

Causation: Appropriate Medical Determination of Work Place Exposure

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AMERICAN SOCIETY for SURGERY OF THE HAND

SDPM Society for Disability Prevention & Management

AAOS American Association of Orthopaedic Surgeons®

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The Hand Center ORTHOPAEDICS OF THE HAND & UPPER EXTREMITY

ACOEM AMERICAN COLLEGE OF OCCUPATIONAL MEDICINE AND ENVIRONMENTAL PHYSICIANS

KU SCHOOL OF MEDICINE WICHITA

A Community - Based Medical School Campus

- About the Campus
- Campus Resources
- Departments
- Dean's Message
- Medical Education
- Patient Services

American Academy of Orthopaedic Surgeons®

AAOPOS AMERICAN ASSOCIATION OF OCCUPATIONAL PHYSICIANS OF THE HAND SURGEY

ReedGroup

AADEP AMERICAN ACADEMY OF DISABILITY EVALUATING PHYSICIANS

Physical Health Insights, LLC Detection and Prevention of Injury

100 North Wacker Drive, Suite 1420 - Chicago, IL 60606 - Phone: 800.458.8000 - Local: 312.858.1171 - Fax: 312.858.1175 - E-mail: aaadep@aaadep.org

Declare

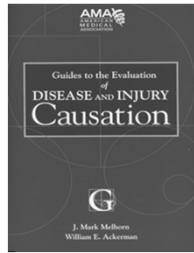
- The Hand Center
- MAP Managers, owner of CtdMAP
- PHI = Physical Health Index – Health Assessment
- Books: Physician's Guide to Return To Work, Guides to the Evaluation of Disease and Injury Causation, etc
- Professional Organizations: ABA, AMA, AADEP, AAOS, ACOEM, ASSH, AAHS, IAIAABC, SDPM, etc
- Organizations: MDA, ODG, SEAK, etc
- Speaker: multiple national and state level organizations
- Reviewer: multiple journals and books
- Any other task or job that will improve outcomes for injured workers

Occupational Health

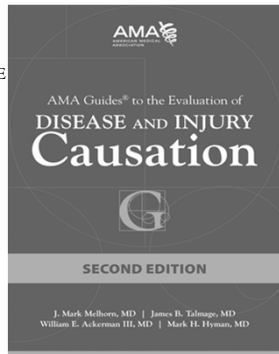
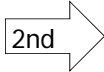
5 Primary Issues

1. Dx – what we do best
2. Causation – who is responsible for costs
3. Treatment – cost of care & outcomes
4. Return to Work – disability duration
5. Impairment & Disability – final costs

AMA Press



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FINANCIAL CONFLICT OF INTEREST

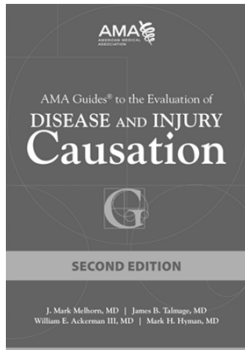
Request for Help

Make the 3rd edition better – email all info, data, and suggestions to Mark Melhorn at

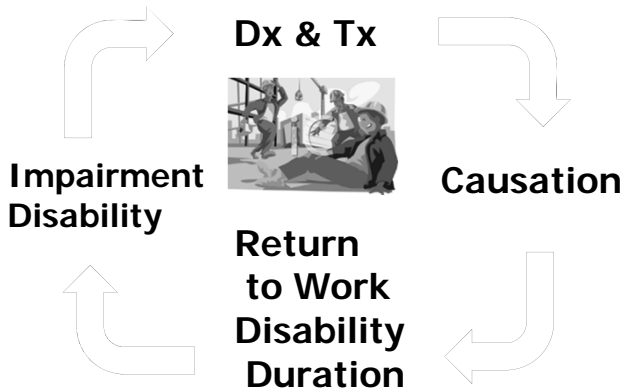
melhorn@onemain.com

Target date is 2019

All discussions are 2nd edition unless otherwise indicated



The Blue Book



Repetitive Use Injuries

Have you every had a "claim" or seen a patient with a "repetitive" injury?

What exactly is a repetitive injury?

Misconceptions and Examples

Misconceptions

Heart attacks more deadly in winter

True

False



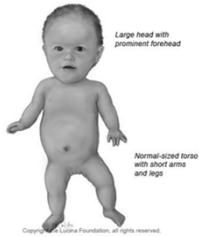
Causation Example

- What causes this condition?



Causation Example

- What causes this condition?



Achondroplasia

- Caused by a gene mutation
- Shown to be associated with advanced paternal age.
- Gene mutation affects bone formation



Causation Example

What type of tree is hit by lightning more frequently than others?

- Simple question
- Frequency established
- What is the cause?

Causation Example

Who is more likely to have an ACL Strain - Tear from Jumping?



1. Males
2. Females
3. Tall people
4. Tibial slope angle

Causation Example

Long-term exposure to residential road traffic noise is associated with a higher risk of MI?

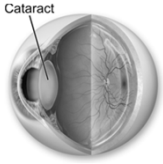
Yes

No



Causation Example

What do these pictures have in common?



Causation Example

• Which of the following does not belong?

- a. Large green square
- b. Large red circle
- c. Large green circle
- d. Small green circle





Example



- When the first ever episode of angina occurs when Joe walks up stairs at work, we recognize that this was when, but not why he had angina.
 - Not a worker' comp claim
- Yet, in the past, when the first episode of ____ (back pain, shoulder pain, knee pain, etc.) occurs with normal activity at work or minimal trauma at work, doctors have assumed this was intended to be "work compensable" even if they understood it was not actually CAUSED BY the work exposure.

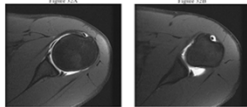
Causation In A Nut Shell

- Physician - determination of causation leads to amelioration of the causative agent and restorative treatment
- Legal - the primary effect of the determination of causation is cost-shifting, e.g., from the individual or health insurance to liability or WC insurance.

Treating Physician

32. A 21-year-old basketball player reports increased left shoulder pain with all lifting and overhead activities. He denies any history of dislocations. Axial MRI arthrogram images are seen in Figures 32A and 32B. An expected finding on physical examination of the shoulder would be positive findings for which of the following tests?

1. O'Brien's test.
2. Speed's test.
3. Jerk test.
4. Neer impingement test.
5. Apprehension test.



PREFERRED RESPONSE: 3

DISCUSSION: An MRI arthrogram is a sensitive imaging study used to identify intra-articular shoulder pathology, especially abnormalities of the labrum. Posterior labral tears, although generally less common than anterior tears, can cause significant morbidity, especially in the athlete. Pain, grinding, or gross subluxation often can be elicited with a "jerk" test of the involved shoulder. This test consists of placing an axial load through the humerus, with the shoulder forward flexed to 90 degrees. The shoulder is then abducted, while maintaining the axial load, and the patient's subjective and objective response is observed. Comparison to the contralateral shoulder is important, especially if painless subluxation is noted, to determine potential evidence of generalized joint laxity.

Treating Physician

- 21 y/o electrician reports increased pain in shoulder with lifting and overhead activities at work
- PE: Jerk test positive
- MRI: posterior labral tear
- Opinion: "work caused"
- Is there a better approach?

Treating Physician

78. Figure 78 shows the radiograph of a healthy 52-year-old woman who has severe right hip pain that has been unresponsive to nonsurgical management. What is the most appropriate surgical procedure at this time?

1. Total hip arthroplasty.
2. Hemiarthroplasty of the hip.
3. Valgus femoral osteotomy.
4. Periacetabular osteotomy.
5. Varus femoral osteotomy.



PREFERRED RESPONSE: 1

DISCUSSION: The patient has developmental dysplasia of the right hip, as can be noted by the shallow acetabulum and lack of femoral head coverage. She has secondary osteoarthritis, manifested radiographically by joint space narrowing, periarticular sclerosis, and subchondral acetabular cyst formation. Femoral and/or acetabular redirection osteotomies are most effective when performed before the onset of arthritis. After osteoarthritis has set in, total hip arthroplasty is the most reliable procedure for reducing pain. Hemiarthroplasties are not indicated in the presence of arthritic changes of the acetabulum.

Treating Physician

- 52 y/o female, housewife, mother of 5 children, no history of trauma, gradual onset of hip pain when walking the dog
- PE: painful right hip, limited ROM
- X-ray: OA right hip
- Dx: OA right hip
- Tx: THA = "work caused?" but not WC

Treating Physician

- 52 y/o female, door greeter, stands 6 hours per day on padded floor mats, no history of trauma, gradual onset of hip pain when standing at work
- PE: painful right hip, limited ROM
- X-ray: OA right hip
- Dx: OA right hip
- Tx: THA = "work caused?" but now is it WC?

Treating Physician

Hip Arthritis

- Predictors
 - Crossover sign
 - Acetabular protrusion
 - Lateral center edge angle
 - Tonnis angle



Treating Physician

Hip Arthritis

- Adult Dysplasia of the Hip
- Hip dysplasia is a disorder of development or dislocation of the hip secondary to capsular laxity and mechanical factors



Treating Physician

Hip Arthritis

- Adult Dysplasia of the Hip
- Adult and adolescent dysplasia in two forms
 1. dysplasia that was previously treated
 2. dysplasia that was not treated (if left untreated it can progress to early arthritis)



Treating Physician

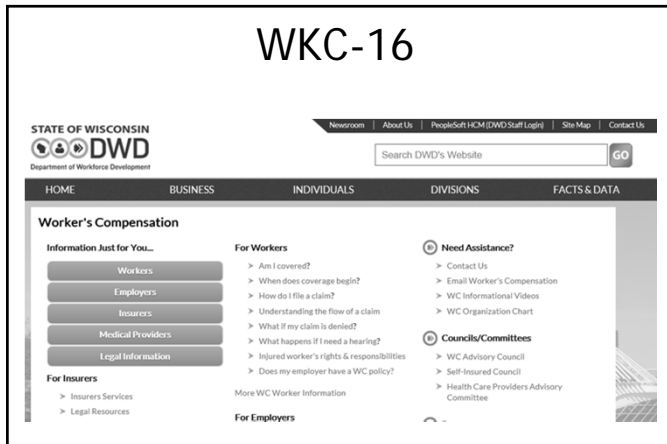
- Hip Arthritis
- Adult Dysplasia of the Hip
- Pathoanatomy acetabular retroversion is most common factor
- Epidemiology dysplasia is attributable to 1/3rd of all cases of hip osteoarthritis
- So, is this OA “work caused?”



Treating Physician

- Individual bends over in their attorney's office and feels a “pop” and complains of pain.
- He wants to fill a claim against the attorney's office liability insurance.
- Will the liability insurance accept the claim?
- Bends over at work, is this now a WC claim?

WKC-16



The screenshot shows the DWD website interface. At the top, there is a navigation bar with links for Newsroom, About Us, PeopleSoft HCM (DWD Staff Login), Site Map, and Contact Us. Below this is a search bar with the text "Search DWD's Website" and a "GO" button. The main navigation menu includes HOME, BUSINESS, INDIVIDUALS, DIVISIONS, and FACTS & DATA. The "Worker's Compensation" section is highlighted, and it contains several sub-sections: "Information Just for You..." with buttons for Workers, Employers, Insurers, Medical Providers, and Legal Information; "For Workers" with links like "Am I covered?", "When does coverage begin?", "How do I file a claim?", "Understanding the flow of a claim", "What if my claim is denied?", "What happens if I need a hearing?", "Injured worker's rights & responsibilities", and "Does my employer have a WC policy?"; "Need Assistance?" with links for "Contact Us", "Email Worker's Compensation", "WC Informational Videos", and "WC Organization Chart"; and "Councils/Committees" with links for "WC Advisory Council", "Self-Insured Council", and "Health Care Providers Advisory Committee". There are also links for "For Insurers" (Insurers Services, Legal Resources) and "For Employers" (More WC Worker Information).

WKC-16 = Fill Out the Form

State of Wisconsin
Department of Workforce Development
Worker's Compensation Division

- WKC-16 Practitioner's Report on Accident or Industrial Disease in Lieu of Testimony
- WKC-7760-p Using the WKC-16B For Worker's Compensation

WKC-7760-p

General Instructions

- The questions on the WKC-16-B concerning causation and disability are to be answered to a "reasonable degree of medical probability."

WKC-7760-p

- The Worker's Compensation Law does not require 100 percent certainty. The standard is a reasonable degree of medical "probability" meaning "more likely than not," as opposed to speculation or a mere possibility.

WKC-7760-p

- On the basis of the information available to doctors, they should decide whether it is more likely than not that an event or series of events caused the injury and whether the injury caused the disability.

WKC-16

Question 4

Describe the accidental event or work exposure to which the patient attributes his/her condition. (A copy of medical history or notes containing this information will suffice if complete.)

WKC-16

Question 5

Give a complete description of physical or mental disability and diagnosis. (A copy of the medical history or notes containing this information will suffice if complete and limited to the work injury.)

WKC-16

Questions 11, 12 and 13 are directed to the issues of medical causation and should be answered to a reasonable degree of probability, as defined earlier.

WKC-16

Question 11
In your opinion, is it probable that the event in Item 4 directly caused the disability? Yes or No

WKC-16

Question 12
If not directly, is it probable that the event described in Item 4 caused the disability by precipitation, aggravation and acceleration of a pre-existing progressively deteriorating or degenerative condition beyond normal progression? Yes or No

WKC-16

Questions 13

If the patient suffers from a condition caused by an appreciable period of work place exposure (from Item 4), was that exposure either the sole cause of the condition, or at least a material contributory causative factor in the condition's onset or progression? Yes or No

WKC-16

Questions 13

If yes, give date disability from work began:

WKC-16

CERTIFICATION

I certify, subject to the penalty of fine and/or imprisonment, as provided in Sec. 943.39 of the Wisconsin Statutes, that the above report truly and correctly sets forth the history, my findings, diagnosis and opinion.

Signature of Practitioner

Date Signed

WKC-16

- In Wisconsin after "certifying causation", has a physician ever been fined and/or imprisoned for their "opinion" that was later found to be not based on the science?

WKC-16

Question 4

- Describe the accidental event or work exposure to which the patient attributes his/her condition. (A copy of medical history or notes containing this information will suffice if complete.)
- Poorly written = says which patient attributes not what the science says.
- This is a causation question.

WKC-16

Question 4

"accident" = easy

- usually has blood, fx, deformity, or loss (amputation)

"work exposure" = difficult

- requires an understanding of individual and occupational risk factors and
- exposure to the occupational risk factors

WKC-16

Question 4

"work exposure" = difficult

This is key = has 2 parts

1. requires an understanding of individual and occupational risk factors
2. "adequate" exposure to the occupational risk factors

WKC-16

Question 4

"work exposure" = difficult

2. "adequate" exposure to the occupational risk factors

Adequate exposure is the key, since we are all "exposed" to some risk factors

WKC-16

Question 4 "work exposure" = difficult

How do you establish adequate exposure to a workplace risk factor?



Table 3-2 NIOSH / ACOEM

1. Identify evidence of the disease = Dx
2. Review and assess the available epidemiological evidence for a causal relationship
3. Obtain and assess the evidence of exposure
4. Consider other relevant factors
5. Judge the validity of testimony
6. Form conclusions about the work-relatedness of the disease in the person undergoing evaluation

WKC-16

Question 5

Give a complete description of physical or mental disability and diagnosis.

- Accurate Dx is key to determining causation

WKC-16

Question 11

In your opinion, is it probable that the event in Item 4 directly caused the disability? Yes or No

- "accident" = easy
- "work exposure" = difficult

WKC-16

Question 11

In your opinion, is it probable that the event in Item 4 directly caused the disability? Yes or No

But "disability" is a legal definition. So you are asking a physician a legal question?

WKC-16

Question 11 from AMA Guide 6th Edition
Disability = Alteration of an individual's capacity to meet person, social or occupational demands or statutory or regulatory requirements because of an impairment. Disability is a relational outcome, contingent on the environmental conditions in which activities are performed.

WKC-16

Question 11 from AMA Guide 6th Edition
Impairment = A loss, loss of use, or derangement of any body part, organ system, or organ function.

This is what the physician is actually determining and opining to, unless they have evaluated all of the "disability factors".

WKC-16

Question 12

If not directly, is it probable that the event described in Item 4 caused the disability by precipitation, aggravation and acceleration of a pre-existing progressively deteriorating or degenerative condition beyond normal progression? Yes or No

- Precipitation
- Aggravation
- Acceleration

WKC-16

Question 12 from AMA Guide 6th Edition

- Precipitation = not defined
- Cambridge Dictionary = water that falls from the clouds toward the ground or the chemical process that causes a substance to precipitate
- Law.com Dictionary = not defined

WKC-16

Question 12 from AMA Guide 6th Edition

- Aggravation = A factor(s) (eg, physical, chemical, biological, or medical condition) that adversely alters the course or progression of the medical impairment. Worsening of a preexisting medical condition or impairment.

WKC-16

Question 12 from AMA Guide 6th Edition

- Acceleration = not defined
- Cambridge Dictionary = the rate of change in the speed of something over time or the rate at which something moves more quickly or happens faster or sooner
- Law.com Dictionary = speeding up the time when there is vesting

WKC-16

Question 12 from AMA Guide 5th Edition

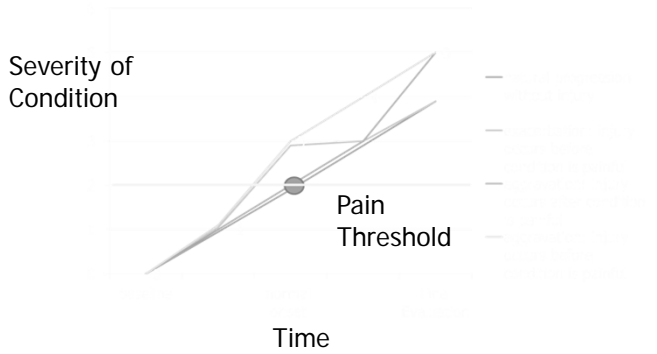
- Exacerbation = Temporary worsening of a pre-existing condition. Following a transient increase in symptoms, signs, disability, and/or impairment, the person recovers to his or her baseline status, or what it would have been had the exacerbation never occurred. . . .

WKC-16

Question 12 from AMA Guide 5th Edition

- Exacerbation = Given a condition whose natural history is one of progressive worsening, following a prolonged but still temporary worsening, return to pre-exacerbation status would not be expected, despite the absence of permanent residuals from the new cause.

Progression



Progression

- The graph is a visually reflection of the concept of why "I did not hurt before this..." does not mean objective aggravation.
- post hoc, ergo propter hoc = a causal relationship has erroneously been assumed from a merely sequential one.

WKC-16

Questions 13

If the patient suffers from a condition caused by an appreciable period of work place exposure (from Item 4), was that exposure either the sole cause of the condition, or at least a material contributory causative factor in the condition's onset or progression? Yes or No

- Why "I did not hurt before this..." does not mean objective aggravation.

WKC-16


Questions 13


- Appreciable period of work place exposure
- Sole cause
- At least a material contributory causative factor
- Progression

WKC-16

Questions 13

- Appreciable period of work place exposure
- Threshold for risk factors?
- What is available?
- Blue Book can help.





3. Obtain and assess the evidence of exposure

Standard forms can be helpful

WKC-16

Questions 13

- Sole cause
- Easy if accident
- Difficult if "over time" often described as cumulative trauma
- No established thresholds for cumulative

WKC-16

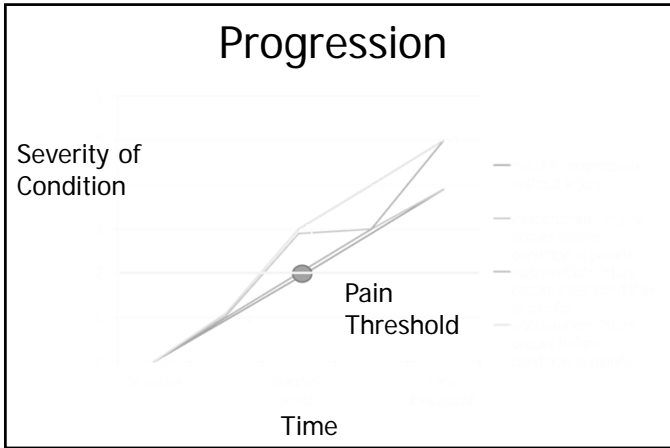
Questions 13

- At least a material contributory causative factor
- Often implied but not proven for "cumulative trauma" or repetitive tasks.

WKC-16

Questions 13

- Progression
- "I did not hurt before this..." does not mean objective aggravation.
- post hoc, ergo propter hoc = a causal relationship has erroneously been assumed from a merely sequential one.



WKC-16

- How do I fill out the form WKC-16

Department of Workforce Development
 Worker's Compensation Division
 201 E. Washington Ave., Rm. C100
 P.O. Box 7901
 Madison, WI 53707-7901
 Telephone: (608) 266-1340
 Fax: (608) 267-6394
 http://dwd.wisconsin.gov/wc
 e-mail: DWD@DWDWI@dwd.wisconsin.gov

PRACTITIONER'S REPORT ON ACCIDENT OR INDUSTRIAL DISEASE IN LIEU OF TESTIMONY

FILED ON BEHALF OF: EMPLOYEE EMPLOYER OR INSURANCE CARRIER

Provision of your Social Security Number (SSN) is voluntary. Failure to provide it may result in an information processing delay. Personal information you provide may be used for secondary purposes (Privacy Law, s. 19.04 (1)(b), Wisconsin Statutes)

1. WC Claim Number	Employee Name	
Employee Social Security Number	Employee Address	
2. Employer Name	3. Date of Traumatic Event	
Employer Address	Worker's Compensation Insurance Carrier	
4. Describe the accidental event or work exposure to which the patient attributes his/her condition. (A copy of medical history or notes containing this information will suffice if complete.)		

- ### WKC-16
- Four approaches to filling out the form
1. Abstain (Let some else fill out form)
 2. Play Secretary (Patients says the job is the cause. Doctor not really necessary.)
 3. Gestalt (Educated guess or "gut feeling" or "based on my experience")
 4. Apply the Science

WKC-16

3. Gestalt (Educated guess or "gut feeling" or "based on my experience")

- Would you want a Doctor to treat your condition base on their gut feeling or with evidence-based medicine?



WKC-16 = Consider

- There are many physicians and health care providers who have adequate training in causation analysis.
- However, consider the following . . .

WKC-16 = Consider

Causation Analysis as Commonly Practiced



- Many physicians assume since the employer or insurer made the appointment, the case has ALREADY BEEN DETERMINED to be work related and they complete form WKC-16.

WKC-16 = Consider

Can Doctors Accurately Assess Causation in Cases without Obvious Major Traumatic Injury?

- Medical Students are NOT trained in this.
- Family Physicians, Orthopaedic Surgeons, Neurosurgeons, PM&R doctors, etc are NOT routinely trained in this.

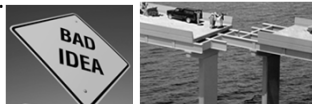
WKC-16 = Consider

Can Doctors Accurately Assess Causation in Cases without Obvious Major Traumatic Injury?

- Many physician practices use a PA or NP to do the initial visit assessment, and PAs and NPs are NOT trained in this.
- Note: the law ASSUMES the patient will see a physician, but many clinics use PAs and NPs for the initial visit, or for many early visits

WKC-16 = Consider

- What if the law said "All bridges on Interstate Highways will be designed by Physicians" (or College English professors).
- Some degree of intelligence is not equivalent to study of, or training in, an academic discipline.



WKC-16 = Consider

Training available from professional physician organizations (in alphabetical order – I am affiliated with but have no financial benefit)

- American Academy of Orthopaedic Surgeons
- American College of Occupational and Environmental Medicine
- American Medical Association
- International Association of Industrial Accident Boards and Commissions

WKC-16 = Consider

- Many doctors have never been trained in or studied causation analysis.
- Many doctors have not read the scientific studies on possible work related causation for a specific diagnosis as these studies are not commonly published in their commonly read journals.

WKC-16 = Consider

Science Does Exist but

- Ergonomists publish in "Ergonomics journals"
- Epidemiologists publish in "Epidemiology journals"
- The vast majority of doctors treating workers' compensation patients NEITHER subscribe to, NOR read these journals.

WKC-16 = Consider

- I am a Surgeon
- Doctors (especially surgeons) have strong obsessive-compulsive personality traits
- They are often perfectionists
- When I need surgery, I want a surgeon who is a perfectionist.

WKC-16 = Consider

- I am a Surgeon
- However, many doctors will almost NEVER change an opinion once it has been expressed.
- It is very hard for doctors to say "I made a mistake."



WKC-16 = Consider

- the six most important words:
I admit I made a mistake.
- the five: You did a good job
- the four: What is your opinion?
- the three: If you please
- the two: Thank You
- the one: We, the least important is I

(Anonymous)



Fun with the word "Repetitive"

- "Repetitive" is a word misused repetitively by physicians.
- A dictionary definition would state repetition is the "act of doing a thing a SECOND time, or again and again".

Fun with the word "Repetitive"

- Therefore, punching a time clock at the start of work each day is done "repetitively".
- What is the purpose of the definition?
 - Research
 - Medical
 - Legal

Fun with the word "Repetitive"

- From a legal point of view – there are no validated (scientifically proven) numbers for defining repetitive.
- In other words, there is no cutoff threshold that says – if you do more than x/hour you get this Dx.

Fun with the word "Repetitive"

- From a medical point of view –

Silverstein and Armstrong are generally credited with (or blamed for) the current obsession with linking symptoms to work activity based on their paper ("Occupational Factors and Carpal Tunnel Syndrome" AM J Ind Med 1987; 11:343-358) which . . .

Fun with the word "Repetitive"

- From a medical point of view –

. . . which defined "HIGH repetitions" as jobs with a cycle time of less than 30 seconds, or more than 50% of the cycle time involved in performing fundamentally the same cycle or activity

Fun with the word "Repetitive"

- From a medical point of view –

Many ergonomists and many subsequent papers have adopted this definition.

But have we ever been wrong?

Fun with the word "Repetitive"

- From a medical point of view –



FIGURE 1: Flow diagram demonstrating the process by which study findings become clinical dogma. Note that reader assumptions rather than validity of findings are the key factor that leads to application of findings toward increasing levels of "truth."

Fun with the word "Repetitive"

- From a medical point of view –

"Numerous examples can be found in the medical literature in which prospective RCTs have found vastly disparate results compared with the observational epidemiologic studies preceding them that had been accepted as the final answer."

Fun with the word "Repetitive"

- From a medical point of view –

Examples of "Been Wrong"

- JAMA 2001; 286: 821-830. Comparison of evidence of treatment effects in randomized and nonrandomized studies.
- JAMA 294 (2):218-228, 2005. Contradicted and initially stronger effects in highly cited clinical research.
- JAMA 298(21):2517-2526, 2007. Persistence of Contradicted Claims in the Literature

Fun with the word "Repetitive"

- From a medical point of view –

Unfortunately, these were retrospective epidemiological studies exploring data end points and were based on inclusion criteria by subjective symptoms for Dx. This data is also only applicable to automotive industry.

Fun with the word "Repetitive"

- From a medical point of view -

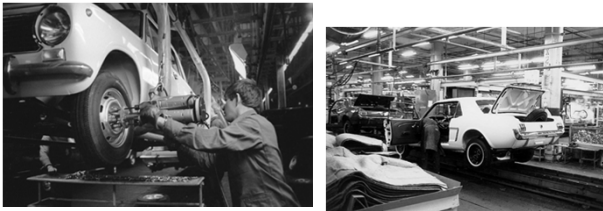
Therefore, at best these studies are hypothesis generating but not confirming.
Furthermore, this works out to about 1000 repetitions per 8 hour work shift (actually a minimum of 960 reps).

Fun with the word "Repetitive"

- From a medical point of view –
- For companies who routinely work 12 hour shifts, this would permit almost 1500 repetitions per work day before the possible threshold is crossed and does not take into account the object to which task is being applied.

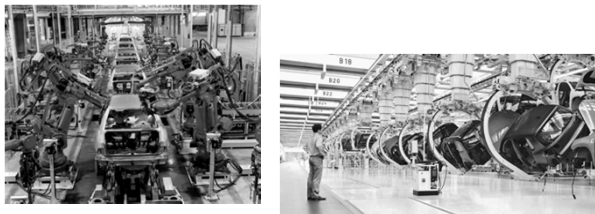
Fun with the word "Repetitive"

Are job tasks in 1987 applicable to same job title today?



Fun with the word "Repetitive"

Are job tasks in 1987 applicable to same job title today?



Fun with the word "Repetitive"

Can you move the concept of repetitive in job to repetitive in a different job?



Fun with the word "Repetitive"

- From a research point of view

current studies suggest that the best assessment instrument for CTS is the Strain Index

(J. S. Moore and A. Garg. The Strain Index: a proposed method to analyze jobs for risk of distal upper extremity disorders. American Industrial Hygiene Association Journal 56 (5):443-458, 1995. and A. Garg, J. Kapellusch, K. Hegmann, J. Wertsch, A. Merryweather, G. Deckow-Schaefer, and E. J. Malloy. The Strain Index (SI) and Threshold Limit Value (TLV) for Hand Activity Level (HAL): risk of carpal tunnel syndrome (CTS) in a prospective cohort. Ergonomics 55 (4):396-414, 2012.)

Fun with the word "Repetitive"

- From a research point of view

Moore - Garg Strain Index

	Strain Index	4.5
Description of task		Uncertain
Intensity of Exertion	Somewhat hard: Noticeable or definite effort (BS-3)	3.0
Duration of Exertion (% of Cycle)	30-49%	1.5
Efforts Per Minute	4-8	1.0
Hand/Wrist Posture	Good: Near Neutral	1.0
Speed of Work	Fair: Normal speed of motion	1.0
Duration of Task Per Day (hours)	4-8	1.0

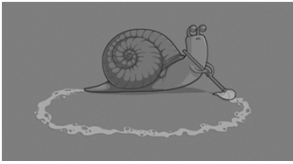
Fun with the word "Repetitive"

- From a research point of view

What is the best assessment instrument for all of the other Dx's that currently are commonly related to work activities?

Fun with the word "Repetitive"

The End



Thank you for coming today

WKC-16 Q vs A

- Quinones v. Anew Healthcare Services, WC Claim No. 2013-010074 (LIRC Mar. 30, 2015)
- Finding a wrist injury by disease based on one day of work activity

WKC-16 Q vs A

Disclaimer

- I do not have all the records only the WORKER'S COMPENSATION DECISION Claim No. 2013-010074 to review.
- Statements and conclusions are by the "Review Commission"
- My opinion may change if provided additional information.

WKC-16 Q vs A



1. Identify evidence of the disease = Dx
 - Commission confirms "Dr. C's original note only listed "pain" as the Dx and he opined that the pain met the work exposure requirements of WC-16-B

WKC-16 Q vs A



1. Identify evidence of the disease = Dx
 - Commission "confirming Dr. C's conclusion that the wrist pain was the result of a "new" tear."
 - But Dr. C's notes stated that he originally thought pain was due to previous condition. His opinion changed after MRI.



WKC-16 Q vs A

1. Identify evidence of the disease = Dx
Can you confirm her diagnosis as TFCC tear?
- MRI for "new" central tear
 - "New" based on symptoms or MRIs
 - Need review both MRIs



WKC-16 Q vs A

1. Identify evidence of the disease = Dx
Can you confirm her diagnosis as TFCC tear?

Triangular Fibrocartilage Complex Injuries or Tears

The triangular fibrocartilage complex (TFCC) is comprised of cartilage and ligaments that suspend the distal radius and ulnar carpus from the distal ulna.¹⁴⁹ The TFCC stabilizes wrist bones, acts as a shock absorber, and enables smooth movements. Because the skeletal architecture of the distal radioulnar joint (DRUJ) imparts minimal stability, soft tissues are the prime stabilizers and are susceptible to anatomic, pathophysiologic, and degenerative issues similar to the knee menisci. Although variable, the primary vascular supply to the articular disk is from the anterior interosseous and ulnar arteries. Analogous to a meniscus, there is radial penetration of blood vessels into the periphery of the articular disc but central avascularity. Evidence that degeneration increases with age is commonly seen on MRI, making indications for surgical intervention somewhat unclear.¹⁵⁰⁻¹⁵³ In other words, the TFCC is at substantial risk for injury but also experiences naturally occurring degenerative change because of its anatomic complexity and multiple functions.



WKC-16 Q vs A

1. Identify evidence of the disease = Dx
- Evidence that degeneration increases with age is commonly seen on MRI, making indications for surgical intervention somewhat unclear.
 - In other words, the TFCC is at substantial risk for injury but also experiences naturally occurring degenerative change because of its anatomic complexity and multiple functions.



WKC-16 Q vs A

2. Review and assess the available epidemiological evidence for a causal relationship
 - 06-23-2012 the applicant experienced three incidents at work that caused pain in her right wrist.
 - First, when she was dressing one of her clients, she felt a sharp pain in her wrist as she was pulling the client's pants up.



WKC-16 Q vs A

2. Review and assess the available epidemiological evidence for a causal relationship
 - Then, she started feeling more pain as she was bathing another client.
 - Finally, she felt a severe pain when she was operating a lever (like a car jack) on a Hoyer lift for the client.



WKC-16 Q vs A

2. Review and assess the available epidemiological evidence for a causal relationship

Occupational Risk Factors for TFCC

- Combination of risk factors (eg. force and repetition, force and posture): insufficient evidence
- Vibration: insufficient evidence
- Highly repetitive work alone or in combination with other factors: insufficient evidence
- Forceful work: insufficient evidence
- Awkward postures: insufficient evidence
- Keyboard activities: insufficient evidence
- Cold environment: insufficient evidence
- Length of employment: insufficient evidence



WKC-16 Q vs A

2. Review and assess the available epidemiological evidence for a causal relationship

Nonoccupational Risk Factors for TFCC

- Age: very strong evidence; increased risk in fourth and fifth decades
- Anatomy: very strong evidence
- BMI: insufficient evidence
- Gender: insufficient evidence
- Biopsychosocial factors: insufficient evidence
- Diabetes: insufficient evidence
- Dominant hand: insufficient evidence



WKC-16

3. Obtain and assess the evidence of exposure

Standard forms can be helpful

The image shows a complex form titled 'CtdMAP Ergo Activities Form'. It includes a header with 'Date', 'Job', 'Task', 'Form', and 'Date'. Below this is a large table with columns for 'Check for exposure for the Cause of Exposure' and 'Check for exposure for the Cause of Exposure'. The table is organized into several sections: 'Upper Limb', 'Lower Limb', 'Neck', 'Shoulder', 'Wrist', 'Hand', 'Finger', 'Thumb', 'Carpal Tunnel', 'Vibration', 'Noise', 'Temperature', 'Humidity', 'Light', 'Air Quality', 'Psychosocial', 'Ergonomics', 'Safety', and 'Other'. Each section contains a grid of checkboxes and numerical values (1-5) for different activities and risk factors. At the bottom, there are sections for 'Notes' and 'References'.



WKC-16 Q vs A

- ## 3. Obtain and assess the evidence of exposure
- Certified nursing assistant
 - No specifics on "cumulative exposure" only single day event described, but commission later stated "considered as repeated occupational exposure" after challenged by council.



WKC-16 Q vs A

3. Obtain and assess the evidence of exposure

- The activity that precipitated the first TFCC tear (soreness developing while lifting and twisting objects), is similar to the activities that the applicant claimed precipitated her "new" TFCC tear with job requirements to lift 50 to 100 lbs.



WKC-16 Q vs A

3. Obtain and assess the evidence of exposure

- What about the Hoyer lift?
- Two person lift?
- Previous work guides after 1st surgery?
- Accommodations by employer?



WKC-16 Q vs A

3. Obtain and assess the evidence of exposure

- Is this her only risk exposure?
- Hobbies?
- ROS and comorbidities = diabetic, obesity, CTS, UNE
- Ergonomic modifications?



WKC-16 Q vs A

4. Consider other relevant factors

Occupational Risk Factors:

- For “cumulative trauma” =insufficient evidence

Nonoccupational Risk Factors:

- Age = very strong evidence = 4th & 5th decades = age 30 to 49



WKC-16 Q vs A

4. Consider other relevant factors

- It is important to understand that wrist pathology such as positive ulnar variance, ulnocarpal impaction syndrome, and/or a degenerative TFCC tear may preexist a wrist injury. Not all perforations and tears in the TFCC are traumatic.



WKC-16 Q vs A

4. Consider other relevant factors

- The prevalence of TFCC lesions increases with age, and many tears therein are asymptomatic. These lesions commonly occur in patients with positive ulnar variance or ulnocarpal impaction syndrome of another cause.



WKC-16 Q vs A

4. Consider other relevant factors
- Central perforations are usually degenerative and due to aging and limited or absent central blood supply.
 - Asymptomatic perforation is common, even in young patients; thus, ligament perforation is not necessarily the cause of wrist pain in patients.



WKC-16 Q vs A

4. Consider other relevant factors
- IME by Dr. M states the belief that the current central tear was due to "normal attritional process with aging."
 - He provides no explanation, however, for accepting the opinion that the applicant's tear of her TFC at age 34 was due to injury, while coming to the opinion that her second tear, just four years later, was due only to age and normal attrition.



WKC-16 Q vs A

4. Consider other relevant factors
- IME by Dr. M report did not demonstrate he understood the demands of the job.
 - Therefore commission states "It was reasonable for the ALJ to accord more weight to Dr. C's opinion due to his history of treatment of the applicant's wrist and better opportunity to see the relationship between the applicant's work and her medical condition."



WKC-16 Q vs A

4. Consider other relevant factors
- IME
 - Perhaps a better IME report incorporating the science using the six steps of causation analysis would have improved the commission's opportunity to understand and apply the appropriate weighting.



WKC-16 Q vs A

5. Judge the validity of testimony
- Patients says "the job is the cause"
 - Job description by patient
 - Job description by employer
 - Video of job
 - Onsite viewing of job



WKC-16 Q vs A

5. Judge the validity of testimony

5. Assess the studies using the Updated Hill Criteria; apply the criteria to individual studies (especially 5a-5c) and to the studies as a whole (5a-5l)
- Temporality
 - Strength of association
 - Dose-response relationship
 - Consistency
 - Coherence
 - Specificity
 - Plausibility
 - Reversibility
 - Prevention/elimination
 - Experiment
 - Analogy
 - Predictive performance



WKC-16 Q vs A

6. Form conclusions about the work-relatedness of the disease in the person undergoing evaluation.

- The scientific evidence would suggest that this individual has occupational and nonoccupational (individual) risk factors and preexisting factors for the onset of her wrist pain – determined to be a TFCC tear.

WKC-16 Q vs A

The Original Question was

Is this a compensable injury?

Yes vs No = you vote

WKC-16 Q vs A



- What is the legal threshold?
- Again, I reserve the right to change my opinion if additional information is provided. (ppt)

WKC-16 Q vs A

- So do you always get this level of analysis?
- 6 hours at "Special Reports" usually limited to \$100 if paid at all.
- Please do the math!!



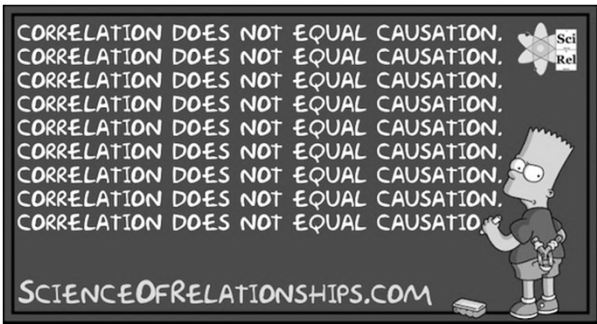
Table 3-2 NIOSH / ACOEM

1. Identify evidence of the disease = Dx
2. Review and assess the available epidemiological evidence for a causal relationship
3. Obtain and assess the evidence of exposure
4. Consider other relevant factors
5. Judge the validity of testimony
6. Form conclusions about the work-relatedness of the disease in the person undergoing evaluation

A Time to Reflect



Causation Summary



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