so you can use it before physiotherapy started – 80% accurate in identifying what cases won't return to work by the end of the physiotherapy program and they were 74% accurate in identifying people that will require more than seven sessions of physiotherapy.

So the big message here is in terms of your remoteness, if you're looking at spending resources, there are tools that can help you identify people where you can target your resources towards, even before they start physio. My talk is about acute care and good acute management might identify some of these people early on.

Alright. But the message I want to reiterate is it's not physical factors, it's psychosocial factors that predict that.

My fourth and final proposition is that unnecessary early investigations are not helpful and associated with poorer outcomes.

This is a new study that was just published in November late last year and it's a review of the literature looking at CT and MRI changes in pain free individuals. So the following slides are individuals who are asymptomatic in lumbar – for their lumbar spine conditions and they looked at lots of different variables – degeneration, disc bulge, disc protrusion, spondylolisthesis, facet joint degeneration.

[*Graphic "MRI changes in pain free individuals.*

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ORIGINAL RESEARCH

SPINE

Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Populations

W. Brinjikji. P.H. Juetmer, B. Comstock, B.W. Bresnahan, LE. Chen, R.A. Deyo, S. Halabl, I.A. Turner, A.L. Avins, K. James, J.T. Wald, D.F. Kallmes and J.G. Jarvik "]

I'll show you a couple of graphs with age related changes in these asymptomatic people.

Alright, here's the first one, disc degeneration.

[*Image of graph of Disc degeneration in asymptomatic patients*]

So I might just pick an age. Let's say 50. There's an 80% chance that if you're a 50 year old and you're a truck driver or you're an anything, that you'll have disc degeneration at age 50. Okay? These are asymptomatic individuals.

[*Image of graph of Disc bulge in asymptomatic patients*]

Disc bulge – if we choose the age 50 again, there's a 60% chance you'll have a disc bulge – asymptomatic.

[*Image of graph of Disc protrusion in asymptomatic patients*]

Disc protrusion – if you're 50 year old it's about a 36% chance you'll have a disc protrusion.

And this is unhelpful, but we know that these – this population of asymptomatic individuals have these symptoms, then when people have a sore back and they go on and have these sorts of scans, they attach their symptoms to these structures that may or may not be true.

[*Image of graph of Facet degeneration in asymptomatic patients*]

Facet degeneration – note the slower process in facet degeneration is normal.

[*Image of graph of Spondylolisthesis in asymptomatic patients*]

And spondylolisthesis a little bit slower as well, but present. These are all asymptomatic individuals.

[*Graphic "ORIGINAL ARTICLE*

Relationship of Early Magnetic Resonance Imaging for Work-Related Acute Low Back Pain with Disability and Medical Utilization Outcomes

Barbara S. Webster, BSPT, PA-C and Manual Cifuentes, MD, MPH, ScD

JOEM • Volume 52, Number 9, September 2010"]

So why is that important? Well in 2010 Webster and others looked into early MRI for acute lower back pain and saw how the outcomes of whether people had an MRI or not influenced their outcome and they pulled this data out of WorkCover authority in the USA.

They found that of the cases that they saw – and there was over 3,000 cases that they looked at – 21%, 21.7, had an MRI and on average that was done at the two week mark. So 21.7%, on average it was done at the two week mark.

Interestingly, if you do an MRI and someone doesn't get better, what you do is you do another MRI. Eighteen% of those had a repeat MRI and what the study found was – they separated the two groups whether you had an earlier MRI or whether you hadn't and what they found that – one of the benefits of the study was these good numbers, more than 3,000 people. It is an observational study, so we need to be careful about interpreting the results. But what they estimated was that MRI could worsen the severity in terms of disability, the medical costs and they were at larger risk of going on to having surgery.

[*Slide saying "Rotator Cuff Tears in Asymptomatic Individuals*

An MRI study found a 34% rate of full-thickness tears in 96 asymptomatic volunteers.
Sher et al 1995

When looking at patients over the age of 60 years, the prevalence increased to 54%.
Templehof et al 1999"]

I was asked to talk about shoulders as well. MRI found 34% of asymptomatic shoulders in this Sher study that's reported a lot had full thickness rotator cuff tears and Templehof found that 54% of people over 60 had rotator cuff tears.

Now these are full thickness tears both those studies and for partial thickness tears. The graph sort of looks like some of the other ones we showed before.

[*Slide saying:*

"AIM:

Assess Inform Manage and monitor

- ***A**llow sufficient time during a consultation to discuss and identify beliefs, expectations and fears that workers might have about their condition and its management.*
- ***A**im to early identify and address factors that may influence management. These include the occurrence of trauma and other red flags, psychosocial factors including yellow flags.*
- ***A**void imaging (plain X-ray, MRI or CT) in the early management of workers with low back pain unless justified by a clinical suspicion of a serious underlying condition (a red flag).*
- ***A**ssess the worker's ability to return to safe and suitable work.*
- *WorkCover Corporation of South Australia. Managing acute-subacute low back pain - Clinical practice guideline. March 2010 [cited 2014 14 November"*]

I found this – so they're my key points. MRI definitely has a role if people have red flags, but one of the – one of the studies in particular highlighted that most of the individuals that were going and having these MRIs in general didn't have red flags.

Now I found this yesterday. It's from the WorkCover South Australia website and it sort of summarises – you'll be able to find it yourselves. It summarises some of the key points that I've talked about today and they break it up into an acronym AIM, which starts with assess – and this is directed towards medical professionals and physiotherapists who are providing care in that sort of …environment.

Allow sufficient time in the consultation to discuss and identify beliefs, expectations and fears that workers may have. So it's a psychosocial thing. So do that right from the beginning.

These are – this is a direction for acute back pain I should add, so these are acute cases.

The second one, aim to early identify and address factors that may influence management. These include red flags and psychosocial yellow flags.

Avoid imaging like we've mentioned, unless there's a red flag. Assess the worker's ability right from the beginning to return to work on suitable duties.

Okay, the inform section.

[*Slide saying:*

"AIM:

Assess Inform Manage and monitor

- ***I**nform the worker that pain does not mean the injury is getting worse – explain the difference between hurt and harm.*
- ***I**nstruct the worker to gradually resume normal activity despite some pain. Bed rest should be discouraged.*
- ***I**nform the worker that in the majority of cases the most accurate diagnosis is 'non-specific low back pain'.*
- ***I**nform the worker that most low back pain regardless of diagnosis is treated in the same way."*]

Inform the worker that pain does not mean it's getting worse; explain the difference between hurt and harm.

Instruct the worker to gradually resume their normal activity despite pain. Bed rest should be discouraged.

Inform the worker that in the majority of cases an accurate diagnosis is not required and specific lower back pain is okay.

Inform the worker that regardless of diagnosis many back pain are treated in a similar way.

And the manage and monitor.

[*Slide saying:*

"AIM:

Assess Inform Manage and monitor

- ***M**anage an early return to work by discussing suitable work duty options with the worker and the workplace.*
- ***M**anage each worker using an approach that includes awareness of the individual worker's psychosocial issues, advice, education and exercise.*
- ***M**onitor and assess the progress of the worker using regular reviews and measures of symptoms and function.*
- ***M**ake it a priority to activate a structured workplace intervention (eg. Graded activity, worksite assessment, contact with the employer) for workers who have not returned to work after four weeks.*
- ***M**ake a referral to a workplace rehabilitation provider via the worker's case manager if recovery is not as expected."*]

Manage and monitor an early return to work, managing psychosocial issues, as well as giving advice and education and exercise.

Monitor and assess the progress of the worker and making structured workplace intervention such as worksite assessments if they're struggling to get back within four weeks, which depending on where you come from seems like a long period of time.

[*Slide - Image of skeleton*]

Okay. Now I sped that up because I started late. We've got time for questions and then if you're struggling I've got two questions also that – I had to give a talk on shoulders recently and I've got those.

Any questions first?

Audience Member:

I've got one and it's partly comment, partly question. So as a health professional, you know, around the asymptomatic cases and use of imaging and those sorts of things, I agree 100% and that's something that we really do try and avoid in our rehab. But having said that, we also then have the – I guess the counterintuitive side of that where from a business perspective we're needing to mitigate risk in terms of our employment practices and those sorts of things and I've had the argument from GMs saying why don't we give – MRI everyone before they come on site so we can check how their back is, you know. So I guess, you know, there's got to be a point in that where it works and Rob probably knows a fair bit about this doing, you know, the pre-employment type work that he does, but how – I guess how do we balance that from a risk mitigation perspective? I mean we may have the inspectorate asking questions about what did we do to mitigate the risk of exacerbating a pre-existing injury or something like that that comes out. That balance, how do we find that?

David Brentnall:

Rob, do you want to make comment or…

Rob, Audience Member:

Yeah, I mean it is a balance isn't it, because we do know that in cross-sectional data when you do try and do that intervention, that investigation – the first part of your point – it does worsen across the board people's outcomes. But that's still just cross-sectional. So there are individual cases where I think an investigation helps in that person's journey to getting better. But like any investigation you need to talk to them before you get the result because the radiologists report all sorts of different things.

How to manage – how to get outcomes on [*inaudible*] back pain I guess is my next presentation. How do you stop it and what can you do at either primary, secondary or preventative, tertiary prevention and they're challenges but I'll put forward some ideas for it.

Audience Member:

It's a little bit of a belief system thing too I think, because we're looking to assign – as much as our patients are … we're looking to assign the blame somewhere and say this is the cause of this injury. Therefore am I liable? Am I not liable? … Everyone seems to be – I mean, counterintuitive to what you've just said which suggest a lot of these findings would appear anyway. We're trying to assign blame then on the basis of the findings.

Rob, Audience Member:

Exactly. Yeah.

Audience Member:

It's not really about recovery at that point.

Rob, Audience Member:

No, that's exactly true.

Audience Member:

Which is, I don't know. Unlikely to change, but it's going to be a conflict.

Audience Member:

I might say as an inspectorate I don't know what industry you're from but I cannot see any inspectorate expecting that you would be doing MRIs in a pre-employment screening program.

Rob, Audience Member:

No. I haven't heard of any companies doing it.

Audience Member:

No. So like I said, I think – you know, again I can only speak on behalf of the mines inspectorate and we do have our medical advisor as well, but I cannot see that it would be an expectation that pre-employments include MRIs.

Audience Member:

But I guess in terms of an expectation – and our aim is to make sure that we're not putting people at risk. We don't want to employ people and put them in a role where they're at risk and if we do and inadvertently there was something that we were not aware of – it's right to place scrutiny on the processes that we put in place to try and identify a mitigating factor and so my comments about where – finding that balance as an industry – so I work for BMA.

So as a business it's about us trying to find that point where – how many questions can we ask, do we want to ask and is it appropriate to ask to balance that so we're not putting people at risk and to demonstrate we are actively seeking to mitigate it.

David Brentnall:

Yep. Is there any other questions?

Audience Member:

On that point about asymptomatic discs and rotator cuff tears, has there been studies to suggest how many of these became symptomatic?

David Brentnall:

No, I don't think they've followed them up.

Audience Member:

I guess sometimes it is a precursor to injury down the track and it's just…

David Brentnall:

Yeah. It's one of those challenging medical questions answering those sorts of questions. However we do – yeah, we don't know.

[*Slide saying:*

"Your Questions:

- *Common mistakes by PTs regarding treatment for impingement – what workplace rehab practitioners need to watch for.*

- *PT view on things to look for in regard to the function of the shoulder to determine when ready to progress in load and elevation."*]

The two questions quickly that were asked of me when I was talking about shoulders recently – these are questions that were just emailed through to me and I just cut and pasted them in. Common mistakes by physios regarding treatment for impingement and what workplace rehab practitioners need to watch for and the second one was physiotherapy view on things to look for in regard to the function of the shoulder to determine when they're ready to progress with load and elevation. So if we do that in the context of an acute injury.

The biggest thing that I see missed and when I'm reviewing cases is (a) the obvious thing, that actually there's no rehab occurring in the process and it's a very passive approach to physiotherapy and sometimes when exercises are occurring, what's happening is it's ignoring the intended function of the shoulder and the intended function of the shoulder is that you can do this and you can lift things above your head. And what we see is we see lots of rehab occurring in zero degree shoulder elevation, which – and shoulder rehab is angle dependent, so your ability to strengthen doing stuff up here has to occur up here and we see lots of rehab that occurs down low and it doesn't transition towards, you know, mimicking some of these work tasks that people have to do, overhead tasks.

And then that sort of leads into the second part of the question. If you're doing rehab in those sorts of angles, it's really easy to know exactly what they're at in terms of managing load from a return to work point of view.

That's my little bugbear on shoulder rehab. It all happens down here and shoulders are designed to do things up top.

And that's my time.

Thanks.

(Audience Applause)

[End of Transcript]